Microsoft Digital Literacy

Version 4

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Mousing & Keyboarding Skills

Mousing & Keyboarding Skills

Microsoft

Welcome

Description

Computers have redefined the way we do many things today. Computers have become an integral part of every profession and business, making it more efficient and easier to conduct day-to-day business activities.

Employers increasingly expect people entering the workforce to have basic computer and software skills. Individuals without such skills or a way to obtain them are at an increasing disadvantage in both the local and global economy. In a world where computers are everywhere, learning how to use a computer is necessary.

Benefits

As a first step toward digital literacy, learners must learn how to use the keyboard and the mouse. This course, *Microsoft® Digital Literacy: First Course*, provides the opportunity to learn how to use a keyboard and mouse. The prerequisite for taking the course is the ability to read a newspaper.

Computer Basics

Computer
Basics

Microsoft

Welcome

Description

Computing has become a very integral part of everyday life in the twenty-first century. From music and photos to banking and communicating, computers have changed the way we work and live. This course introduces you to the fundamentals of computing, explains the components of a computer, explores operating system basics, and shows you how to use a mouse and a keyboard. Also explains how computers can be used in different aspects of life.

Benefits

Computers are used in every field. They help organizations and individuals to conduct business transactions efficiently and quickly. Today, one of the basic skills necessary to succeed at a workplace is to know how to use the computer. To be able to get better jobs, you need to know how to use a computer.

Introduction to Computers

A computer is an electronic device that you can use the store and process information. A computer can be used to help you perform various tasks, such as:

- Send e-mail
- Make Presentations
- Maintain Records
- Write Text
- Organize Files
- And more

In this lesson you will learn the importance of computers in today's world, the main parts of a computer, and the basics of using a computer; such as starting and shutting it down.

Role of computers

Computers impact our lives every day. Consider a trip to the store and how many different computers are involved. Computers are inside your car, manage the traffic lights, control the temperature in the store's freezers, and calculate the cost of your groceries. Let's look more at how computers play a regular role in your life.

Role of Computers can be accessed online at http://www.microsoft.com/digitalliteracy

Knowledge check

Computers are used in which of the following?
- o Automobiles
- o Airplanes
- o Street lights
- o All of the above

Computers are used by which of the following professions?
- o Business
- o Art
- o Education
- o All of the above

Answers:

#1 – Computers are used in all of these examples and in many more ways, too.

#2 – Computers are used in all of these examples and in many more industries.

Parts of computers

Computers contain many parts including keyboards, monitors, processing units, memory, and more. In this lesson we will look at all the parts of a computer. We will organize these parts by categories including input, output, microchips, storage, and ports.

Knowledge check

To connect to the Internet which of the following must a computer have?
- o Video Card
- o Audio Card
- o Network Card
- o USB Port

A keyboard is an example of a _____ device.
- o Input
- o Output
- o Storage

Answers:

#1 – A computer must have a network port to connect to the Internet.

#2 – A keyboard is an input device.

Using a computer

To start a computer, you press the power button. This may cause a small light to turn on and then the monitor to turn on. The computer will check all of its components and if everything is running smoothly, it will display the welcome screen, and then to the user screen. Here you may login into your personal user, or as a guest.
All new computers now have an energy-saving mode called Sleep that allows the computer to temporarily shut down all nonessentials. Usually, there is a light flashing to indicate that it is asleep. This is a huge energy saver, using as much electricity as a Night light and taking seconds to start up. The computer may seem to be shut down, except all of your work will still open and will not be lost. It takes seconds to turn back on and continue to work on any pages that were open, sleep is a very useful tool on a computer. There are other options; such as Log off, Restart, and Shut down. Before doing any of those options, make sure to save all unsaved items because they can become lost.

Do not press the power button to shut down the computer unless the whole computer has stopped responding and you can no longer restart it.

Log off

Logging Off
Logging off will exit you from the current user that you are using. Any open programs will remain open and once logged back in will open up, unless the computer is shut down. Any other users may have their information open as well.

Restart

Restarting
The Restart option is usually used when something is not corresponding. The Restart option will shut down the computer and automatically begin to turn on the computer again. Remember that any unsaved information will be lost if it is not saved if the computer is restarted.

Shut down

Shutting Down
Shutting down the computer will completely turn off the whole system. Any unsaved information will be lost, so remember to save before shutting down the computer.

Knowledge check

Logging off your computer will close any open programs?
- o True
- o False

Unsaved data is safe if you do a restart but lost if you shut down.
- o True
- o False

Answers –

#1 – False. Logging off will end the current user session but leave programs running.

#2 – False. Unsaved data is lost in both a restart and a shut down. Always save your work.

Overview of a keyboard

The keyboard is an input device that goes into your computer which allows you enter information such letters from the alphabets, numerical data, symbols, and commands. There are many keyboards, although not all have the same layout style. The most common kind is referred to as a QWERT keyboard, which is named after the keys on the top rows of letters. The keyboard is divided into several groups based on the function.

Function keys

The functions keys, labeled from F1 to F12, are used to perform specific tasks based on the operating system and software used. For an example, in many programs, the key F1 is commonly used as the Help file. In some cases, it can control the monitor brightness or the sound volume. The functionality of these keys differentiates from program to program and operating system to operating system

Special keys

The special keys are used alone or in combination with other keys to perform certain actions. These include the Control (ctrl), Alternate (Alt), Escape (Esc), Windows, Tab, Caps Lock, and Shift keys. For an example, in many programs pressing "Ctrl+S" will save a file automatically.

The Shift key is a combination key used with another letter to type an uppercase letter.
The Caps Lock key allows all letters to be typed in uppercase without having to press shift. This function can be turned on or off. An indicator light might be present to show that the function is on.
Most keyboards include a special key called the Windows logo key. This key is used to open the Start menu, or is used in combination with a second key to perform common Windows tasks.

Alphanumeric keys

The alphanumeric keys cover most the typical keyboard; this is for letters, numbers, punctuations, symbol keys, the space bar, tab, backspace, Caps Lock, shift, and enter key. The Spacebar allows a space

to be indicated when pressed
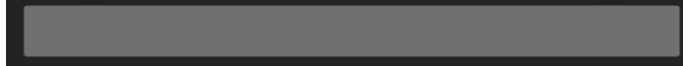
The Enter key allows the cursor to be moved to the beginning of the next line
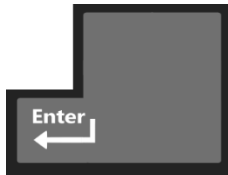
The Backspace key deletes the character before the cursor, or the selected text chosen

The Backspace key deletes the character before the cursor, or the selected text chosen

Navigation keys

The navigation keys are used for moving around in documents or webpages and editing text. Navigation keys include Delete, Insert, Home and End, and Page Up and Page Down keys.

The Home key is used to move the cursor to the beginning of a line or to move to the top of the webpage
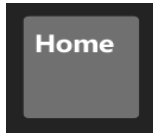
The Left, Right, Up, and Down Arrow keys is used to move the cursor or selection one space or line in the direction of the arrow, or scroll a webpage in the direction of the arrow

The End key moves the cursor to the end of a line or move to the bottom of a webpage.

The Page Up key moves the cursor or page up one screen

The Page Down key moves the cursor or page down one screen
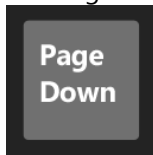
The Delete key deletes the character after the cursor or the selected text. If used in Windows, the Delete Key can be used to move to selected items to the recycle bin
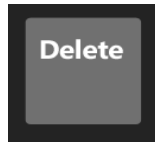
The Insert key can be turned on or off. When used, the text that you type is inserted at the cursor. When the Insert key is not used, the text that you type replaces existing characters

Numeric keys

The Insert key can be turned on or off. When used, the text that you type is inserted at the cursor. When the Insert key is not used, the text that you type replaces existing characters
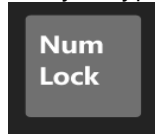
Three keys that you may have seen on your keyboard known as PrtScn (Print Screen), ScrLk (Scroll Lock), and Pause/Break have different uses for different programs.
 PrtScn is used to capture an image of your entire screen known as a screen shot which copies into your computer's clipboard.
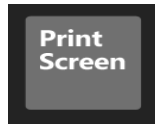
The Insert key can be turned on or off. When used, the text that you type is inserted at the cursor. When the Insert key is not used, the text that you type replaces existing characters
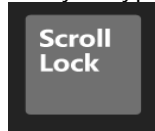
Pause/Break is rarely used although when pressed in a program, it can pause or in a combination with Ctrl, it can allow the program to stop running

The keyboard is an input device that you can use to type commands or text into a computer.
Different keyboards have different key layouts. In addition, the functions of some keys may vary from program to program.

Most keyboards have keys labeled from F1 to F12. These keys are the function keys, which you can use to perform specific functions. Their functions differ from program to program. The function of the F1 key in most programs is to access the help file associated with a program.

Keys such as Control (CTRL), SHIFT, SPACEBAR, ALT, CAPS LOCK, and TAB are special keys. The special keys perform special functions depending on when and where you use them. Most keyboards include a special key called the Windows logo key. This key is used to open the Start menu, or is used in combination with a second key to perform common Windows tasks.

The alphabet and numeric keys are used to enter letters, numbers, punctuations, and other symbols. You use the ENTER or RETURN key to move the cursor to the beginning of a new line.
In some programs, it is used to send commands and confirm a task on a computer.

Keys such as INSERT (INS), DELETE (DEL), and BACKSPACE are common keys. The DELETE key and BACKSPACE key are used to remove typed characters, text, and other objects on the right and left side of the cursor respectively.
The INSERT key is a toggle key. This type of key is switched on or off each time it is pressed. When the INSERT key is turned ON, it helps you overwrite characters to the right

of the cursor. When it is OFF, it helps you enter characters or text to the right of the cursor, without overwriting the characters or text.

Keys such as the arrow keys, HOME, END, PAGE UP, and PAGE DOWN are navigation keys. You use the arrow keys to move the cursor up, down, right, and left. The HOME key moves the cursor to the left end of a line of text. The END key moves the cursor to the end of a line of text. The PAGE UP key is used to move one page up and the PAGE DOWN key is used to move one page down while viewing a document.

For example you can create an audio CD and then add video files and text files to it to create a mixed mode CD. .

Most keyboards have a numeric keypad that is located on the right side. It has a set of 17 keys with numbers from 0 to 9, the decimal point, mathematical symbols, and navigation symbols. The NUM LOCK key on this keypad allows you to switch between the numeric and the navigation keys.

Knowledge check

Shift is a _____ key.
- o Navigational key
- o Numerical key
- o Alphanumerical key
- o Special key

Function keys perform different actions depending on what program is running.
- o True
- o False

Answers –

#1 – Shift is a special key.

#2 – True. Depending on what program is running, the function keys perform different actions.

Using the mouse

A mouse is a small device that you can use to move, select, and open items on your computer screen.

The mouse is usually kept on the desk next to the keyboard.

Most mouse devices have at least two buttons, left and right.

Most of the actions are performed by clicking the left button. The right button is used for specific functions.

Some advanced types of mouse devices provide additional buttons to speed up common tasks, such as scrolling.

As you move the mouse on your desk, a pointer moves correspondingly on your screen.

The mouse allows you to select an item on the screen.

As you move the pointer over different areas of the screen, the items or the pointer change.

These changes indicate that you can click an item to open it, or to see more of its options.

You can open an item or show more options by moving the pointer to it, and then clicking the left or right mouse button.

In a document, you can use the mouse to select a position to start typing.

You need to position the pointer in the document, click where you want to insert text, and then use your keyboard to begin typing.
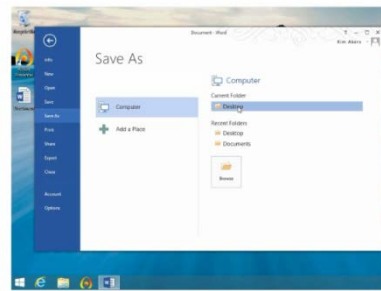
To move an item, you need to click it, and then holding the mouse button down, move the item to a different location.

After you move the item to the new location, you release the mouse button.

The right button on the mouse is often used to display a menu. Menu options can include common tasks, such as copy or paste as well as advanced options.

These are called context menus. These menus help you complete tasks quickly.

Most mouse devices also have a wheel that helps you to scroll through documents or pages.
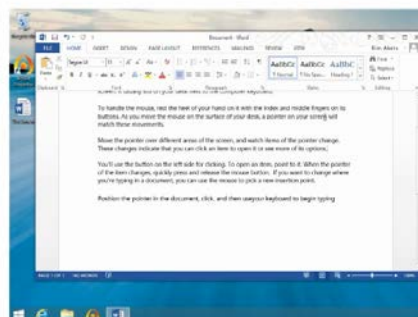
To scroll, place your finger on the wheel and roll it back and forth.

This action moves the document up and down.

Some mouse devices have a "back" button on the side that works in browsers and Windows Explorer.

There are different types of mouse devices available in the market.

Older mouse devices had a rubber or a metal ball on the underside.
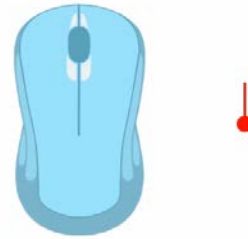
The mechanical movement of the mouse device moved the ball.

This movement further moved the pointer on the screen.

The moveable parts of a mechanical mouse were prone to failure. As a result, these devices were high on the maintenance side.

To improve performance most people today use an optical mouse that works in the same way as a regular mouse.

The ball is replaced by a light emitting diode (LED) to track the movements of the mouse.

You can also use a laser mouse that uses laser technology to detect movement by transforming hand movements to digital signals.

When compared to an optical mouse, a laser mouse is more expensive.

Knowledge check

Which mouse button most commonly opens items?
- o Left
- o Right
- o Middle Wheel

What does the right mouse button most commonly do?
- o Open Items
- o Perform Tasks
- o Display a menu
- o None of the above

Answers –

#1 – You perform most tasks, including opening items, by clicking the left mouse button.

#2 – Clicking the right mouse button often displays a shortcut menu.

Computing devices

You have many choices when selecting a computer. The Personal Computer, or PC, is popular for many businesses and individuals, as it performs all the basic functions needed for most workplaces and at the home. The PC is perfect for creating documents, organizing records and researching on the Internet. They also offer entertainment choices by providing a format to play video games, talk to friends, listen to music or watch videos.

The PC is not the only choice, however, and many smaller computing devices are now offering popular alternatives to the desktop PC. Depending on your needs, you may consider one of the following.

Desktop computers

Desktop Computers
Desktop computers offer a lot of computing power and options such as large memory capabilities, larger screen sizes and generally faster processing speeds. The components are separate allowing you to select or upgrade your monitor, keyboard, mouse and system core as you wish. They run from a continuous power source (such as an electrical outlet) allowing for uninterrupted use.
They are large, compared to other options, and require a permanent space to set up. If you are looking for something more portable, keep reading.

Laptops

Laptops
Laptops offer a lighter, more portable option to the desktop. They are designed to travel with you while still offering impressive computing ability. With a laptop you get your computer, keyboard, mouse and monitor all on one device.
Laptops can run on battery power or plug into electrical outlets for longer use. Many boast nearly the same capabilities as a desktop but are generally more expensive. If you are looking for something that offers full PC power on the go, the laptop is a great choice.

Tablets

Tablets

Tablets are an extremely popular choice these days. They are hand-held devices (smaller than even laptops) and offer touch screen capabilities. Many use a stylus, which is a pen-like device you can write, draw pictures or click screen options with. Tablets offer terrific Internet and media access as well as the ability to read documents and send email. Tablets can also utilize apps which offer a huge variety of tools that enhance tablets and other smart devices.

Some, like Windows Surface, also come with a flat, detachable keyboard that can also be used as a screen protector. Many tablets now come close to laptops in functionality and popularity.

Smartphones

Smartphones

Smartphones are basically tiny computers you can hold in one hand. Smartphones also can access apps and connect to the Internet for email, test messaging, and web searches. Perhaps most unique of all, smartphones are also functional telephones that can go anywhere your phone service is provided.

More and more, smartphones can perform tablet-like functions including office tasks, use apps and accessing music and entertainment. You will have to get a cellphone service provider to access many of the functions of a smartphone.

Knowledge check

What does PC stand for?
- o Profile Computer
- o Personal Computer
- o Personal Common

Jason wants to get a computer that is portable but as strong as a desktop computer, what should he get?
- o Tablet
- o Smartphone
- o Laptop

Answers –

#1 – All of the options above are considered a computer.

#2 – Laptops are as powerful as desktop computers.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Describe the importance of computers in today's world.
- Identify the main parts of a computer.
- Identify the steps for starting and shutting down a computer.

Common Computer Terminology

An automobile, such as a car or a van, is available in different models and colors, but its essential components remain the same. All automobiles have an engine, a body, and wheels. Similarly, computers are available in various sizes and shapes, but they all have common components that work in the same manner. The essential components of a computer are:

- Hardware
- Software

In this lesson, you will learn about common computer terminology such as hardware and software.

Introduction to hardware

Every time you press a key or click your mouse a signal is sent to the processor. The processor then decides what the best course of action is for the signal. The CPU handles millions of instructions per second which is why you can watch videos, listen to music and chat with friends all at the same time. Let's look at a simple example of how signals are processed.

Knowledge check

The CPU acts as the _____ of a computer.
- o   Heart
- o   Blood
- o   Brain
- o   All of the above

You cannot add new hardware to your motherboard.
- o   True
- o   False

Answers –

#1 – The CPU acts as the brain of your computer, processing commands.

#2 – False. You can add new hardware to a computer such as an updated video card.

Introduction to operating systems

Operating systems, OS, allow you to use files and devices. The OS control all the programs you are running, by sharing the CPU's time. They also provide help when installing new devices. Most OS now have a graphical user interface which allows more people to use computers. Let's look at how the OS works.
Every time you press a key or click your mouse example of how signals are processed.

Knowledge check

What does GUI stand for?
- o Generate User Input
- o Graphical User Interface
- o General User Interface
- o Graphical User Input

Operating systems require updating.
- o True
- o False

Answers –

#1 – The graphical user interface, or GUI, makes using an operating system such as Windows 8 easier.

#2 – True. Updates make sure your operating system is secure and running optimally.

Digital devices

Programs run computers, without programs commanding the computer on what to do and the input data to the program, the computer would just be a screen and components. The programs that run computers are like recipes. These programs have a set of variables, which are like ingredients, and statements, which are like directions.

Computers may run other programs, which are also known as applications, which are meant to do other tasks. There are many types of programs, from programs that are used to create files like a letter or brochure to making a presentation. There are also programs created for entertainment, such as playing games, watching movies, or communicating with others.

In order for a program to work, there must be input of data. Much like a car, the car must have the key inserted and turned for the car to do anything. Once the car is on, the output is being able to drive or listen to the radio. In a program, information must be inserted for tasks to be done. When the information is inserted, it will display on the screen. You will soon click on the next objective, that inputs data that gives you the output of being able to move on to the next objective.
Once data is in, the file can be saved so that it can be opened or viewed later on. If a program has inserted information and is closed without saving, all that information will be lost.

Knowledge check

Programs are sets of instructions.
- o True
- o False

Which of the following options can be called data?
- o Text
- o Numbers
- o Images
- o All of the above

Answers –

#1 – True. Programs are sets of instructions that tell a computer what to do.

#2 – Text, numbers, and images are all data that can be used or created by programs.

Introduction to networks

Many employees need to print or share documents in their workspace in order to fulfill their tasks. Buying a printer and memory stick for every single employee would be very expensive and time consuming. Workspaces normally have a network, a network consists of two or more computers that are linked in order to share resources, exchange files, or allow electronic communications. Networks allow all employees to share information while sitting at different desk, print to the same printer, and more.

Most networks, if not all, have the following components:
- A server
- A workstation
- Communication Channel

The size of the workplace matters because it will indicate whether you use a Local Area Network (LAN) or a Wide Area Network (WAN).
- LAN
- WAN

Server

A Server
The main computer or drive that provides the services to all the other computers. The server is in charge of allowing devices or computers to access certain items.

Workstation

Workstation
The actual device that is connected to the network.

Communication channel
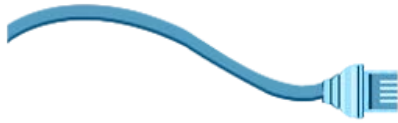
Communication channel
The path or link that actually connects computers or devices to transfer the information.

LAN

LAN
A small network that is confined to a small and limited area that is usually the size of a home or a small group of offices.

WAN

WAV
A very large network that can be connected throughout the whole world; via long wires, optical cables, or satellites. A great example of a WAN is the Internet.

Knowledge check

A network consist of two or more computers
- o True
- o False

This internet is an example of an LAN.
- o True
- o False

Answers –

#1 – True. A network has two or more computers.

#2 – False, A LAN is a local network.

Using the Internet

The Internet is a worldwide collection of public networks that are linked to each other for information exchange. The Internet started as a network to facilitate communication between government and educational departments in the United States. When other networks were connected to this network, it became a vast medium for exchanging information and ideas.

Today, the Internet connects many commercial, government, and educational networks, as well as individual computers, which share data.

The Internet offers a range of services to its users, such as file transfers between Internet users and electronic mail for sending messages. The World Wide Web (WWW), or the Web, is another service that the Internet provides. WWW includes specially formatted documents that are interlinked and stored on servers around the world.

You can use the Internet and its services to send messages to other Internet users, search and apply for jobs, watch movies, and buy and sell products. Many organizations use a special type of network to communicate and share information within the organization. Such a network is called an intranet. An intranet is similar to the WWW but is accessible only to authorized users of the organization. An intranet is much smaller than the Internet and can provide services such as document distribution, software distribution, access to databases, and training.

Knowledge check

Anyone who can connect to the Internet can also access any intranet they would like.
- o True
- o False

WWW stands for World With Web.
- o True
- o False

Answers –

#1 – False. Intranets are only accessible by authorized users of an organization that set up the intranet.

#2 – False. WWW stands for World Wide Web

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Identify the primary hardware components of a computer.
- Explain an operating system.
- Explain programs and data.

Computer Performance and Features

Consider a situation where you want to buy a television. There are many brands and models available in the market. You need to make a decision based on the features that you want and the price of the product. Similarly, there are different types of personal computers available in the market. They differ on the basis of features such as price, size, and speed. In addition, these factors affect the overall performance of the computer.

After you buy a television, you need to choose from different kinds of channels that are available. These channels may offer entertainment, sports, or news. You can choose to view a channel based on your preferences. In the same way, after you start using a computer, there are different types of programs available that help you perform different tasks. You can use a word processor to create documents or a spreadsheet to perform mathematical calculations. Communications programs can help you talk to people at distant locations. With entertainment programs, you can watch movies, listen to music, or play games.

The role of memory

When a computer performs a task, it stores data in its memory. Computer data is represented by 0's and 1's. Each 0 or 1 is a bit.

The role of memory can be accessed online at http://www.microsoft.com/digitalliteracy

Knowledge check

What is the smallest unit of memory?
- o   Byte
- o   Bit
- o   One letter or one number

What is the basic unit of computer memory?
- o   Byte
- o   Bit
- o   Megabyte
- o   Gigabyte

Answers –

#1 – A bit is the smallest unit of memory.

#2 – A byte, or 8 bits, is the basic measuring unit of computer memory.

Computer performance

There are a number of factors that affect your computer's performance.

Computer Performance can be accessed online at http://www.microsoft.com/digitalliteracy

Knowledge check

What determines the speed at which your computer performs tasks?
- o RAM
- o CPU
- o Hard Disk
- o Video Card

Hard Disks have no effect on computer speed.
- o True
- o False

Answer –

#1 – The CPU determines the speed at which tasks are performed.

#2 – False. Although hard drives do not affect the speed at which all tasks are performed, faster hard drives process data faster.

Productivity programs

There is software for just about every task or project you do in that requires writing, organizing, record keeping or creating images.

Word processing

Word processing programs are used to create and edit text documents. The come with built-in features that spell check and format your writings any way you choose. Some are extremely specialized such as software that aids with screen writing. Others are made to create high-end professional looking documents that combine text and graphics to produce such things as brochures or magazines.

Note taking

Note taking programs allow an easy way to take, collect and organize notes, recordings and other data. You can then store that information for quick reference in one convenient location.

Presentations

With a presentation program you can create slideshows and business proposals that are professional looking and easily edited or modified. You can even add audio/visual elements to make your presentations even better.

Spreadsheets

A spreadsheet program is used to manage charts and graphs. You can organize budgets, streamline complex calculations and manage data tables. Spreadsheets use cells in vertical and horizontal rows to custom create any chart you need.

Databases

A database is used to organize and store data in a searchable and manageable format. You can create data reports that can track sales, customer information and inventory.

Graphics

Graphics programs help you create pictures and drawings. The software allows you to edit what you draw or enhance photographs. These programs often offer digital art tools such as custom color options and various built-in pencils, paintbrushes and pen types.

Knowledge check

With type of program can you use to create slide shows?
- o Word Processing
- o Note Taking
- o Presentation
- o Graphics

What type of program can you use to store information for quick reference in one convenient location?
- o Spreadsheet
- o Graphics
- o Database
- o Note taking

Answers –

#1 – A presentation program helps you create slide shows, business proposals, and more.

#2 – Note taking programs provide an easy way to take, collect, and organize notes, recordings, and other data.

Minimum requirements for software

Before you buy and install a software application, be sure that your computer meets any stated minimum requirements for that application. For example, an application may require a minimum amount of RAM, free space on a hard drive, or processor speed.

Knowledge check

All software applications and programs will work on all computers.
- o True
- o False

Minimum software requirements usually include enough hard disk space, enough RAM and what?
- o Spreadsheet
- o Processor speed
- o CD or DVD player
- o None of the above

Answers –

#1 – False. Computers must meet the minimum requirements to run software applications.

#2 – Minimum software requirements usually consist of the right amount of RAM, hard disk space, and processor speed.

Communication programs

The Internet allows us to quickly and easily communicate with people all around the world.

Sending e-mail

Sending e-mail is the exchange of messages from one computer user to another computer user.

Instant messaging

Instant messaging programs allow you to send and receive messages immediately.

Social media

You can build or join social groups with common interests by using social media and social networking sites.

Sending email

Sending e-mail is the exchange of messages from one computer user to another computer user.

This exchange can be within a local area or from one part of the world to another.

You can send an e-mail message to, or receive an e-mail message from, one or several persons at any time of day.

To use e-mail you must have an Internet connection and an e-mail account.

You can obtain an Internet connection from an Internet service provider and use several services, such as Windows Live Mail, to create an e-mail account.

If you have an e-mail account, it will be similar to username@example.com, where the username is set by the account owner.

The "at" symbol and then example.com is the domain name.

A domain name identifies the name and type of organization with whom you have an e-mail account.

After you have an e-mail account, you need to know the
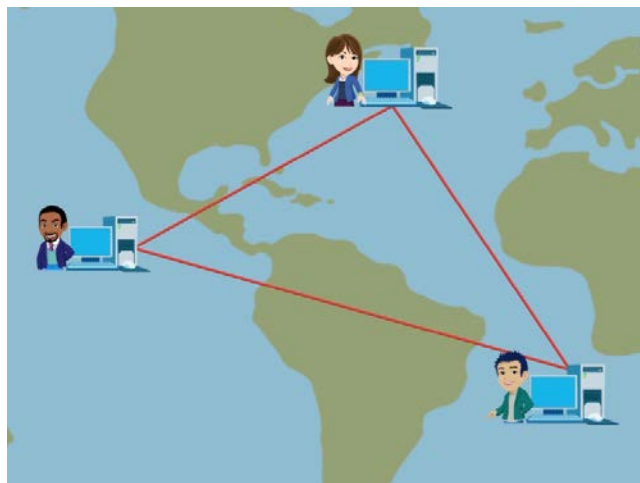
e-mail address of any person to whom you want to send an e-mail message.

You can send both text and pictures through e-mail; however, this can depend on various factors, such as the type of service you have or the kind of picture you are sending.

Sending and receiving e-mail messages is an instant way of communicating with anyone.

It only takes a few seconds to send and receive an e-mail message depending on the speed of your Internet connection.
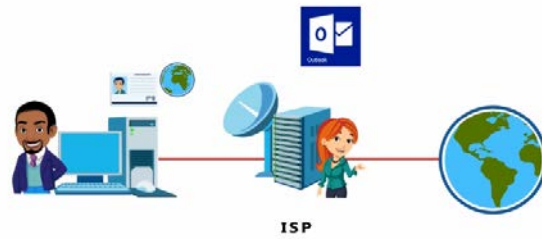
username@example.com

Instant messaging

Instant messaging programs allow you to send and receive messages immediately.

When you are chatting with someone over an instant messaging program,
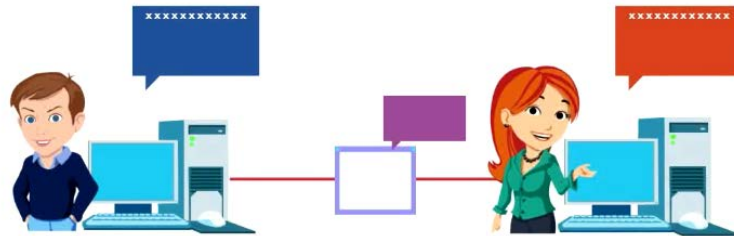
the person on the other end receives your messages immediately.

You can use these programs to communicate with several people at the same time.
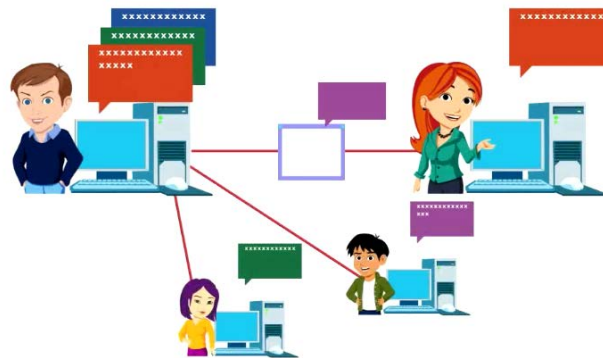
A commonly used communication program is Windows Skype.

You can share pictures and other files through Windows Skype.
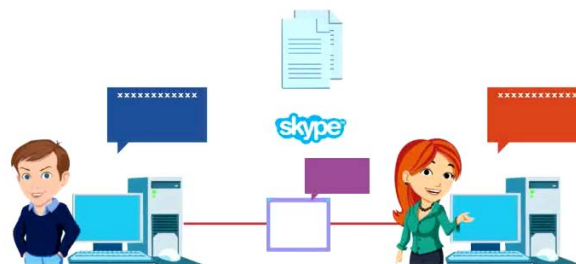
With some chat programs including Windows Skype you can talk to the person you are chatting with over a microphone.

This form of chat is called voice chat. You can also see the person you are talking to by using a device called a webcam.
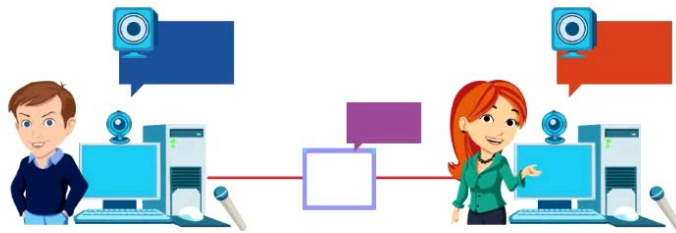
This form of chat is called video chat.

Social media

You can build or join social groups with common interests by using social networking sites.

To use a social networking site, you need create an account and a profile.

This profile contains all the information that you want to share with your contacts.

With social networking sites you can share ideas, share files, view photos, and hold discussions.
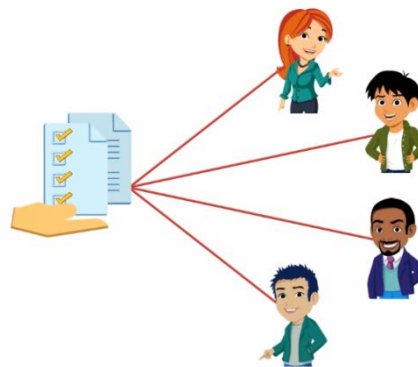
Windows Live allows you to view highlights of updates from your contacts on Outlook, Skype and other social networks.

Some of the social networking sites also allow you to post job openings and promote products.
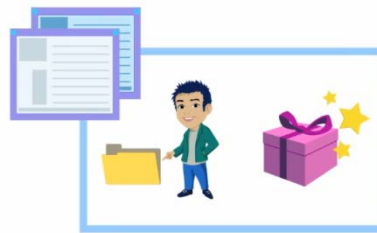
Knowledge check

Which communication program allows you to send and receive messages with attachments any time of day from anywhere around the world.
- o Email
- o Instant messaging
- o Social Media

You can do instant video chat from any computer.
- o True
- o False

Answers –

#1 – You can send an email message with an attachment at any time of day from any computer with an Internet connection.

#2 – False. You need to have a webcam and a microphone in addition to an instant messaging program to do video chat.

Educational and entertainment programs

Computers can give you access to educational and entertainment programs that may not be available in your community.

Educational programs

You may want to learn a new language or work toward a college degree but you don't have a school that offers the courses you want in your home town. With your computer you can find and download educational software that focuses on the lessons you want to study. Often these programs are designed to teach the course just like a school does, and offer audio/visual elements to make the learning experience more immersive or interactive. You can discover educational software that accommodates any age group or subject with a simple web search.

Entertainment programs

Entertainment options are nearly endless on your computer. Don't have a movie theater or arcade in your town? You can find the latest games and movies from your computer while sitting at home and download them to watch anytime. You can do the same with music and video games. With a PC or laptop, you can also watch or listen to your music or movies on a CD, DVD or Blu-ray disk, depending on what your computer is compatible with.

Knowledge check

You can learn a new language using educational programs on your computer.
- o True
- o False

There aren't a lot of options for entertainment on your computer.
- o True
- o False

Answers –

#1 – True. With your computer you can find and download educational software that focuses on the lessons you want to study including new languages.

#2 – False. Entertainment options are nearly endless on your computer.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Explain the role of memory.
- Explain the basics of computer performance.
- Compare the features of common computing devices.
- Describe the types of productivity programs and their uses.
- Describe the types of communications programs and their uses.
- Describe the uses of educational and entertainment programs.

Computer Operating Systems

An operating system performs four primary functions. It manages and controls the hardware connected to a computer. It helps other programs running on a computer to use the hardware. It helps you organize and manage files and folders on the computer. It provides a user interface that allows you to interact with the hardware, the operating system itself, and other programs.

Functions of an operating system

An operating system controls how programs work with each other and how they interact with the computer hardware. It also creates the file system that determines how your data is stored within a storage device.

Functions of an Operating System can be accessed online at <u>http://www.microsoft.com/digitalliteracy</u>

Knowledge check

The operating system controls how programs work with each other.
- o True
- o False

Adding a WiFi connection, managing hard drive space, and automatic backup are examples of what?

- o Operating Systems
- o Utilities
- o User Interface
- o Authentication

Answers –

#1 – True. The operating system controls how programs work with each other.

#2 –Operating systems provide utilities such as adding WiFi connections, managing hard drive space, and automatic backup.

Windows 8 interface

The interface for Windows 8 includes performance improvements and security enhancements.

Windows 8 Interface can be accessed online at http://www.microsoft.com/digitalliteracy.

Knowledge check

Which of the following can you do with the Live Tiles on the Windows 8 Start screen?
- o Change their order
- o Change their size
- o Remove them
- o All of the above

How do you display the Windows charms by using the mouse?
- o You can't access the charms with your mouse
- o Place your mouse in the upper-right or lower-right portion of your screen
- o Right-click

Answers –

#1 – You can change the order or size of the tiles on the Windows 8 Start screen, or remove them.

#2 – Point to the upper-right or lower-right corner of the screen to display the charms.

Windows 8 start screen

The Windows 8.1 start screen allows a new level of personalization. In the start screen, you will be able to customize to your own personal preferences. You can pin your favorite applications (apps), websites, friends, files, and folders, to your start screen. You can also change your background and color the way you want it to appear.

Personalize your desktop background	The Start screen allows you to customize it the way you prefer it. You can change the start screen with themes, background colors, accent colors, and motion backgrounds. To personalize your computer, you must first access the charms. You can find the charms by moving your cursor to the upper-right corner or the lower-right corner of the screen. The charms will display five different settings: Search, Share, Start, Devices, and Settings. Click Settings, and then click Personalize. You will now be able to see the Personalize tab that allows you to choose from different themes, background colors, and accent colors.
Adding apps	When installing an application, Microsoft's Windows 8.1 operating system will usually create a tile on the Start Screen. In some cases, you will need to add the tile yourself. To add a tile, you must be on the Windows 8 Start Screen, and then left-click the All Apps button located on the bottom right corner. The All Apps button will reveal a list of all installed apps. Move your cursor to the desire application that you would like to appear on the Start screen, and then right-click the appropriate application. A panel will appear on the bottom giving you different options. These different options can include: Pin to Start, Pin to taskbar, Open new window, Run as administrator, and Open file location. Click on the Pin to Start button. Now the selected application will be added to the Start Screen. After you have added an application, you will automatically slide back to the Start Screen to view the location of your newly listed application.
Arranging tiles	Now, you may want to arrange the tiles on your Start Screen. You can arrange them into specific categories depending on their purpose or however you want them to appear. To move a tile, you must click on a specific tile

and hold it. Now, you will be able to drag it to any place on the screen. To arrange multiple tiles into a group, you need to drag one tile to an open space. When the gray bar appears, release the title. You can start drag more tiles to the selected group. Another way to create a group is to right-click all the applications you want to move. After right-clicking the tiles you would like to move, you need to left-click one of the selected tiles and hold it moving towards the desired location.

Changing tile sizes

Another way to personalize your Start screen is by changing tile sizes located on the Start screen. Windows 8.1 offers four different sizes: small, medium, wide, and large. You can set your favorite or most used apps, websites, friends, files, and folders on your start screen. This way you can have easy access to them. Once you get all your desired applications in the right place on the Start Screen, you will be able to change the sizes of tiles. To resize a tile, you must right-click the application you want to resize. A panel will appear on the bottom of your screen giving you different options. These options may include Unpin from Start, Uninstall, Resize, and Turn live tile off. Click the Resize button. It will give you options of resizing your tiles to small, medium, wide, and large. Some of these options will not appear depending on the application.

Running multiple apps

You may want to run multiple applications at once. The Windows 8.1 allows you to use up to four applications, depending on your screen's resolution. While running these applications, you can snap them, which means that you can adjust the size of each application displayed on the screen. For an example, you can now have your email open, while watching a video, and completing a work task. This makes multitasking easier.

Changing your account picture

In the upper-right corner, you might have notice your account name and a default account picture. You can customize this to meet your personal information. To change your picture, right-click your name or default icon picture, it will give you options such as: Change account picture, Lock, Sign out, and Switch account. If there are multiple signed on registered accounts, you will get an

option to sign on. You will be redirected to the Your account menu. In here it will give you the option of connecting to your Microsoft account, changing your account picture, or you can create an account picture. Underneath the "Account picture" section, there should be an option called, Browse. If you have already a picture in your PC, you can locate it by using Browse. Once you have clicked Browse, it will automatically display your Pictures folder. Click the desired picture, or locate the picture you want inside another folder. After finding the picture that you would like to use, click Choose image. You can also create an account picture underneath the section called "Create an account picture". It gives you the option of Camera and People. The Camera option is used when there is a webcam installed onto your computer. You can create an account picture easily like this or you can even create a video to use instead of a photo. To do this, press the Camera option, you will be directed to your installed camera application. This will allow you to take pictures or record videos which will then be your default picture. The People option allows you to sync your picture and all other information from your Microsoft account.

Using the search charm

The Search charm has been provided in Windows 8.1. This will provide global search results powered in Bing to find the best answer for your query. It searches from your local PC by applications, settings, and files, and then it will give you searches from the World Wide Web if you are connected to the Internet. Now, you will be able to search from the Internet without having to open a browser. Microsoft 8.1 Blue version has added this handy feature to provide this to make getting things done easier and quicker. For an example, you can now search your favorite artist group, and the Search charm will provide information about them, discography, songs, album names, images, videos, and different websites that feature your search term. To access the Search charm, you can click the Windows key + F or move your cursor to the upper-right or lower-right corner. You will be able to view your charms, click on the Search charm.

Start button

One of the major features that Microsoft has brought back in Windows 8.1 was the Start button. You can quickly

access the Start screen by moving your cursor to the bottom-left corner of the screen in Windows 8.1 or by clicking the Windows icon located on your keyboard. When right-clicking the Start button, you will be able to see the PC settings. Windows 8.1 offers the updated Settings feature meaning that you will not have to go into your Control Panel. You have access to Programs and Features, Power Options, System, Task Manager, Computer Management, Search, Shut Down, and such. When you have a program open, clicking the Start button will allow you to go back to the Start screen.

Windows 8.1 gives a clean and easy way to access your applications from your Start screen. You may prefer to find these applications directly from your desktop or from a different Start screen. You change the Windows 8.1 Start screen by going to your desktop. To go to your desktop, press the application that says Desktop or you can locate it through Apps. Once you are on the desktop screen, right-click on the Windows 8.1 taskbar, and then choose Properties. Click on the Navigation tab, then under the Start screen section, you are able to view what options you can choose from. These options should include: Go to the desktop instead of Start when I sign in, Show my desktop background on Start, Always show Start on my main display when I press the Windows logo key, show the Apps view automatically when I go to Start, Search everywhere instead of just my apps when I search from the Apps view, and List desktop apps first in the Apps view when it's sorted by category. If you want to load to the Start screen, click on the box next to Go to the desktop instead of Start when I sign in and click Apply. When applied, every time you start your computer, you will be directed straight to the desktop view.

Knowledge check

What is the effect of right-clicking the Windows 8.1 Start button?
- o   Display the Start menu
- o   Display the Start screen
- o   Display the PC settings

How do you move tiles on the Windows 8 Start screen?
- o   Click and drag
- o   Swipe to display all apps and drag
- o   Use the control panel

Answers –

#1 – Right-clicking the Start button displays the PC settings.

#2 – To move a tile, you must click on a specific tile and hold it. Now, you will be able to drag it to any place on the screen.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Explain the common functions of an operating system.
- Identify the components of the Windows 7 interface.
- Explain the options that are available in the Start menu of Windows 7.
- Work with the Windows 7 interface within programs
- Manage files and folders in Windows Explorer.
- Perform basic file operations on Windows 7 operating system.

Career Opportunities

Using computers is no longer restricted to any specific field of work. They are extensively used everywhere, from households to large businesses. This widespread use of computers has created many career opportunities. Depending on your field of interest and degree of knowledge about computers, you can select a job that matches your skills.

Computers in everyday life

Computers are used in everyday life all around the world in cities and in remote areas and even in space.

Knowledge check

There aren't a lot of uses for computers in rural areas.
- o True
- o False

Computers are used in which of the following?
- o School
- o Work
- o Home
- o All of the above

Answers –

#1 – False. There are a lot of uses for computers in rural areas and with wireless Internet you can do even more.

#2 – Computers are used in every aspect of life today including at home, work and school.

Overview of career opportunities

Overview of Career Opportunities

Remember that computers play a major role daily life in many industries, schools, government offices, and shops. Computer literacy is a valuable skill whether you work in education, farming, business, health care, scientific research, government affairs, arts, entertainment, publishing and many other industries.

Information Worker

An information worker, known as a home and office user, does not particularly work with computers although they normally use a computer to enter and maintain records. An information worker can include a data entry operator, a warehouse manager, graphic designers, a travel agent, a human resource manager, or an entrepreneur.

Warehouse Manager

A warehouse manager keeps an account of the warehouse stocks, manages receipts, storage, training employees, and such. It is vital that a warehouse manager uses a computer to keep track of their company. The use of computers, word processors, and data processing systems has made the task easier. A warehouse manager has to dispatch and send a wide range of products. They must organize their inventory, stock shelves, transfer and export inventory. Without the use of a computer and a data-entry program, companies can be short on inventory and therefore can cost the company money.
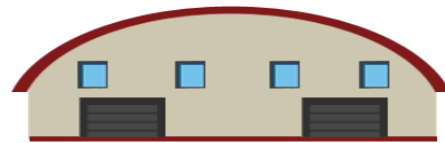
Data Entry Operator

A data entry operator can use the computer to create documents, enter data such as names, addresses, statistical information, business information, account numbers, or other data, handle word processors, and maintain records. These records can be analyzed by the computer to generate reports. The words "data entry" is broad and could be used for a position that types information into a computer program such as Microsoft's excel.

Travel Agents

Travel agents arrange their clients with travel arrangements, look up quotes about plane tickets, hotels and restaurants, collect payments for transportation and accommodations, and provide information about mode of transportation, finances, and flight schedules. To provide their clients with this information, they must use a computer. A travel agent can search up their client's accommodations, ticket time and price, information about a specific place; compute the costs of their trip, transportation, restaurants, and hotels, with a computer.

Graphic Designers

Graphic designers create designs and art that are visually-appealing to the target audiences. Graphic designers can work with drawn, painted, photographed, typography, or computer generated-images. Most graphical designers work with computers to complete their task. Normally, they develop creative ideas and concepts to create. Graphic designers usually create their pieces of work using a computer with an advance photo editing program. They can create a poster, a billboard, a business logo, a magazine ad, an album cover, a website, and more.   If you want to work closer with computers, you can seek various job opportunities in the field of computers, if you have relevant knowledge. Depending on

your skills, you can work as an information worker, an IT professional, or a software developer.

| Information Technology Professionals | Information Technology professionals, known as I.T. professional are specialist that apply their technical expertise to the implementation, monitoring, or maintenance of IT systems. IT professionals can specifically work in one area such as computer networking, database administration, system administration, security and information assurance, IT audit, database administration, web administration and more. |
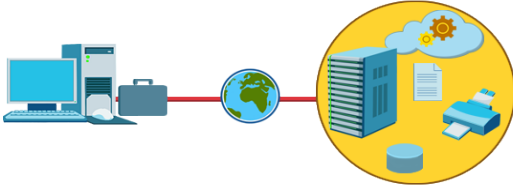
Information technology careers vary depending on your education level. You can get a certification, teach yourself, and get a degree in information and technology.

I.T. jobs are based specifically on the computer. Examples of IT professionals include network administrators, and database administrators.

Network Administrators

Network administrators are responsible for managing a local area network (LAN) or a wide area network (WAN) for an organization. Network administrators can organize, install, and support an organization's computer system by maintaining network security, installing new hardware and applications, monitoring software upgrades, enforcing licensing agreements, developing a storage management program, and insure routine backups. Network administrators make sure that the network is a reliable, secure, and efficient..

Database Administrators

A database is an organized collection of information on a computer. Database administrators are in charge of storing, organizing, and managing data. Database administrators make sure the database is operating efficiently, maintaining a secure successful database, fine-tuning, upgrading, and testing modifications if needed.
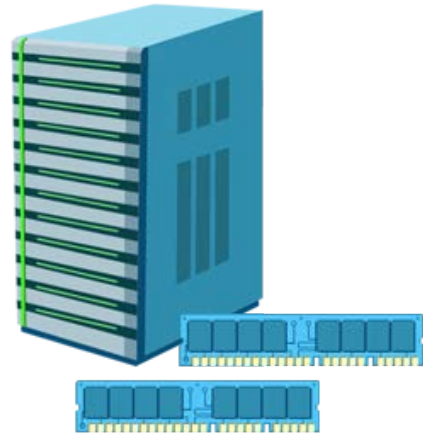
Bank Clerks

Bank clerks use computers to process transactions for their clients. Using computers, they provide information such as creating a new account, looking up account balance and interest rates, for their customers.

Entrepreneurs

In today's society, entrepreneurs use blogs and social network sites to promote their business and products. These networking tools give their businesses a wider reach and help them meet possible prospects.

Software Developers
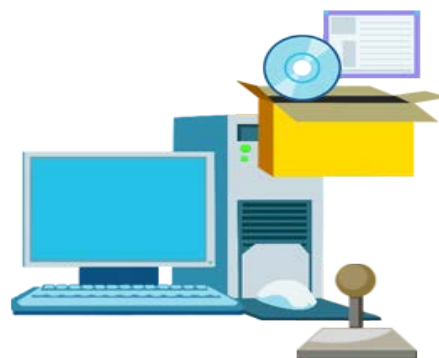
Software developers create applications, software, and, programs, that businesses and consumers use every day. They can range from game developers, mobile application developers, to making software for a company. They write programs, diagnose and fix problems, design, and organize projects. Every time you open an application on your phone or on your computer, this is the work of a software developer.

Knowledge check

Computer literacy opens up many new and exciting career opportunities.
- o True
- o False

Who writes programs, diagnoses and fixes problems, designs, and organizes projects?
- o IT workers
- o Software developers
- o Bank clerks
- o Travel agents

Answers –

#1 – True. Computer literacy opens up many new and exciting career opportunities.

#2 – Software developers write programs, diagnose and fix problems, design, and organize projects.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Describe how computers have become a central part of everyday rural and urban life.
- Identify the career opportunities available to a computer-literate person.

Glossary

A

Applications
A program or group of programs that are designed for users to accomplish a specific task. Word processors, Web browsers, games, database management programs, presentation programs are a few examples of applications.

Authentication
The process by which a computer system validates a user's logon information.

Authorization
The process by which a user can associate specific permissions to each username.

B

Bit
The smallest unit of information that a computer handles. A single bit can hold only one of two values, 0 or 1.

Byte
A combination of eight bits arranged in sequence.

C

Central Processing Unit (CPU)
The primary hardware device that interprets and runs the commands you give to the computer.

Chat Program
Programs that allow you to send and receive messages instantly. You can use a chat program to communicate with several people at the same time.

Commands
Instructions that you give to a computer for it to carry out an action. Commands are either typed by using a keyboard or are chosen from a menu.

Communication Channel

A path or a link that connects computers or peripheral devices, such as printers and disk drives, to transfer information.

Communication Programs

Programs that are used by computers to exchange messages and files with other people in a digital format.

CPU Speed

The rate at which the CPU can perform a task, such as moving data to and from RAM, or performing a numerical calculation.

D

Data

The plural for the Latin word datum, meaning an item of information.

Database Programs

Programs that are used to store and manage data in an organized way. You can also use these programs to sort or search for information stored in a database.

Desktop

An on-screen work area that uses a combination of menus and icons.

Desktop Computers

Computers are made up of individual components such as a monitor, a keyboard, a system unit, and a printer.

E

E-mail

The electronic form of the traditional postal mail. E-mail allows you to exchange messages and files over a network.

F

Folder
A container for programs and files in GUI interfaces.

G

Gigabyte
The unit of data measurement equal to 1,024 MB, which is approximately one billion bytes.

Graphical User Interface (GUI)
A user interface which displays images and pictures that allows a computer user to interact with a computer easily.

Graphics Programs
Programs that are used to create and edit drawings. You can also use these programs to enhance photographs.

H

Handheld Computer
Computers that are smaller than laptop computers and provide fewer features compared to than desktop computers or laptop computers. Handheld computers are used for specific everyday tasks, such as managing personal data.

Hardware
The physical components of a computer.

I

Icon
A small image displayed on the screen to represent an object.

Input Devices
A device used to provide information to a computer. A keyboard is an example of an input device.

Internet

A worldwide collection of public networks that are linked to each other for information exchange.

Internet Service Provider (ISP)

A company that provides Internet connectivity to individuals, businesses, and organizations.

Intranet

A special type of network used to communicate and share information within an organization.

K

Kilobyte

The unit of data measurement that is equal to 1,024 bytes.

L

Laptop Computers

Lightweight and portable personal computers. Laptop computers are also called notebook computers.

Local Area Network (LAN)

A network that connects devices within a limited area, such as a home or a small group of offices.

M

Megabyte

The unit of data measurement that is equal to 1,024 KB.

Menu

A list of options from which a user can select an option to perform a desired action, such as choosing a command or applying a particular format to part of a document. Many programs, especially those that offer a graphical interface, use menus as a means to provide the user with an easy-to-use alternative to memorizing program commands and their appropriate usage.

N

Network
A group of computers that are connected to share resources and exchange information.

Network Drives
A disk drive that is shared with other computers on a network..

Notification Area
The area located on the right side of the taskbar when the taskbar is located at the bottom of a screen. The notification area displays the time, a volume icon, and icons of some programs that are running on a computer.

O

Microsoft Office 365
A Microsoft group of hosted productivity, communications, and collaboration services including the Office desktop suite, Exchange Online, SharePoint Online, and Lync Online.

Microsoft Online Services
Microsoft hosted solutions for businesses with advanced IT needs. The suite includes Microsoft Exchange Online, Microsoft SharePoint Online, Microsoft Office Communications Online, Microsoft Forefront, and Lync Online

On-premises software
Software installed and run on computers on the premises of the person or organization using the software, rather than at a remote datacenter via cloud computing.

OpenStack
An IaaS cloud computing project by Rackspace Cloud and NASA, joined by more than 120 companies such as Citrix Systems, Dell, AMD, Intel, Linus, HP, and Cisco, to provide free open source software released under the terms of the Apache License.

Oracle Corporation
An enterprise software company that develops, manufactures, markets and distributes database technology software.

P

Private Cloud
An internal environment optimized for performance and cost that provides self-service access to IT resources on demand and is deployed inside a customer's datacenter and is powered by packaged server products, providing compatibility with existing applications.

Public Cloud
Offers customers the ability to deploy and consume services using a highly scalable platform providing pay-as-you-go flexibility.

S

Server
The main computer on a network that provides services to other computers on the network. A server decides which computers are allowed to access the hardware and software on the network.

Setup Wizard
A guide that takes the user through each step of a particular task, such installing hardware or software.

Software
A sequence of instructions that a computer can execute. It is also referred to as programs.

Spreadsheet Programs
Programs that are used to create budgets, manage accounts, perform mathematical calculations, and convert numerical data into charts and graphs.

Storage Devices
Devices that are used to store data. A hard disk is an example of a storage device.

System Unit

The box that holds the processor, motherboard, disk drives, power supply, and the expansion bus.

T

Tablet Computer

Computers that allow you to write directly on the screen by using a pen called stylus.

Taskbar

A rectangular bar that is usually located at the bottom of the computer screen. You can use the taskbar to select a program running on your computer.

Terabyte

The unit of data measurement that is equal to 1,024 GB, approximately equal to trillion bytes.

The Web

Also known as the World Wide Web (WWW), is a collection of information that is accessible on the Internet. This information is arranged logically and stored on computers known as Web servers.

W

Wallpaper

A pattern or picture on the screen background that you can choose.

Wide Area Network (WAN)

A network that connects devices in geographically separated areas.

Window

A rectangular area on the monitor that displays a program. Each program has its own window.

Word-processing Programs

Programs that are used to create and modify text-based documents.

Workstation

A computer connected to a network. You use a workstation to access the hardware and software on a network.

The Internet and the World Wide Web

The Internet and the World Wide Web

Microsoft

Welcome

Description

Productivity *programs* are tools that you can use to create documents, presentations, tables, charts, and graphs. This course explores the most common *productivity software* applications used in business, in education, and at home. In this course, you will learn the features of various productivity programs such as word processing software, spreadsheets, *presentation software*, and databases. You will also learn how to select the right software to cater to your needs.

Benefits

Productivity programs are used in business for schedules, résumés, business plans, and more. These programs are widely known and used on a daily basis. In school, students are using these applications to write essays, create presentations, and organize their schedule. High Schools and Colleges have started demanding a typed final essay for a grade; forming these applications into a vital part of education. Others may use the applications at home for any other tasks, making these applications a universal tool.

The Internet and the World Wide Web

The Internet is an international computer network that allows you to go to websites for certain objectives, such as:

- Email
- Information
- Education
- Entertainment
- Communication
- And more

This lesson will help you identify various uses of the Internet, such as searching for information, sending letters and cards, playing games, reading the latest news, or even buying and selling products. You will also learn about the components required to connect to the Internet and the different types of Internet connections. In addition, you will learn about the term bandwidth and the bandwidth provided by different types of Internet connections

Imagine a scenario where you want to exchange information between a computer on your network and a computer on another network. For this exchange, you can use the Internet to connect both the networks. The Internet is a collection of networks that are connected together to exchange information. Today, the Internet is being used worldwide.

A new trend on the Internet is cloud services, which allows users to store data or run programs on remote machines and access that data on any computer. A cloud service is replicated to several distribution centers across the globe. This replication allows other machines to resume activity of a cloud service if the active center experiences an interruption in service or loses connection.

Uses of the Internet

You can do the following in the Internet:

- Perform banking transactions
- Communicate with people all around the world
- Obtain up-to-date news on world events
- Search for information on any topic
- Study any course of your choice and even take exams
- Access entertainment including music, games, TV, movies, and pictures
- Buy and sell products

Knowledge check

You can use the Internet to which of the following?

- o   Transfer money to pay a bill
- o   Video Chat with a friend in a different country
- o   Listen to a new music album
- o   All of the above

You can listen to music or watch videos saved on your computer but not from the Internet.

- o   True
- o   False

Answers –

#1 – You can do all of the things listed above and more with and Internet connection.

#2 – False. You can listen to music or watch video files saved on your computer and also stream music and video files directly from the Internet.

Identify the requirements for an Internet connection

Connecting to the Internet requires specific hardware and services. You need to have a computer and a connection device such as a modem. Service is provided by an Internet service provider (ISP). Let's look at what is required to connect to the Internet.

To connect to the Internet, you need a computing device, a connection device, and an Internet Service Provider, or ISP.

The computing device can be a personal computer, a portable computer, a tablet computer,

or even a mobile device, such as a cell phone, a smart phone, or a handheld device

To connect your computer to the Internet, you need a connection device, such as a modem.

A modem converts digital information into analog information and transmits it over a phone line.

You can use cables to connect to the Internet.

Such a connection is called a physical connection.
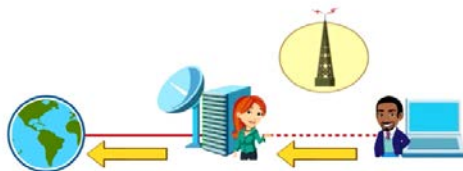
Another device you need for wireless connectivity is an access point (AP).

This is used to connect a wireless computing device to a wired network.

This wired network may belong to an ISP.

You can then connect to the Internet through the ISP.

The wireless device such as a USB modem provides access to the Internet via 4G, 3G, or general packet radio service (GPRS), or circuit switched data (CSD).

Knowledge check

You must have an Internet Service Provider (ISP) to connect to the Internet

- o True
- o False

WiFi connections only permit one connection at a time.

- o True
- o False

Answers –

#1 – ISP stands for Internet Service Provider

#2 – False. WiFi can support many connections at the same time. You can also have different devices such as a computer, phone, TV, and tabled connected at the same time.

Identify the Features of two types of Internet connections

There are two common ways to connect to the Internet; dial up and dedicated connections. A dial up connection is less expensive but can be very slow. Dedicated connections are very fast but require a certain infrastructure that may not exist in rural areas. Please continue to view video demonstrations of the two types of Internet connections.

Dedicated connection video

A dedicated Internet connection keeps the computer connected to the Internet all the time.
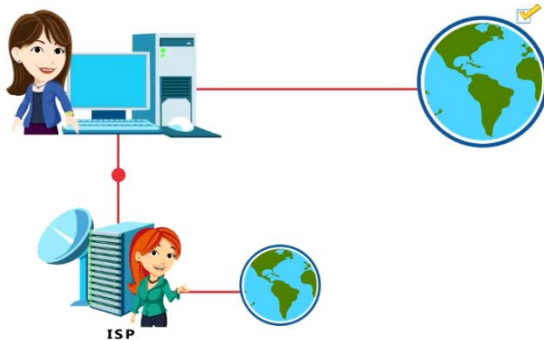
In a dedicated Internet connection, you do not need to request your ISP for a connection every time you want to connect to the Internet.
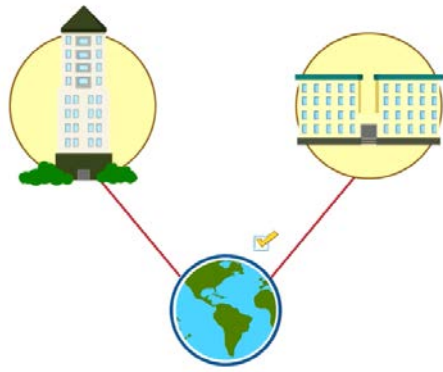
Many large organizations and universities use dedicated Internet connections because these organizations and universities need to use the Internet extensively.

Dial-up connection video
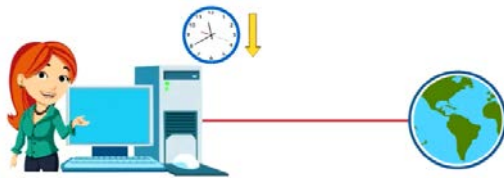
This worker only wants to be connected to the Internet for only a short time, and therefore uses a dial-up Internet connection.
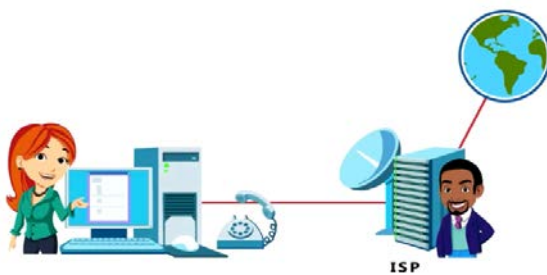
In a dial-up connection, you need to connect the ISP every time you want to connect to the Internet.
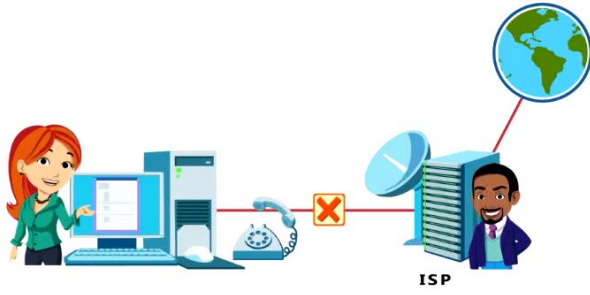
You can disconnect from the Internet after completing your work.

Knowledge check

If you live in a remote area, what type of connection is most likely available to connect to the Internet?

- o Dial-Up
- o Dedicated

What type of Internet connection do businesses use to stay constantly connected to the Internet?

- o Dial-Up
- o Dedicated

Answers –

#1 – Dedicated Internet connections are faster than dial-up.

#2 – A dedicated Internet connection is always connected and does not require users to sign in or sign off.

Bandwidth and Internet connections

Bandwidth is the amount of data that can be transmitted over a network in a certain amount of time and is measured in Mbit/s (megabits per second), Kbit/s (kilobits per second), or bit/s (bits per second). If the bandwidth of a network is 1 Mbit/s, then 1 megabit of data can be transmitted over that network in 1 second. The actual rate of transfer of data will however vary depending on a number of factors such as the equipment of the ISP, the type of Internet connection, and the number of people using the same connection at a single point in time.

Bandwidth and Internet Connections simulation can be accessed online at
http://www.microsoft.com/digitalliteracy

Knowledge check

Megabytes are a common measurement of Internet speed.

- o True
- o False

Cable modems require users to dial in for an Internet connection.

- o True
- o False

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Explain basic concepts related to the Internet
- Explain two common ways to connect to the Internet
- Describe different types of dedicated Internet connections
- Identify what is required to connect to the Internet

The World Wide Web

In this lesson, you will be able to learn about the benefits of the World Wide Web. You can use the World Wide Web for many services. You will be able to learn the basic features of Internet explorer, a browser, which you can use to access the World Wide Web from. You will also learn how to perform online transactions, which allows you to buy or sell merchandise, order tickets, pay your bills, and perform banking transactions.

Web components

The Internet is a series of connected networks. To access information on the Internet you need to know how and where to access the specific information or network. We use Internet Protocol (IP) addresses to label and recognize websites and Internet users. Web browsers access these IP addresses to open web pages or networks. Continue to the next simulation to see how IP addresses work.

How the Internet works simulation can be accessed online at http://www.microsoft.com/digitalliteracy

Knowledge check

Every Website on the Internet has a unique IP address.

- o True
- o False

Web browsers read the information sent from a website.

- o True
- o False

Answers –

#1 – True. Websites are located and opened by browsers using a unique IP address.

#2 – True. Browsers can display HTML, CSS, XML, and other files that websites use.

The basic features of Internet Explorer 11

You can use the Internet to avail a range of services, such as transferring files between Internet users, sending messages through electronic mail, and browsing for recent news and information in Web sites. You can also use the Internet and its services to search and apply for jobs, watch movies, and buy and sell products. In this simulation, you will learn about the various features of Internet Explorer 11.
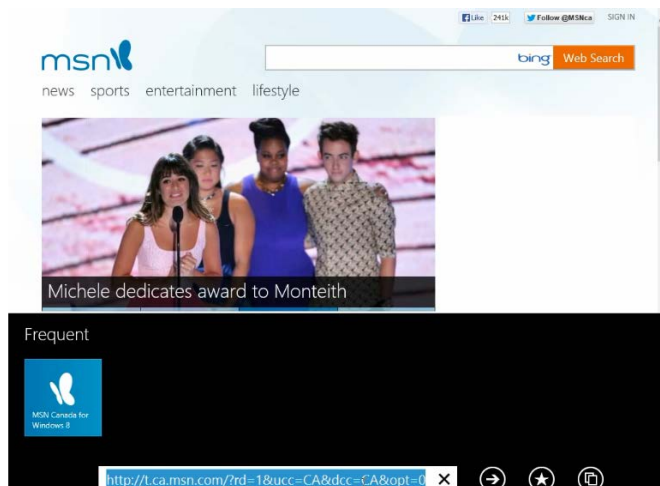
Click the URL in the navigation bar at the bottom of the window.

To visit a website type in the URL of the webpage you want to view and press enter.
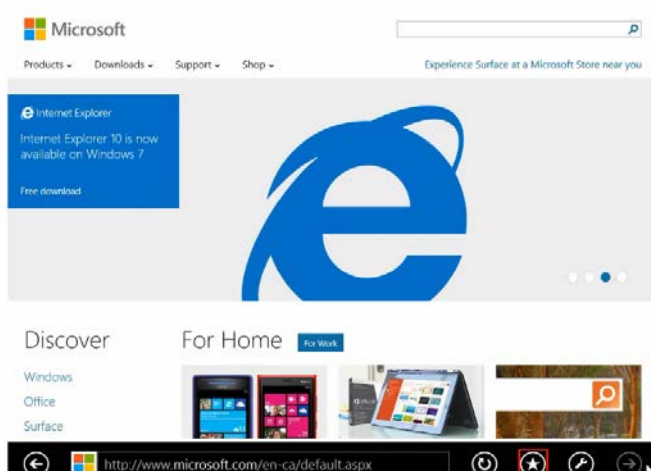
To add a webpage to your favorites list, click the "Favorites" button on the navigation bar to open the favorites list.
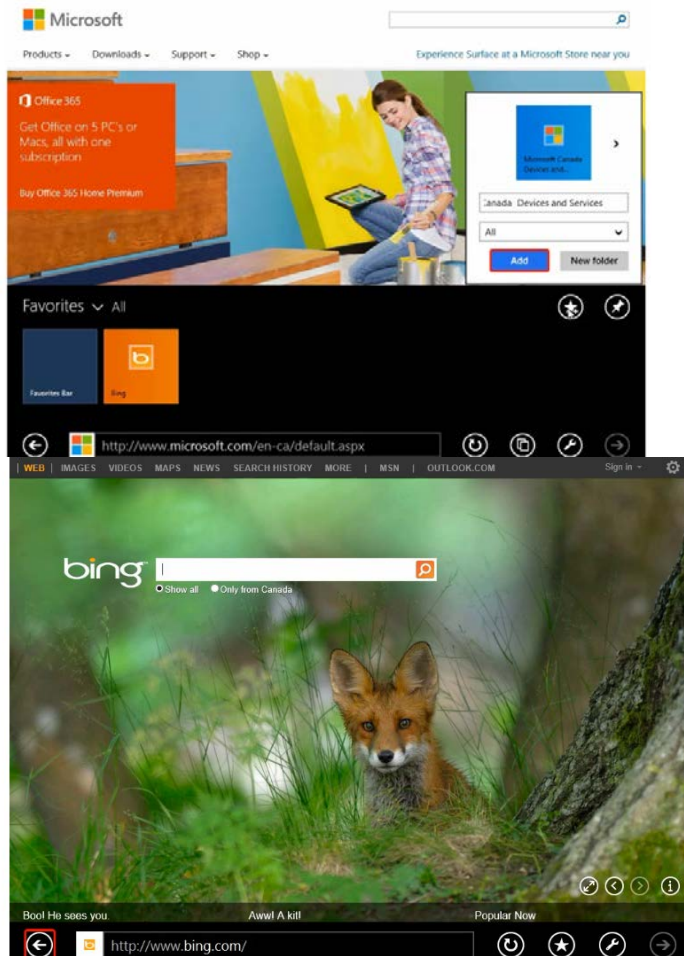
Click the "Add to favorites" button,

Then click "Add" to finish adding the webpage to your favorites.

You can go back to the page you were previously on by clicking the "Back" button on the navigation bar.
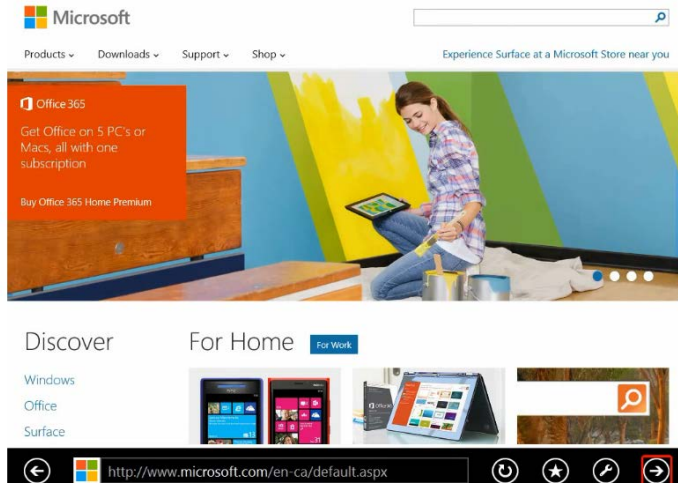
After going back to the previous page, you can go forward again by clicking the "Forward" button.

Right click over a blank area of the current page to open the tabs menu and then click the "New tab" button to open a new tab.

You can then type in the URL for the website you wish to view.

You can quickly switch between tabs by clicking on them in the tabs menu.

You can close tabs by clicking the "X" button on the tab you wish to close.
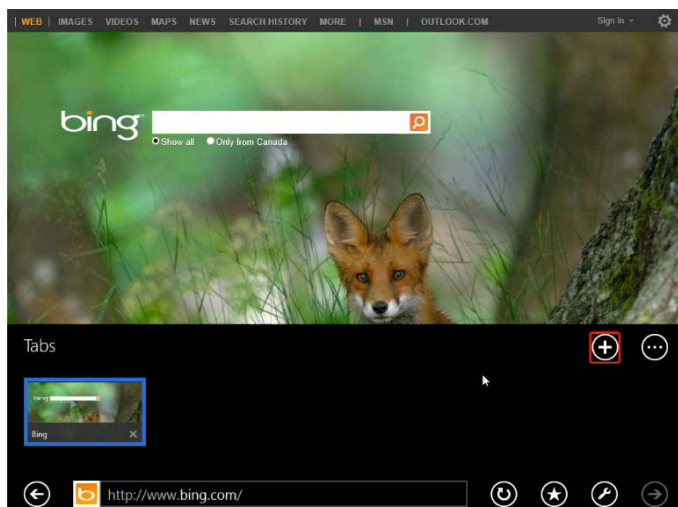
Knowledge check

You can save as many favorite websites as you wish.

- o True
- o False

You can only have one web page open at any one time.

- o True
- o False

Answers –

#1 – True. There is no limit to the number of favorite websites you can save.

#2 – False. You can have a number of different sites open in browser tabs or even different browsers.

Search for reliable information on the Web

The Internet has a wealth of information, however finding what you are looking for can be hard without the right tools. Search engines like Microsoft's Bing helps users find information. In this lesson we will learn how to use a search engine so that you can find information quickly.
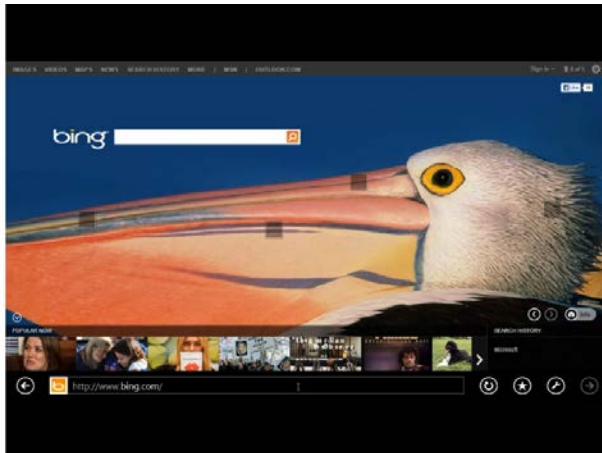
In order to access information on the Internet, we can use a search engine like Microsoft's Bing.
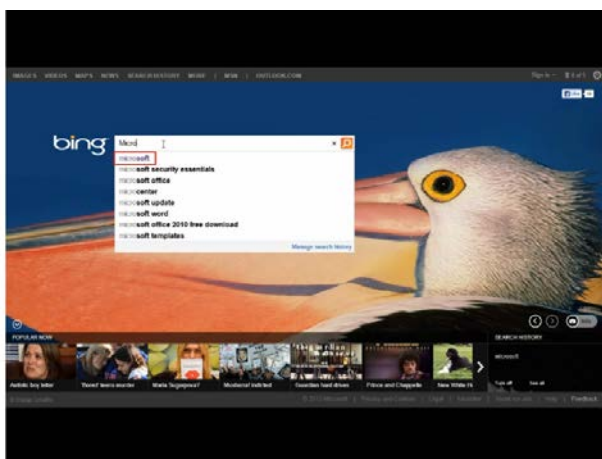
To search with Bing type what you are looking for in the search box.

Related suggestions will appear below the search box on a results page.
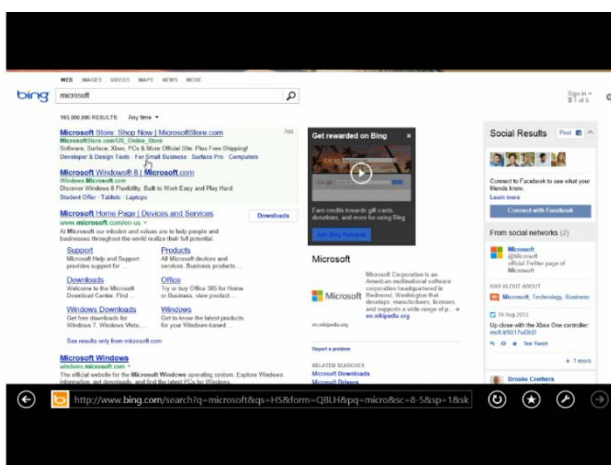
The results page will show you how many results match your keyword or keywords

and will also show you related searches for your keyword or keywords.
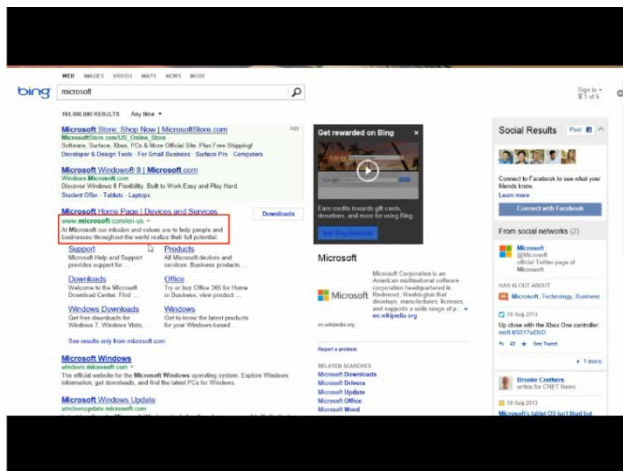
Each result contains a brief description and a link to the website.
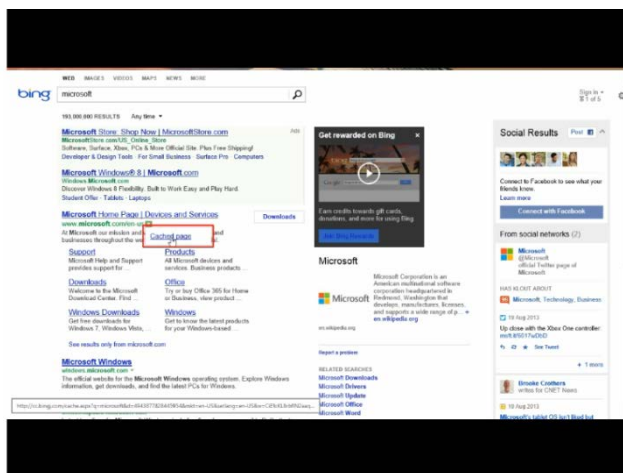
If the website is not available, the search engine may have a saved version of the that website.

This 'out of date' version can be viewed by selecting the 'Cached Page' command.
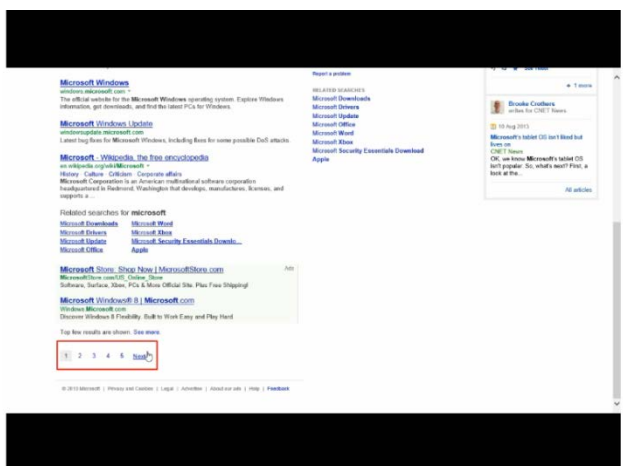
Your search may result in thousands of webpages.

Each result page only contains a few results, to see the rest you can select the links at the bottom of the page.

Knowledge check

Search engines make it harder to find information on the Internet.

- o True
- o False

You can search for specific types of information like images and maps.

- o True
- o False

Answers –

#1 – Search engines help you find websites and other content by using keywords and phrases.

#2 – True. You can search for images, maps, videos, news and more.

How to perform transactions over the web

Businesses have web sites on the Internet that allow you to perform online transactions. These types of transactions include buying or selling merchandise, ordering tickets to a location or event, and performing banking transactions. Let's look at what is involved with online transactions.

An online transaction refers to a business transaction that is made over electronic systems, such as the Internet.
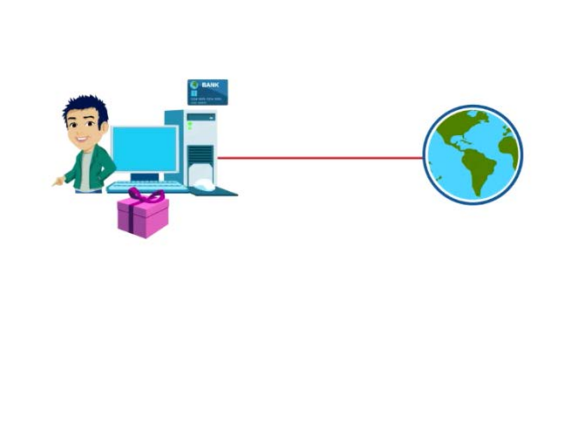
You can buy and sell items and gifts online with a debit or credit card.

ATM transactions such as deposits, withdrawals, inquiries, and transfers are some the examples of online transactions.

An online transaction usually requires you to provide personal information such as user name, password, address, and bank account or credit card details.

Because there is a great deal of personal information exchanged in an online transaction,
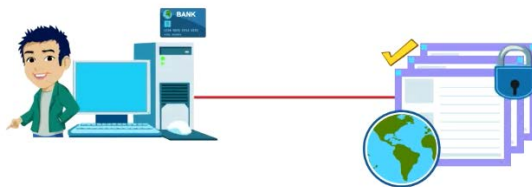
you must ensure that the transactions are done in a secure manner and only on credible Web sites.

How to perform transaction over the web simulation can be accessed online at
http://www.microsoft.com/digitalliteracy.

Knowledge check

You must be connected to the Internet to perform online transactions.

- o True
- o False

Online transactions should only be performed on secure and trusted websites.

- o True
- o False

Answers –

#1 – True. You must have an online connection to the website you want to do a transaction with.

#2 – True. If you do a transaction on an unsecure website you risk having your information stolen.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Explain the components of the web
- Explain how web addresses work
- Describe how to connect to the Internet
- Explore web sites by using a browser (Note: examples from Internet Explorer)
- Save your favorite web sites
- Search for information on the Web (Note: examples from Bing.com)
- Understand how to perform transactions over the web

Using Email
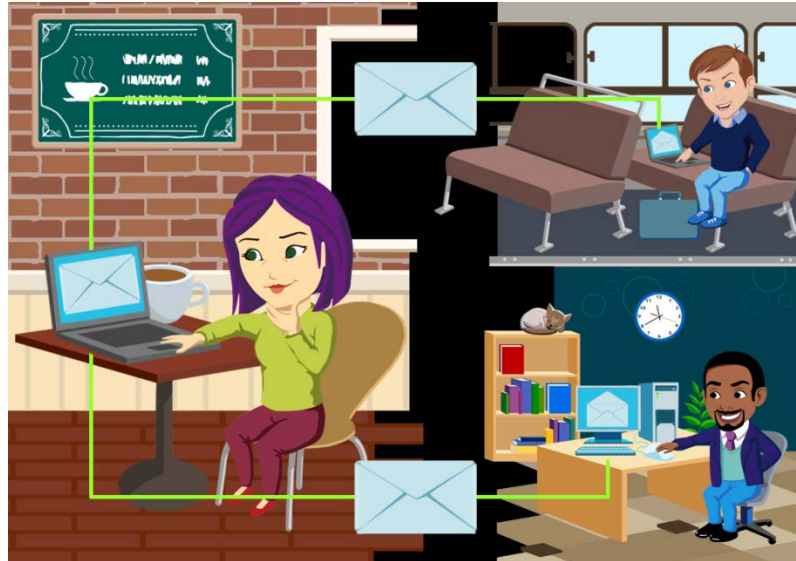
Electronic mail or email is similar to traditional postal service mail. Instead of a pen and a paper, you use a software program to write your message, and a network server takes the place of the postal employee in delivering a message to its recipient. A message can travel halfway around the world in seconds, and can have the following content:

- Text
- Pictures
- Data Files
- Audio
- Video Clips
- And more

In this lesson, you will learn about creating and managing email messages. You will also learn about various email etiquettes.

How email works

Electronic mail, commonly known as email, allows you to communicate with friends and family through the Internet. Email is a great way to communicate and share information quickly. In this lesson we will learn about email.

The Working with Tables and Pictures simulation can be accessed online at
http://www.microsoft.com/digitalliteracy.

Knowledge check

Several users can have the same email identifier on the same domain.

- o True
- o False

It is recommended that you always add a subject line when writing an email.

- o True
- o False

Answers –

#1 – False. Each user needs a unique address on the same domain.

#2 – True. Emails that do not have a subject line can be marked as spam and look suspicious to the recipient.

Create an email address

To use email you need to register with an email service. In this lesson we will show you how to create a Hotmail account thru Microsoft Live.

Creating an email is as easy as 1, 2, 3. By using your email account, you can send emails to multiple email clients all around the world.

Sending an email is a lot like sending a text message on a phone. You need the other person's phone number; where in an email, you need their email domain. Once the recipient has been chosen and the subject for the email has been written, we move from the header to the body. The body of the email is much like the actual text sent in a text messages. A text message can hold a picture or video along with text, much like an email. Except, an email can hold much more; it can include files such as Word documents, PowerPoint documents, and more.

First go to www.live.com by typing it into Internet Explorer.
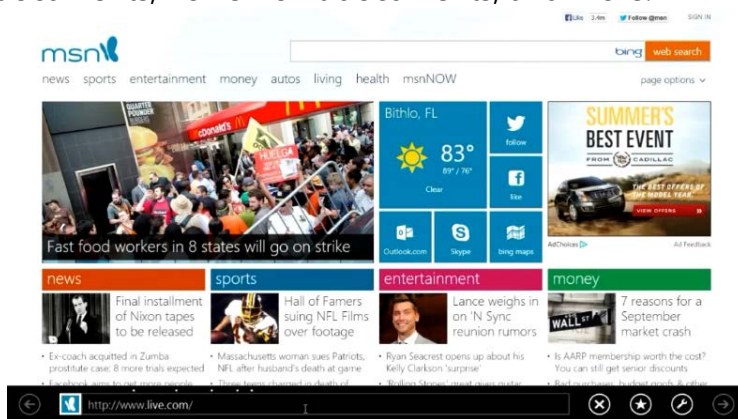
First time users need to select the "Sign up now" link

Microsoft asks for your name,

birthdate

and gender.

Your Microsoft account name needs to unique, try some variations if the first choice you want is not available.

Passwords must have at least 8 characters and contain at least two of the following:

uppercase letters, lowercase letters, numbers, and symbols.

Microsoft needs two ways to contact you in case you need to reset your account password.

Microsoft will store a security question just in case you do need to reset your account password.

Make sure all the required fields are filled in depending on your country or region.

Finally, captchas are used to make sure accounts are created by a human and not another program.

All that is left is to accept the service agreement.
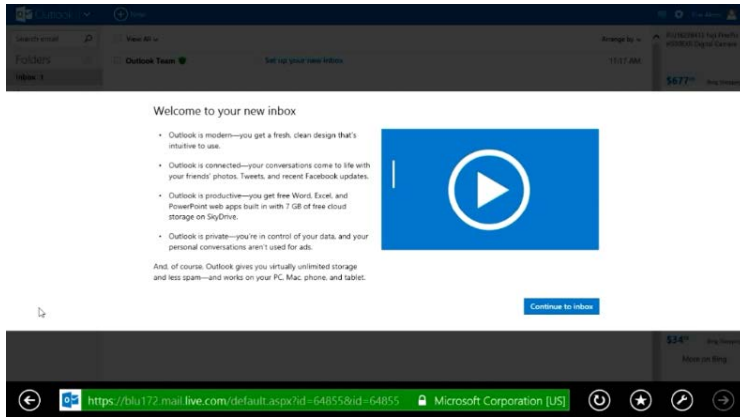
You will be presented with a video when you login the first time.

Take the tour and learn how to use your email account.

Knowledge check

There are no rules for passwords.

- o True
- o False

You can share a login name with another person.

- o True
- o False

Answer –

#1 – False. There are rules for a password to help make it hard to copy and be stolen

#2 – False. Each person has a different login name so everyone has a unique name and only that person receives mail sent to that name.

Identify email etiquette

It is always best to use proper etiquette when writing email. How you write depends greatly on whether you are writing an email for business or friends and family. In this lesson, we will provides some tips for improving your email exchanges.

Identify Email Etiquette simulation can be accessed online at http://www.microsoft.com/digitalliteracy.

Knowledge check

Business emails should have a signature with contact information.

- o True
- o False

You should always run spell check on email.

- o True
- o False

Answers –

#1 – True. The signature provides the business email recipient the contact information to contact you if needed.

#2 – True. Spell check will point out any misspelled words or improper grammar.

Manage email messages

As you start to send and receive emails it becomes important to manage your messages and the folders that hold the email messages. Continue to the next page to launch a simulation that will walk you through the common steps to manage your email messages.

Manage email messages simulation can be accessed online at http://www.microsoft.com/digitalliteracy.

Knowledge check

Which of the following can you use to organize your email messages with the Windows 8 mail app?

- o Rolodex
- o Folders
- o Search
- o None of the above

What does the Windows 8 mail app provide you to mark emails as important?

- o Nothing
- o Folders
- o Flag
- o Search

Answers –

#1 – The Windows 8 mail app allows you to use folders to organize your email messages.

#2 – The Windows 8 mail app lets you mark important messages with flags.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Explain how email works
- Create an email address
- Write and send email messages
- Manage email messages
- Identify correct email etiquette

Other Methods to Communicate on the Internet

There are many methods to communicate on the Internet. You can communicate online with an instant messenger program, on forums, by using a social media site, in chat rooms, on blogs, and in newsgroups.
Many people use an instant messenger program like Microsoft's Skype to send and receive instant messages to anyone with an Internet connection.

In this lesson you will learn how to use a number of different methods to communicate on the Internet.

Features of online communities

The Internet is full of online communities. An online community is a gathering of people who share a similar interest. A community shared interest might be a favorite band, a common hobby, or a local sports team. In this lesson we will look at the many type of communities the Internet has to offer.

Features of online communities simulation can be accessed online at
http://www.microsoft.com/digitalliteracy.

Knowledge check

Blogs is short for what?

- o Newsgroups
- o Chats
- o Web Logs

Chat rooms are similar to what?

- o Email
- o Instant Messaging
- o Blogs

Answers –

#1 – Web log is commonly shortened to blog.

#2 – Instant messaging is similar to a chat room because of the real time ability to communicate.

Instant messaging and web-cam video communication

Instant messaging, IM, lets you communicate with friends and family instantly. IM software also lets you share files and images with contacts. Some IM software like Microsoft's Skype lets you also talk and see your contacts if microphones and cameras are supported. In this lesson we will learn how to use Microsoft's Skype.

Microsoft Skype
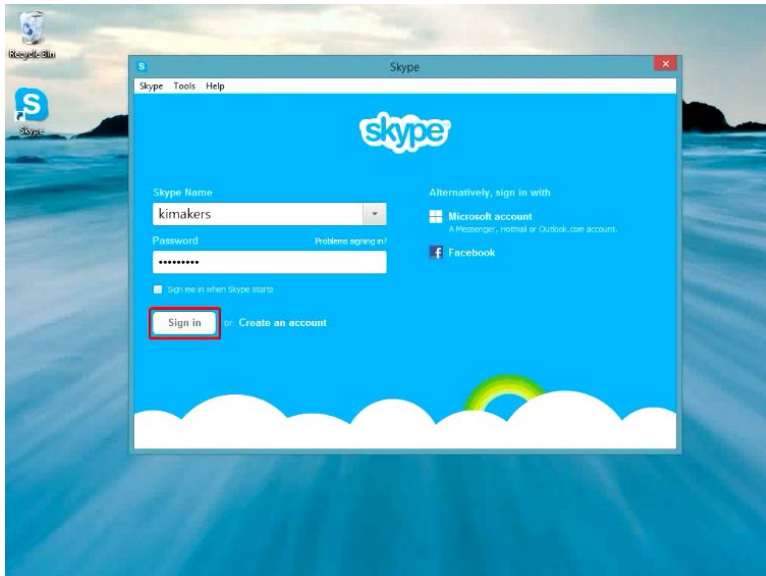
In this lesson we will use Microsoft's Skype.

Once you install the software you will need to create an account and sign in.
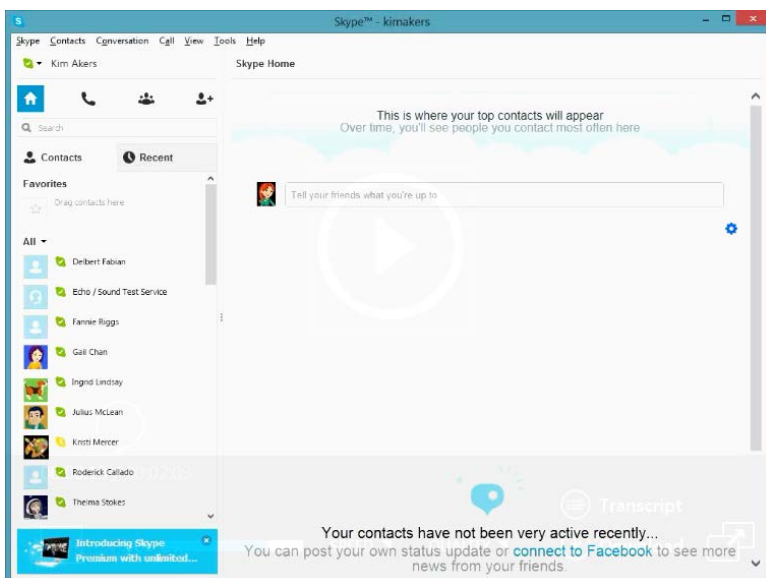
When you first open Skype it will be in full view.

This mode shows all your contacts and news feeds from social websites.
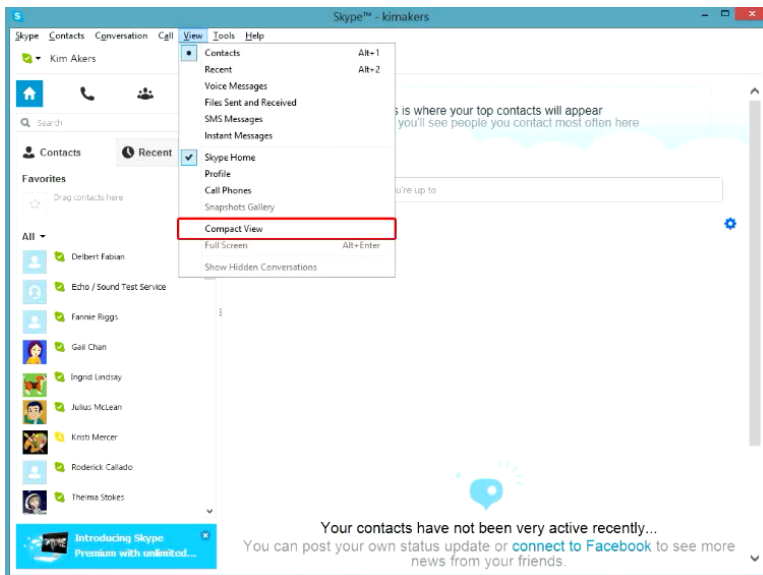
If you are only interested in seeing which contacts are online change to compact View from the View menu.

Compact view will separate your contacts from the news feed so you can close the news window.
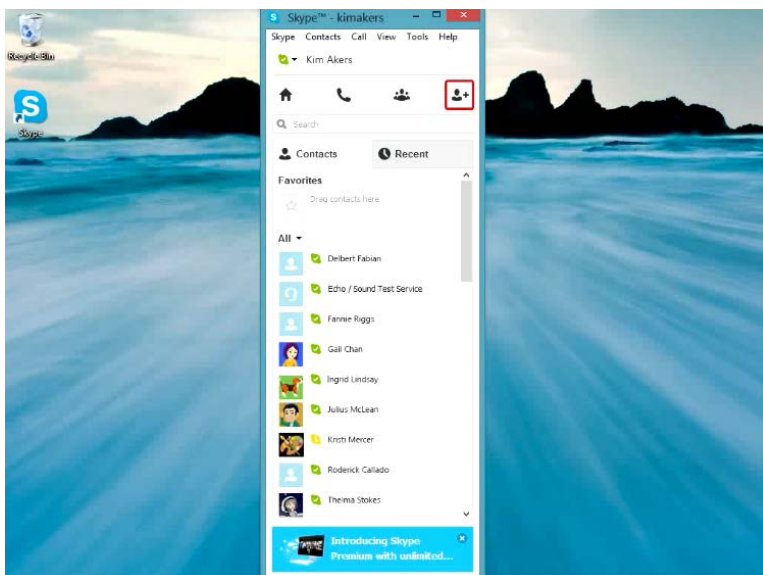
Contacts can be added by selecting the 'Add a Contact' command on the right

and typing a name in the text box below.

Once your contact confirms your invitation, you can communicate with them.
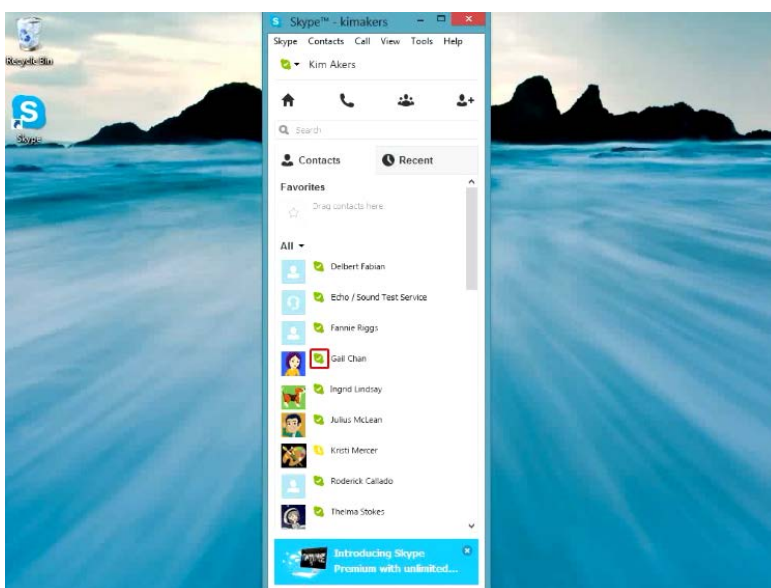
The icon next to the contacts name indicates if the contact is online and available.
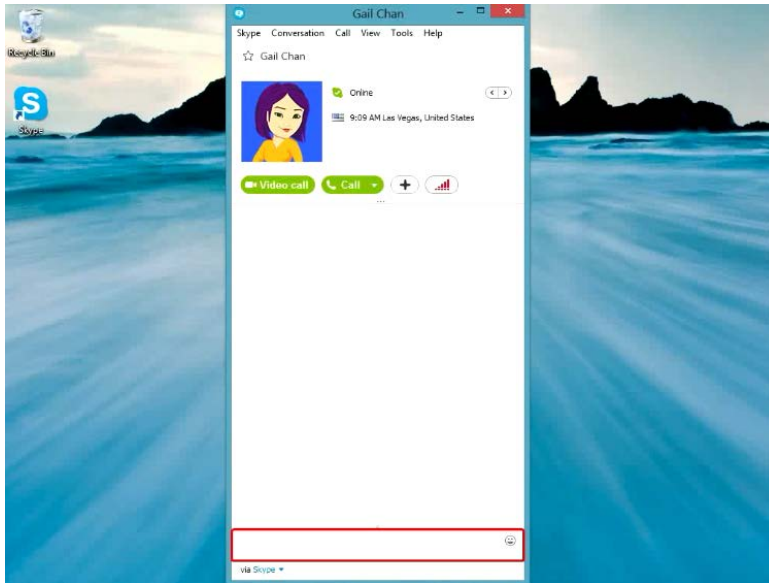
To send a text message double click on the contact

and start typing in the text area.
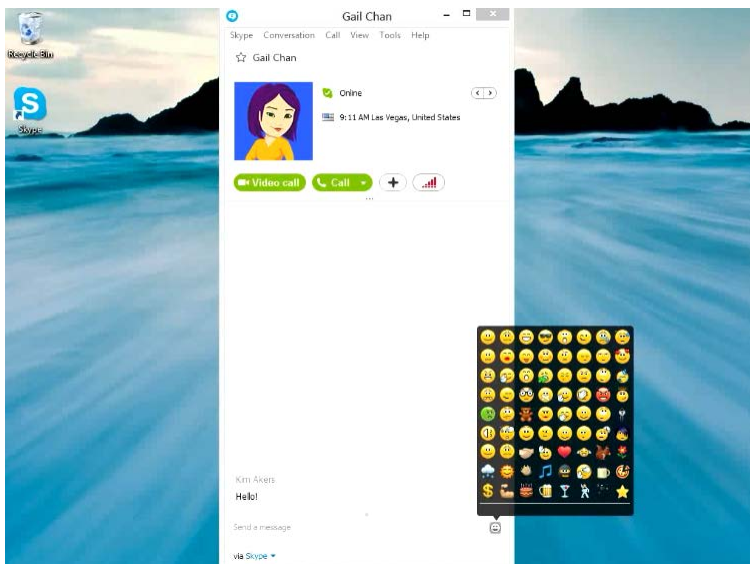
Text messages can be enhanced by adding emoticons from the selection on the right hand side.
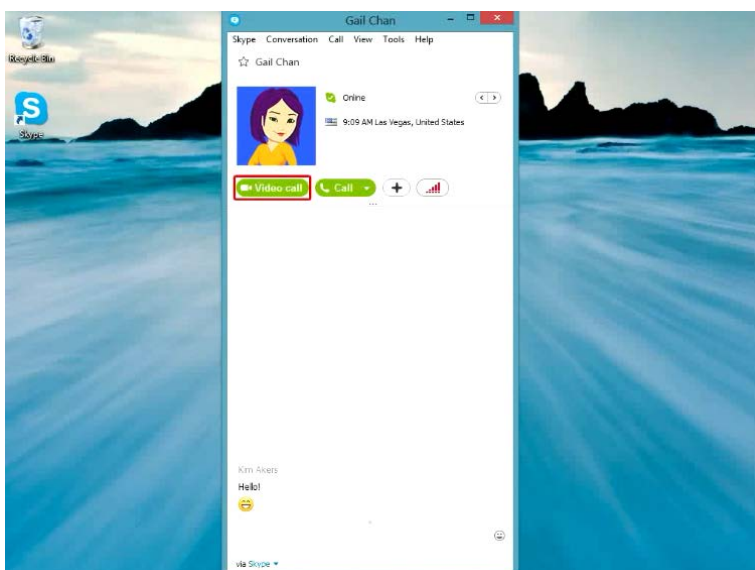
If your computer has a microphone and a webcam you can select the 'Call' or 'Video Call' button to start a voice or video chat.
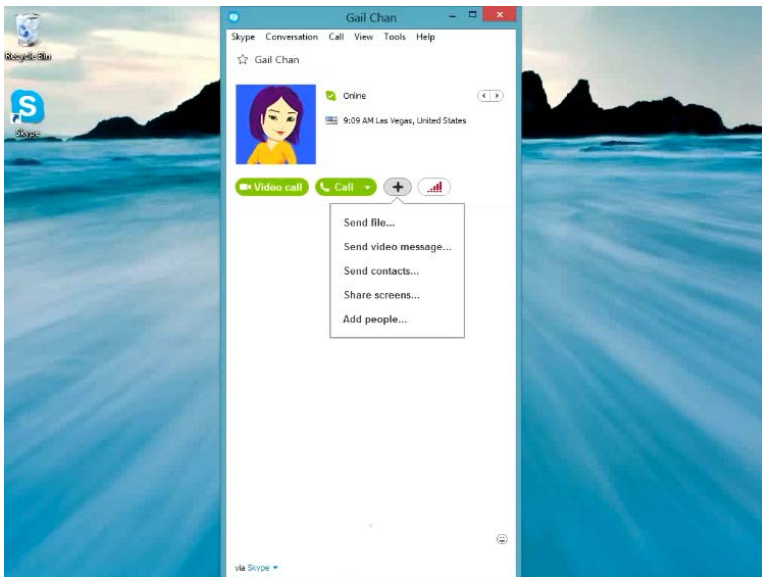
Finally, IM software lets you share files with contacts.

Simply press the 'Plus sign' to see your options.

Knowledge check

What equipment do you need to do a live video chat?

- o Webcam
- o Microphone
- o Speakers
- o All of the above

You can share images and other files with IM software.

- o True
- o False

Answers –

#1 – To do a video chat you will need a webcam, a microphone, and speakers. Many webcams include a microphone or you can use a headset that will have both a microphone and built in speakers.

#2 – True. You can send and receive files over instant messaging programs. But you should only do so with trusted sources.

How to create and publish webpages

People and businesses have web sites on the Internet that provide information about themselves or a service, allow for online transactions, or to perform searches of data. Using software such as Expression Web 4 it is easy to set up a web page and publish it to the Internet. Let's look at what is involved in creating and publishing a web site.
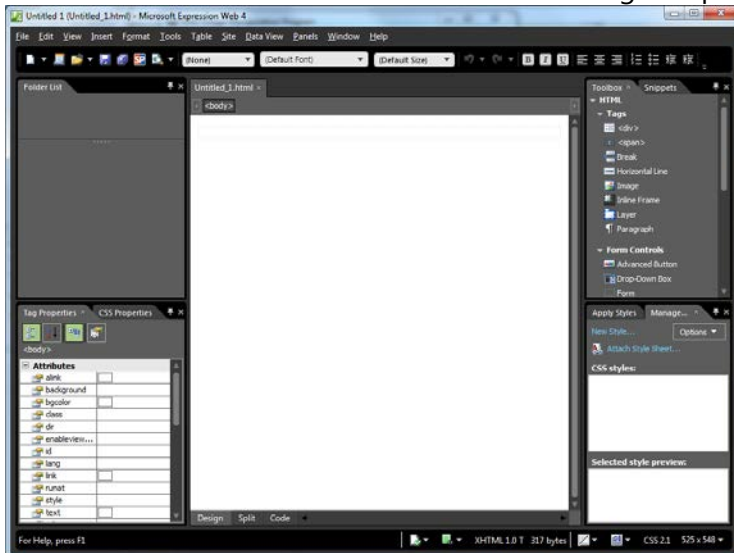
Expression Web 4 may be used to create an entire web site based on a template.

We begin by clicking on the New Site button.
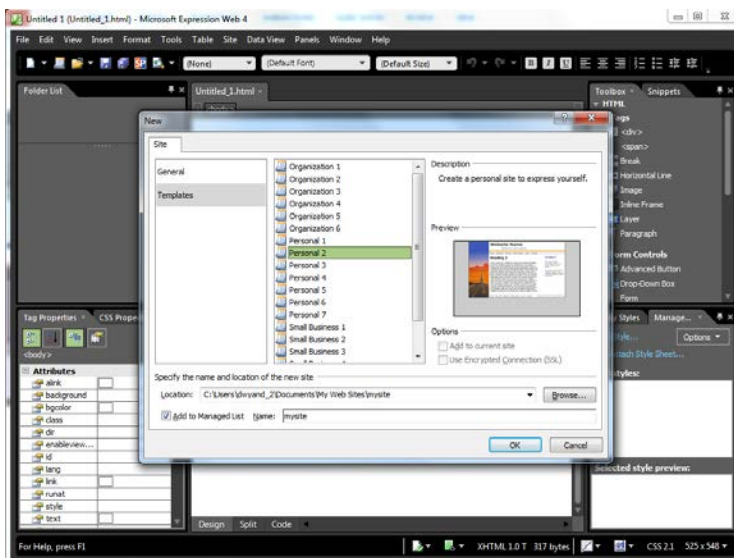
From the New Site dialog we click on the Templates category and choose one of the personal web site templates.

We then give our web site a name

and click on the OK button.

Expression Web 4 then builds all of the necessary files and folder structure for our web site.

On the left is the Folder List tab, this tab provides easy
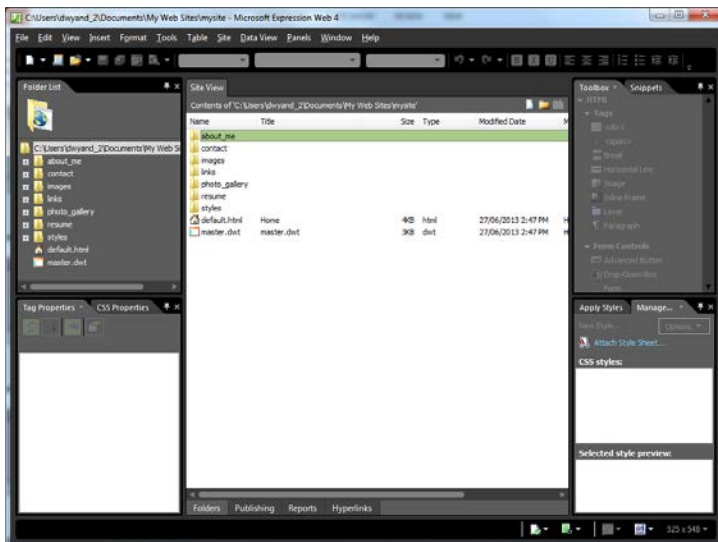
access to all of our web site's files.

In the middle is the Site View tab where we can edit our web site's pages.
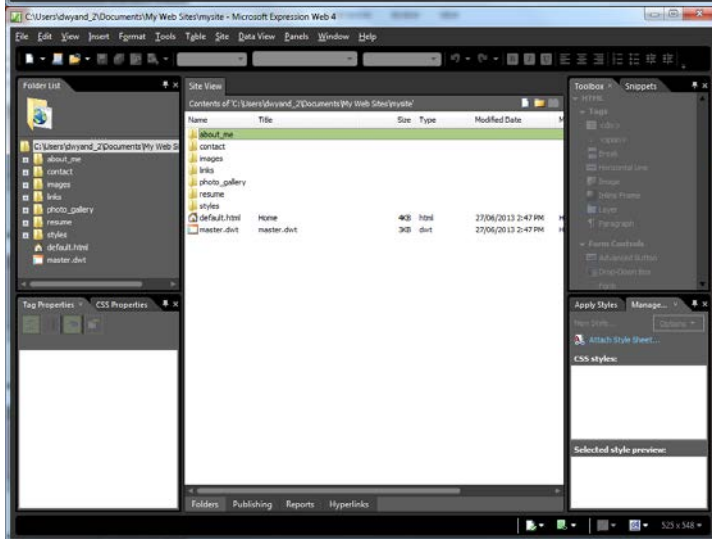
We will place a horizontal line just below our heading.

We will now edit our web site's home page, which is contained within the default.html file.

Double click on the file and Expression Web 4 opens the page for us to make it ready for editing.
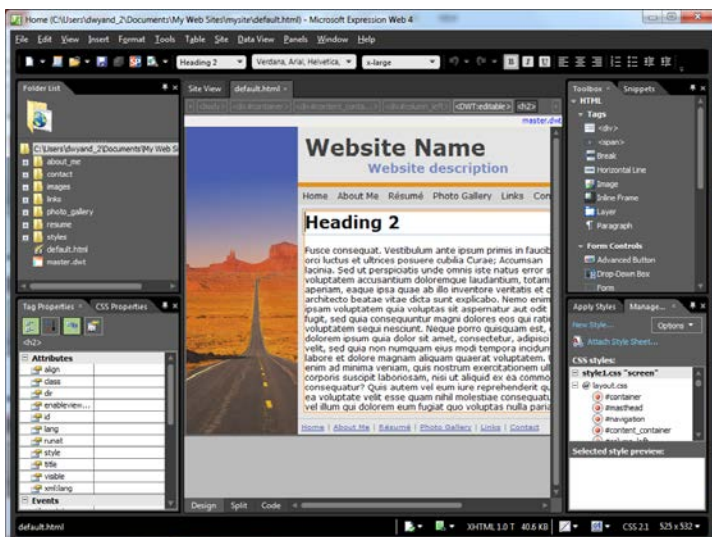
While in the Design view we are able to make changes right on the web page itself.

We will now change the text, with a content header.
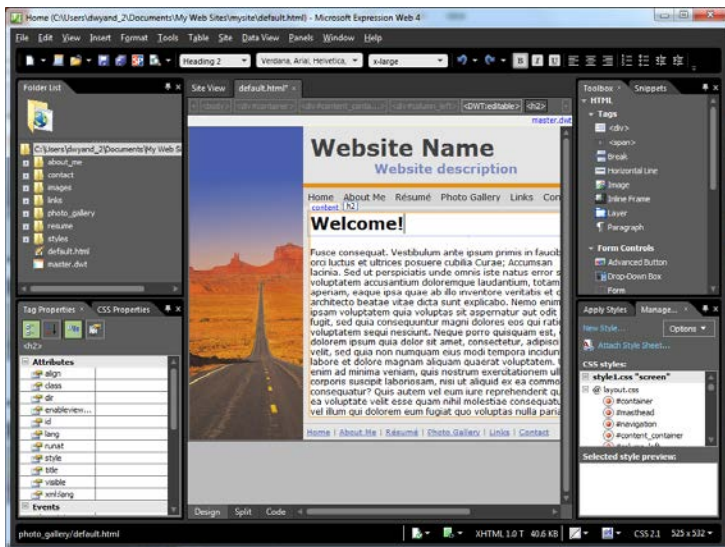
And change the style to heading three.
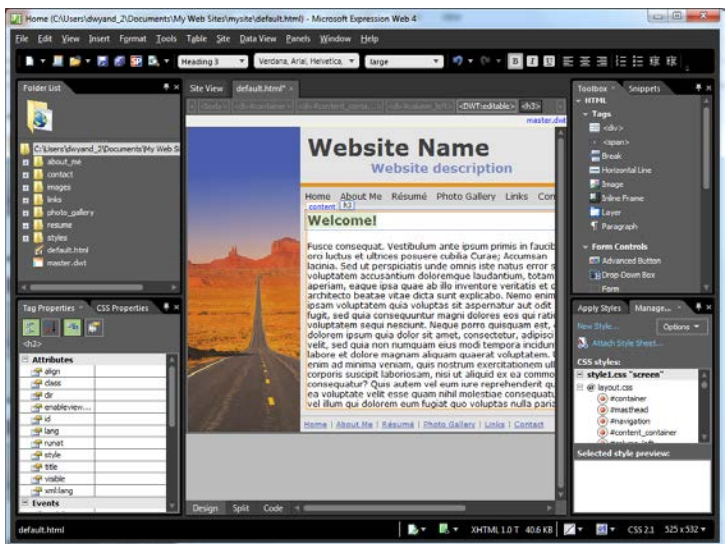
The right side of Expression Web 4 is the Toolbox where we can drag out various HTML tags and controls on to our web page.
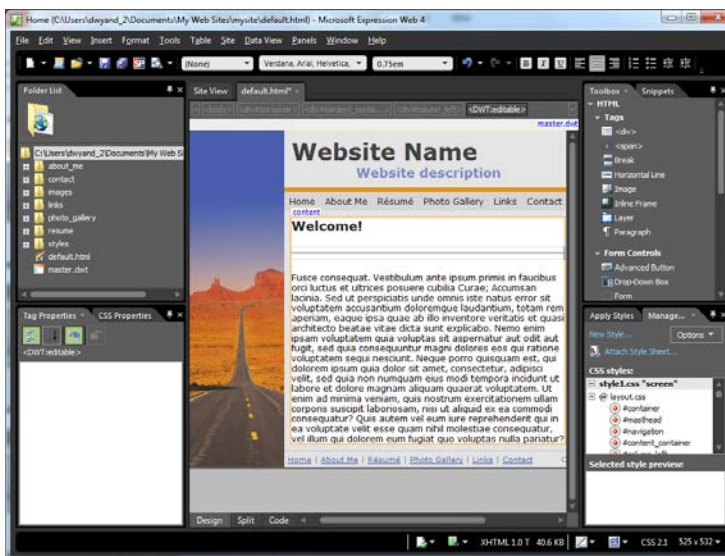
To change the body text of the web page we first select it and then enter in our text.
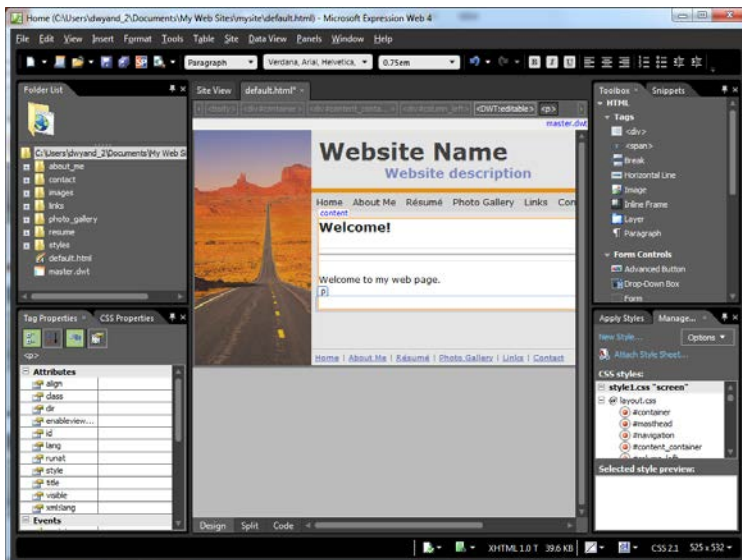
We may also add images to our web page by dragging and dropping the Image tag from the Toolbar.

Next, double click on the image icon to open the picture properties dialog box.
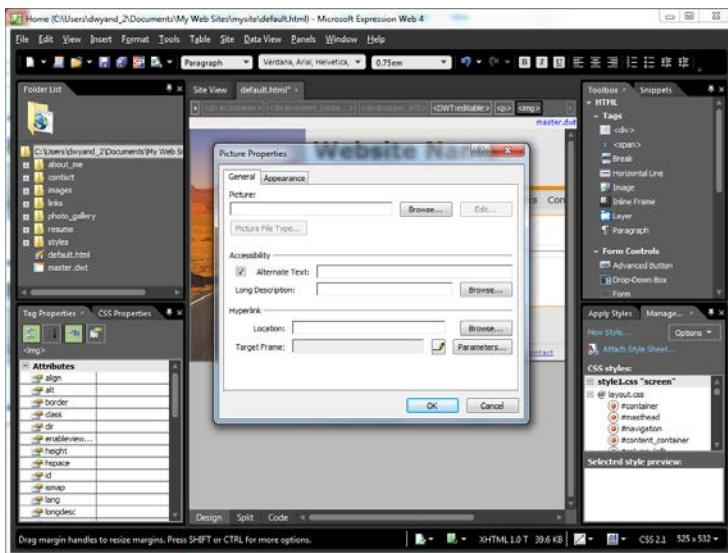
From the Picture Properties dialog we may browse for the image file we want to place in the webpage.

I will select the Microsoft logo file and select open.

We may also enter text that will be seen in the place of an image if the user's browser is set to not display images when they open our page on the Internet.
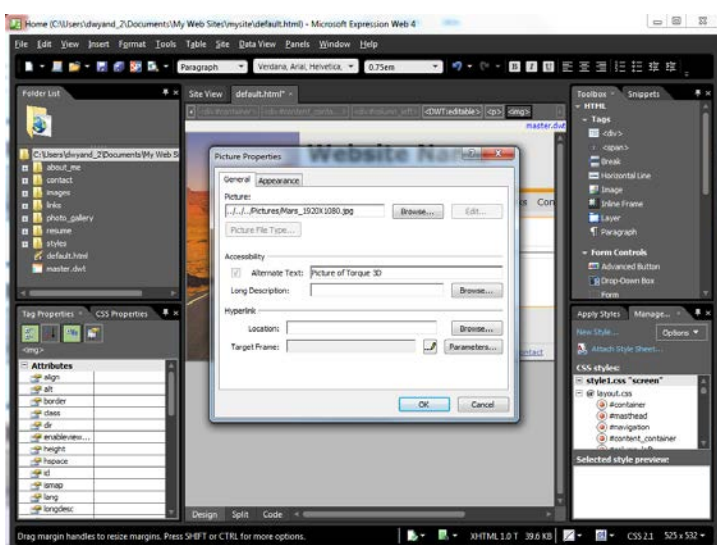
We then click on the OK button to place the picture within our web page.

The image is placed at its full size which may be too large to fit on our web page
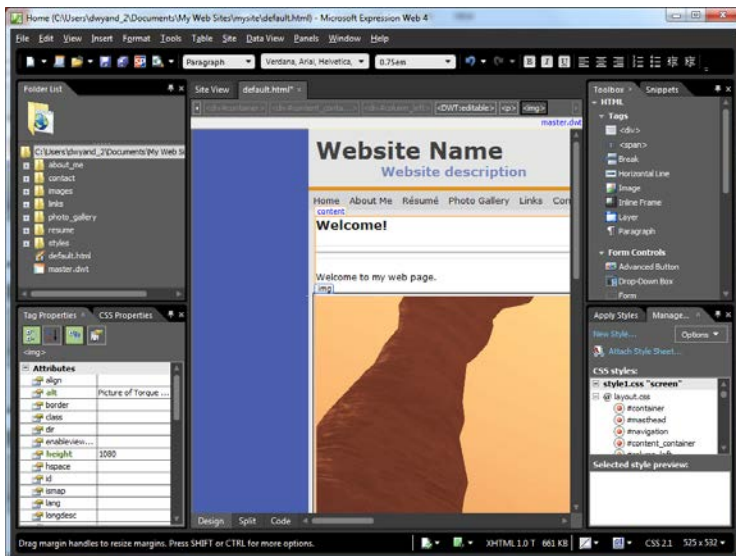
Expression Web 4 allows us to resize the image by changing its properties.

I will make the image smaller by changing its height and width attributes.
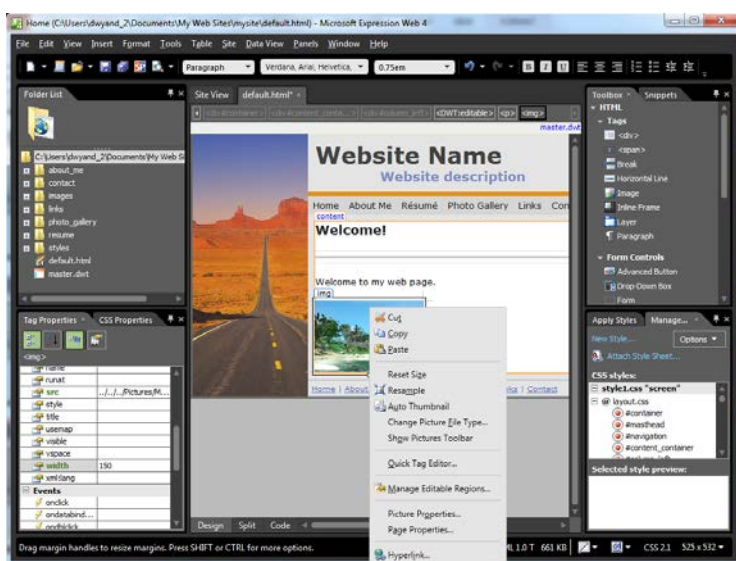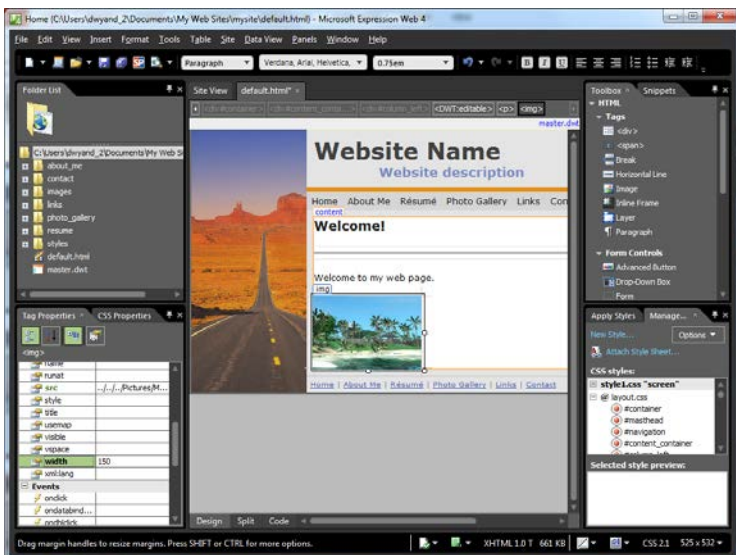
We may have the image take the viewer to another web page or even another web site by adding a link to it.

To add a link using Expression Web 4 we right click on the image and choose the Hyperlink item.
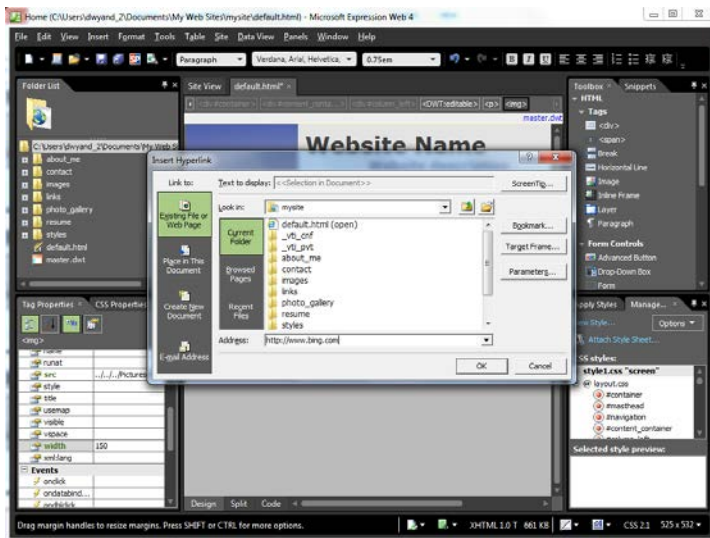
Next, type or paste in the link to the web page we wish the user to go to if they click the image and click on the OK button.
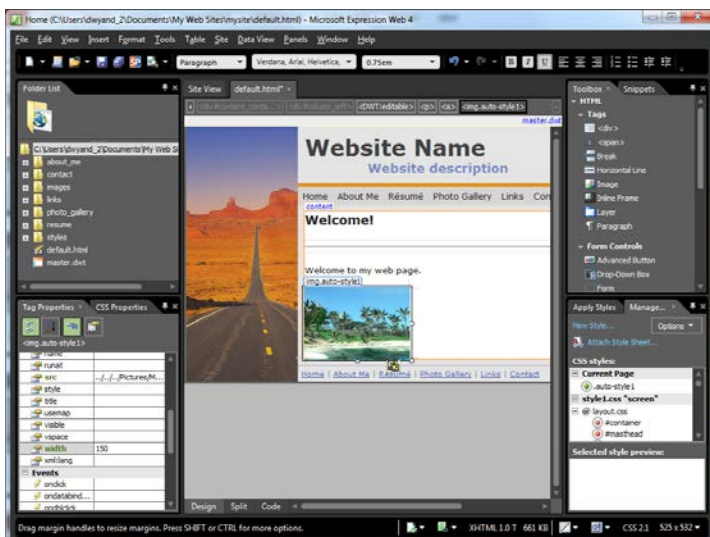
With our changes complete we click on the Save button to store our changes.
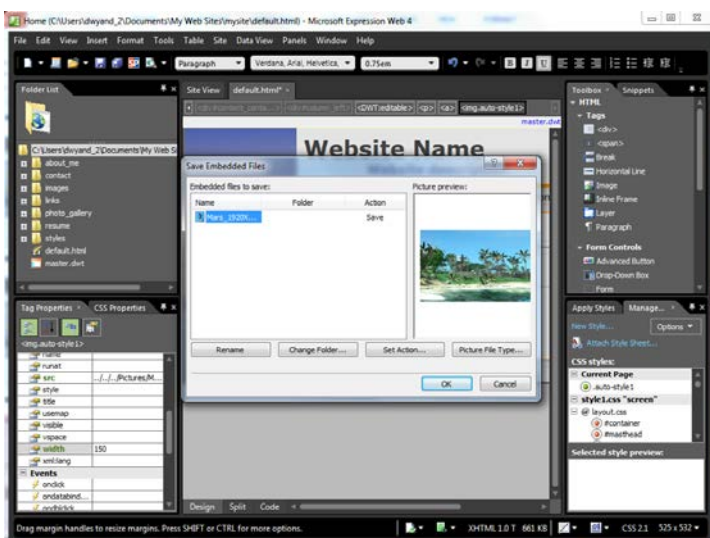
When our web page contains images or other files that are embedded within it, Expression Web 4 makes a copy of that image and places it within our file list.

We may then close the preview and continue to modify our web site in Expression Web 4.

We can confirm this by clicking on the OK button of the Save Embedded Files dialog.
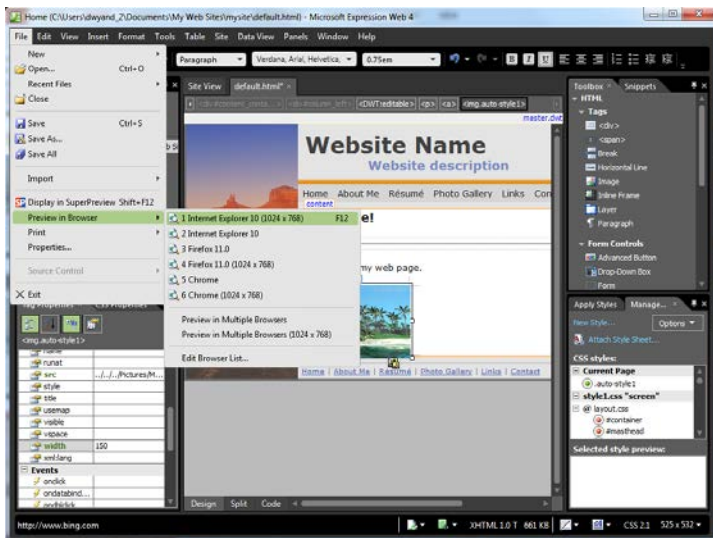
To see how our web page looks in a web browser we go to the File menu and select Preview In Browser.
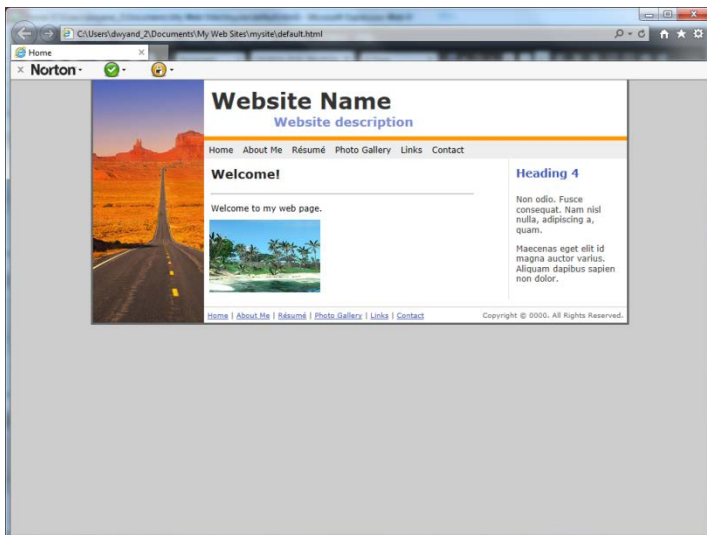
By previewing our web site we ensure that the viewer's experience matches out design.

In this demonstration you saw how to create and publish your webpage by using Expression Web 4.

Knowledge check

Images may provide a link to another web page or web site.

- o True
- o False

Publishing a web site requires a service provider to host the site on an Internet server.

- o True
- o False

Answer –

#1 – True. You can add a hyperlink to an image so users to go another website when they click on it.

#2 – True. If you want to publish a website you need to work with a service to host the files.

Explain how to blog using Windows Live Writer

You might have visited blogs maintained by bloggers on various topics. A blog is a way to share thoughts and experiences with others. This demonstration shows how to post to a blog using Windows Live Writer.

How to use Windows Live Writer Simulation can be accessed online at
http://www.microsoft.com/digitalliteracy.

Knowledge check

You can add pictures to a blog post.

- o True
- o False

An unpublished draft is visible to blog visitors on the web.

- o True
- o False

Answers –

#1 – True. Images are very common in blog posts.

#2 – False. Unpublished drafts are held for editing or for a better time to be published for visitors to read.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Describe different ways to communicate on the Internet
- Identify features of online communities
- Use Microsoft Skype
- Create web pages with Expression Web
- Start a blog with Windows Live Writer

Glossary

A

Access Point
A wireless connection device used to connect a wireless computing device to a wired network.

Add-ons
Programs that help you view files, such as animation, audio, or video, which are included in Web pages.

B

Blog
The short for Weblog, it is an online personal journal that can be posted on a Web page. Blogs typically contain reflections, comments, and other materials such as graphics or videos provided by the writer.

C

Chat
An online discussion in a chat room.

Chat room
A Web site that enables communication instantly with other people who have logged on to the same Web site.

E

E-commerce
The business transactions made over the Internet, such as buying and selling items online.

Email

An electronic form of the traditional postal mail that allows you to exchange messages and files over a network.

I

Instant Messaging

A means or system that enables the transmission of electronic messages instantly.

Internet

A worldwide collection of public networks that are linked to each other for information exchange.

IP address

A numeric address that specifies the exact location of a computer on the Web.

ISP

A company that provides Internet connectivity to individuals, businesses, and organizations.

M

Modem

A connection device that allows you to connect your computer to the Internet. It converts digital information into analog information and transmits it over a phone line.

N

Network

A group of computers that are connected to share resources and exchange information.

O

Online

A computer when connected to the Internet is said to be online.

Online communities

Communities formed by groups of computer users who have common interests and purpose to communicate with each other over the Internet.

P

Portal

A Web site that offers information related to a specific topic in the form of a directory. A portal acts as a starting point to a number of resources on the Web.

Protocol

A standard method of transferring data between different computers

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S

Search Engine

A program that allows you to search and retrieve information over the Internet.

T

The Web

Also known as the World Wide Web (WWW), it is a collection of information that is accessible on the Internet. This information is arranged logically and stored on computers known as Web servers.

W

Web address

The address that specifies the exact location of the Web site and is also known as the Uniform Resource Locator (URL). A Web address also specifies the protocol to be used for transferring data between different computers.

Web browser

A program that enables you to view and interact with various resources on the Web.

Web page

A formatted text document on the Web.

Web site

A collection of one or more Web pages that are linked together and made available through a Web server.

Productivity Programs

Introduction to Productivity Programs

![Microsoft logo]

Welcome

Description

Productivity *programs* are tools that you can use to create documents, presentations, tables, charts, and graphs. This course explores the most common *productivity software* applications used in business, in education, and at home. In this course, you will learn the features of various productivity programs such as word processing software, spreadsheets, *presentation software*, and databases. You will also learn how to select the right software to cater to your needs.

Benefits

Productivity programs are used in business for schedules, résumés, business plans, and more. These programs are widely known and used on a daily basis. In school, students are using these applications to write essays, create presentations, and organize their schedule. High Schools and Colleges have started demanding a typed final essay for a grade; forming these applications into a vital part of education. Others may use the applications at home for any other tasks, making these applications a universal tool.

Introduction to Productivity Programs

Productivity Programs are programs designed to help you perform specific tasks easily and efficiently. Allowing anyone to do the following:

- Text Documents
- Presentations
- Databases
- Spreadsheets
- And more

In this lesson, you will learn about the basic features of productivity programs. You will also learn about the templates and Office Web applications that help you to create and edit documents.

Overview of productivity programs

Microsoft Office 2013 provides users with the latest productivity applications. Each application has a specific purpose, though they share a similar interface.

View what Office 2013 Application is the best fit on the right.

Text Documents

Word
Useful for reports, essays, letters, and documentation.

Spreadsheets

Excel
Useful for managing bills, showing a budget, and other number tracking jobs.

Slideshows

PowerPoint
Useful for school lectures, business proposals, and conference talks.

Databases

Access
Useful for storing shipping records, patient records, and store products.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Describe the functionality of various productivity programs
- Explain the benefits of templates and Office Online
- Explain the use of Office Web applications.

Common Features and Commands

You can use different types of productivity programs to create different types of documents for storing and presenting information. Most productivity programs provide features to perform some common tasks such as; open and close a file, print a file, and insert, move, modify, and delete text and objects. To help you perform these common tasks, most productivity programs include some common features and commands. Microsoft's Office Programs have several common features, such as:

- Ribbon
- Quick Access
- Toolbar
- And more

In this lesson, you will learn about the common features and commands of various types of productivity programs. You will also learn about the main components of the user interface, keyboard shortcuts, and various key combinations.

Introduction to the User Interface

The user interface is the means by which you interact with the productivity programs in Office 2013. You will find many common user interface features and commands across all the Office 2013 applications.
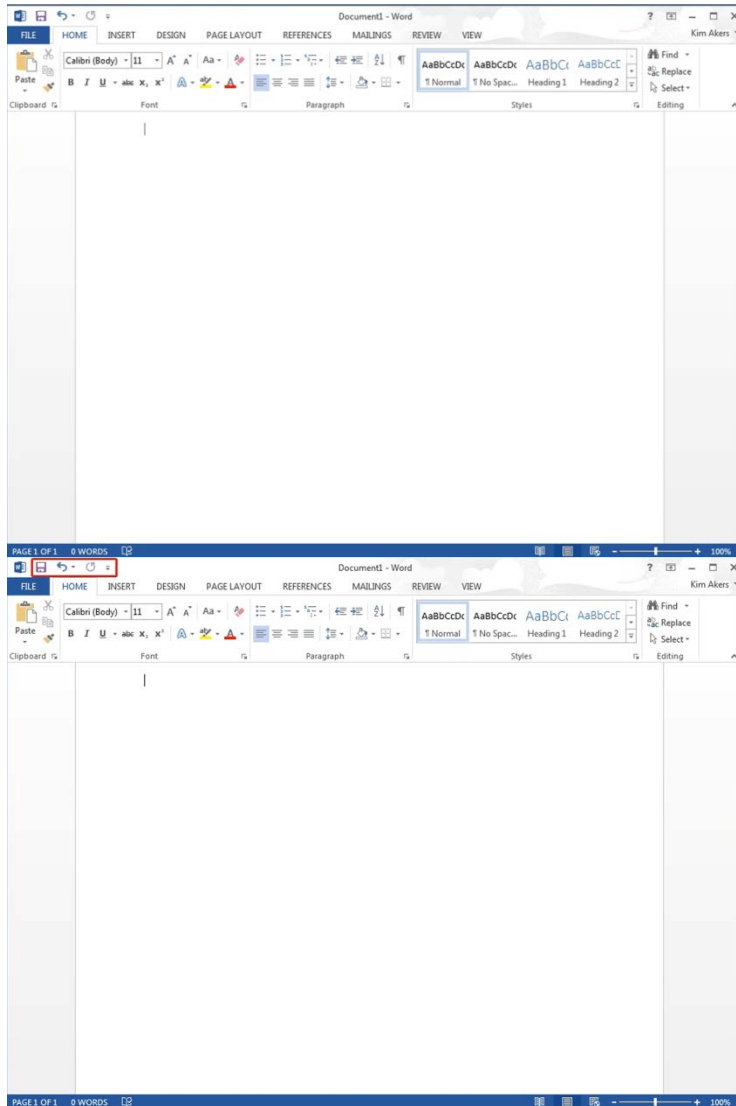
This video will introduce you to the common user interface you will see in office 2013 productivity programs.

Let's start in the top left corner with the Quick Access Toolbar.
By default the Quick Access Toolbar includes Save, Undo, and Redo.
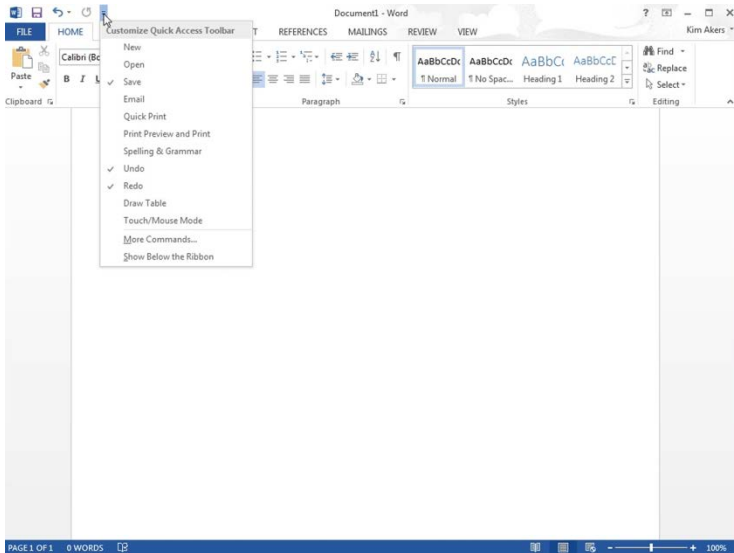
You can customize the Quick Access Toolbar by clicking this arrow to display a list of common commands you can display or remove.
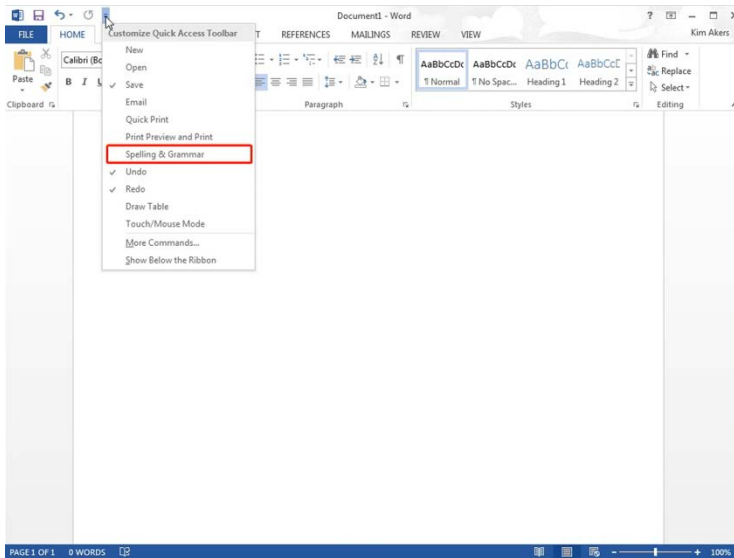
Let's add Spelling and Grammar to Quick Access Toolbar by clicking it.
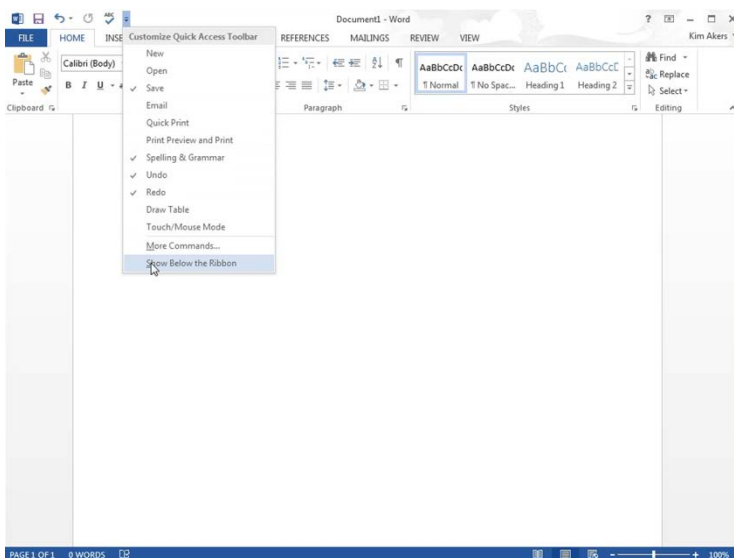
You can also move the Quick Access Toolbar to display below the ribbon
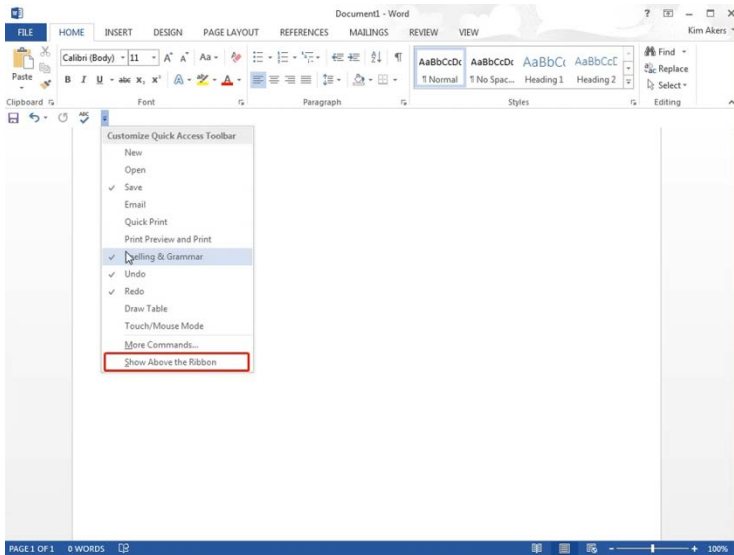
Or move it back above the ribbon.
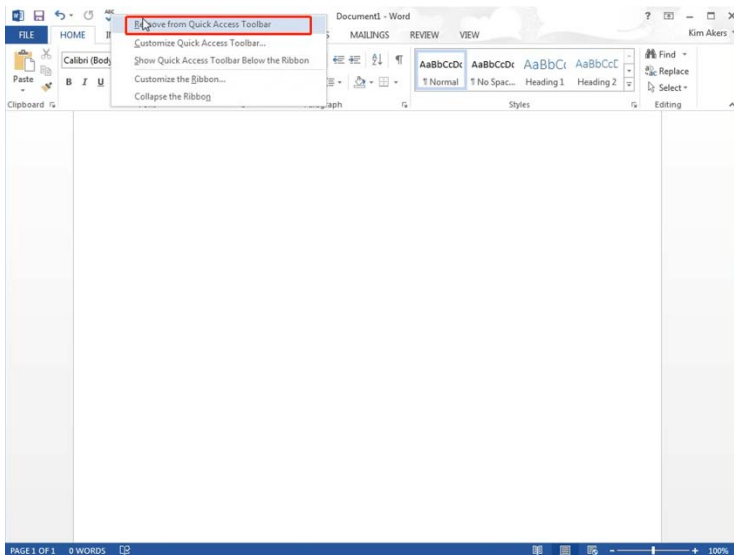
You can remove any individual command from the Quick Access Toolbar by right clicking on it and selecting Remove From Quick Access Toolbar.
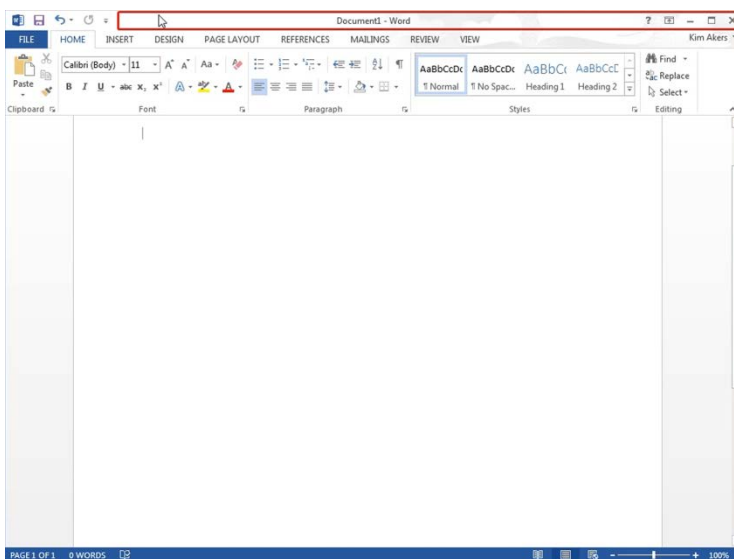
This is called the Title Bar and displays the name of the file you are working on.
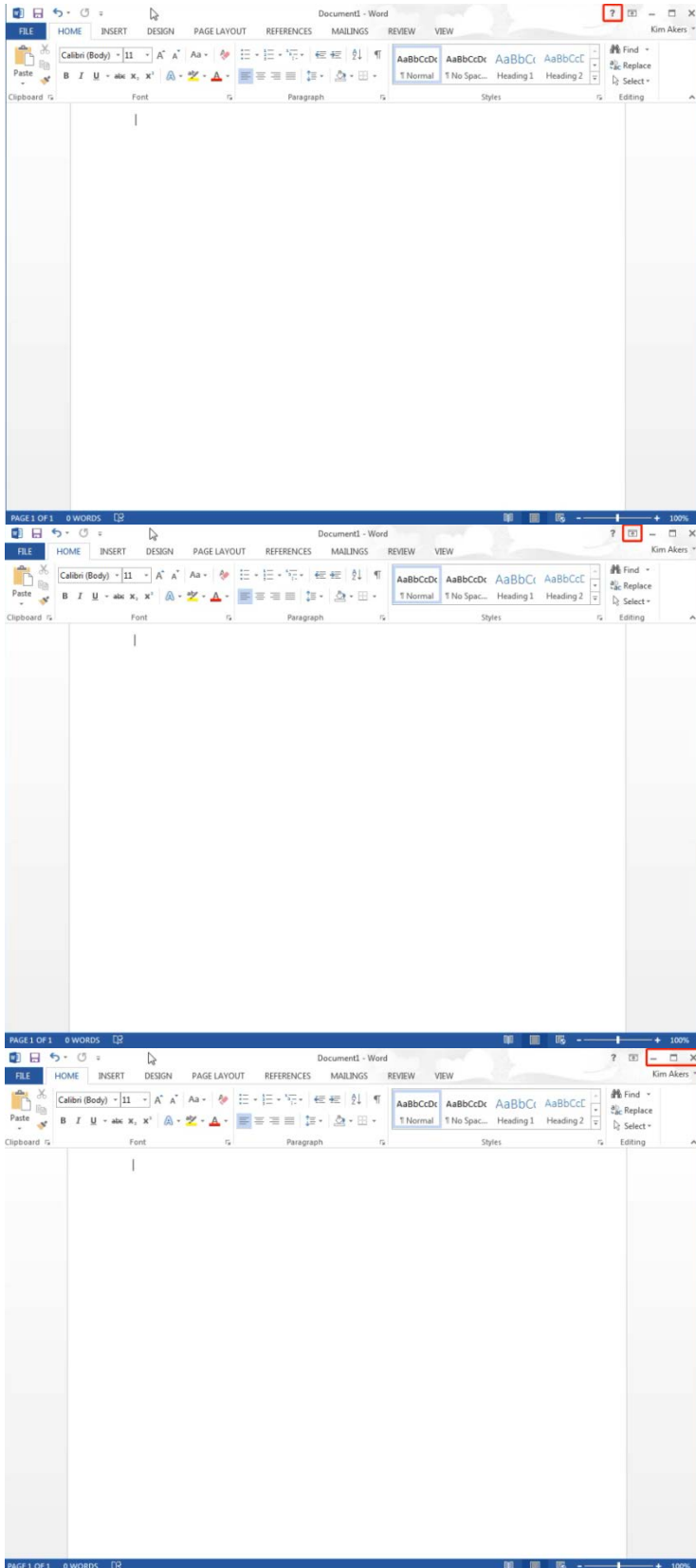
From the title bar you can access Help, Ribbon display options and Minimize, Maximize or Close the application.
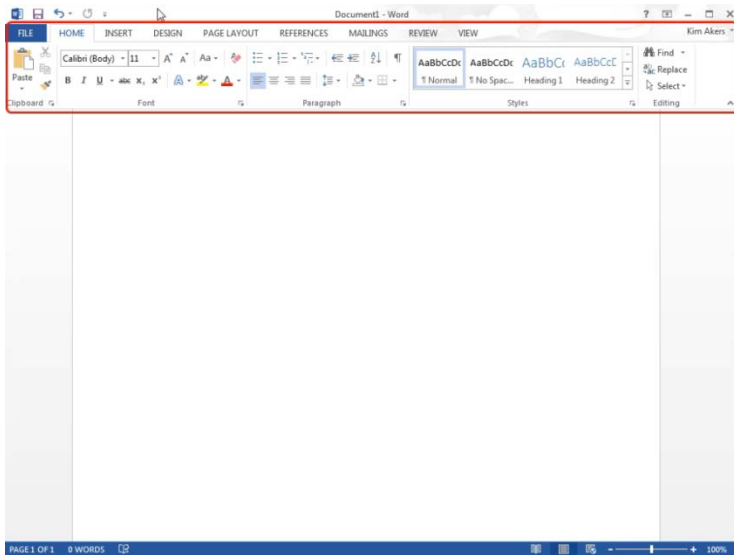
This is the ribbon.

It is organized by Tabs, Groups, and Commands.

We will discuss the Ribbon in more detail later in this lesson.
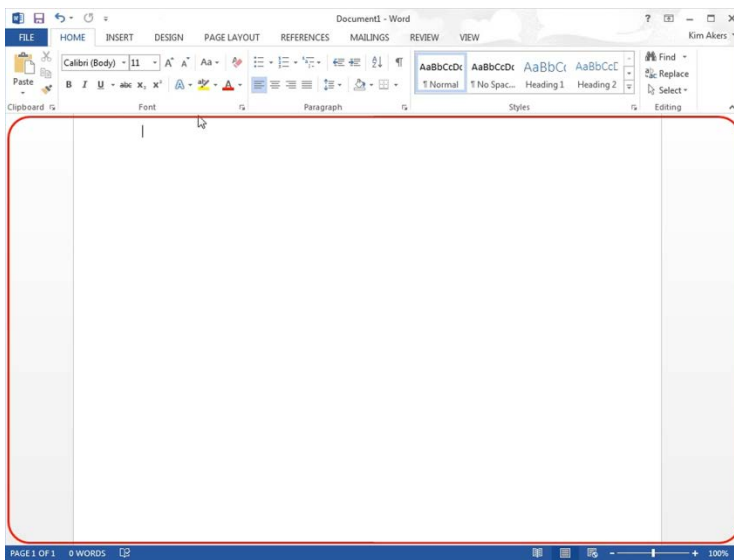
This is the <u>work area</u> where depending on the program you are using you will either type, insert images and data, or create presentations.
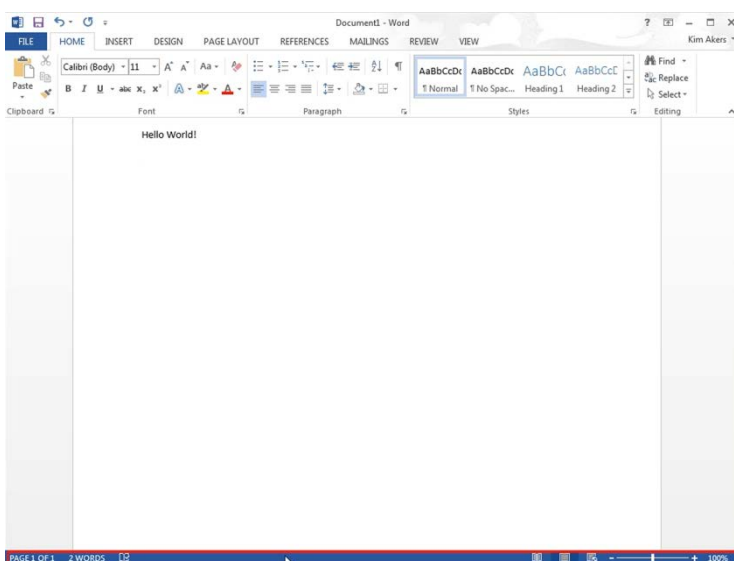
This is the Status Bar.

The Status bar gives you information about your document, worksheet, or presentation.
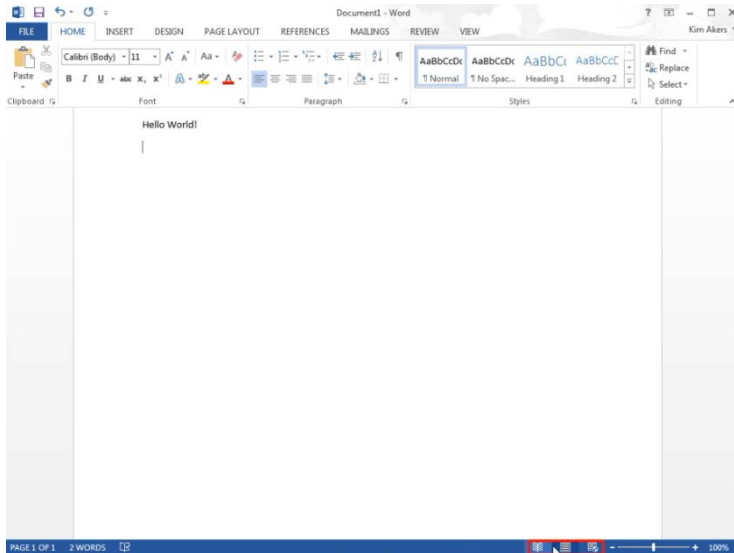
View Shortcuts
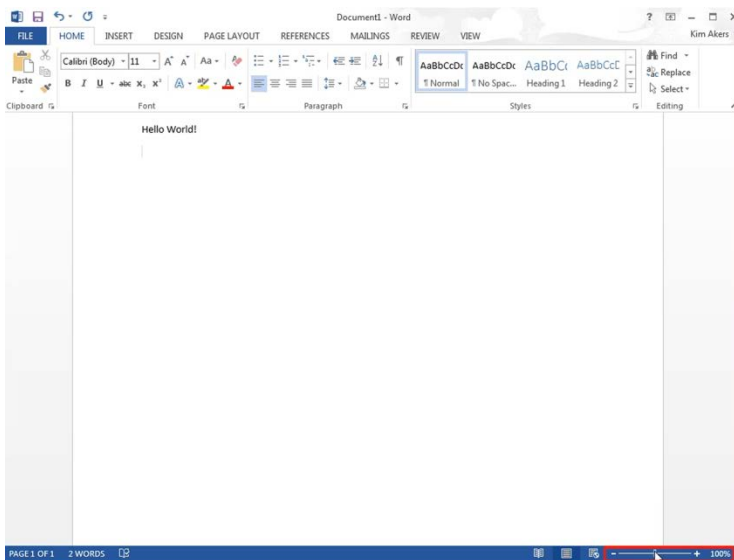
Zoom Slider
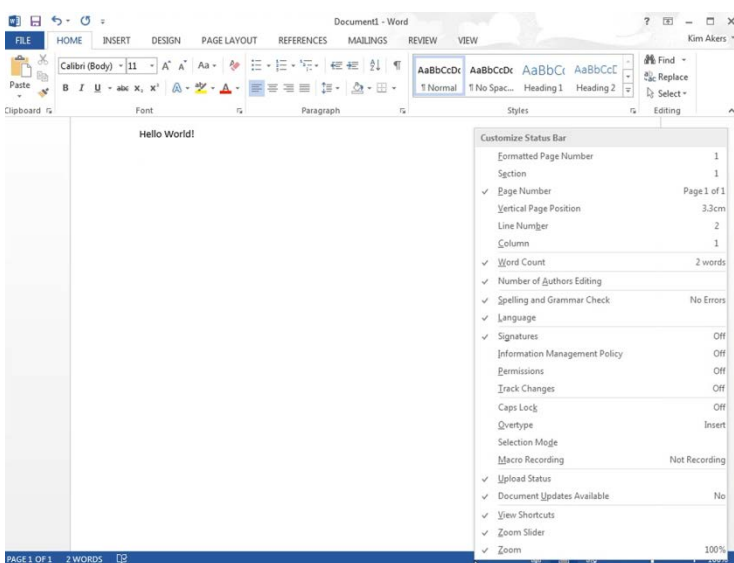
You can customize the Status Bar by Right Clicking over the Status Bar and selecting what option you would to hide or display.
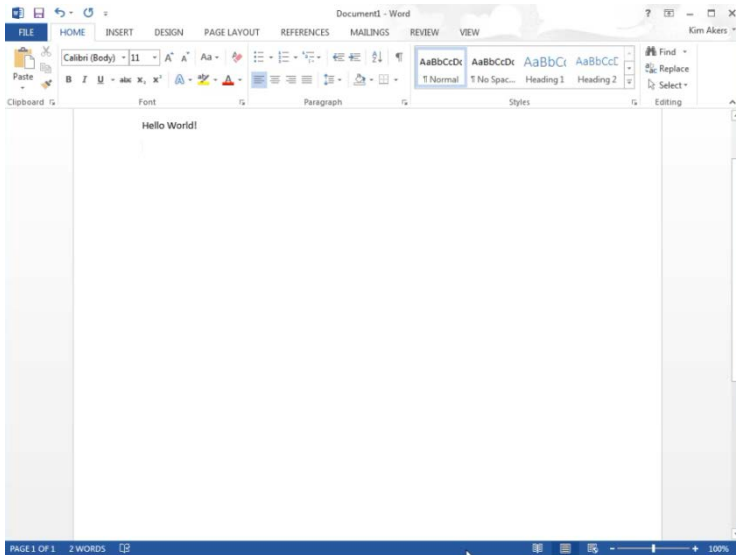
You are now familiar with the common user interface options in Office 2013.

User Interface review

This demonstration introduced you to the following areas of the user interface:

- Quick Access Toolbar
- Title Bar
- Ribbon
- Workspace
- *Status Bar*

Knowledge check

How is the ribbon organized?

- o Tabs
- o Groups
- o Commands
- o Tabs, groups, and commands

Answer –

#1 – The ribbon is organized into tabs, groups and commands.

Using the pointer

A *pointer* is the on-screen arrow or shape that moves when you move your *mouse* or other pointing device. Using the pointer, you can quickly move around a document and perform commands.

A *cursor* is a blinking vertical bar on the screen that indicates the location where you can insert text or graphics in a document. For example, in Word 2013, you can set the location of the cursor by moving the pointer to some text and then clicking the left mouse button.

The Mouse Simulation Activity can be accessed online at http://www.microsoft.com/digitalliteracy.

Working with the Ribbon

In productivity applications, such as Microsoft Word 2013, Excel 2013, and PowerPoint 2013, the ribbon consists of tabs. Each tab is divided into groups. A _group_ helps you perform a set of similar tasks, such as adding picture shapes in a document.

The ribbon also consists of _contextual tabs_, which appear only when necessary. For example, in a Word 2013 document, the contextual tab for editing a table appears when a table is inserted in the document.
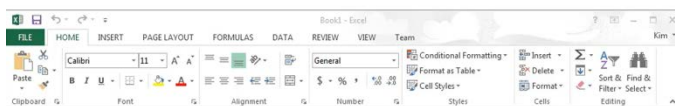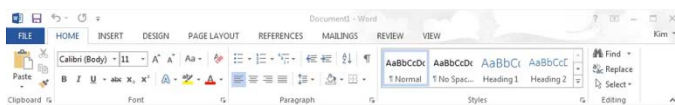
When you open a productivity application, such as Word 2013, Excel 2013, or PowerPoint 2013, you can see the ribbon above the workspace.
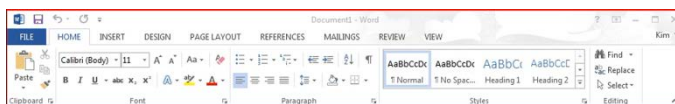
Here you see the ribbons for Word 2013
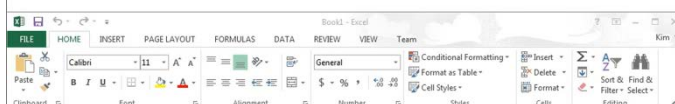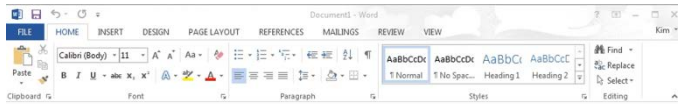
Excel 2013

PowerPoint 2013.
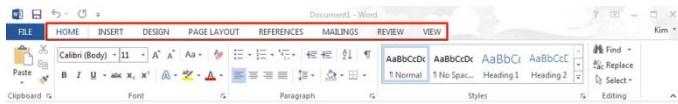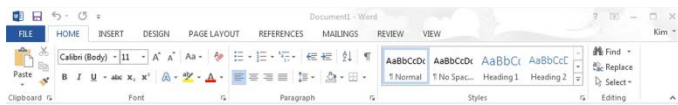
The ribbons use tabs and groups to organize the available functions in an application.
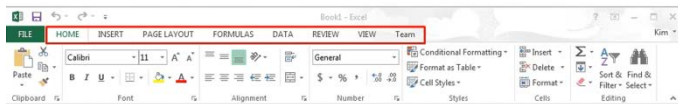
The tabs are along the top of the ribbon.

Note that some tabs are common among all three applications, whereas others are available only to certain applications, such as the Page Layout tab in Word 2013, the Formulas tab in Excel 2013, and the Transitions tab in PowerPoint 2013.
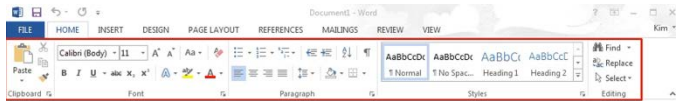
Each tab contains groups.

Groups are a collection of buttons that perform similar or related functions.
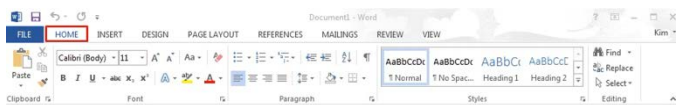
When you open a file in a productivity application, the application opens with the Home tab selected.

The Home tab contains the most frequently used groups of commands.

These are the common groups among the Home tabs:
Clipboard, which contains commands for copying or cutting content and pasting it elsewhere.
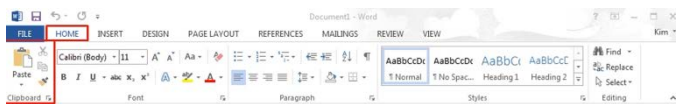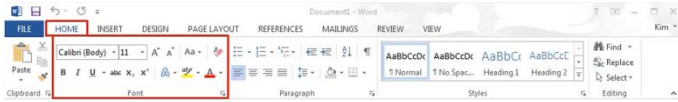
Font, which contains the most commonly used commands for changing the font of text in your documents
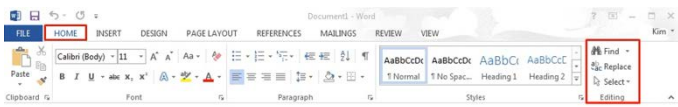
Editing, which contains commands that help you make multiple changes to your document quickly
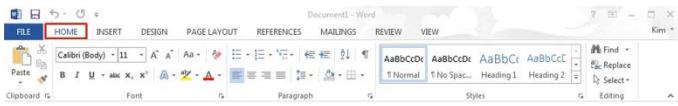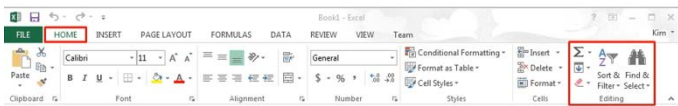
Some groups appear in only a particular application, whereas other groups appear in several applications.

An example of groups that appear in only one application are the Number and Cells groups in Excel 2013.
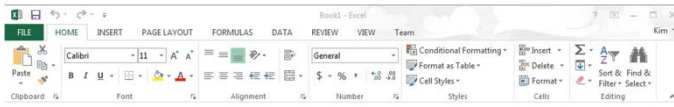
Another example of a group that is present in the Home tab of only one application is the Drawing group in PowerPoint 2013.

This group contains functions and drawing tools that can be used to quickly draw custom diagrams in your presentations.
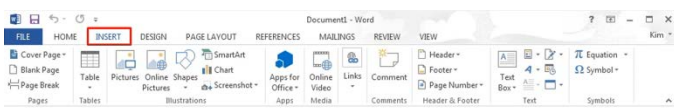
The Insert tab contains groups related to inserting external, or new, content in an existing document.
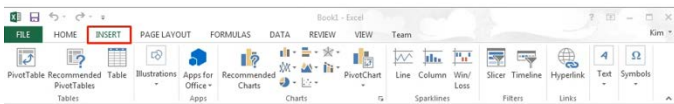
Some groups common to the Insert tab are Tables, Illustrations, Apps, and Text.
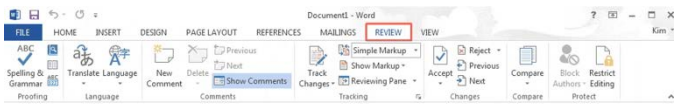
The Review tab contains groups of commands that address reviewing your document, such proofreading, tracking changes, managing changes, making comments, restricting write access to the file, and comparing versions of your document.
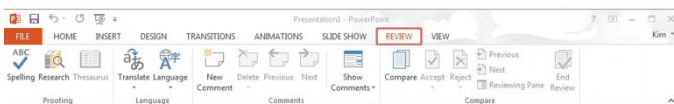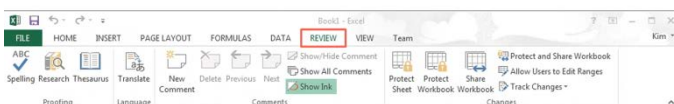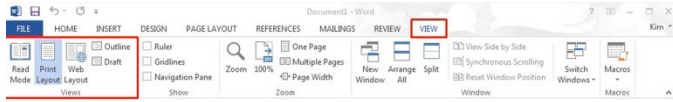
The View tab contains groups of commands for changing the view of a file while you edit it.
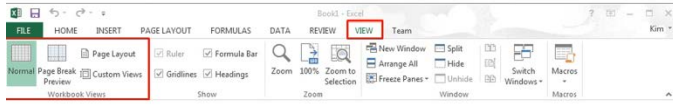
The View groups provide predefined views based on how the output of the file might appear.
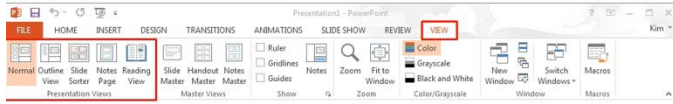
The Show group contains check boxes that you can select or clear to indicate which elements of the user interface to hide or display while you edit.
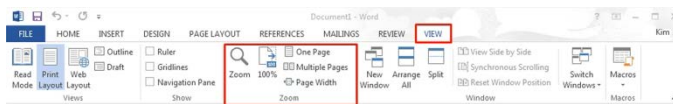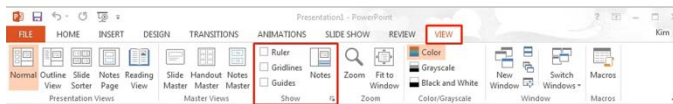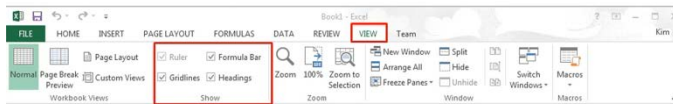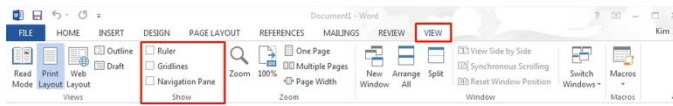
Use the Zoom group commands to adjust the zoom level of your workspace.
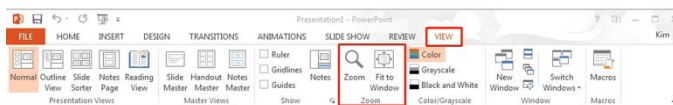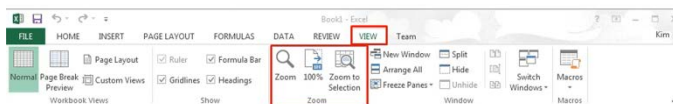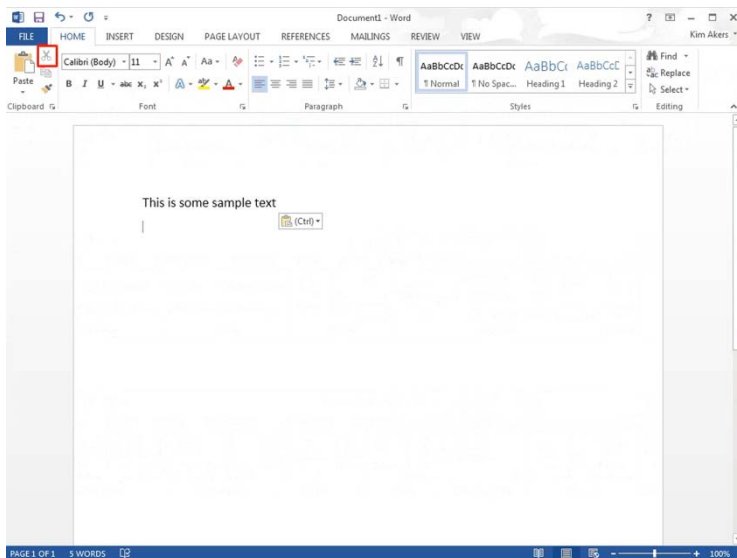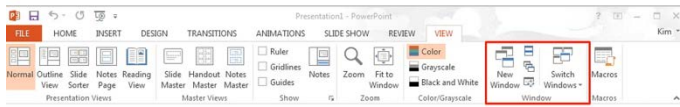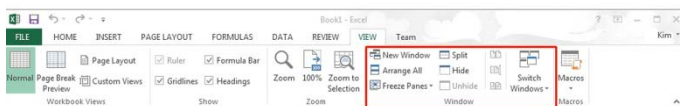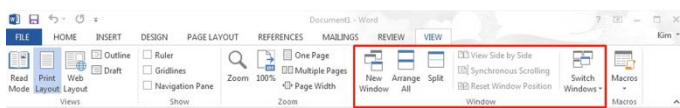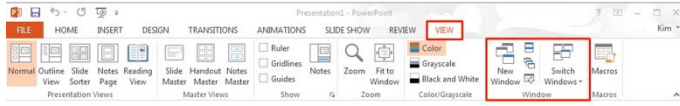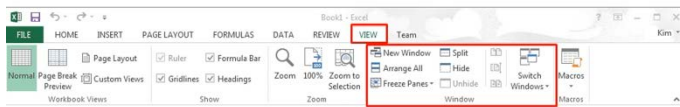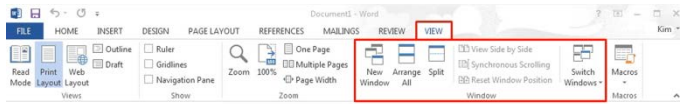
The Window groups contain commands for opening new or existing files, rearranging files in your workspace, and creating split views of your current workspace.

This function can be handy when you are working in one area of a file but need to look at a different area of the file for reference. You might have noticed that some functions are dimmed at times.

This means that they are unavailable.

In the case of a document in Word 2013, the Cut button in the Clipboard group is dimmed until text in the document is selected.
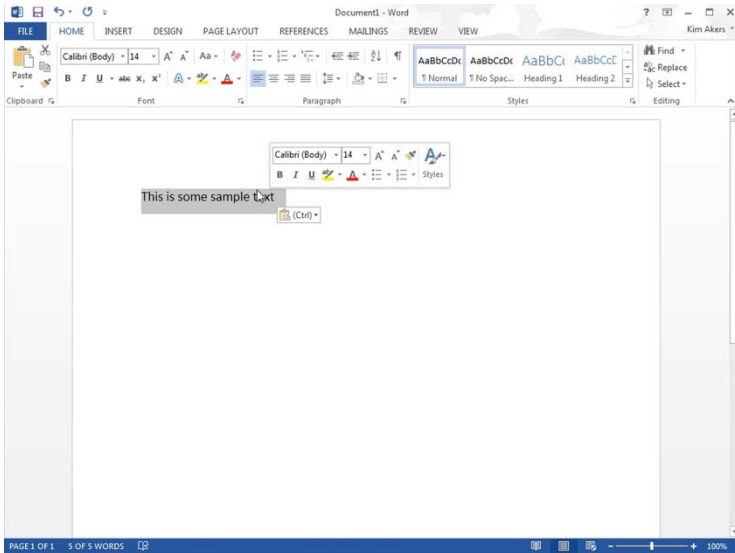
Note that the Cut button has changed and that the background changes color when you point to it, indicating that the button is available.
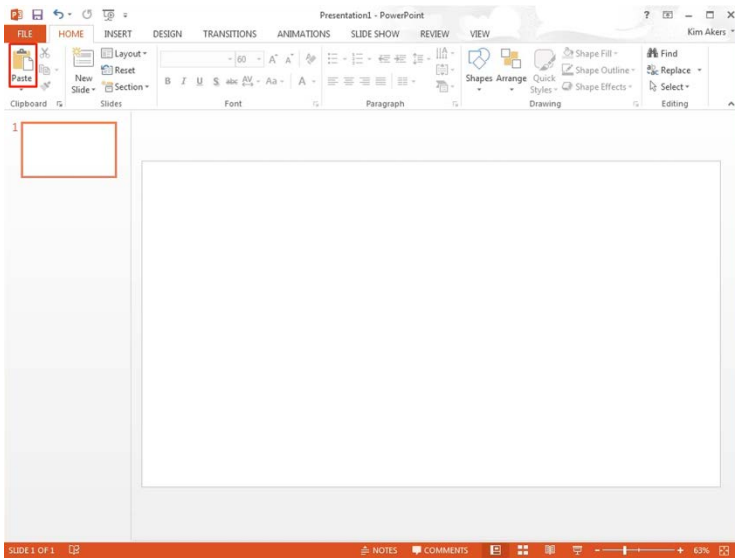
In PowerPoint 2013, the Paste button in the Clipboard group is available because you currently have text on the Clipboard that was cut from Word.
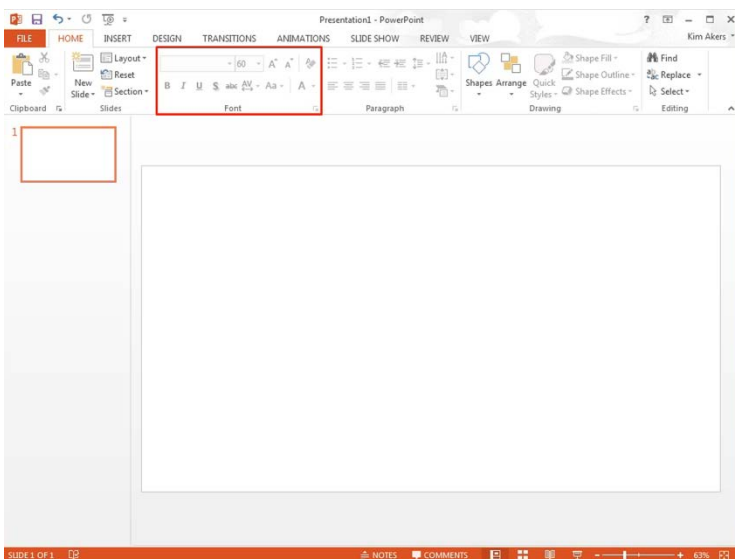
Note that also that the entire Font group is unavailable.
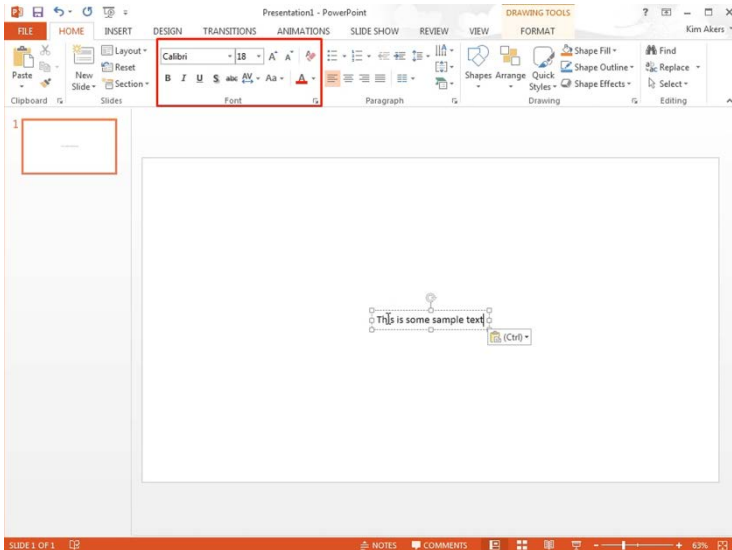
For the Font group to become available, text needs be added to the slide.
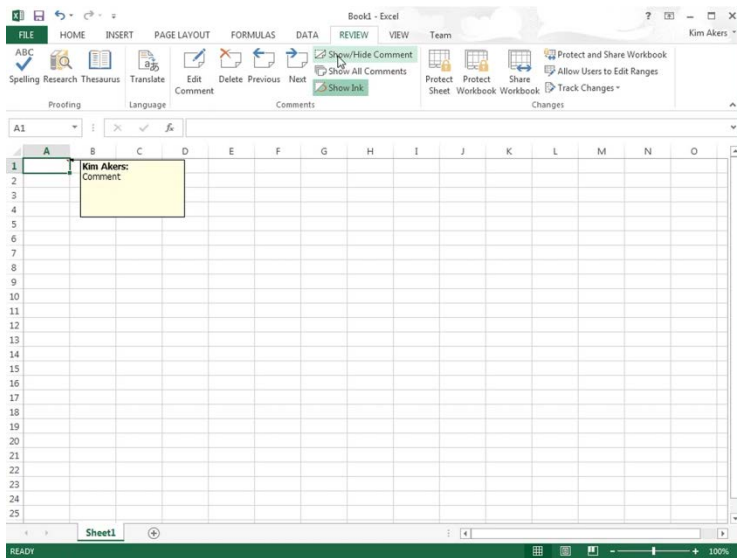
Note also that the functions in the Font group have become available.
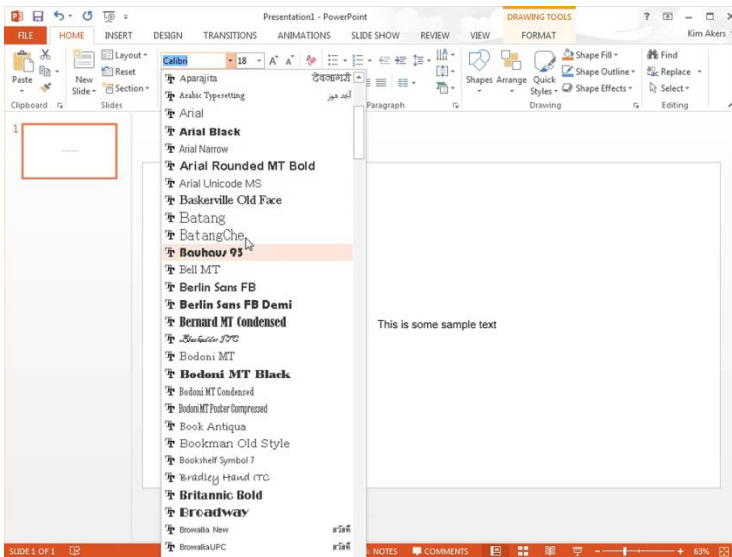
Now you can manipulate the font by using the commands in the Font group.
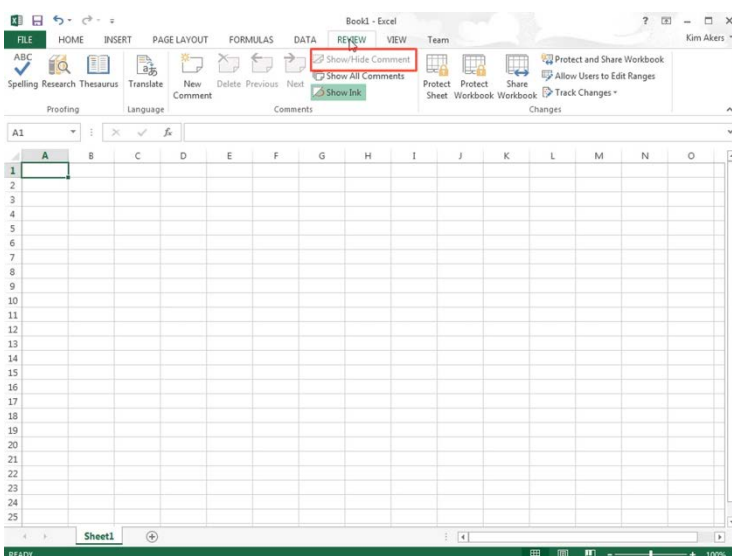
On the Review tab of Excel 2013, in the Comments group, the Show/Hide Comments button is currently unavailable.
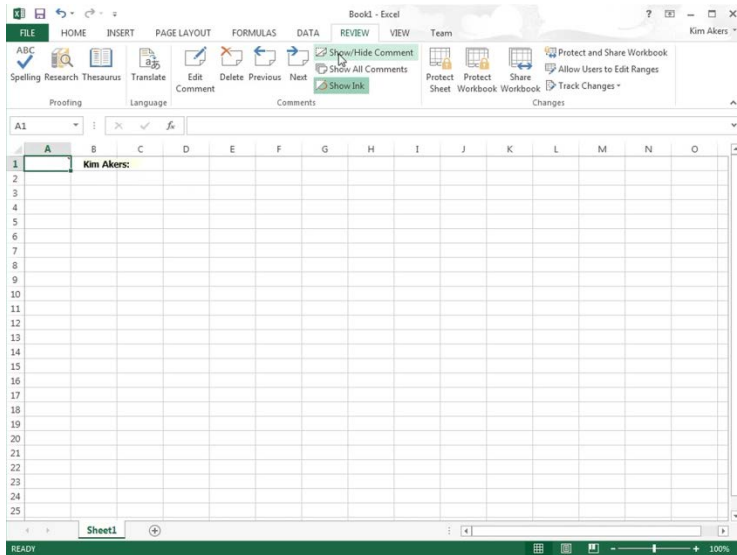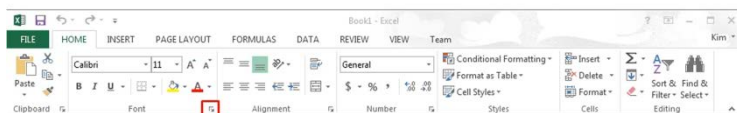
After you add a comment to the document, the button is made available.

Clicking the button hides the comment that you just added to the spreadsheet; clicking the button again makes it visible.
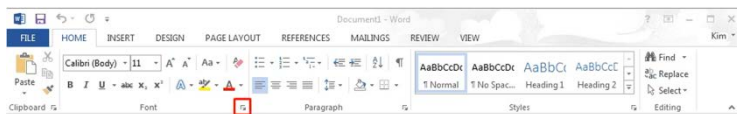
Some groups have more advanced options available.
You can display and change these options by using the Dialog Box Launcher.

When a group has advanced options available, the Dialog Box Launcher is available in the lower-right corner of the group.
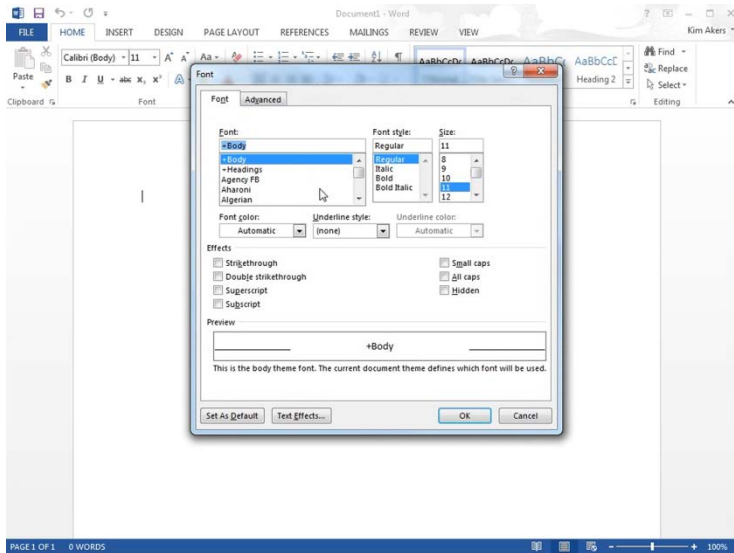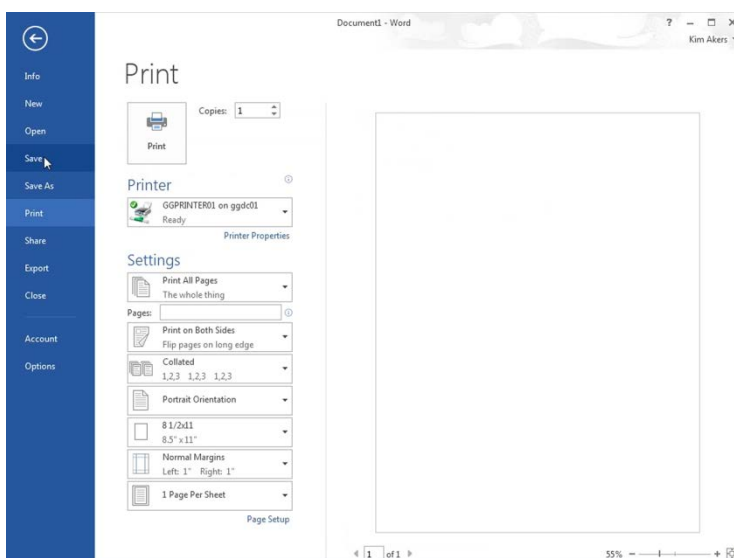
When a group has advanced options available, the Dialog Box Launcher is available in the lower-right corner of the group.
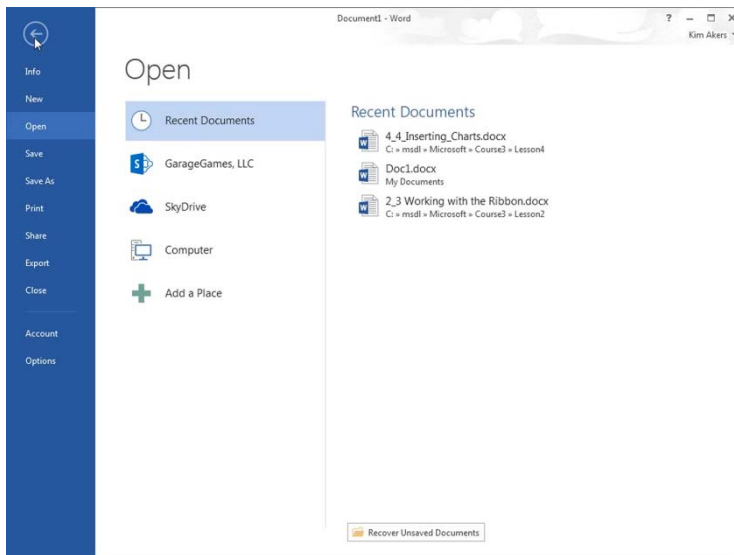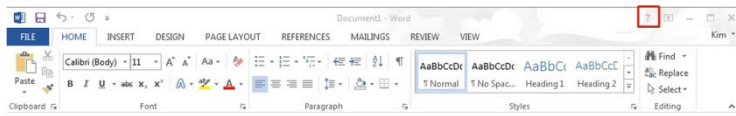

Some commands and menus are available in Backstage view.

You can display the Backstage view by clicking the File tab.

You can display the Backstage view by clicking the File tab.

Examples of menus available in Backstage view are the Print and Save menus.

If you have questions about what a button does, you can click the Help button in the title bar, which opens the Help documentation for each application and provides reference information and further explanation.

Ribbon in Word, Excel, and PowerPoint review

Ribbon in Word, Excel, and PowerPoint
You should now be familiar with how to do the following:

- Select tabs
- Locate groups of similar functions
- Open the dialog box for a group
- Locate the Save and Print commands
- Customize the ribbon
- Open the Help dialog box

Using the Mini Toolbar

The Mini <u>Toolbar</u> appears when you select text in a document. It gives you easy access to commands that you can use to change the size, color, or font of text.

The Mini Toolbar simulation can be accessed online at <u>http://www.microsoft.com/digitalliteracy</u>.

Mini Toolbar review

You should now be familiar with the following commands on the Mini Toolbar and the Image Editing Menu:

- Changing font
- Font size
- Bold, Italic, and Underline
- Font Color
- Image quick styles
- Inserting Office.com clip art

Knowledge check

How do you display the Mini Toolbar?

Answer –

#1 – You display the Mini Toolbar by selecting text and then either using the left mouse button and double-clicking or using the right mouse button and clicking.

Keyboard techniques for entering text

You use the keyboard to enter information into a computer. Depending on the application you are running, keyboard input will behave differently. For example, Word 2013 is a word processor, so most of your keyboard input adds and modifies text.

The Keyboard Techniques for Entering Text simulation can be accessed online at
http://www.microsoft.com/digitalliteracy.

Keyboard Review

You should now have a basic understanding of how to use a keyboard.
Keep the following in mind:

- Alphanumeric keys are A-Z and 0-9.
- Modifier keys are Alt, Shift, Ctrl, and Cmd (Mac only).
- Action keys are the Spacebar, Enter, Delete, Backspace, the arrow keys, Tab, and Caps Lock.

Knowledge check

Keyboard input does not behave the same in all applications.

- o True
- o False

All keyboards have the same keys and layout?

- o True
- o False

Answers –

#1- True. Different applications can use keys to do different tasks.

#2 – False. You can purchase many different keyboard layouts.

Keyboard shortcuts

In addition to entering information by using single keystrokes and simple key combinations, you can use advanced keyboard shortcuts and key combinations, which speed up your productivity.
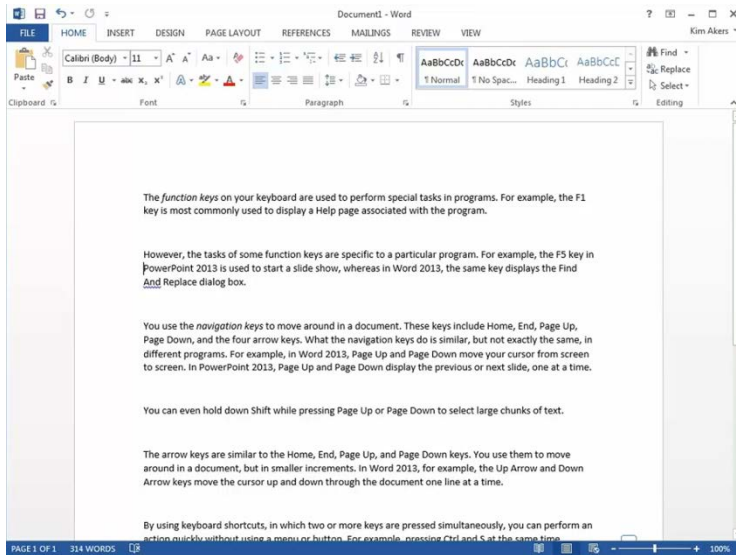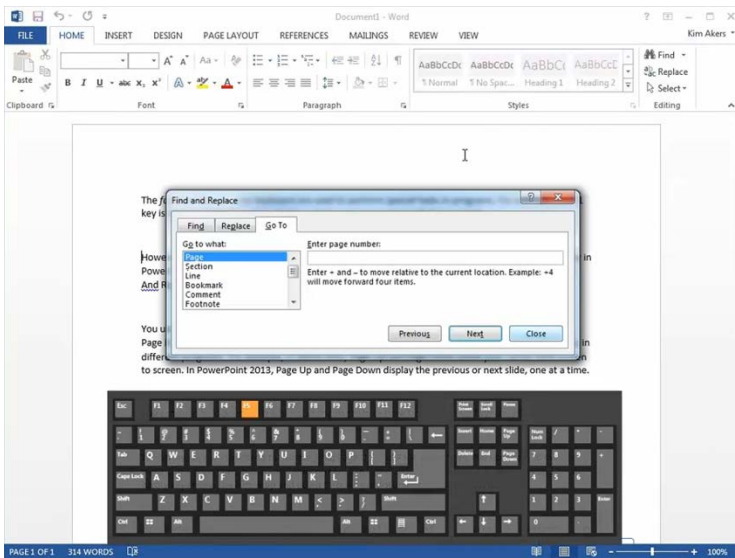

The function keys on your keyboard are used to perform special tasks in programs.
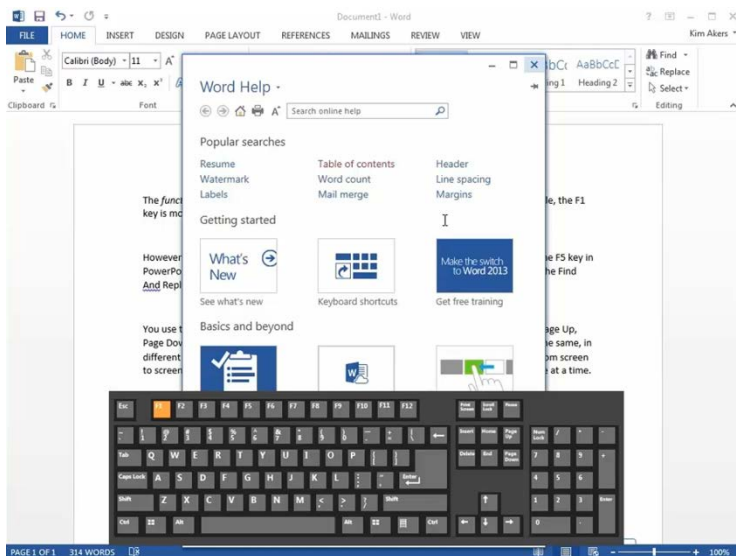
For example, the F1 key is most commonly used to display a Help page associated with the program.
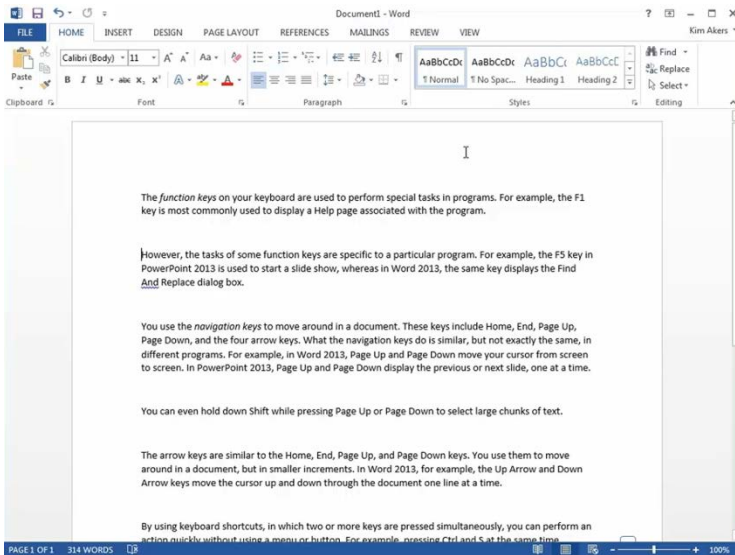
However, the tasks of some function keys are specific to a particular program.
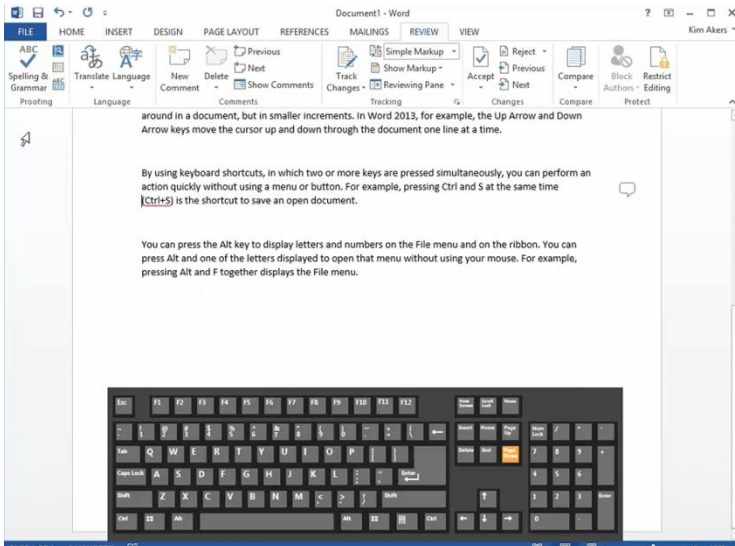

For example, the F5 key in PowerPoint 2013 is used to start a slide show, whereas in Word 2013, the same key displays the Find And Replace dialog box.
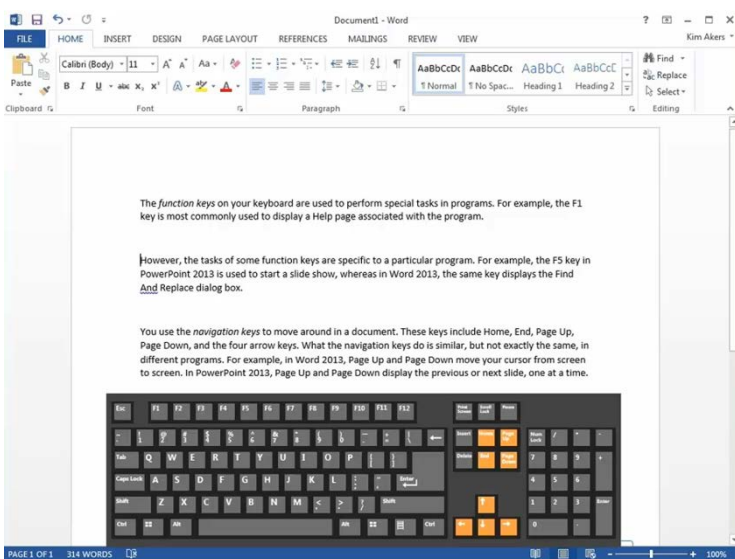

You use the navigation keys to move around in a document.

These keys include Home, End, Page Up, Page Down, and the four arrow keys.

What the navigation keys do is similar, but not exactly the same, in different programs.

In Word 2013, for example, the Up Arrow and Down Arrow keys move the cursor up and down through the document one line at a time.

You can even hold down Shift while pressing Page Up or Page Down to select large chunks of text.

The arrow keys are similar to the Home, End, Page Up, and Page Down keys.

You use them to move around in a document, but in smaller increments.

In Word 2013, for example, the Up Arrow and Down Arrow keys move the cursor up and down through the document one line at a time.
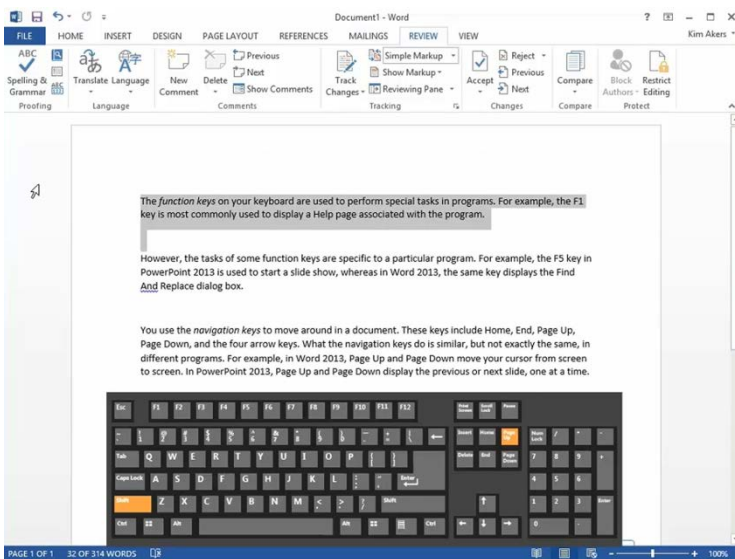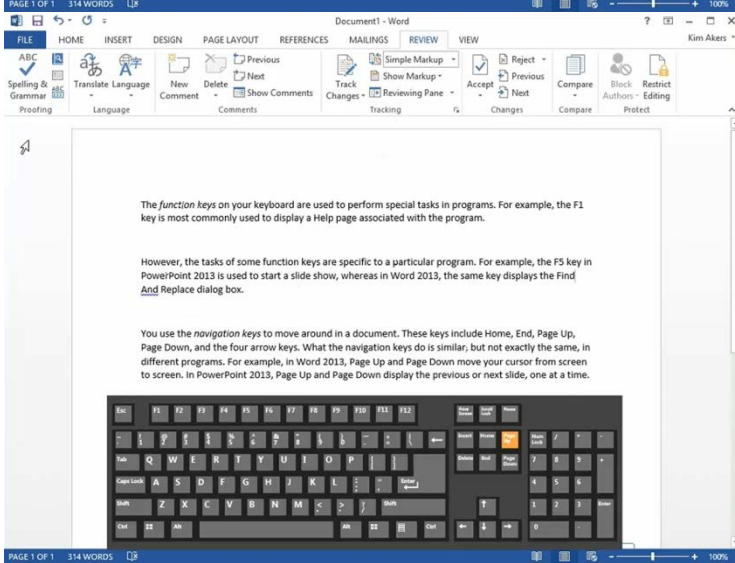
You can even hold down Shift while pressing Page Up or Page Down to select large chunks of text.
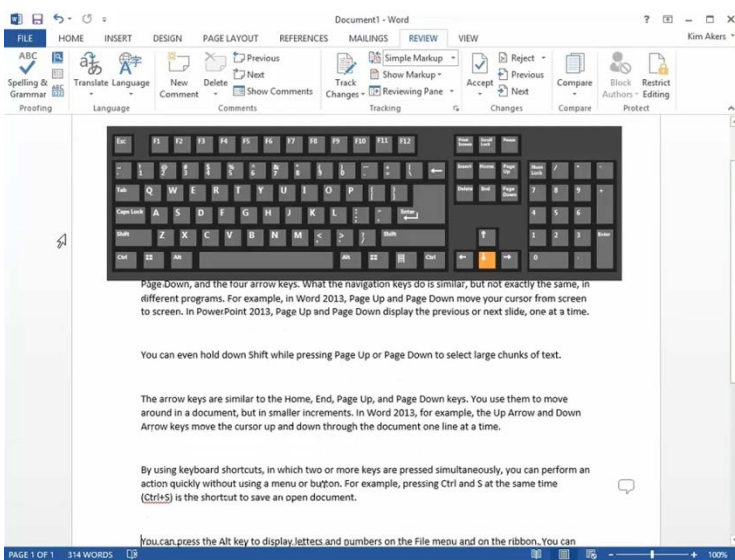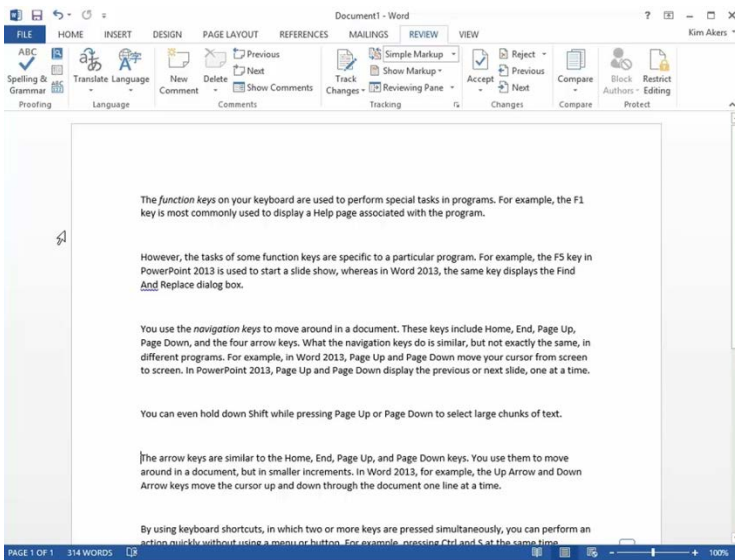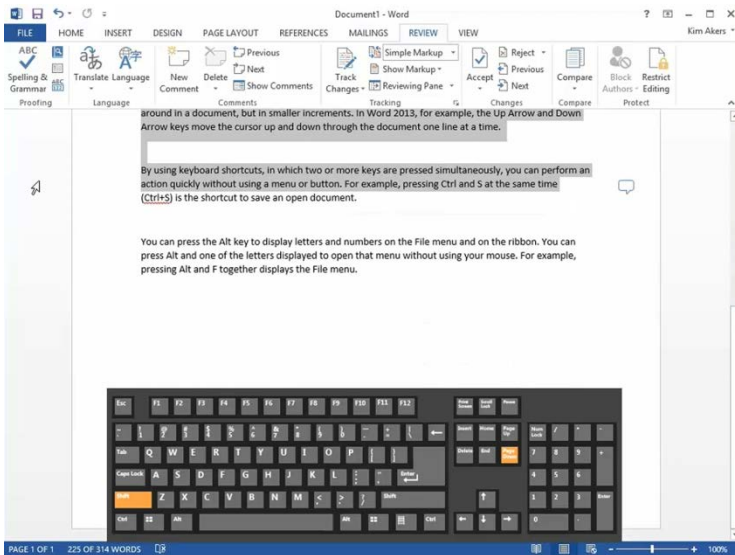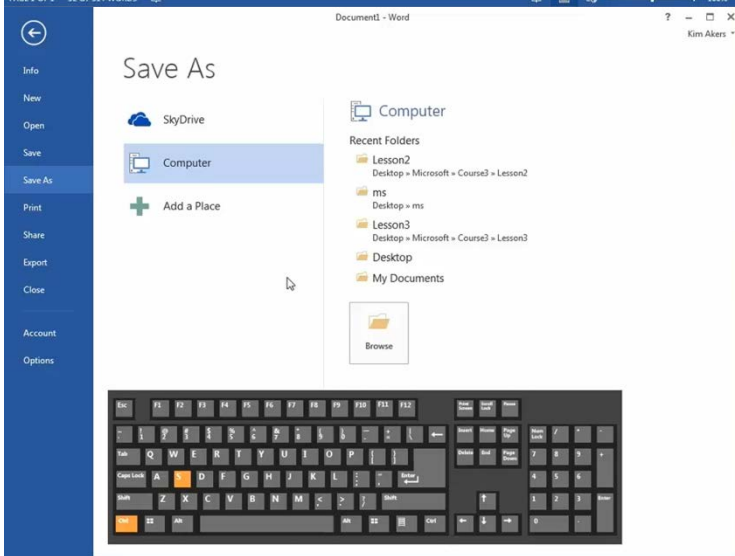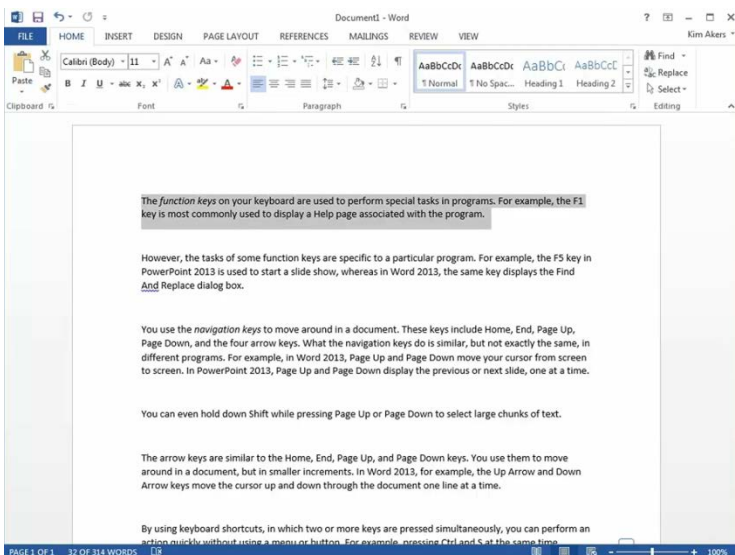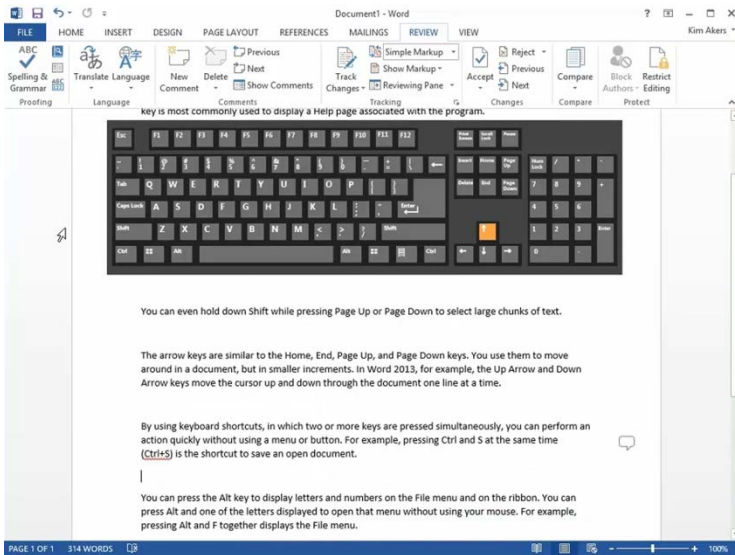
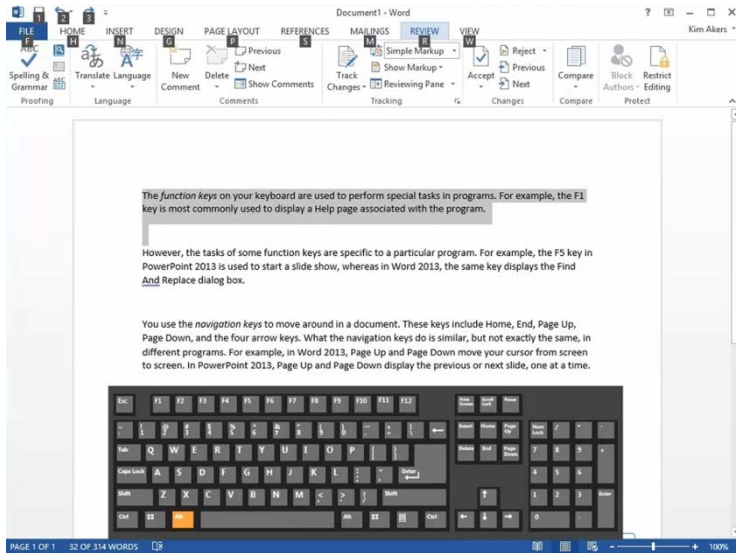The arrow keys are similar to the Home, End, Page Up, and Page Down keys. You use them to move around in a document, but in smaller increments. In Word 2013, for example, the Up Arrow and Down Arrow keys move the cursor up and down through the document one line at a time.

By using keyboard shortcuts, in which two or more keys are pressed simultaneously, you can perform an action quickly without using a menu or button. For example, pressing Ctrl and S at the same time (Ctrl+S) is the shortcut to save an open document.

You can press the Alt key to display letters and numbers on the File menu and on the ribbon. You can press Alt and one of the letters displayed to open that menu without using your mouse. For example, pressing Alt and F together displays the File menu.


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For example, pressing Ctrl and S at the same time. Ctrl+S
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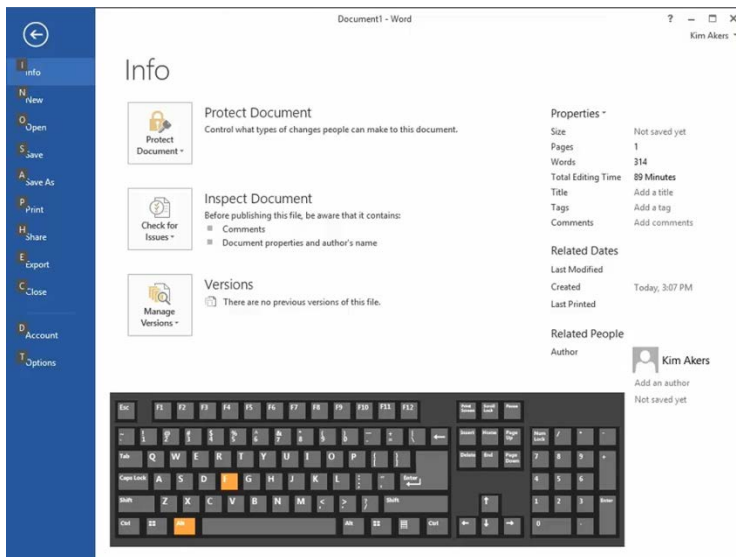
For example, pressing Alt and F together displays the File menu.

Keyboard shortcuts review

You should now have a basic understanding of how to use keyboard shortcuts. Keep the following in mind:

- Modifier keys are Alt, Shift, Ctrl, and Cmd (Mac only).
- A key combination consists of pressing two or more keys.
- Shortcut keys will perform an action quickly.

Knowledge check

What keys are shortcuts for opening dialog boxes?

- o Function Keys
- o Ctrl Key
- o Alt Key

What keys perform quick commands?

- o Functions Keys
- o Ctrl Keys
- o Alt Keys

Answers –

#1 – The Function keys commonly opens dialog boxes.

#2 – The Ctrl key commonly performs quick commands.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Identify the main components of the graphical user interface (GUI) of a productivity program
- Use the pointer to navigate in a program
- Identify the tabs, groups, and commands on the Ribbon
- Use the buttons on the toolbars to perform various tasks
- Type text and characters in a program by using the keyboard
- Explain the use of keyboard shortcuts and key combinations

Introduction to Word Processors

Microsoft Word 2013 is a _word processor_ that can help you create certain items; which are listed below:

- Professional resumes
- Agendas
- Brochures
- Certificates
- Birthday cards
- And more

In this lesson, you will learn about the basic tasks that you can perform by using a word processor. You will learn to work with text, tables, and pictures. Learning what exactly a word processor is and the specialties of such a program.

Basic tasks in Word 2013

A word processor is a software program that you use to create and work with text on a computer. It performs the same functions as paper, a pen, a typewriter or keyboard, an eraser, and a dictionary. Most computers come with basic word processors such as Notepad and WordPad. You can use advanced word processors, such as Word 2013, to perform more complex tasks that include checking for spelling errors, finding synonyms, inserting graphics, and printing documents.

The Basic Tasks in Word 2013 simulation can be accessed online at
http://www.microsoft.com/digitalliteracy.

Knowledge check

What king of tasks can you perform in Word?

Answer –

#1 – Your answer should include the following: review documents, add images, print, write letters, save documents, and format text.

Creating a document by using a template

Office 2013 provides various types of templates. These templates contain predefined formats and layouts that you can use to create a document quickly. Standard templates are available locally on your computer. However, advanced templates are also available on the Office.com web site.

The Creating a document by using a template Simulation can be accessed online at
http://www.microsoft.com/digitalliteracy.

Knowledge check

There is only one type of template.

- o True
- o False

Templates are only available on your computer.

- o True
- o False

Answers –

#1 – False. There are hundreds of templates that help you write resumes, cover letters, thank you notes, and event party invitations.

#2 – False. Your computer starts with some templates, but you can get many more from the Microsoft Office website.

Edit and formatting text

Word 2013 helps you to easily cut, copy, and paste text, undo and redo actions, justify text, change font parameters and paragraph spacing, and perform various other editing and formatting functions. In this demonstration, you will see how to perform basic tasks that are related to editing and formatting of text in Word 2013.
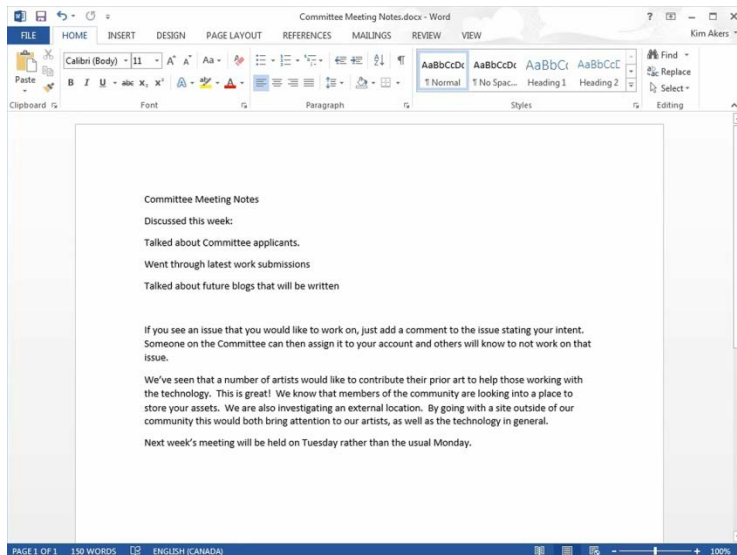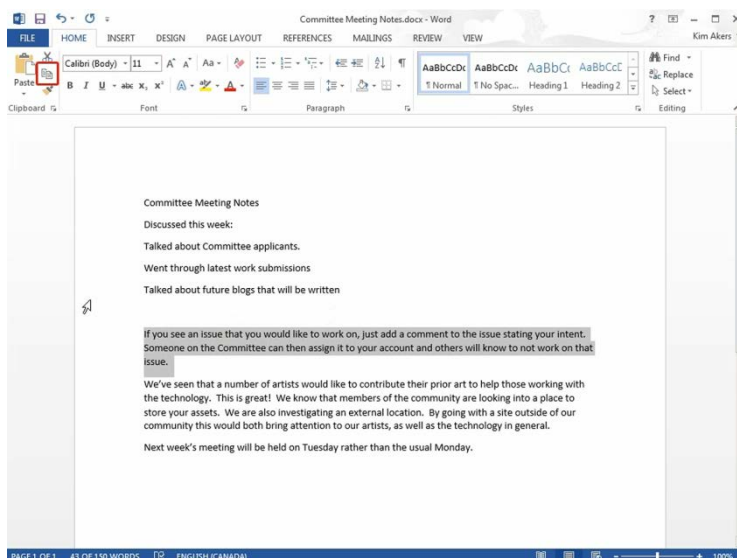

With Word 2013, you can easily change the text of your document and make it look more interesting.

One way to move text in your document is to copy and paste it.

The copy option in Word 2013 helps you duplicate information.

When you select and then copy text no changes are made to the original copied text.

Start by selecting text to copy with your mouse or the keyboard and then click the Copy button in the toolbar or press control and C.
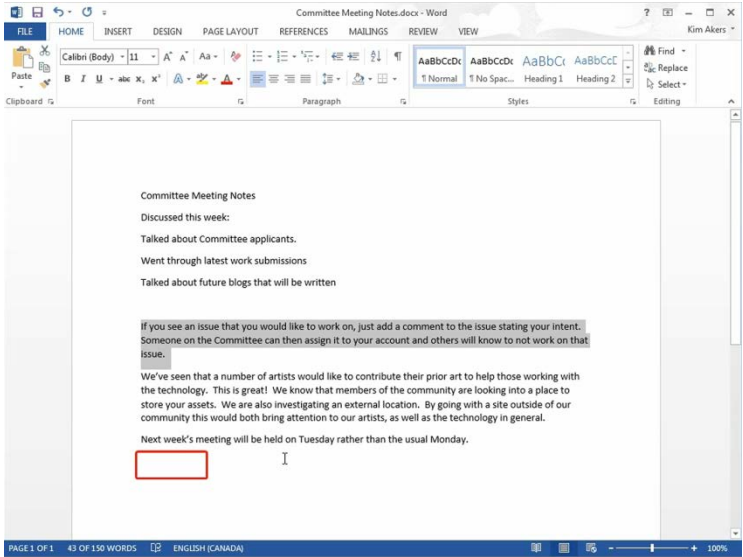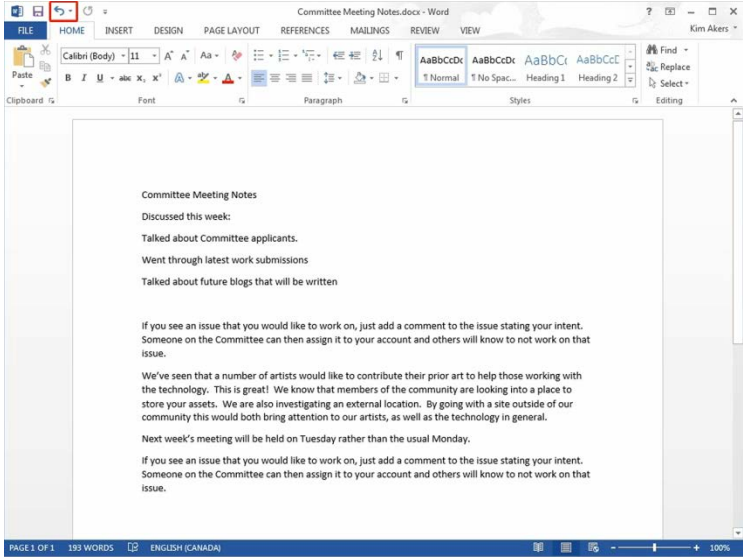
The Paste option inserts text that has been cut or copied from a document into a different location.

That can be within the same document or even into a different document.
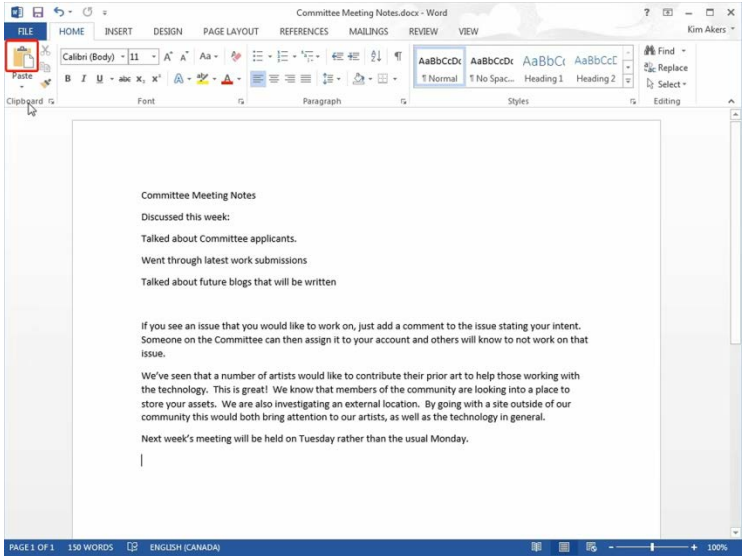
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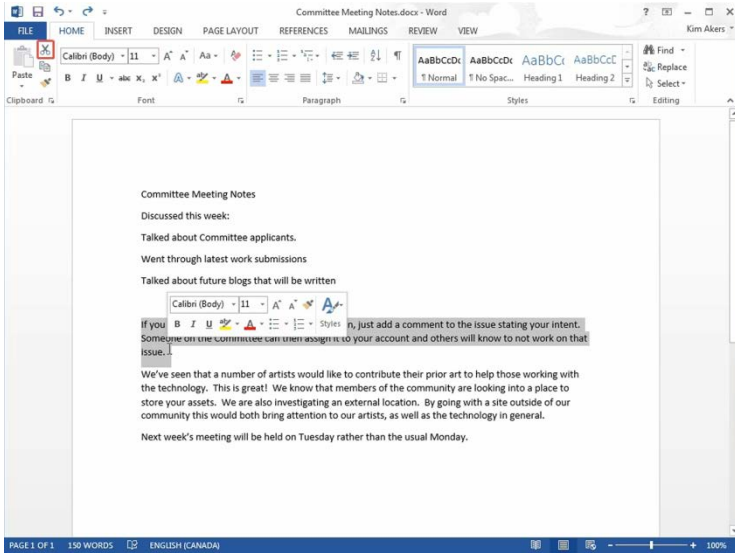
That can be within the same document or even into a different document.
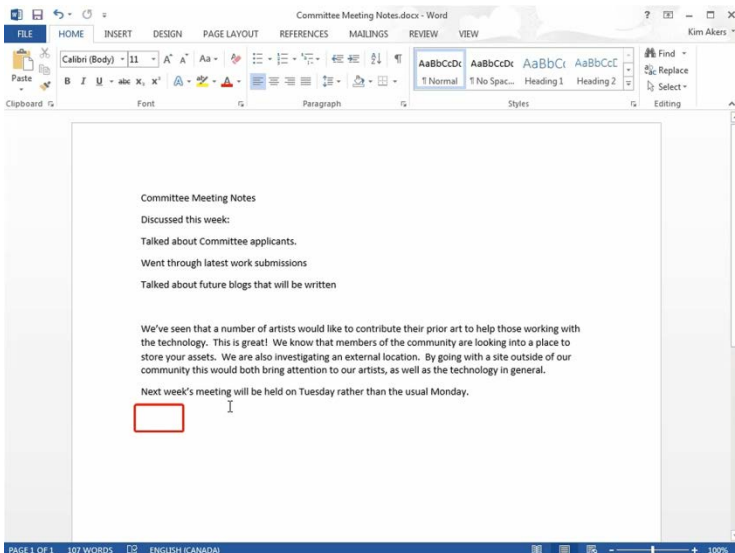

You can reverse specific and repeat actions that you performed.

Click the undo button or press control z to reverse your last action.

Pressing it again will reverse the action that happened before that and so on.
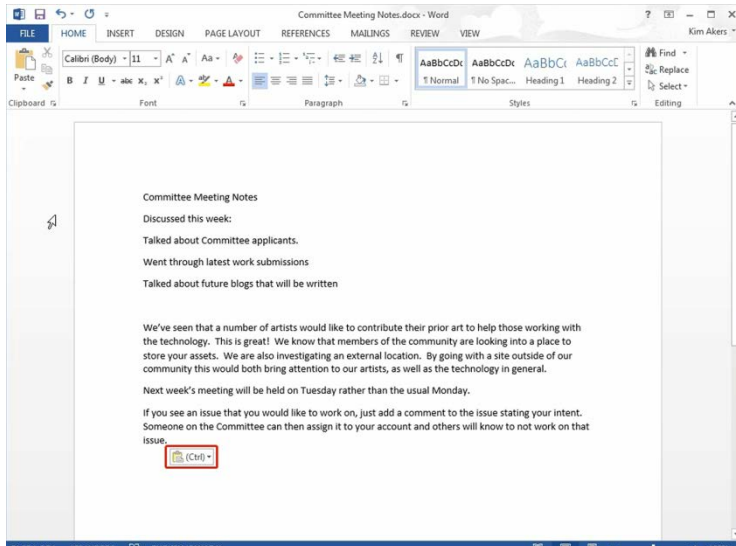
You can use the Cut option to remove selected text from its original location by clicking the cut command or pressing control X.
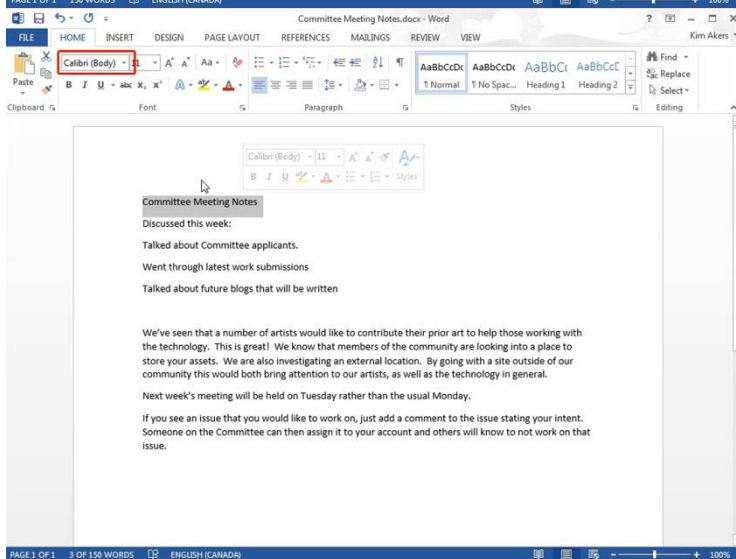
To paste the cut text move your cursor to where you want the text to appear and then paste the text back in the document with the paste command or control V.
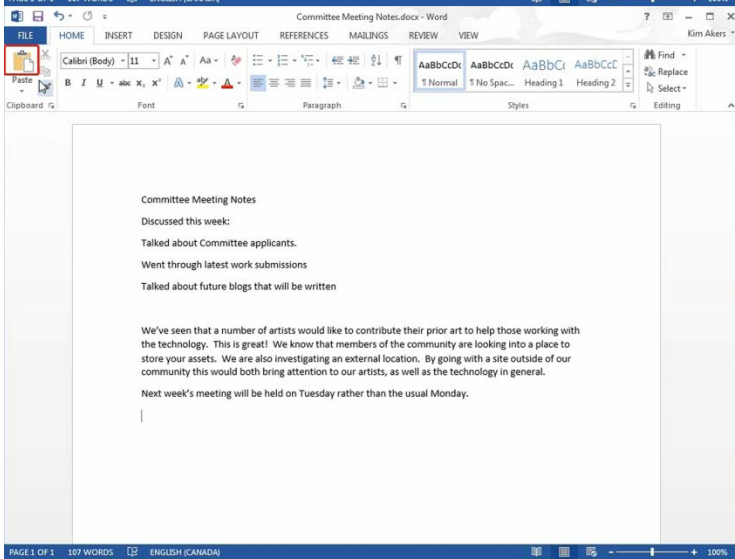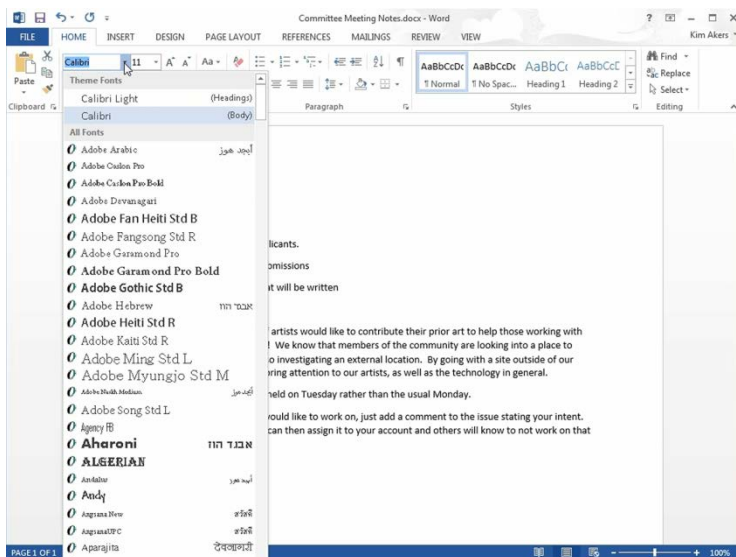
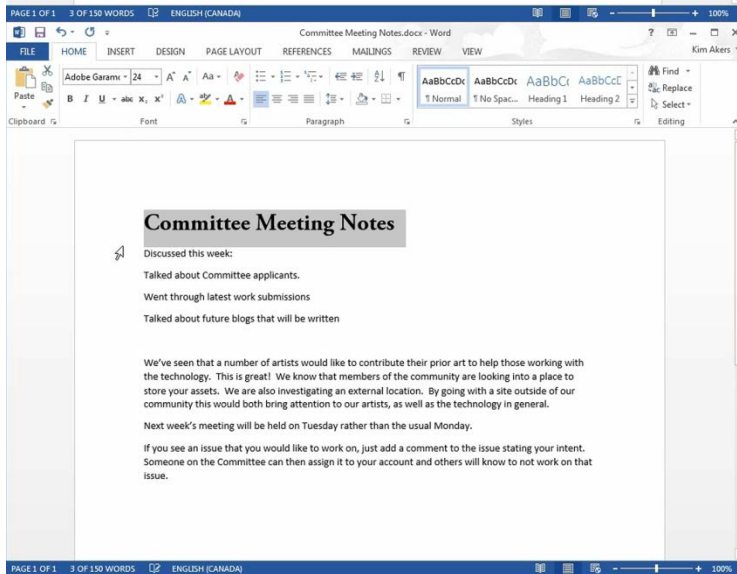Note that the paste options button appears next to the pasted text.
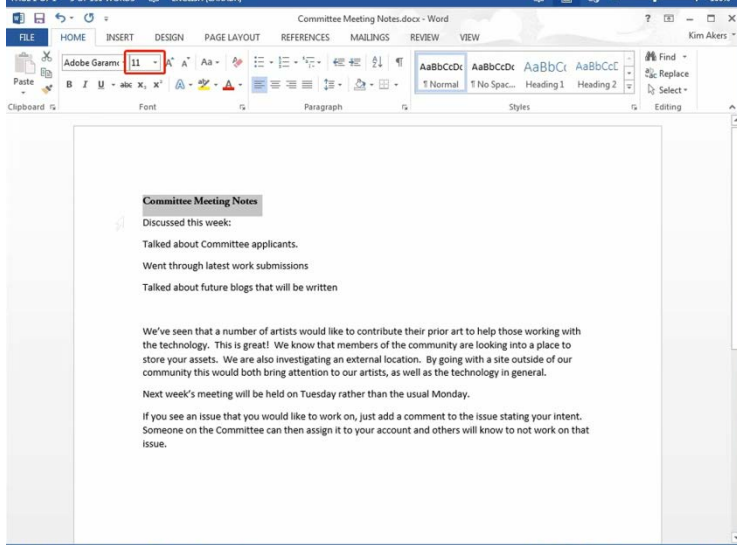
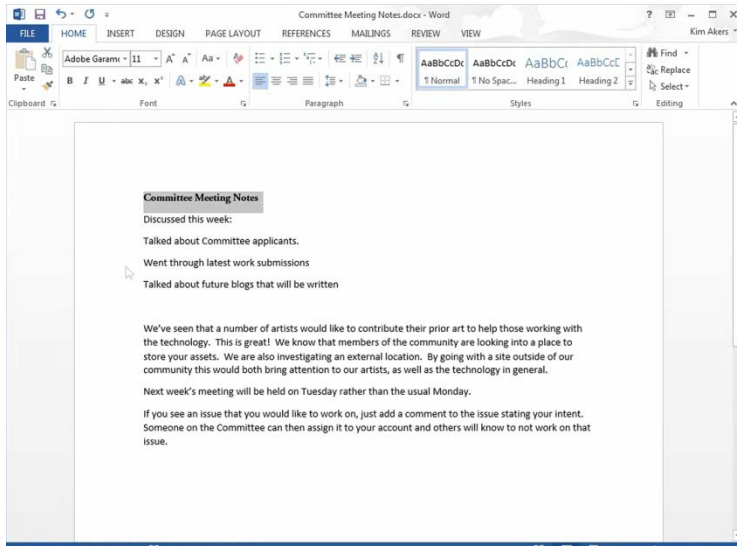This button allows you to specify the formatting of the pasted text.

When you need to change the font, size, or style of a word or sentence use the commands that are available in the Home Tab.

You can change your selected text by clicking the Font selection box and picking an entry from the list.

Changing the font size is as simple as typing a number in the next box or clicking the dropdown selection of preset numbers.

To emphasize important parts of the text, you can select from predetermined styles.
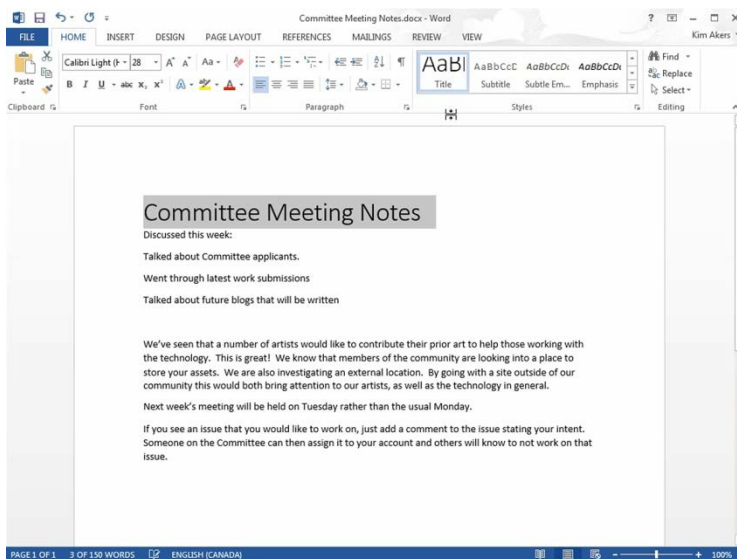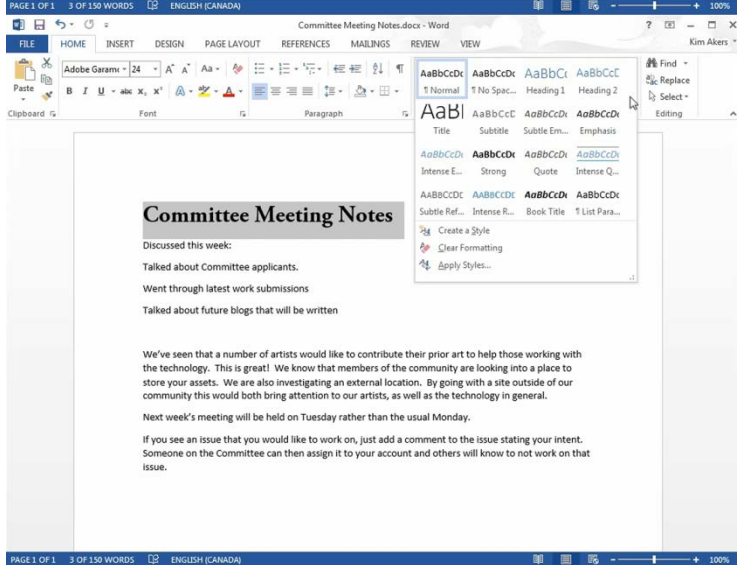
You can change the size, font, color, and alignment of text in a single click.

After selecting a style, you can refine the formatting.
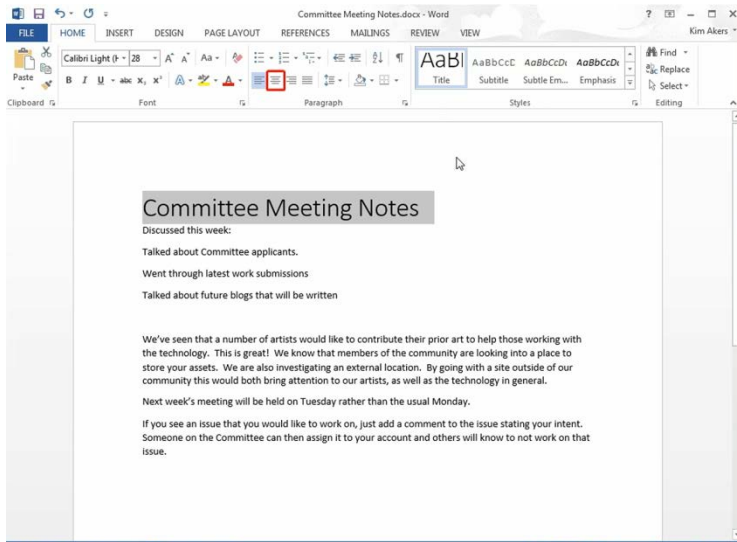
For example, you can make the title for your document centered and underlined.

If you want to have absolute control over the appearance, you can apply a style step by step.
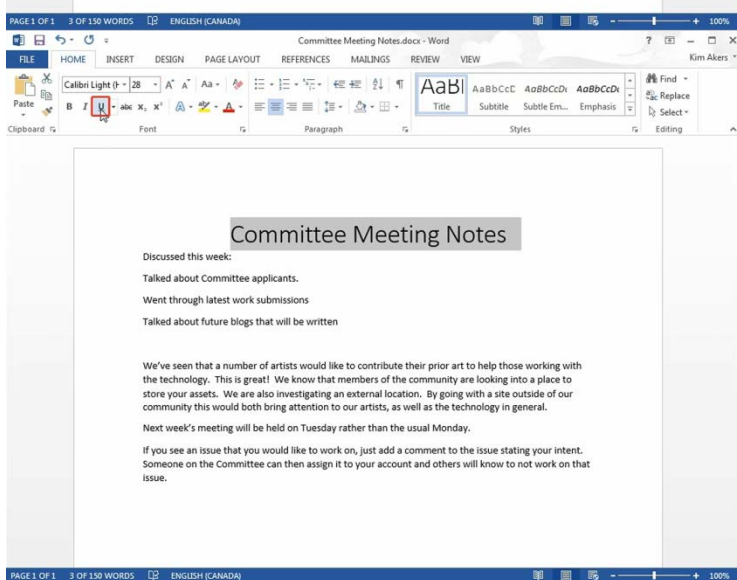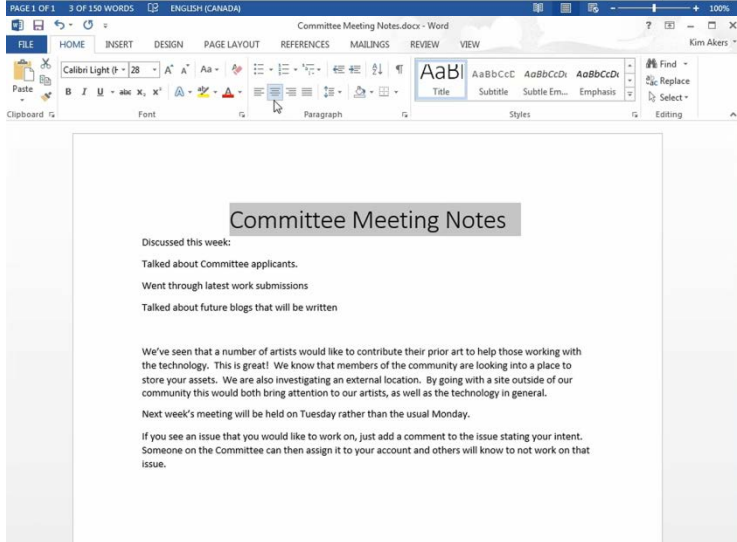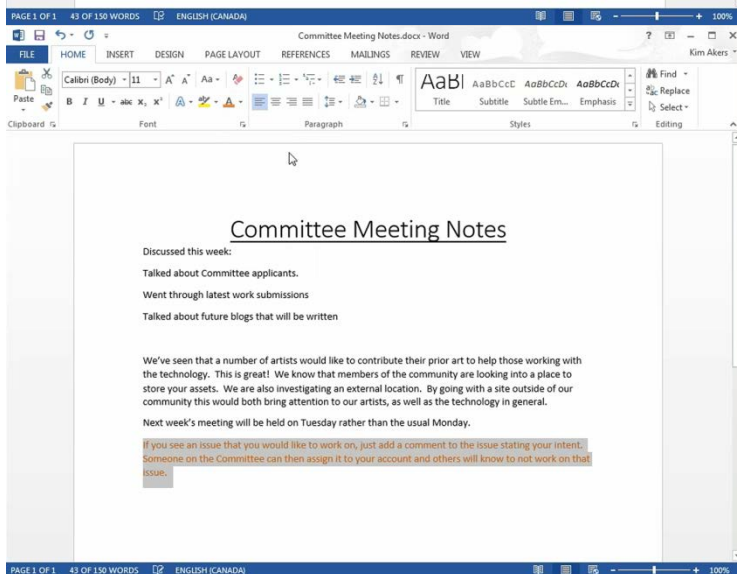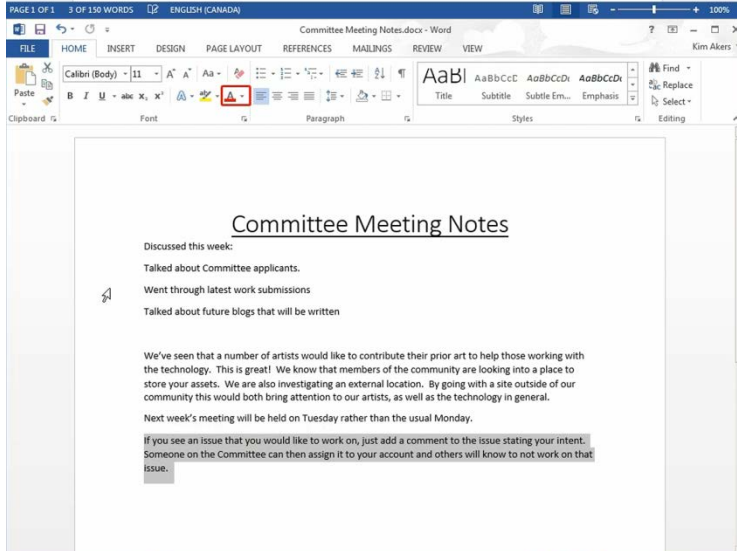
You can change the font color and text highlighting by clicking the appropriate buttons in the Font group.
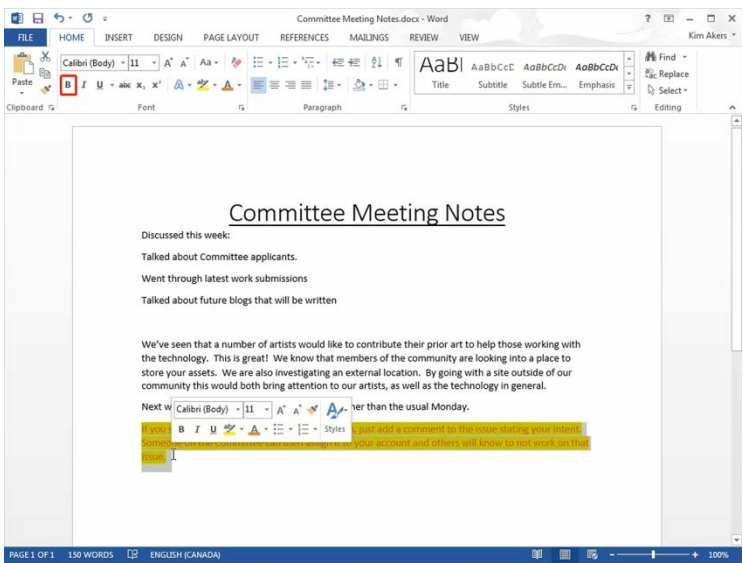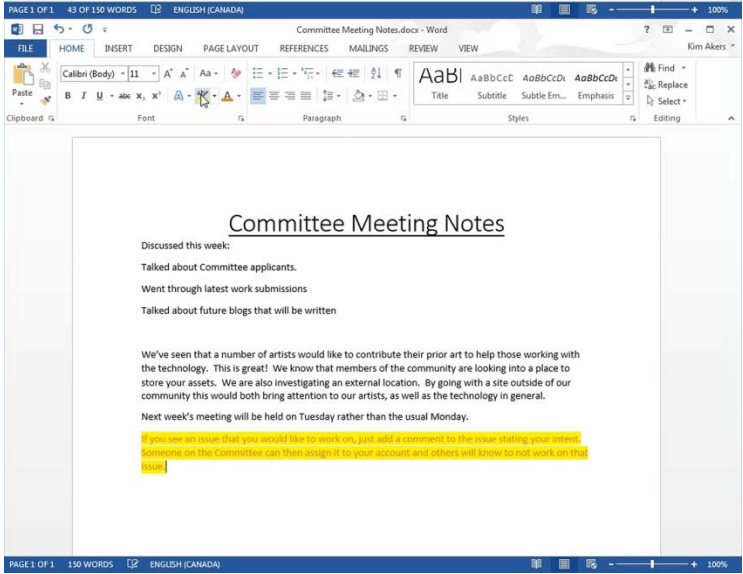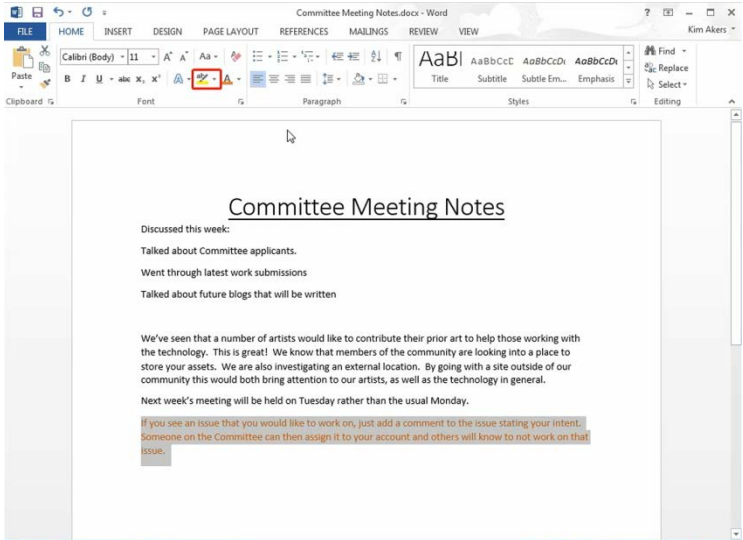
Changing the text to be bold and italicized will make it stand out even more.
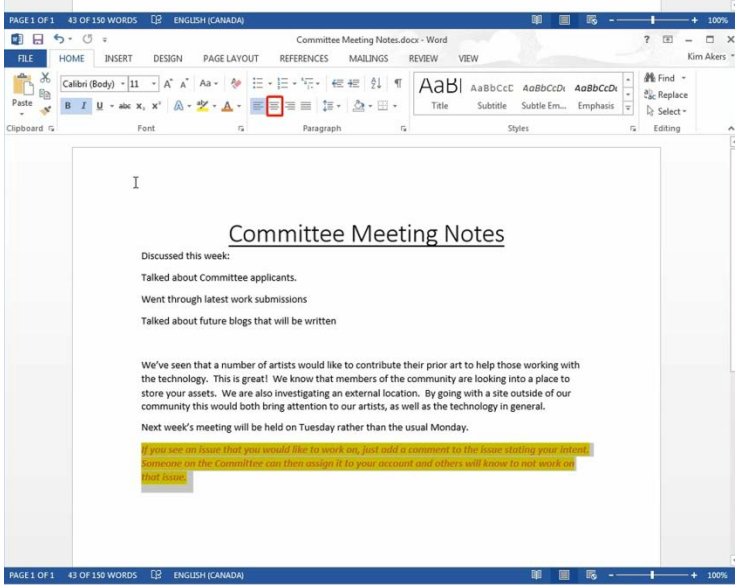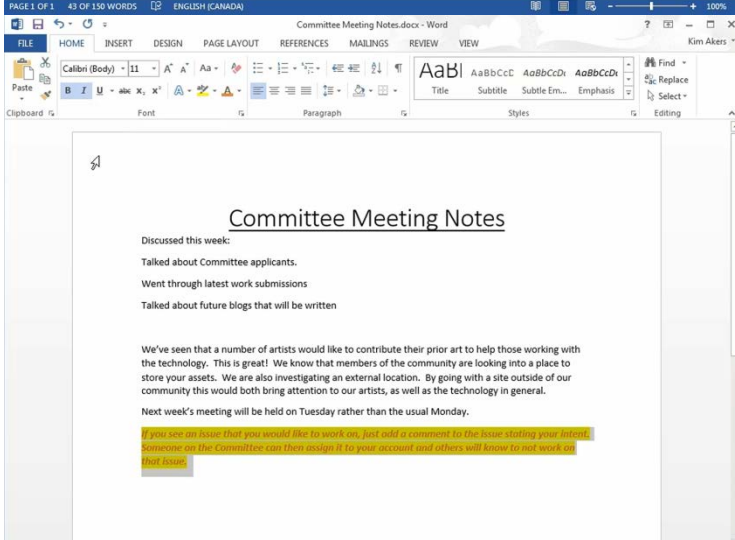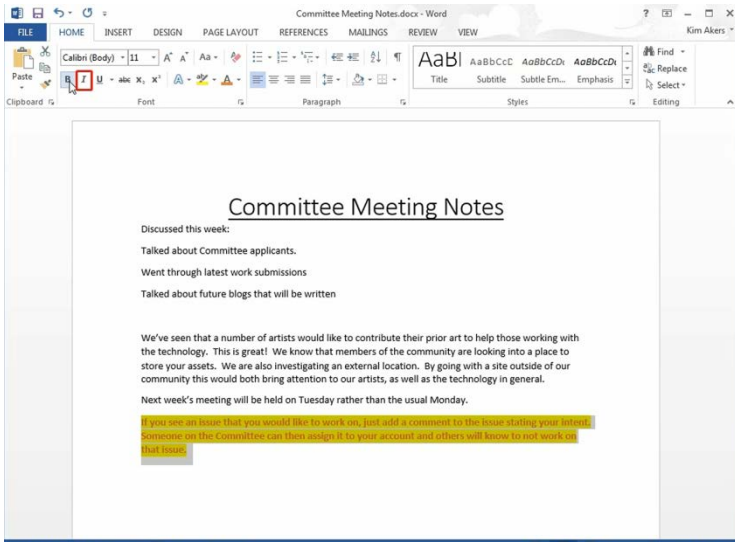
You can specify the arrangement of the text in a document by using the alignment settings.

This will affect the spacing and positioning of the text.

Center will make all of the text align down the middle of the document.
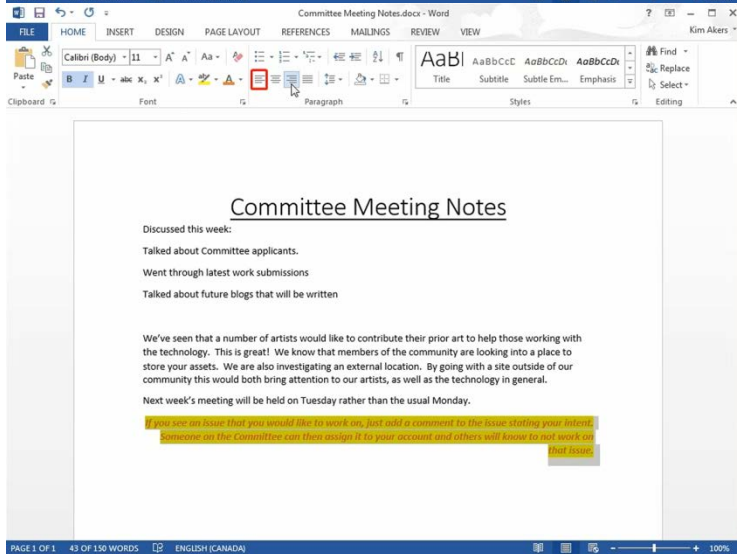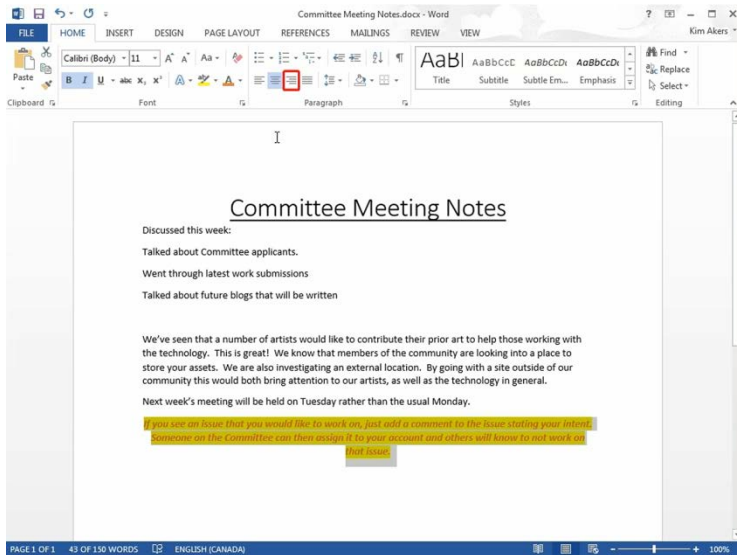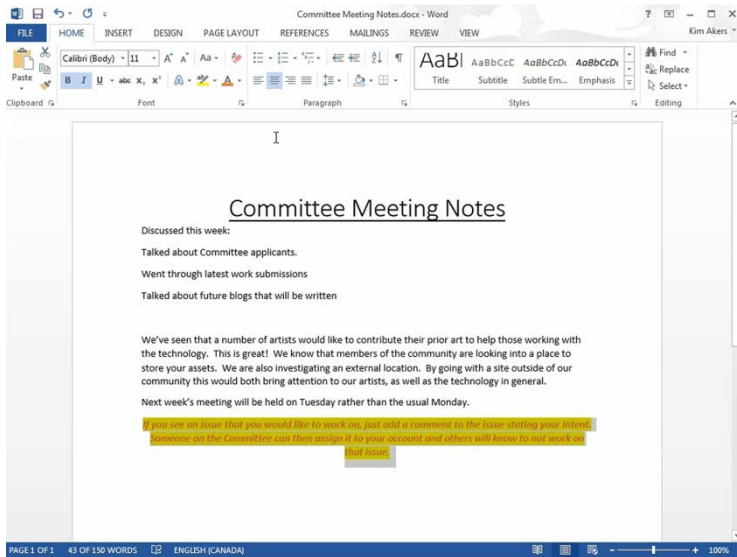
The Align Text Right and Align Text Left buttons allow you to align the text to the edges of the page.
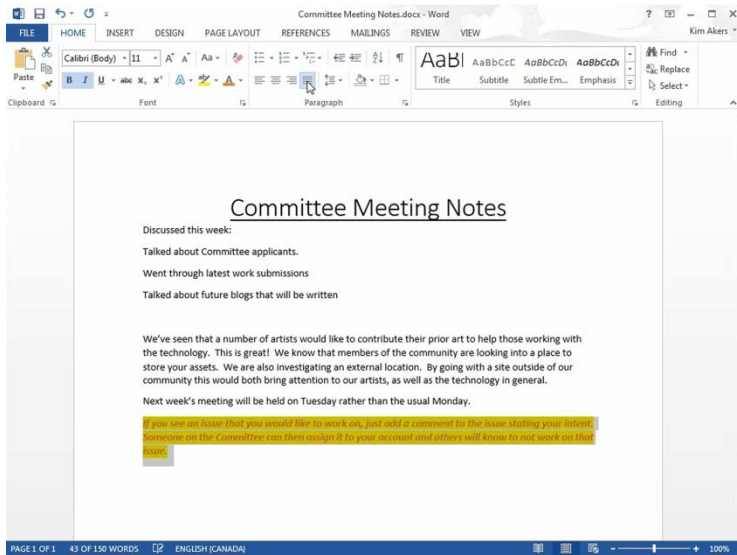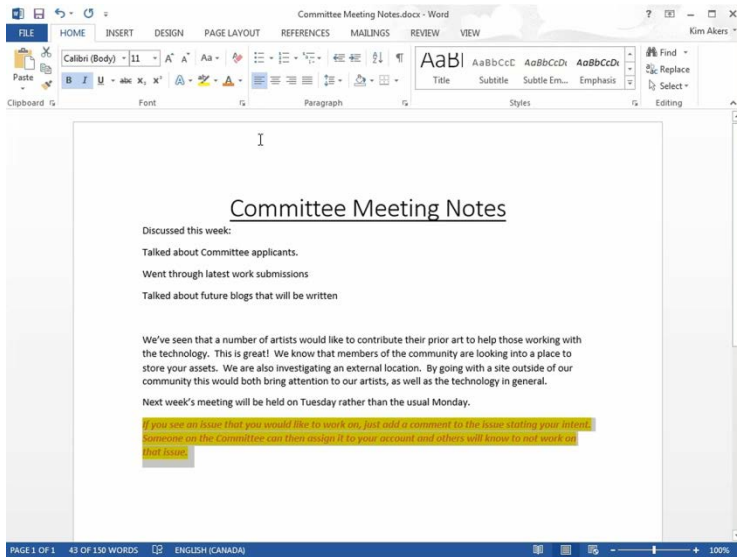
Use the Justify button to align the text of a paragraph evenly between the left and the right margins of a page.
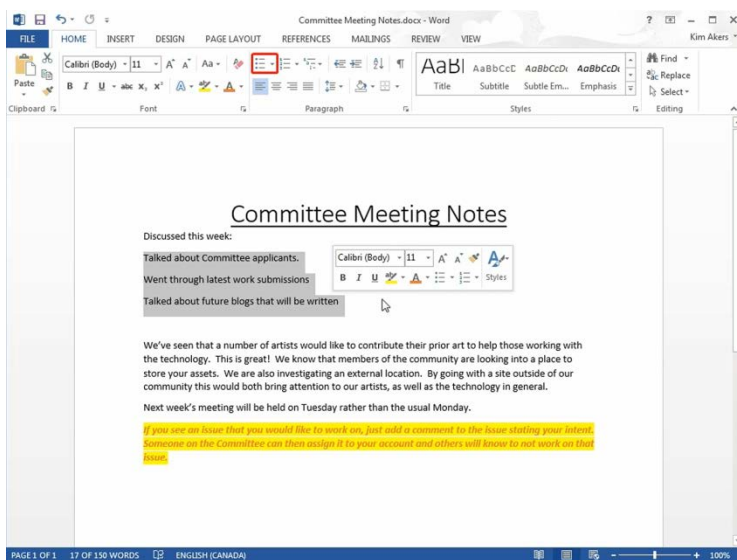
Suppose there is a list of items in your document and you want to make them stand out as a list and not separate lines.

You can make an unordered list by clicking the Bullets button.
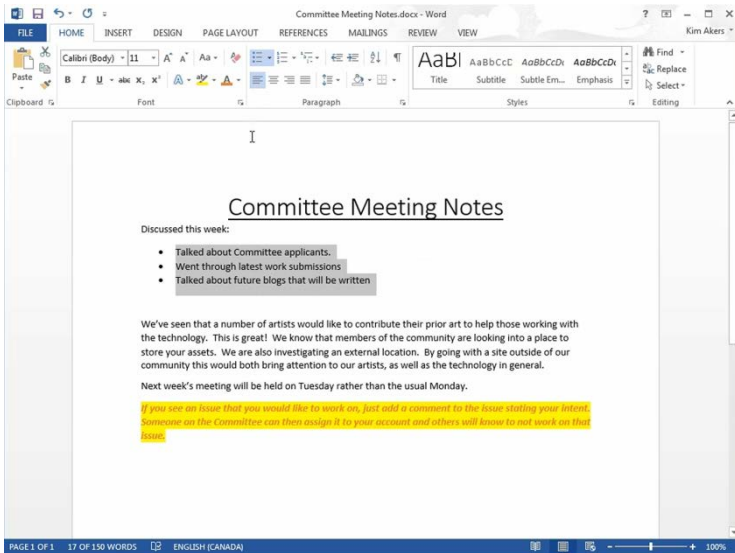
If your list has a specific order, you can click on the Numbering button.
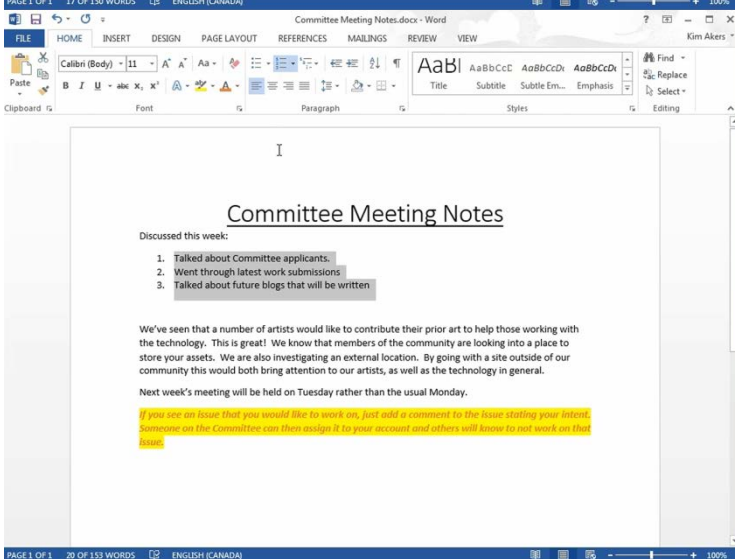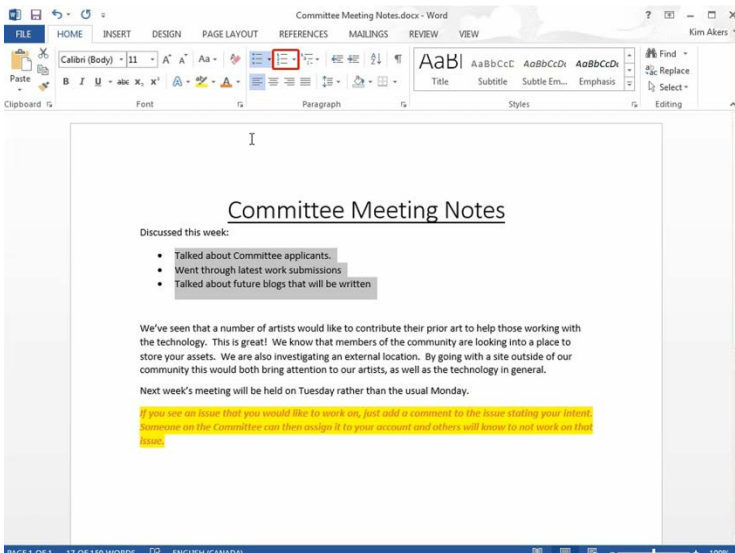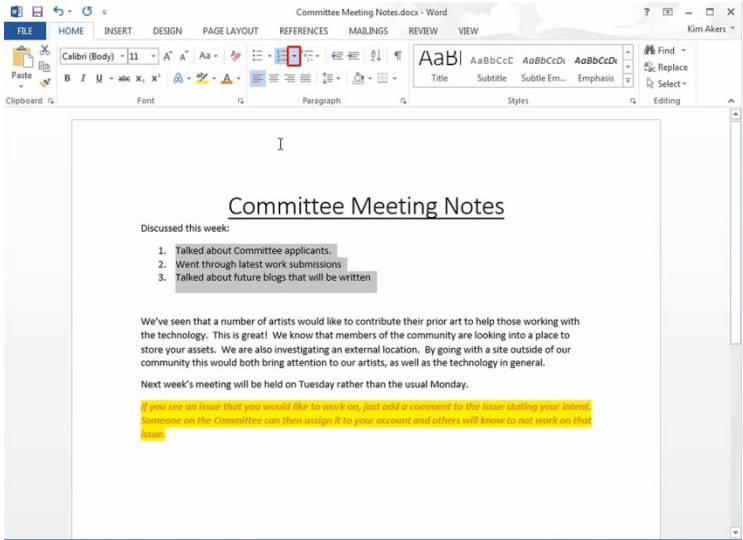
To change the style of the list, you can click on the Numbering or Bullet dropdowns and select style that fits your document.
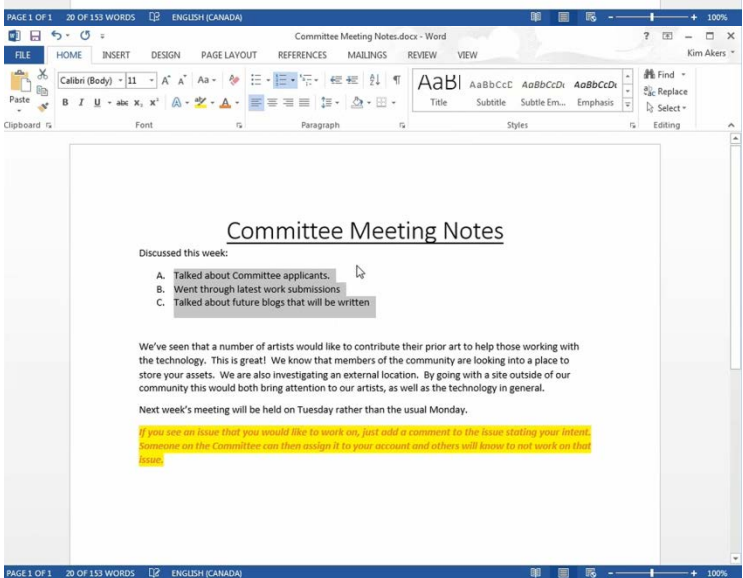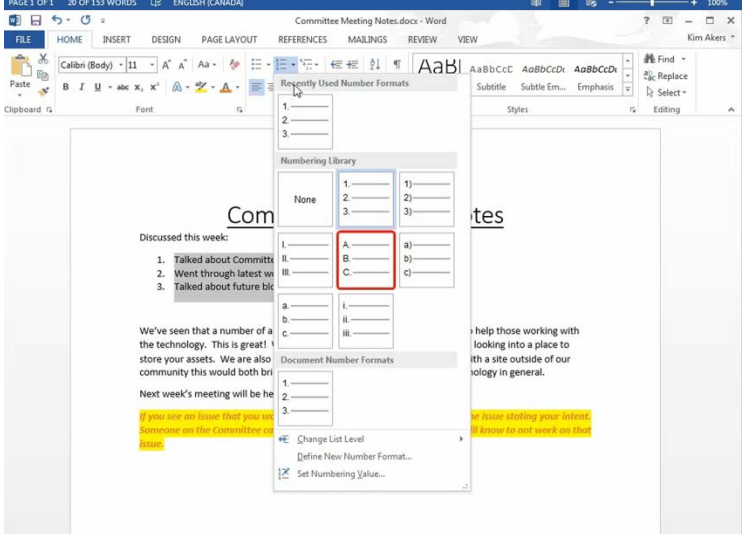
Knowledge check

What are five things that Word 2013 can easily let you do with text?

Answer –

#1 – Your answer should include at least five of the following: cut, copy, and paste text, undo and redo actions, justify text, change font parameters, and paragraph spacing.

Working with tables and pictures

Suppose you want to create a report that contains information about the weekly sale of museum tickets during a month. Instead of presenting this information as plain text, you can present the information in an easy-to-understand format using a table. You can divide the information into logical sections within a table to group different types of data, making it easier to read the entire document. You can also include pictures in a document to make it visually appealing.

The Working with Tables and Pictures simulation can be accessed online at
http://www.microsoft.com/digitalliteracy.

The Working with Tables and Pictures simulation can be accessed online at
http://www.microsoft.com/digitalliteracy.

Knowledge check

How can you present information in an easy-to-understand format?

- o PowerPoint
- o Chart
- o Table
- o Paragraph

You can divide information in a table into sections with different types of data.

- o True
- o False

Answers –

#1 – A table will allow you to put information into different cells and divide it up into different categories.

#2 – True. You can use rows and columns to divide any number of sections.

Proofreading documents

Advanced word processors, such as Word 2013, can automatically check the spelling, grammar, and punctuation of a document based on the language of the typed text. You may also search for synonyms using the built-in thesaurus. Word 2013 also features an AutoCorrect function that will automatically correct misspellings and grammatical errors as soon as you start typing the text. For example, typing "teh" will automatically be corrected to "the".
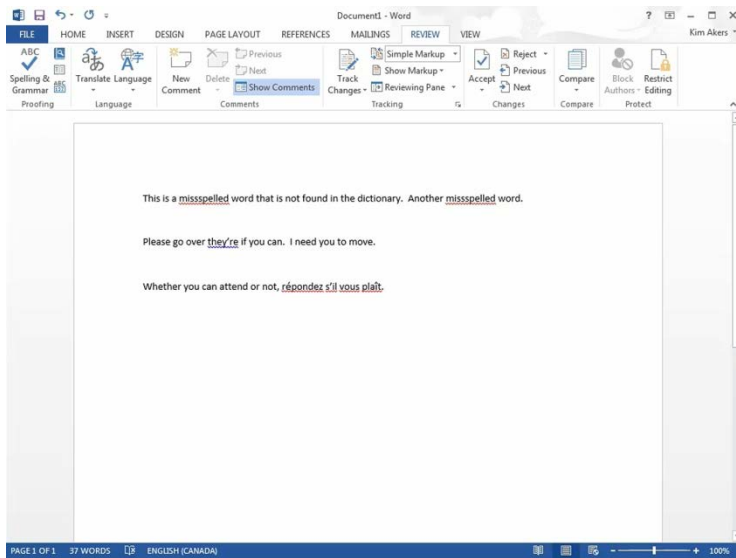
Any time you are writing a report or an essay you may check your document for spelling and grammar mistakes.
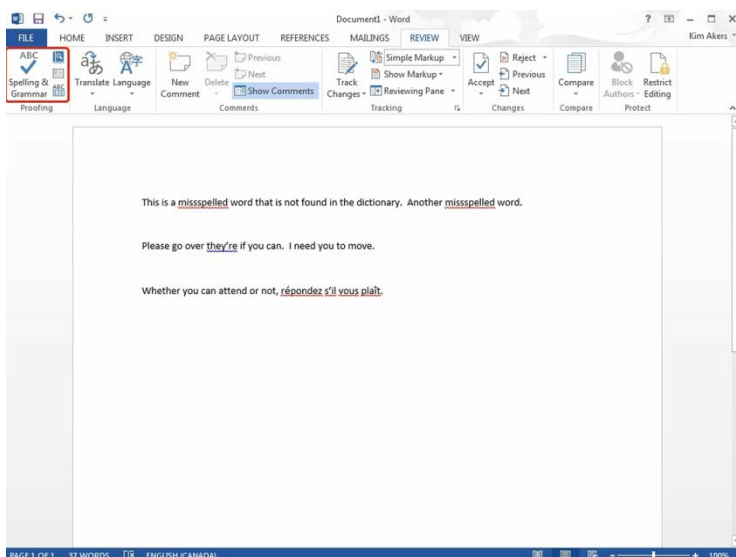
This is done using the proofreading tools that Word 2013 provides as found under the Review tab on the Ribbon bar.
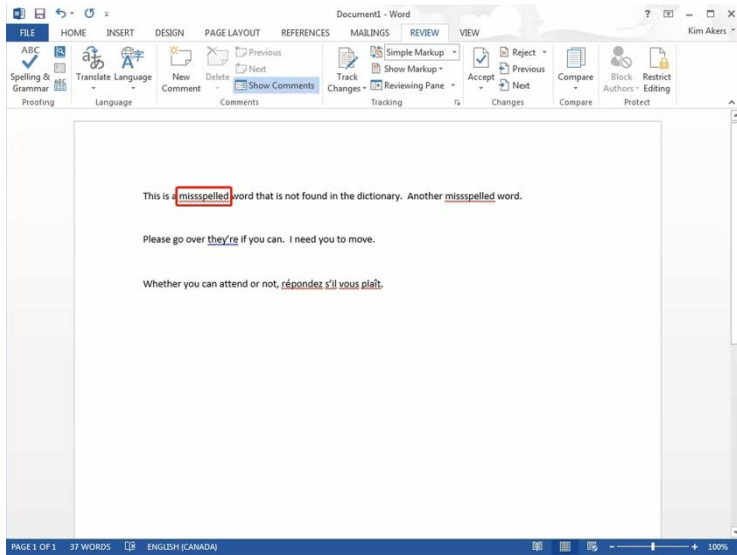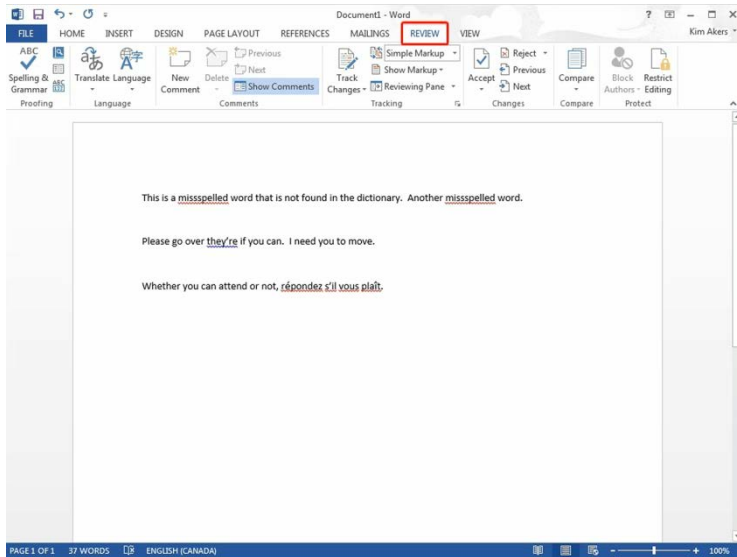
Within the work area of Word 2013 you may see words with a wavy red underline.

This indicates that the word is not found in Word 2013's dictionary.
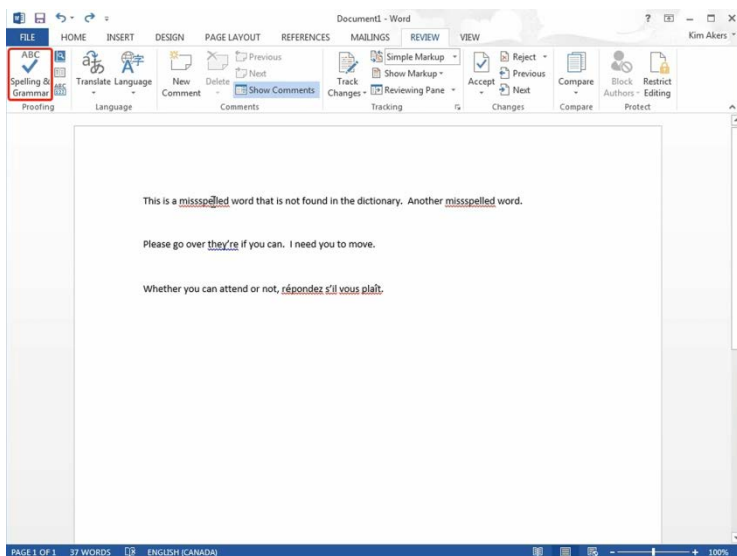
Clicking on the Spelling & Grammar command opens a Spelling task pane that provides suggestions on how to correct the misspelled word.
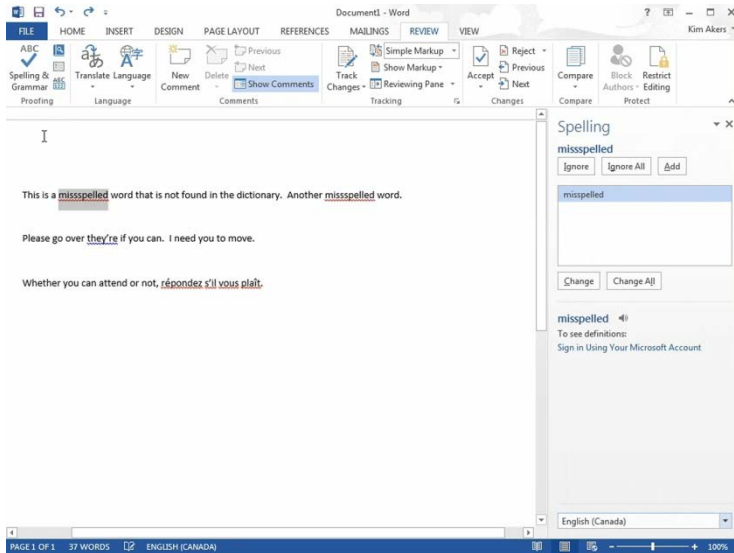
Clicking the Change All button corrects all instances of the misspelled word in the document.

This saves you from having to manually correct the whole document.
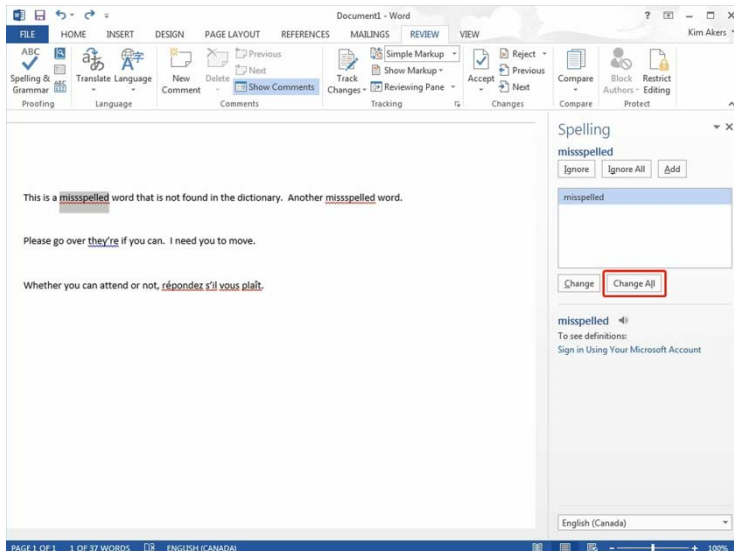
Word 2013 also helps you check and correct grammatical errors in your document.

Words with a wavy blue underline offer suggestions in the Grammar task pane where you may either correct your document or choose to ignore the suggestion.
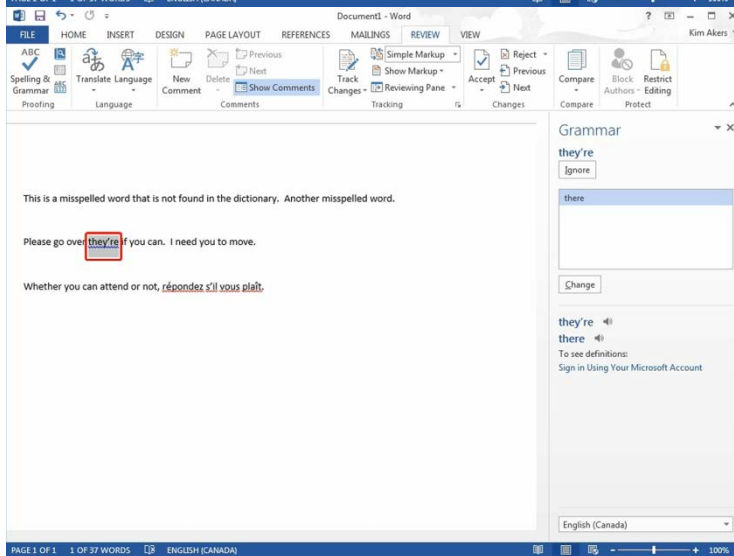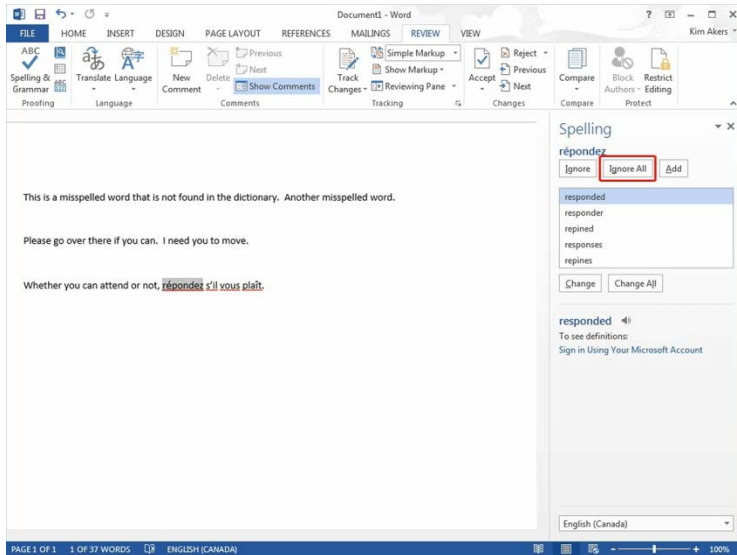
When words from different languages or the names of people and companies show up as misspelled, we may click on the Ignore All button to ignore the suggestions for your document
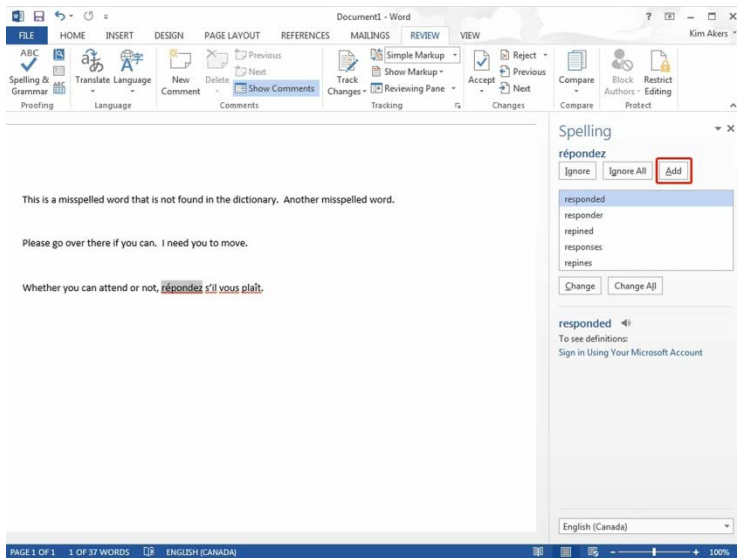
If this is a word that is common across multiple documents we may click on the Add button to add it to Word 2013's dictionary.
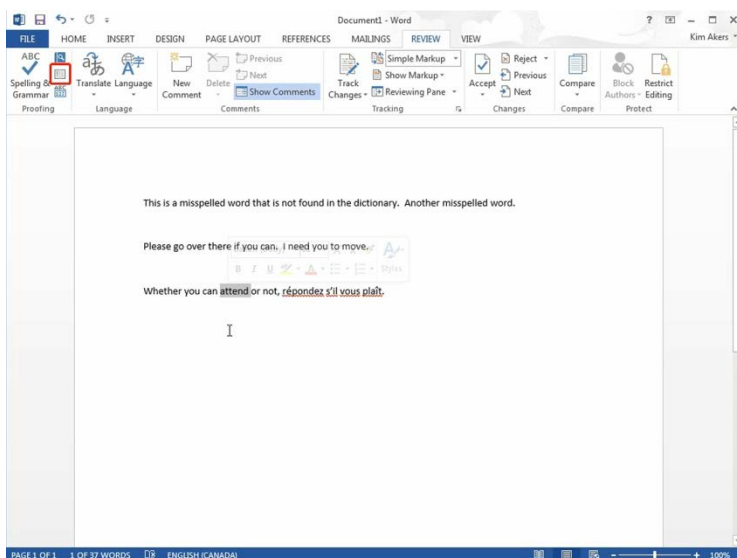
To find a synonym for a word, you can use the Thesaurus feature in Word 2013.
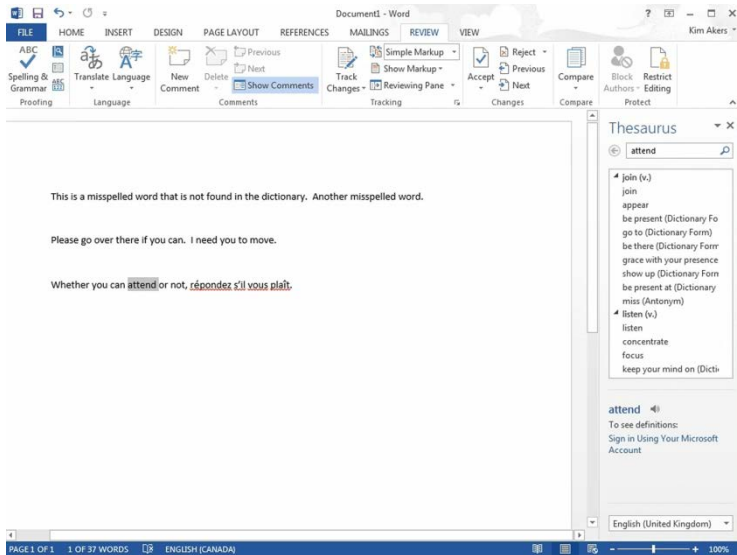
Word 2013 searches for synonyms and provides a list to choose from.
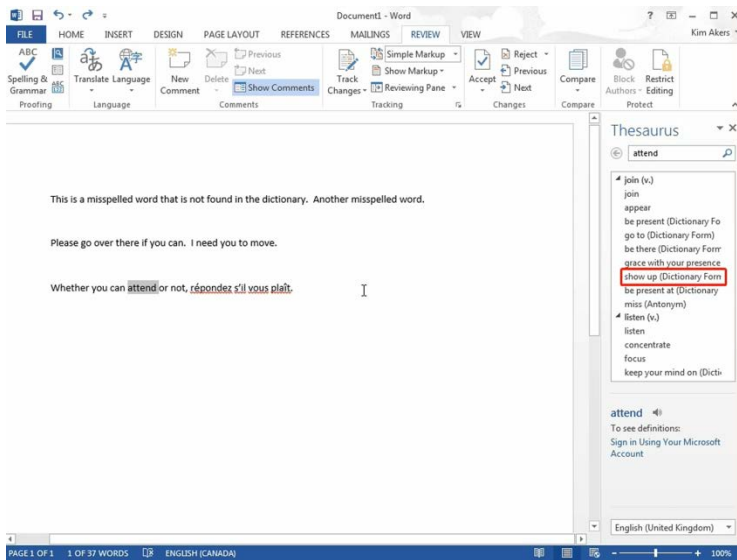
You may then select the word you want from the list.
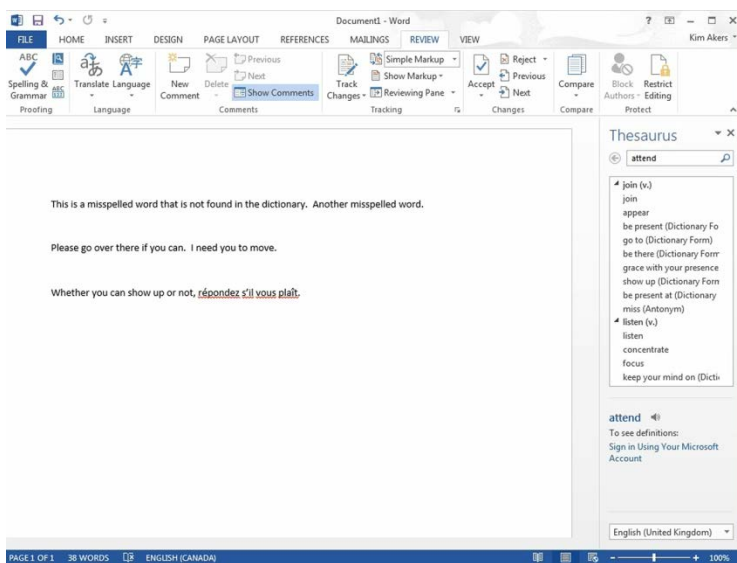
In this demonstration, you saw how to proofread a document in Word 2013.

Proofreading documents review

You should now be familiar with the following Proofreading Features:

- Review Tab's Spelling & Grammar
- Misspelled word highlights with the red wavy underline
- Click to choose a new spelling
- Grammar Suggestions
- Add to dictionary
- Thesaurus

Knowledge check

How do you correct a misspelled word?

Answer –

#1 – Your answer should have included clicking on the Spelling & Grammar command and choosing the correct spelling from the provided list of one or more words.

Benefits of desktop publishing

Up to this point you have learned all about Word Processors, such as Word 2013. You will now be learning about the benefits of publishing the work that has been done on a word processor. There is a specific program that will allow you to do some final touches and move stuff around much easier for a very long document.

A word processor such as Word 2013 provides a lot of flexibility in creating your document. But if you are looking to create documents with a specialized text and image layout a _desktop publishing (DTP) program_ such as Publisher 2013 can help out. DTP makes it easier to arrange and modify information for documents that are very long, or have special formatting needs. And DTP programs also offer built-in templates for documents such as newsletters, brochures, flyers, signs, resumes, business forms, letter formats, and catalogs.
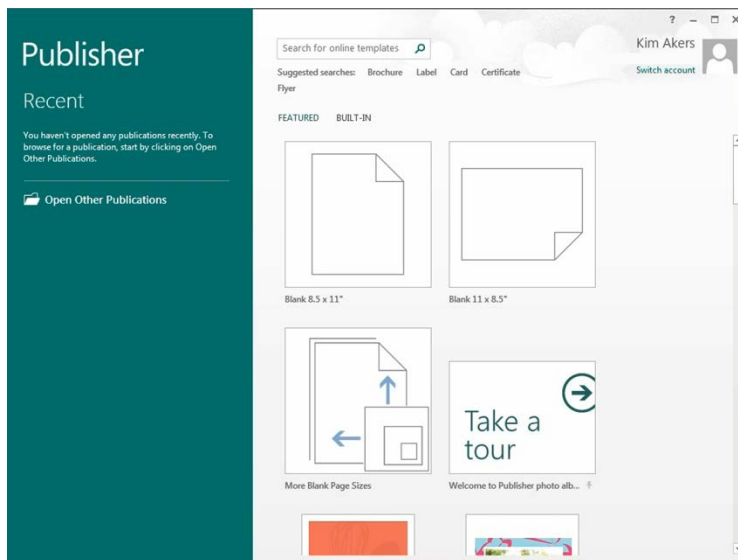
A word processor such as Word 2013 provides a lot of flexibility when creating your documents.

But if you are looking to create documents with a specialized layout such as a brochure or a photo calendar, a desktop publishing application like Publisher 2013 gives you the power to combine text and images in a variety of ways.
Let's step through creating a brochure using Publisher 2013.

When we start up Publisher 2013 we are provided with a list of templates to choose from.
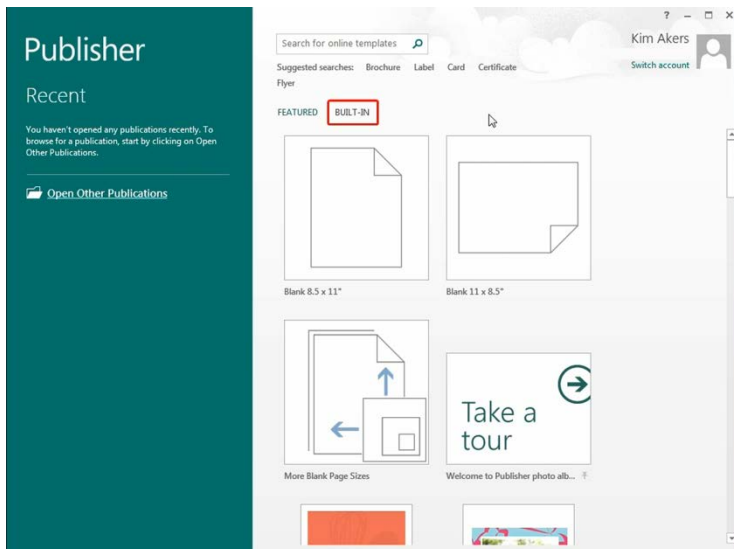
We will start by selecting BUILT-IN.
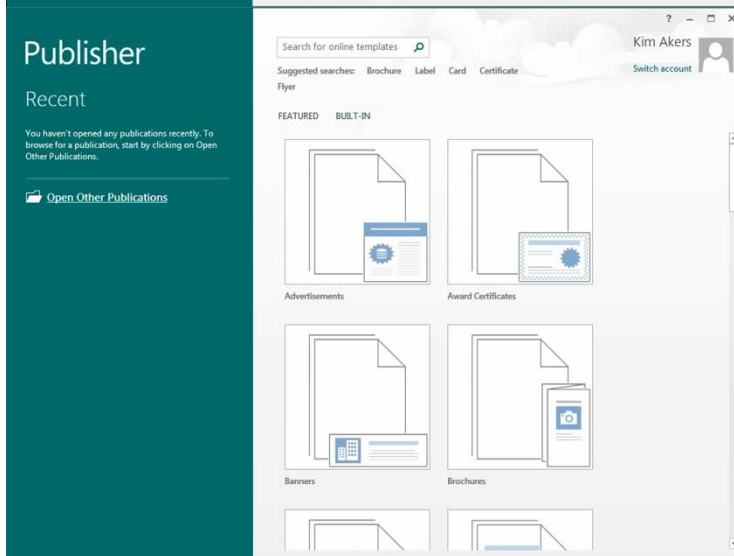
We are now provided with a list of template categories.
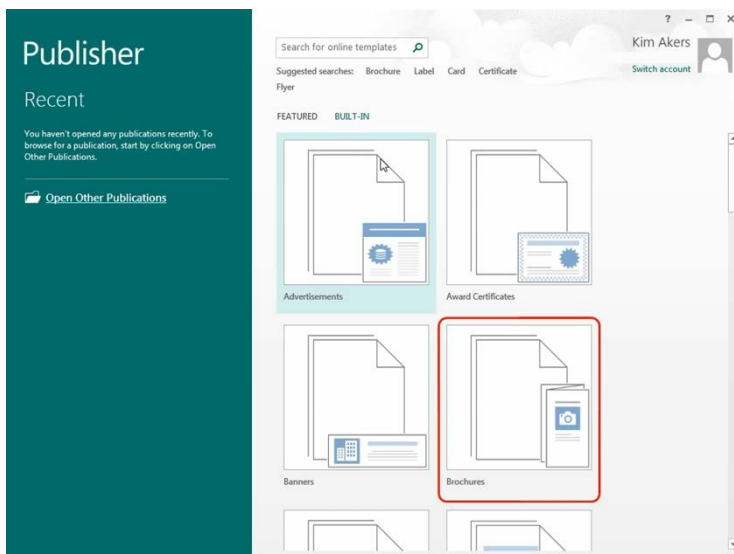
We will select the Brochures category.
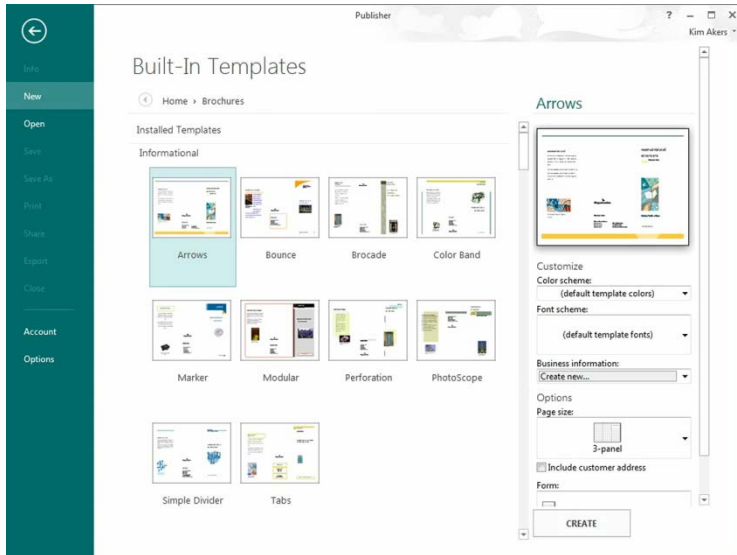
Publisher 2013 now provides us a list of brochure templates to choose from.
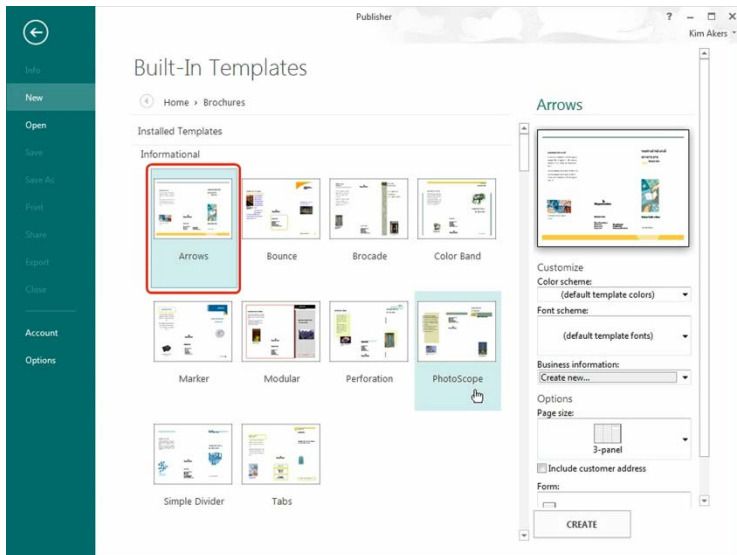
We will select the first brochure template called Arrows.
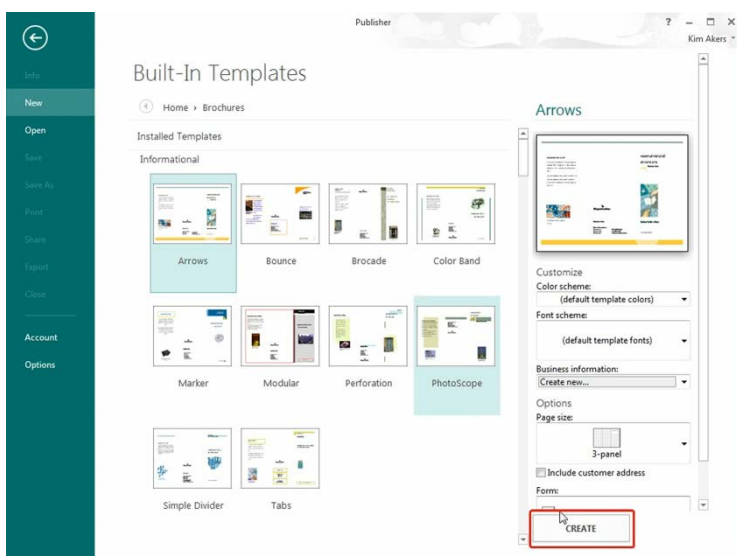
And click on the Create button to create a new document based on this template.
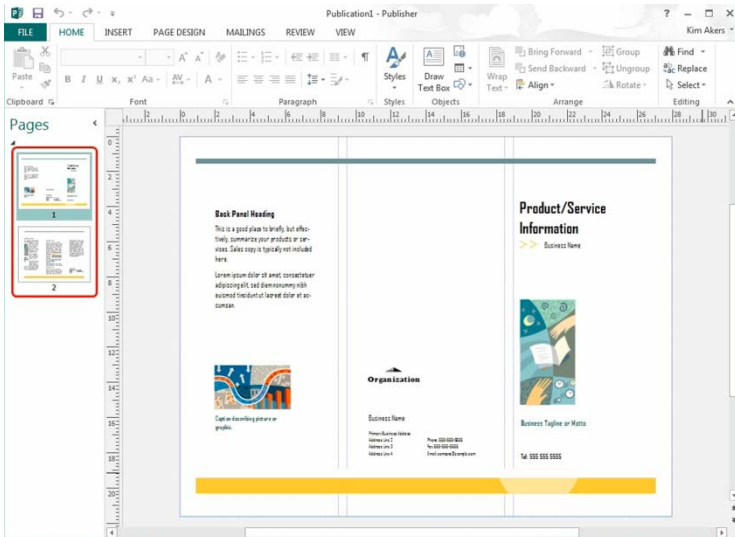
Once Publisher 2013 has created our document, we are provided with a list of the pages on the left.
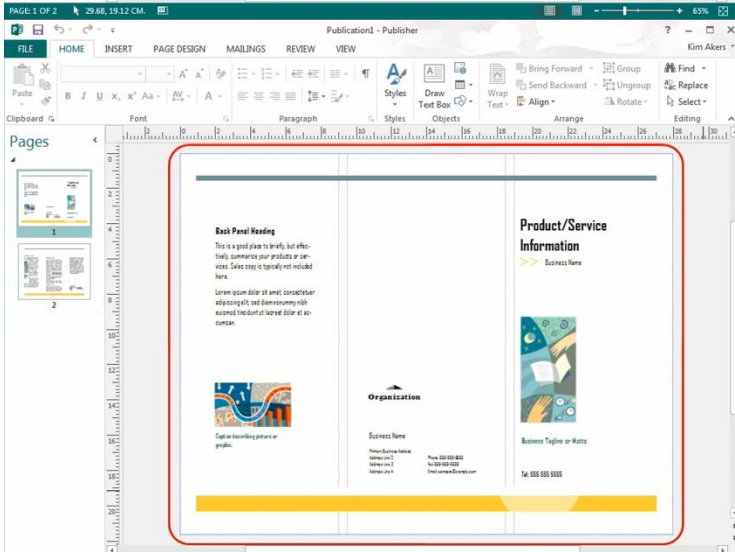
The work area of Publisher 2013 is where we may change the provided example text and images according to our project's needs.
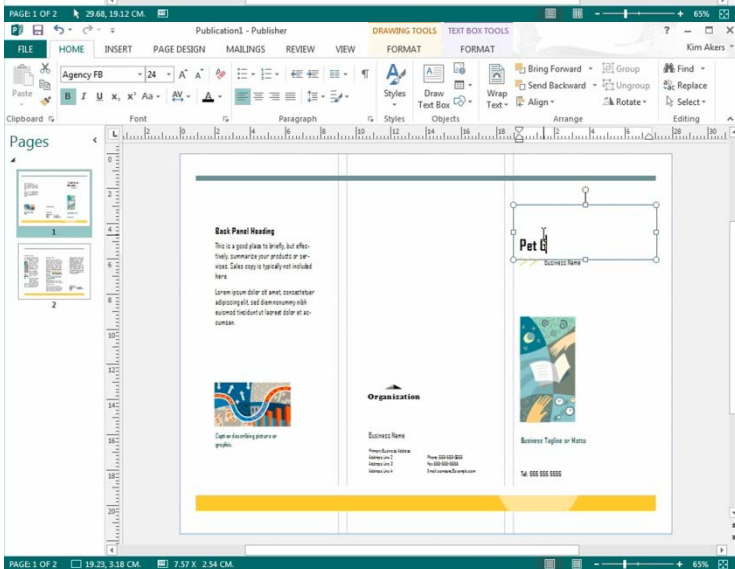
Let's start with the brochure's title.
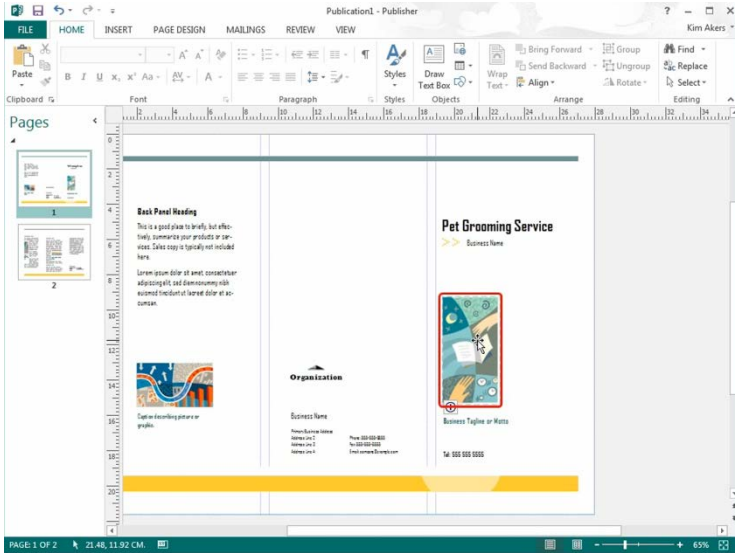
Now right click on the front page picture and select the option to change it.
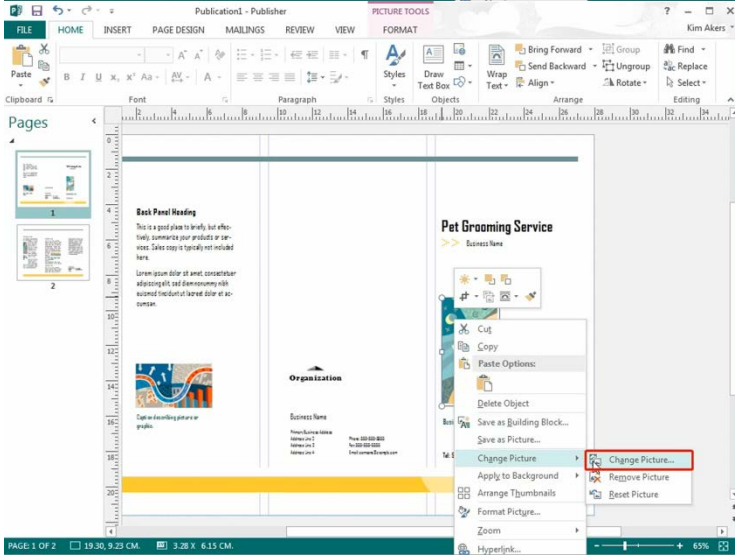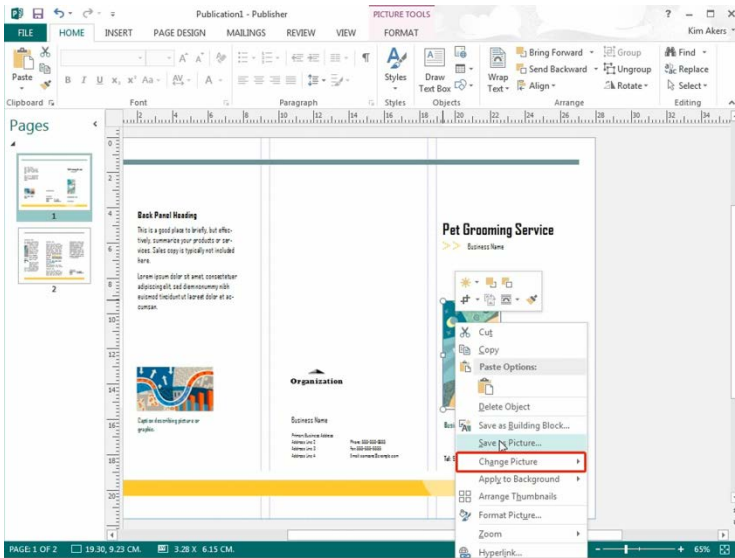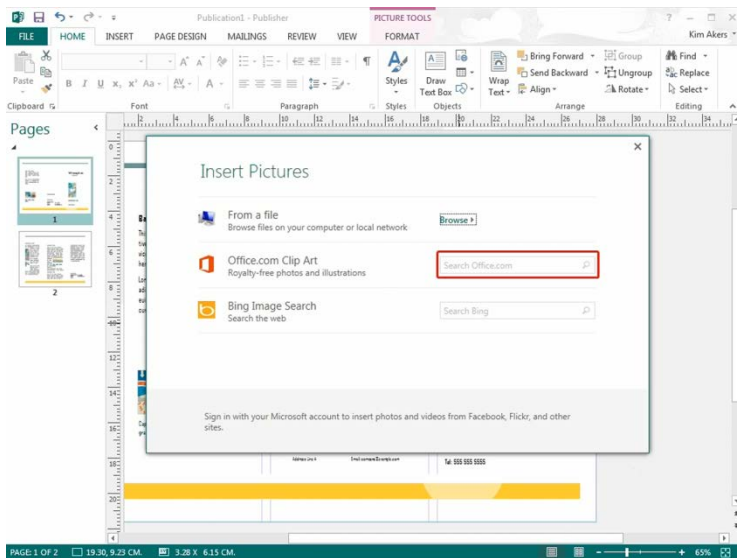
This will open the Insert Pictures dialog where we may search for a royalty-free photo or image
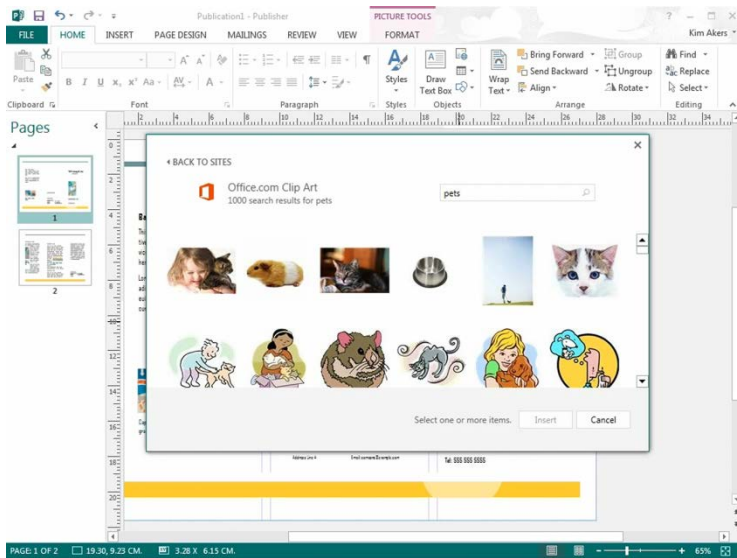
Here is a list of photos, clip art, and images to choose from.
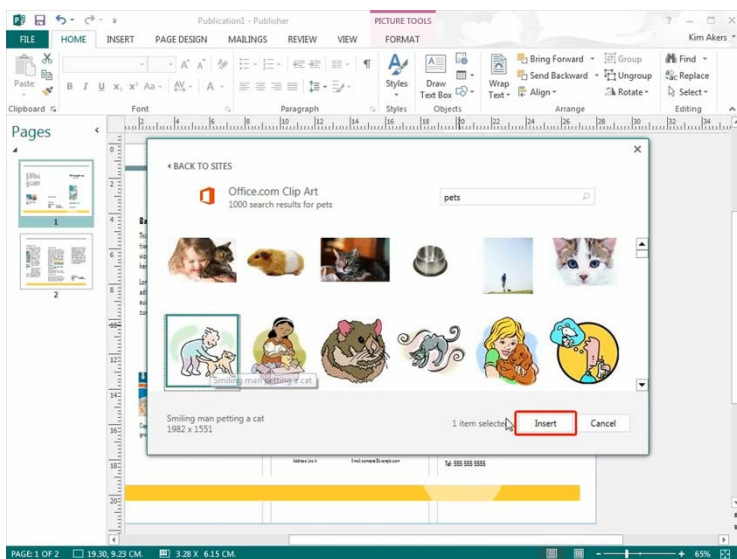
Let's select an image from the list for our brochure, and then click on the Insert button to place the image in the brochure.
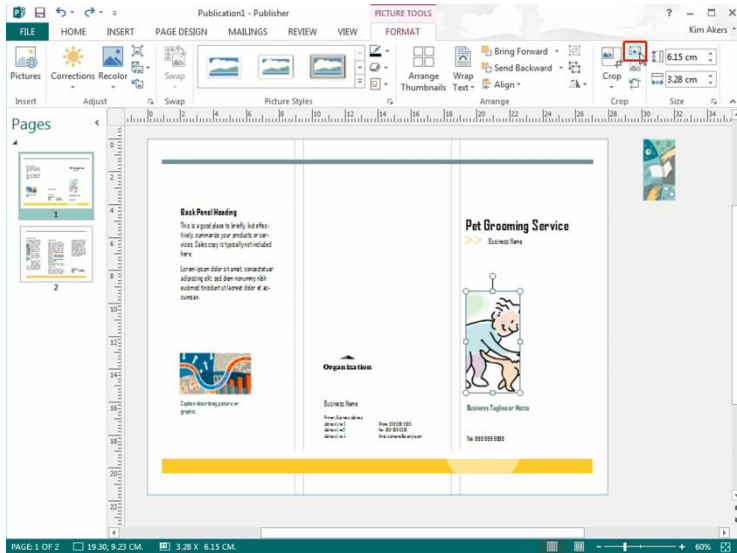
With the new image in place, click on the Fit command in the crop group to resize the image to fit within the frame.
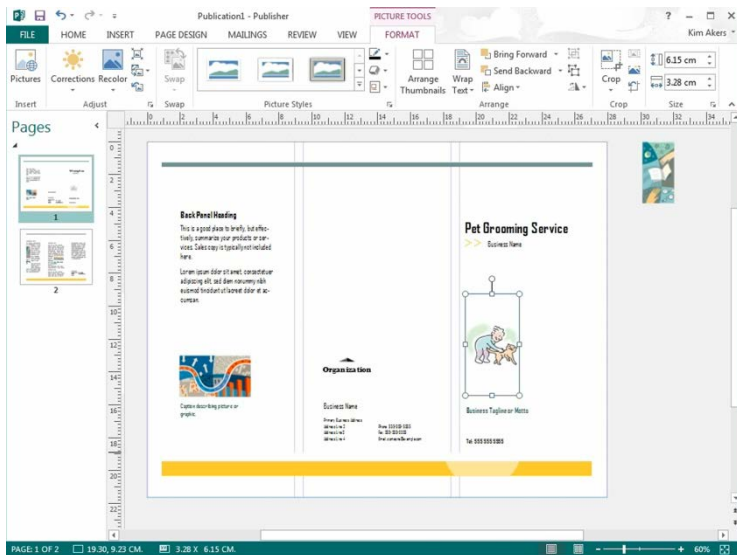
In this demonstration, you saw how to create a brochure based on a template in Publisher 2013.

Benefits of desktop publishing review

This demonstration introduced you to the following tasks you can perform with Publisher 2013:

- Create a DTP document based on a template
- Modify text to suit your particular project
- Change the provided default images
- Browse the Office 2013 royalty-free image catalog

Knowledge check

What types of documents can you create with a desktop publishing program?

How do you resize an image to fit the frame it is in?

Answers –

#1 – Your answer could have included any of the following: newsletters, brochures, flyers, signs, resumes, business forms, letter formats, and catalogs.

#2 – Your answer should have included selecting the image's frame and clicking on the Fit command under the Format tab on the Ribbon bar.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Perform basic tasks in a word processor.
- Create a document by using a template.
- Edit and format text.
- Work with tables and pictures.
- Proofread a document.
- Create a new online document.
- Identify the benefits of DTP.

Introduction to Spreadsheet Programs

Excel 2013 is Microsoft's Spreadsheet Program. This specialized program allows you to create <u>spreadsheets</u>, such as:

- Schedules
- Budgets
- Calendars
- Invoices
- Plans
- And more

In this lesson, you will learn about the components of a spreadsheet and how to store data in it. You will also learn to perform basic mathematical tasks and create charts and graphs in a spreadsheet. In addition, you will learn about the various options available for printing a spreadsheet.

Microsoft Office 2013 includes Excel, the leading spreadsheet program. A spreadsheet is a table consisting of <u>*rows*</u> and <u>*columns*</u> designed to organize your data. Data usually consist of words or numbers used to describe an item. A number might represent the cost of groceries, or even the date they were purchase. A word might describe where you purchased the groceries. Organizing data into a table has two advantages. First off it makes it easy to find a piece of data, answering the question "How much did I pay for the groceries last time?" Secondly, it allows you to do calculations on the data, "How much have I spent on groceries this month?" In addition you can take that data and use Excel to build graphs and charts, but let's not get ahead of ourselves, time to learn the basics and gain some terminology!

Notes for Presentation

Clickable items are identified with a yellow border, provide an effect for the eye, pulsing highlight, or flipping the tile like a windows phone

Slide 2 - After pressing Excel icon, all Icons move to these position Excel sheet comes up from below

Slide 4 - When an Item is clicked, icon fades and 3 text values appear

Slide 5 - Then text fields move to their corresponding position in the sheet

Slide 6 - Fill in 1 column at a time, to show the column selection changing

Slide 7 - Repeat for each Icon, than enlarge the excel sheet

Slide 9 - Highlight cell - 3F- do type effect for string :   =sum(C3:C5)

Slide 15 – Use radio buttons, grey out option if user selected wrong answer

Slide 17 - After pressing button, highlight worksheet tabs swap image show different tabs 1 tab full, another empty, then return to original tab

Slide 18 - Excel sheet slides down, icon return to center position

Knowledge check

What is a cell address?

- o Cells don't have addresses
- o The street name and zip code
- o A random letter and number
- o An intersecting column header and row header

Which types of the following data can cells contain?

- o Numbers
- o Text
- o Equations
- o All of the above

Answers –

#1 – The intersecting column header (letter) and row header (number) make up a cell address.

#2 – Cells can contain numbers, text, and equations.

Inserting data

The time will come when you need to make a budget and keep track of how much your bills are each month. In order to do this, you will need to know the details about each bill such as bill name, due date, bill amount, date paid, etc. Then you will need to calculate the overall amount of your bills for the month so you can see how much of your paycheck goes out each month. All of this can be easily tracked, and tabulated, with Excel. You do this by entering the information into the _cells_ of an Excel spreadsheet. If the bill ever changes, you can even edit the cell with the new value and it will automatically replace the old value with the new. In following demonstration you will learn how to insert data into a _worksheet_ in Excel 2013.

Spreadsheet Programs Review

What you should know now:

- Inserting and editing text in a cell
- Copy and cut text from cell
- Paste or move to another cell
- Insert additional rows and columns
- Save a worksheet

Knowledge check

The Save As function is found in the Review Tab of the Office Ribbon.

- o True
- o False

To move text from cell to another, you use?

- o Copy
- o Cut
- o Move
- o Transfer

Answers –

#1 – False. It is in the file tab.

#2 – Using cut will allow you to delete the information in one cell and paste it in another.

Performing basic mathematical tasks in a spreadsheet

In addition to storing and manipulating data, a spreadsheet program such as Excel 2013 allows us to perform various mathematical tasks on our data quickly and accurately. The spreadsheet program provides functions that perform calculations on the cells of the spreadsheet. For example, you could add together all of your household expenses to reach a total, or use the Average function to calculate the average of your grades.
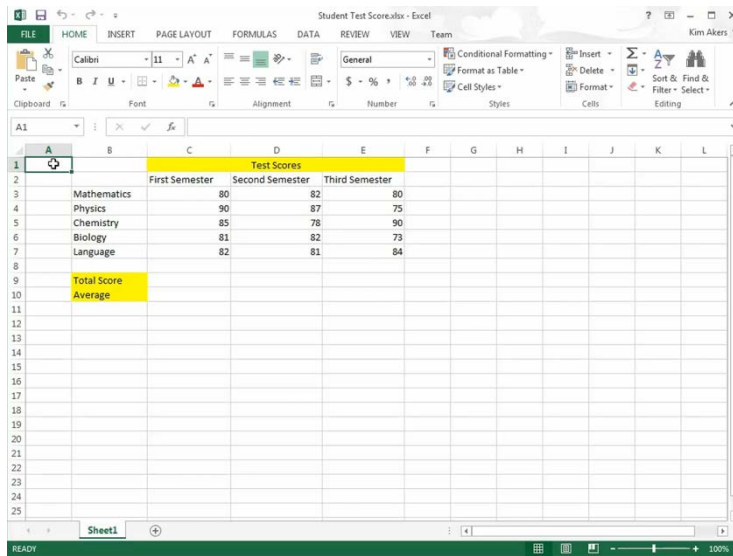
A spreadsheet program such as Excel 2013 allows us to perform various mathematical tasks on our data quickly and accurately.

To perform these tasks, we use functions provided by Excel 2013.
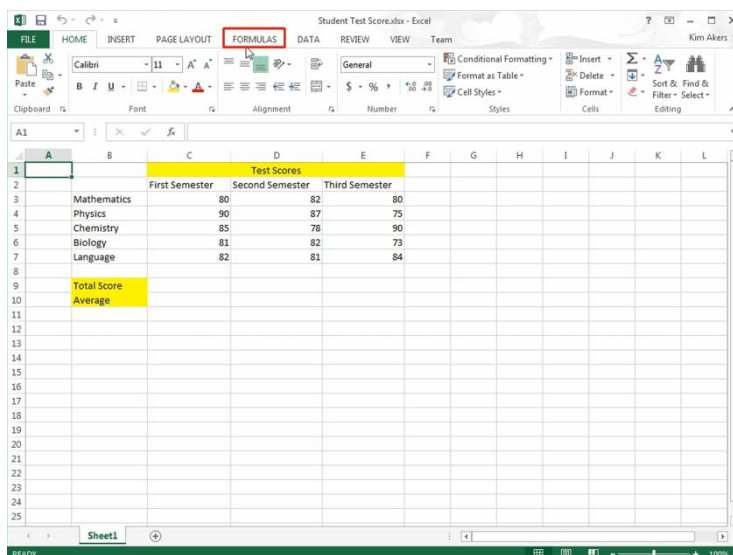
We begin by clicking on the Formulas tab in the Ribbon Bar.
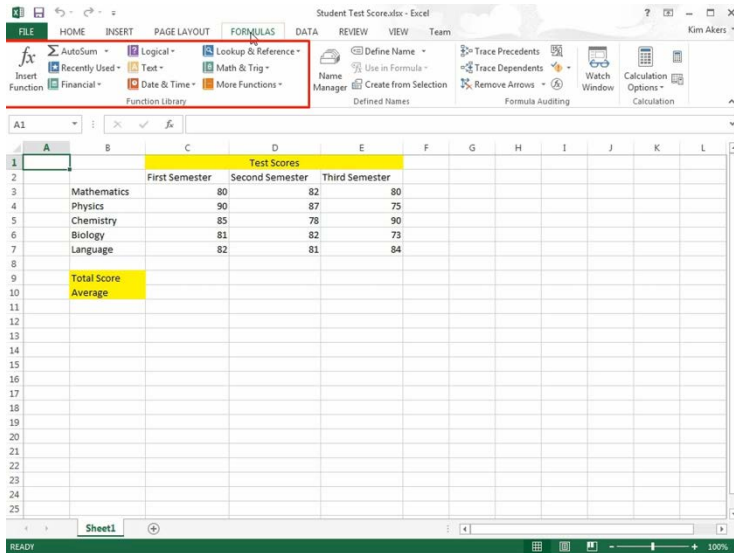
The Function Library group provides access to all of the functions provided by Excel 2013.
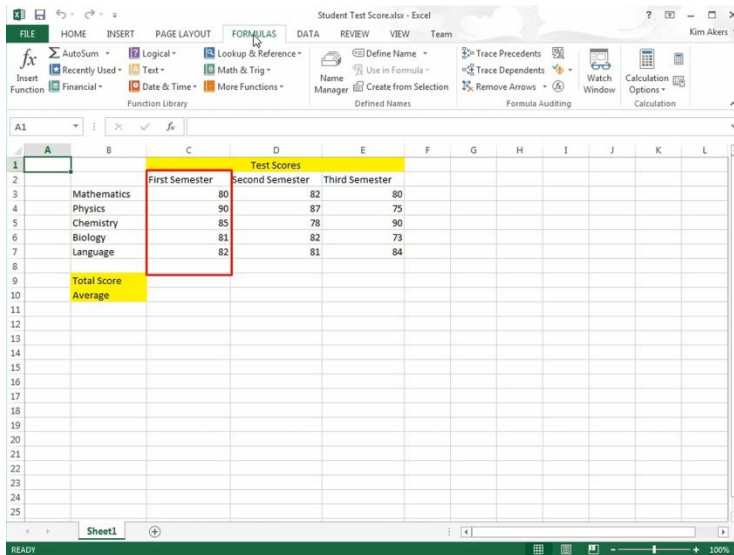
Let's begin by adding together the students first semester test scores in our example.
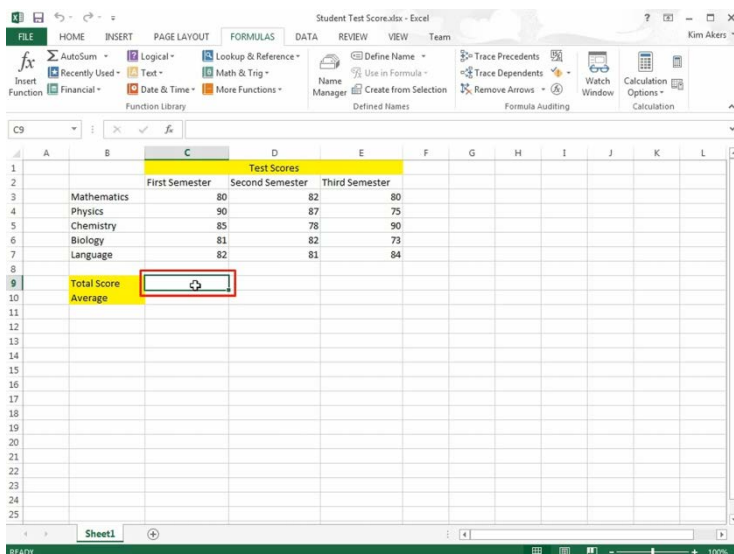
Start by clicking on the cell we wish to place the total.

In our example it is cell C9.
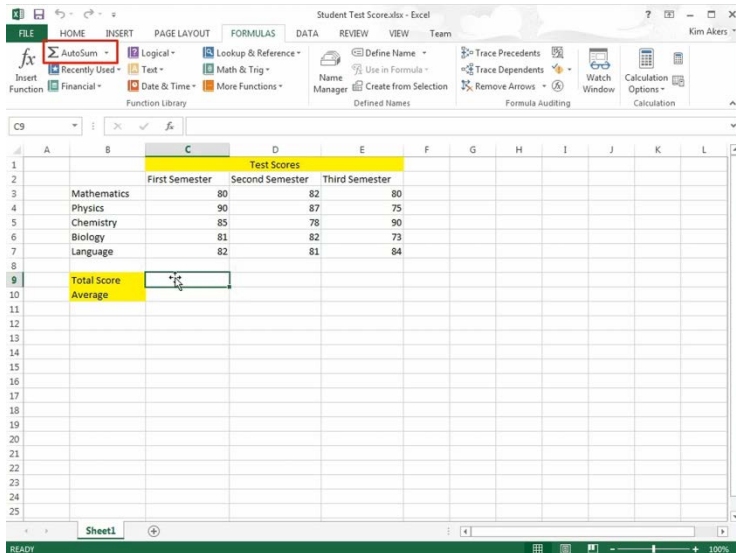
We then click on the AutoSum command.

This will automatically add all the numbers in the cells directly above our selected cell.
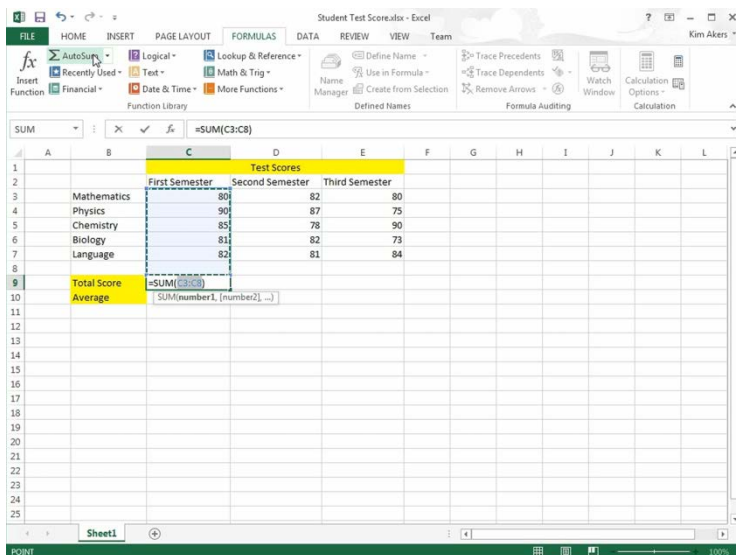
Notice that Excel 2013 shows us which cells and the numbers that will be added together.
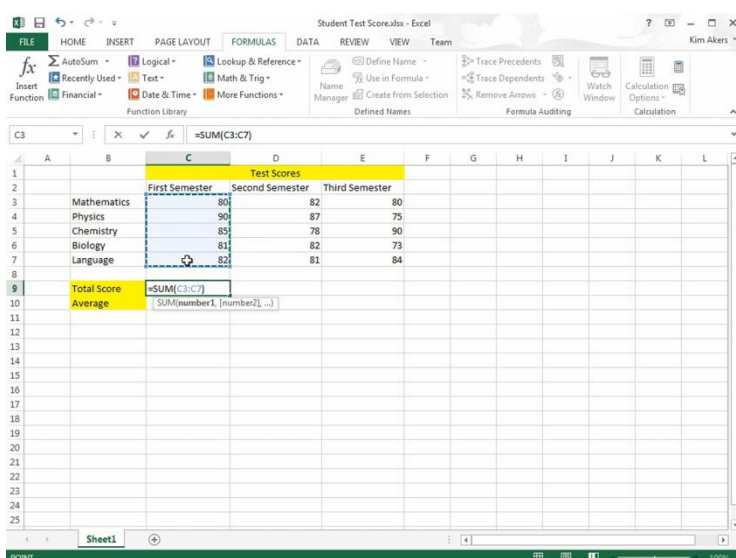
If we wanted to use a different range of cells we could click and drag on the different cells.

For now let's limit our range to just add the numbers in the cells C3 through C7.

To accept the *cell range*, press the Enter key.
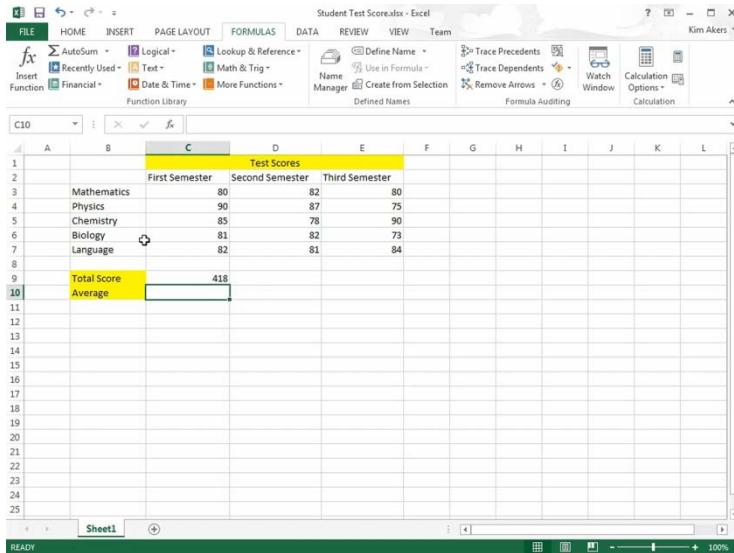
Excel 2013 calculates the total and displays it in a selected cell.
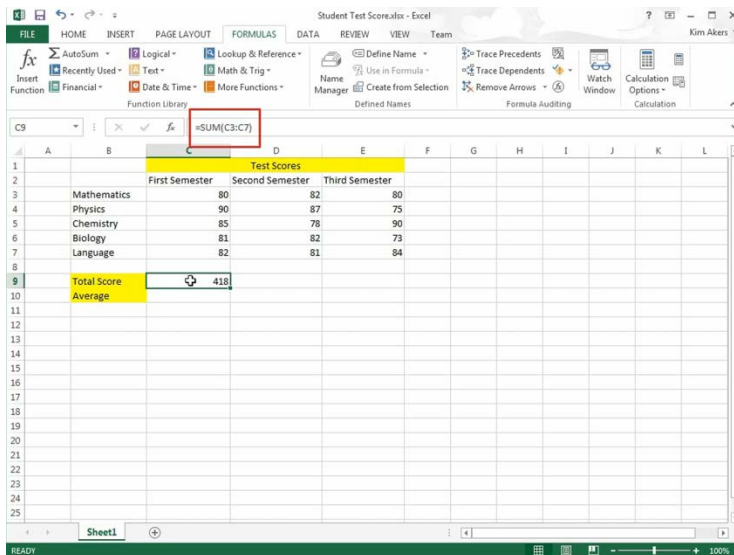
We can see the Sum Function used for the C9 cell by clicking on it again and looking in the *formula bar*.

Let's now copy our function to the other two semesters.
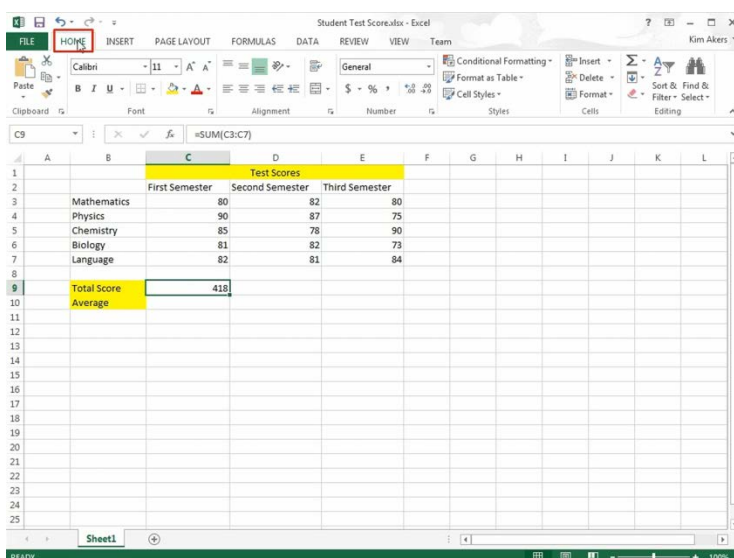
Start by clicking on the Home tab.
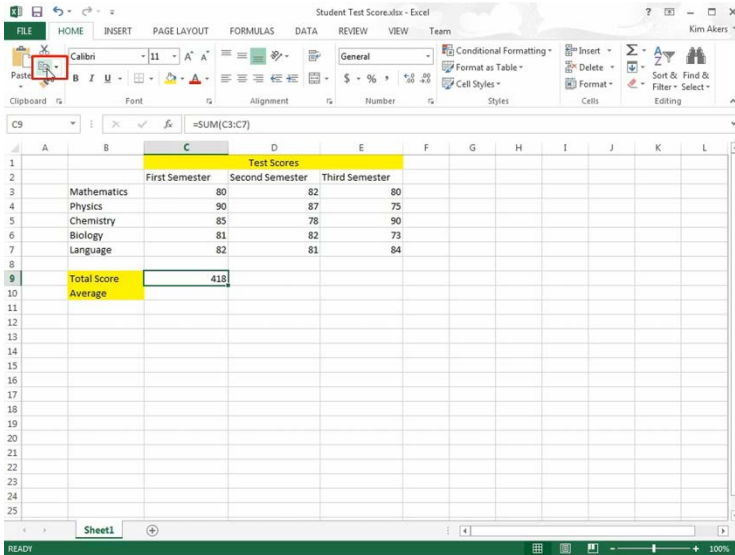
...and then click on the Copy command.

Excel 2013 will highlights the copied cell.
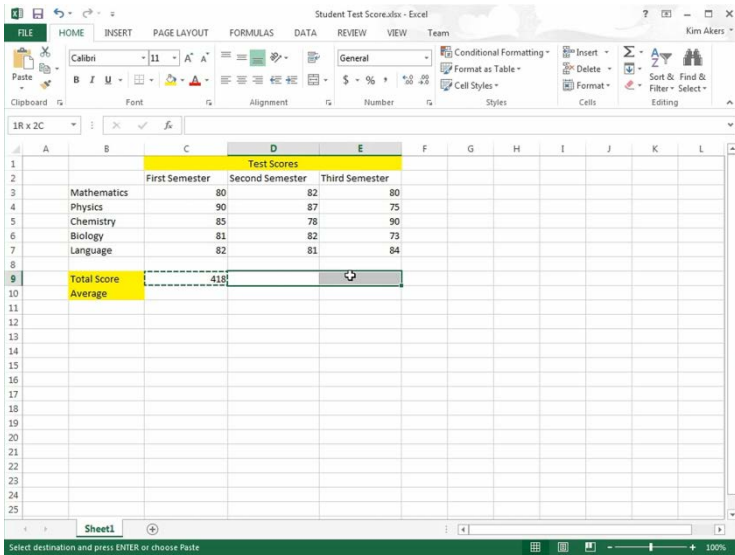
Next we select the Total Score cells of the remaining two semesters.
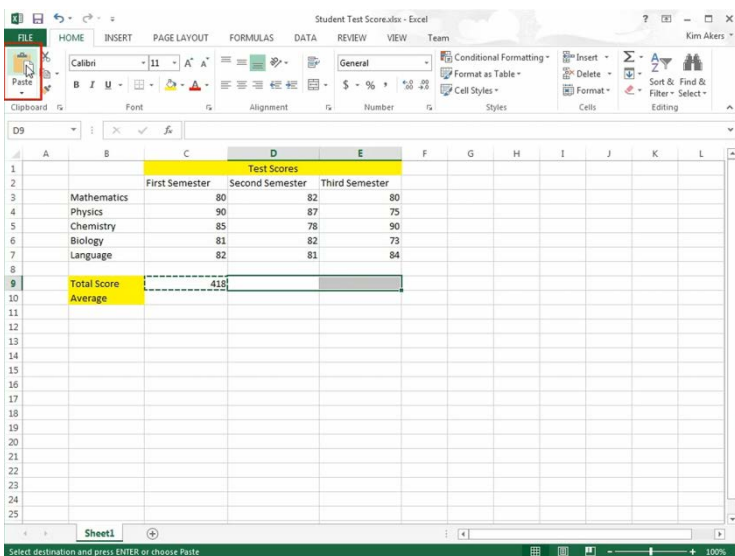
Finally, we click on the Paste command.
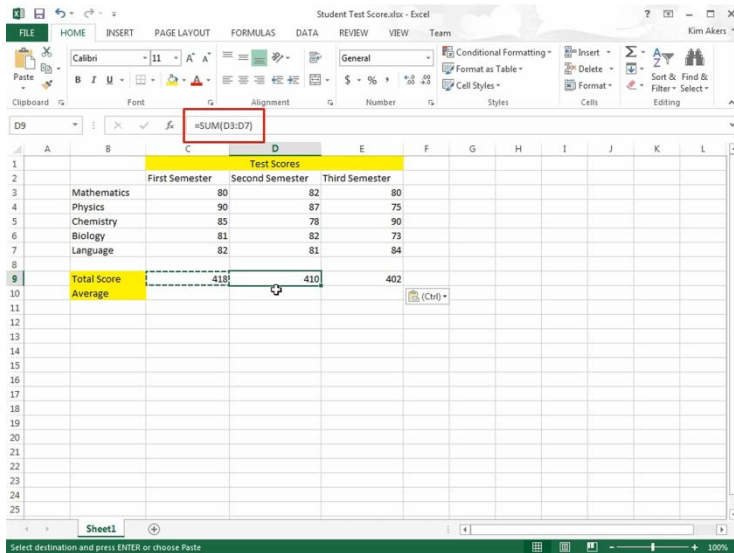
Excel 2013 copies the function from cell C9 and paste it into cells D9 and E9.

Excel 2013 automatically changes the cell range of a copy and pasted function to the appropriate column.
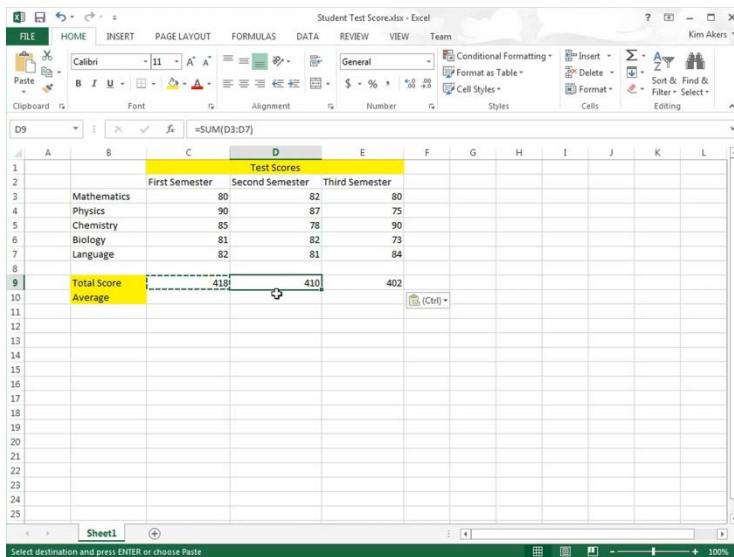
In this demonstration, you saw how to perform a mathematical calculation in Excel 2013.

Performing basic mathematical tasks in a spreadsheet review

You should now be familiar with performing mathematical tasks in a spreadsheet:

- Select a range of cells
- Calculate a cell's value by using a function
- Copy a function from one cell to another

Knowledge check

Where do you find cell functions in Excel 2013?

Answer –

#1 – Your answer should have mentioned the Formulas tab and the Function Library group.

Inserting charts

You have learned how to insert data and operate data now we will show you how use display data with a chart. Excel provides a wide variety of charts and built in functions for the chart. Perhaps you would like to find a linear relationship to a chart. All you have to do is plot the data on a scatter chart and insert a trend line. Excel will give you the y = mx + b relationship of the data! Let me show you.
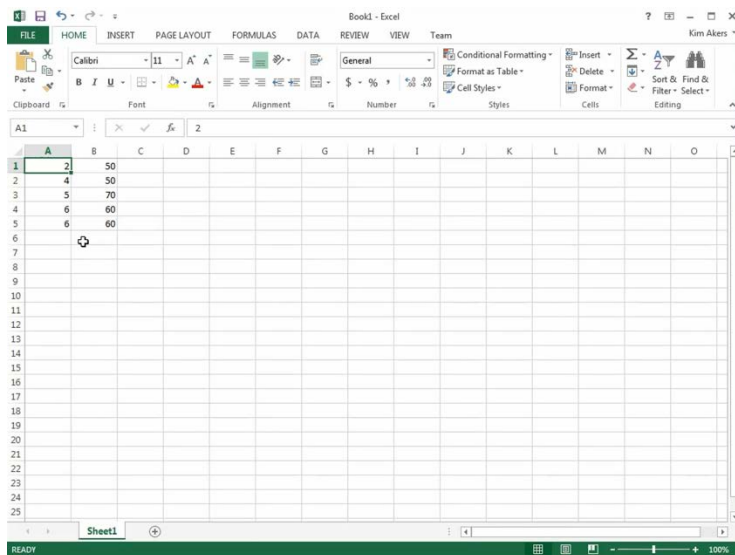
Often you can learn from data more easily when it is displayed graphically, such as in a chart.
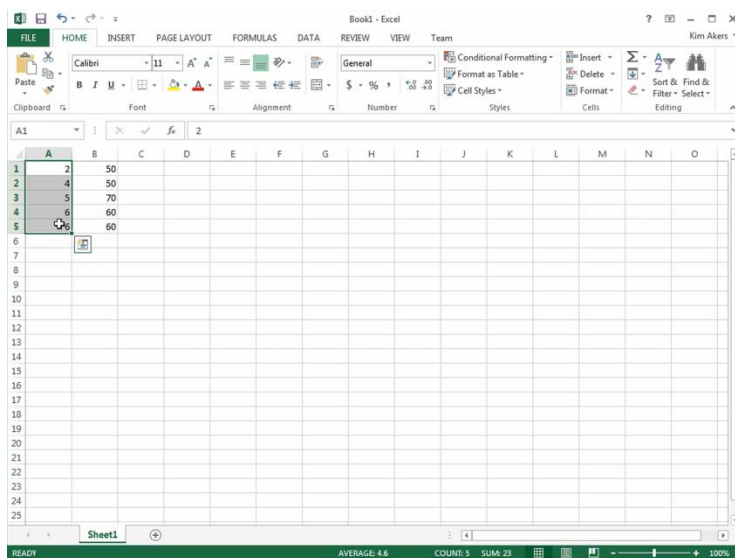
Let's start with a simple data set consisting of one column.
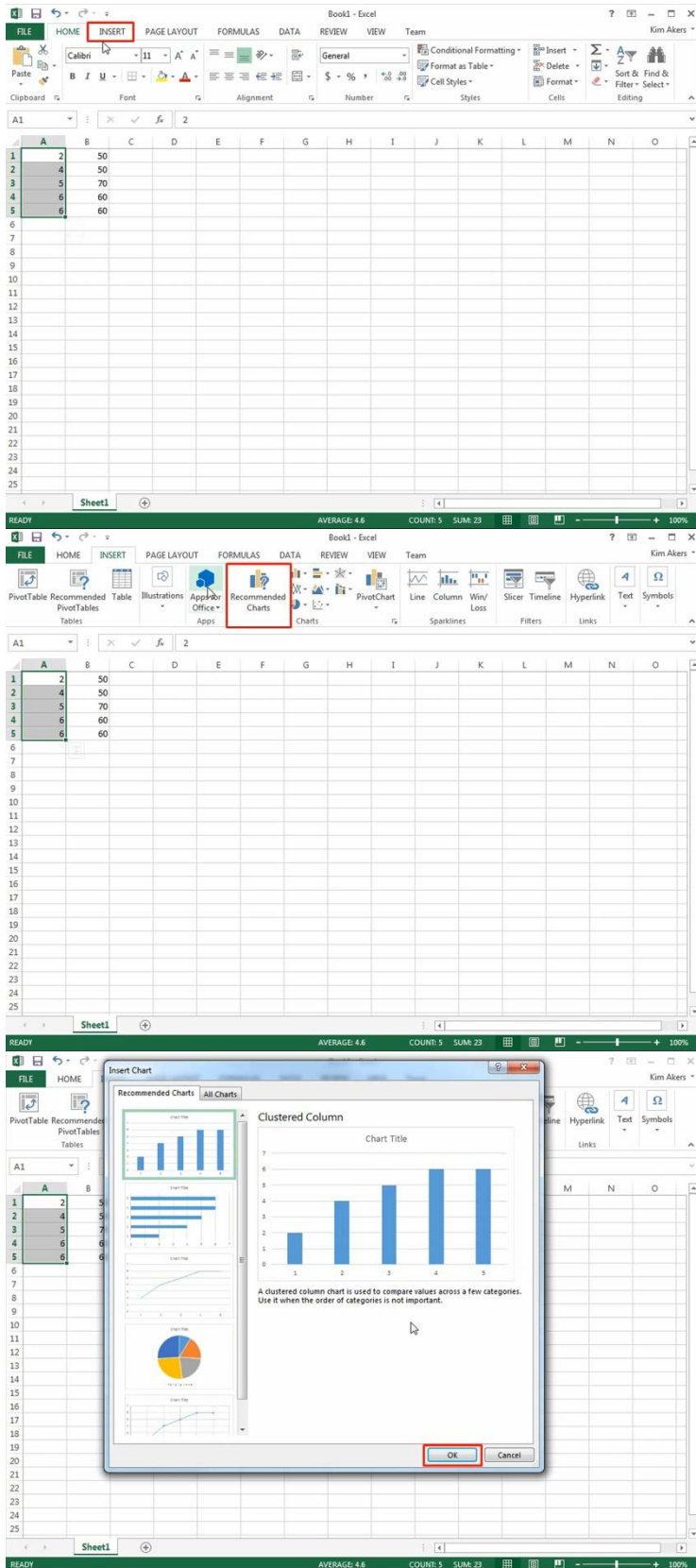
Click on the insert tab and then select Recommended Charts in the Charts group and click Ok to create the chart excel recommends.
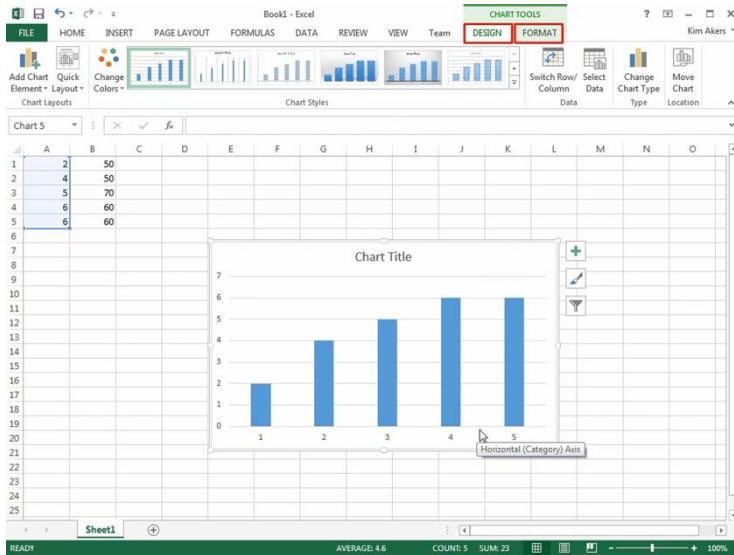
When you select the chart, additional tabs for Design and Format appear.
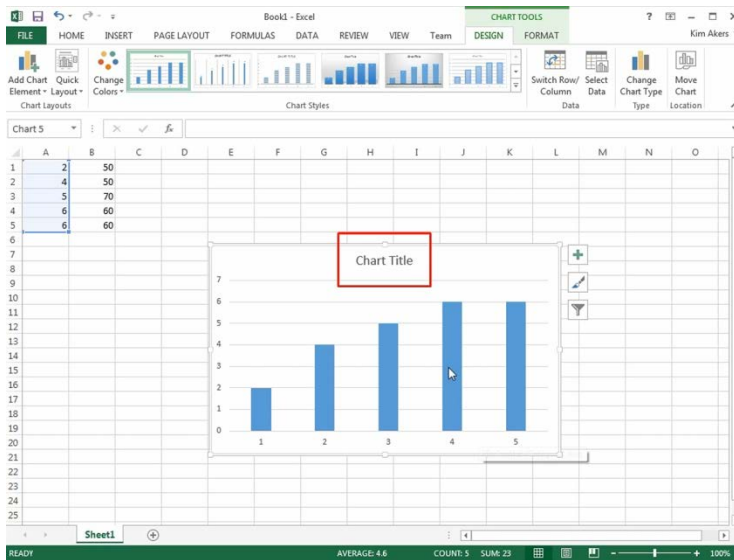
You can customize a chart to include a title and *labels*.
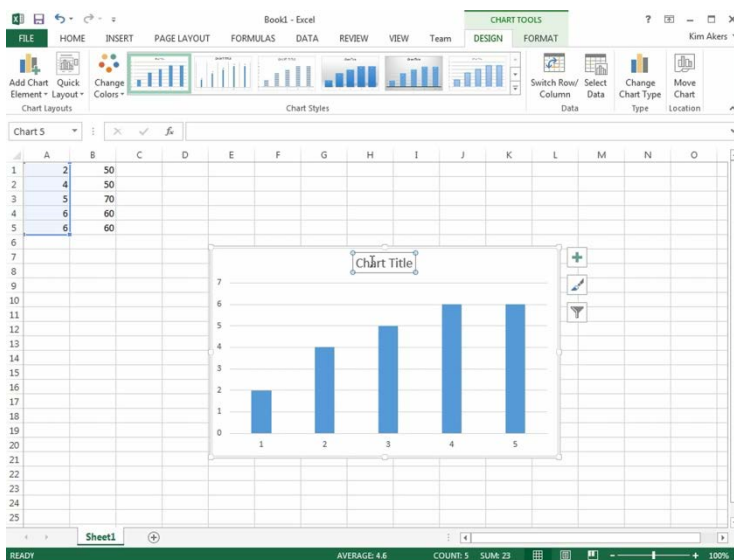
To edit the title, first click to select it and then click on it again to edit the text.
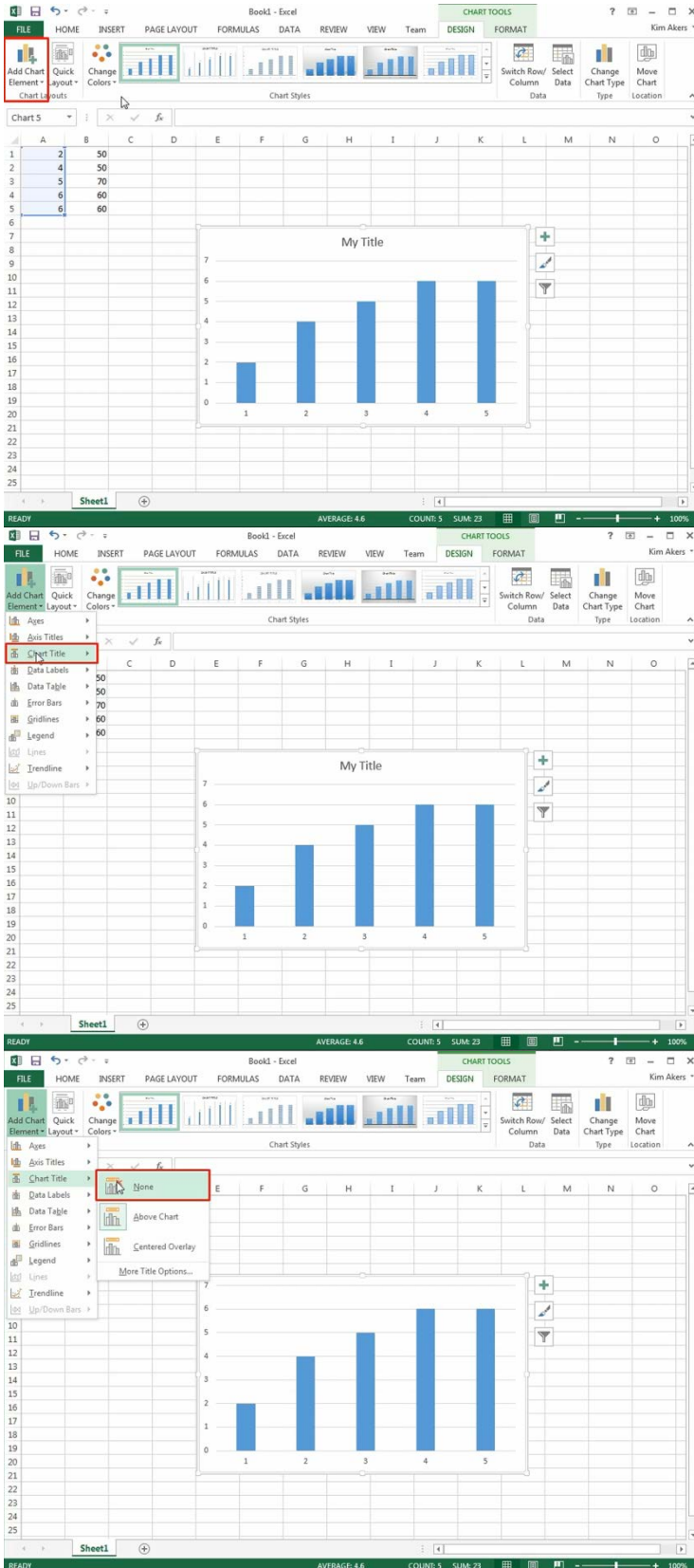
You can remove the chart title by going to the Chart Layouts group on the Design tab.

Select Add Chart Element and Chart Title then select None in the options.
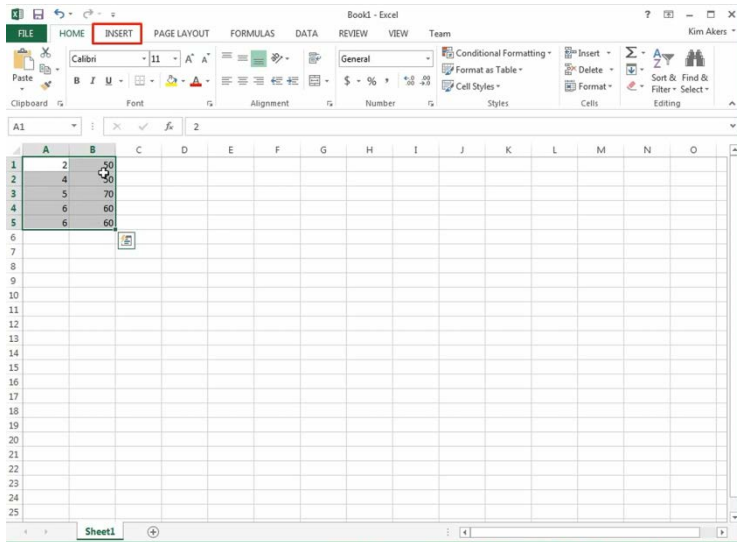
Suppose you want a chart with two variables such as Time and Distance.

You could use a scatter chart to display the two columns of data.

Select all the data you want to display in the chart and then in Charts group on the Insert tab select the Scatter chart.
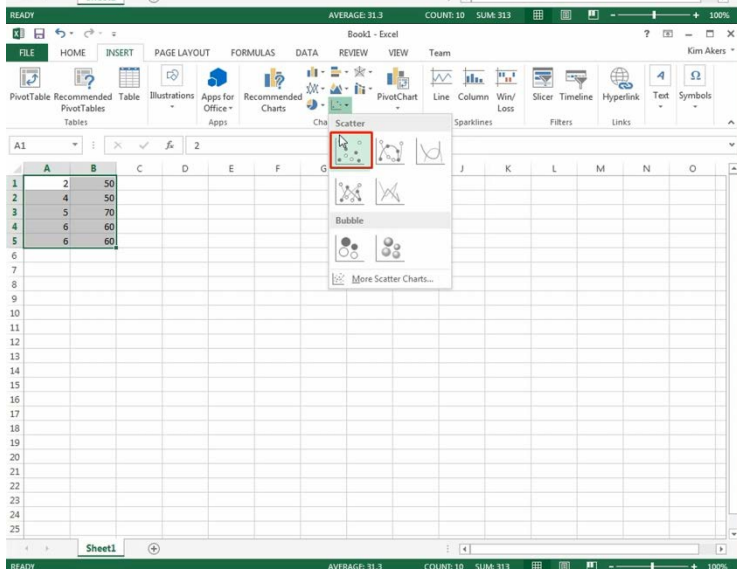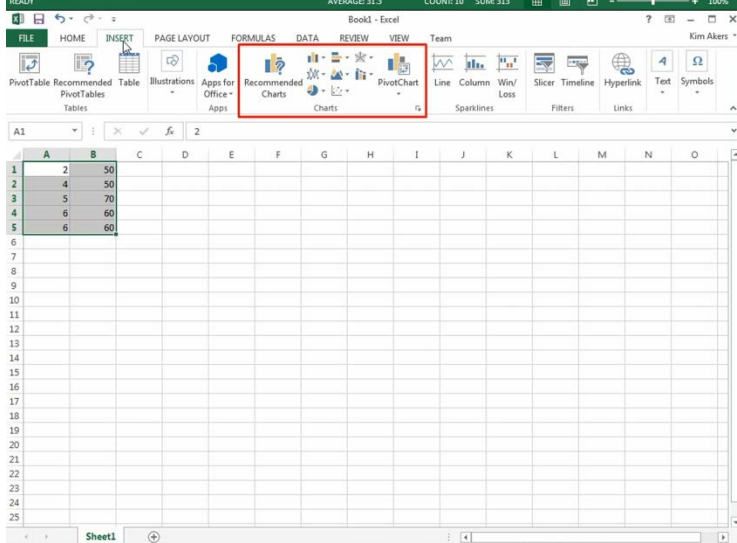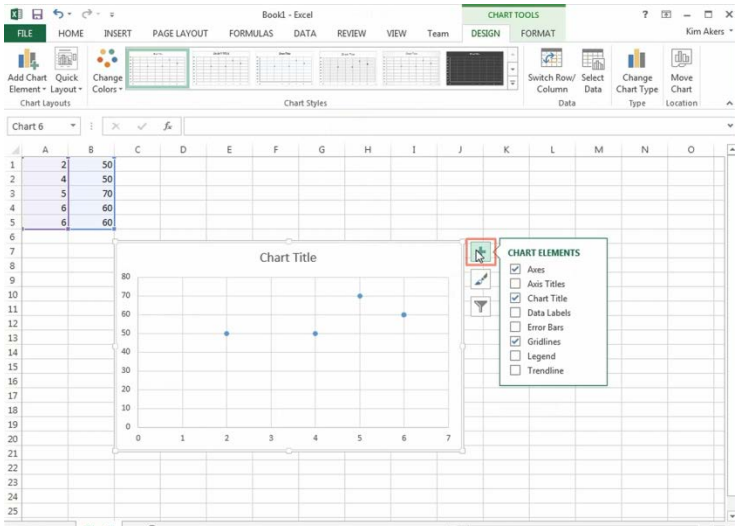
Click the Chart Elements button next to the chart and select Trendline.
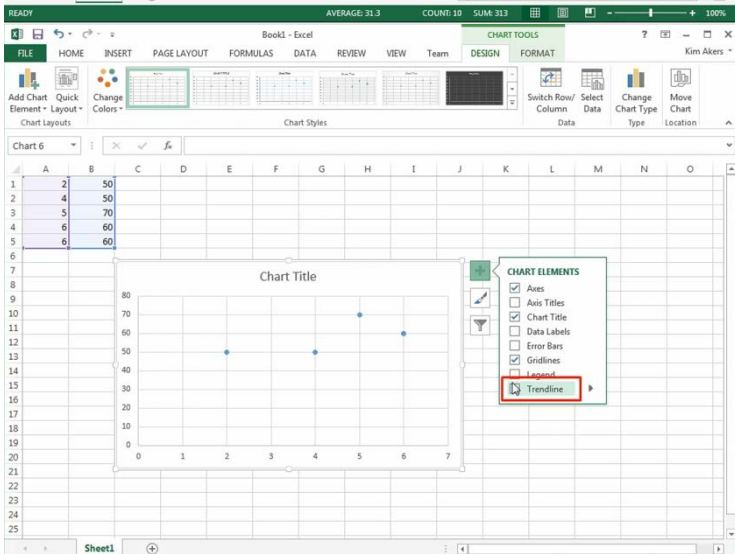
Expand the Trendline option and click More Options to display the Format Trendline dialog box to change the trendline options.
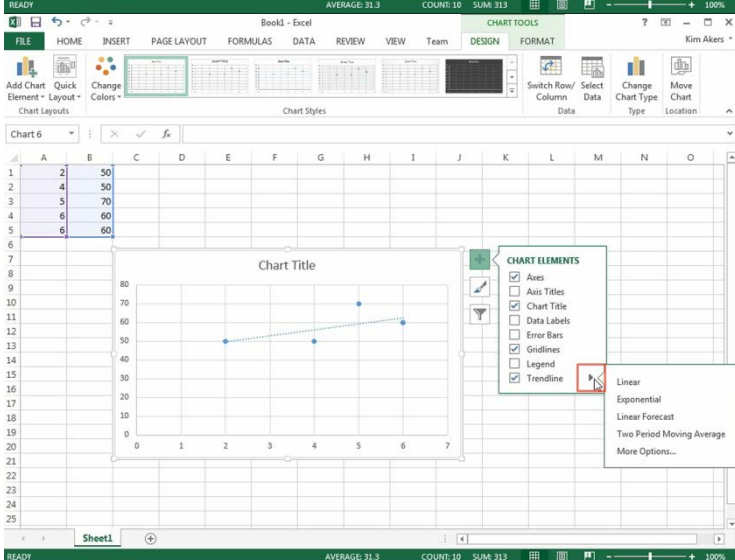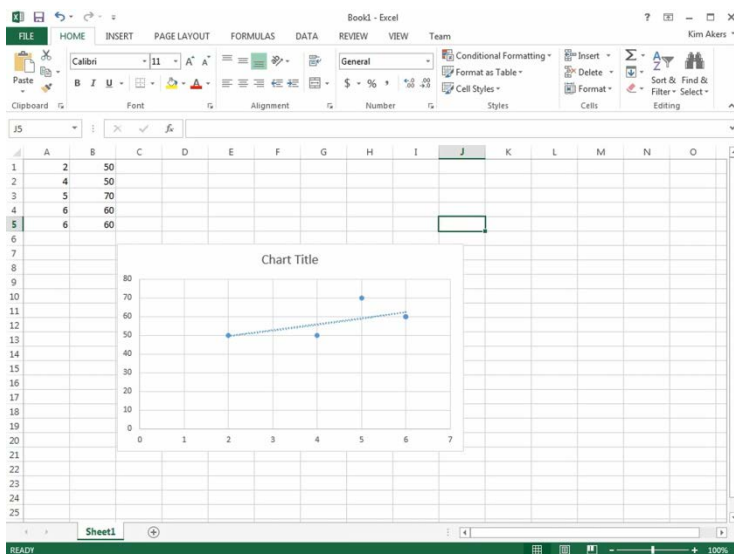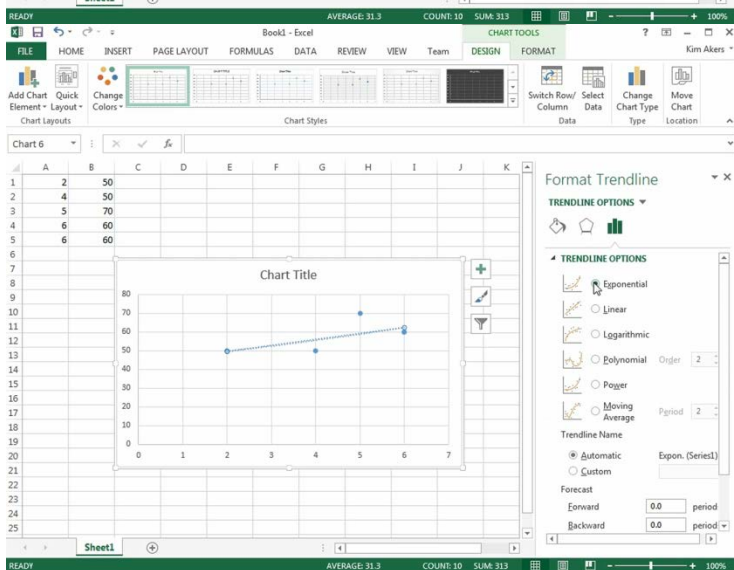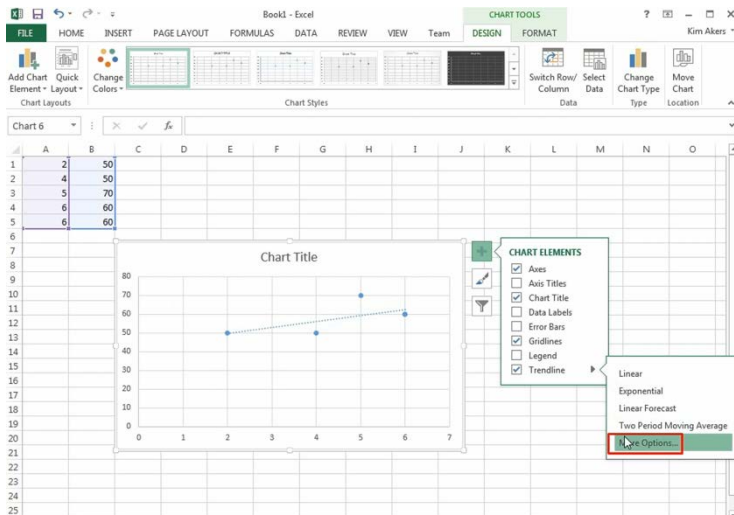
Excel quickly creates a chart that can enhance any presentation.

You can also paste your spreadsheets and charts directly into other Office 2013 products.

Knowledge check

When inserting charts, you should only select the data.

- o True
- o False

If I am not sure what chart to use, I should try…

- o Scatter
- o Pie
- o Recommended Chart
- o Bar

Answer –

#1 – True. When you insert a chart it will only display the selected data.

#2 – The Recommended Chart is based on the type of data you have selected and is the best choice if you are unsure.

How to print spreadsheet data

Excel 2013 provides many options for printing spreadsheets. If you happen to have more columns than rows you can choose to print your spreadsheet as a Landscape. Perhaps your data isn't fitting on your page, Excel provides the option to scale the data to fit your paper. Let's look as some of the way you can print spreadsheets in Excel 2013.
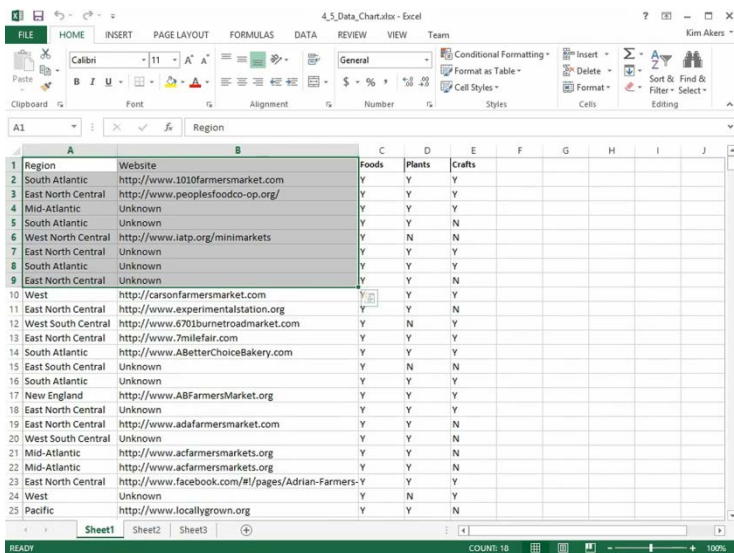
Excel 2013 offers some extra printing features best suited for data.
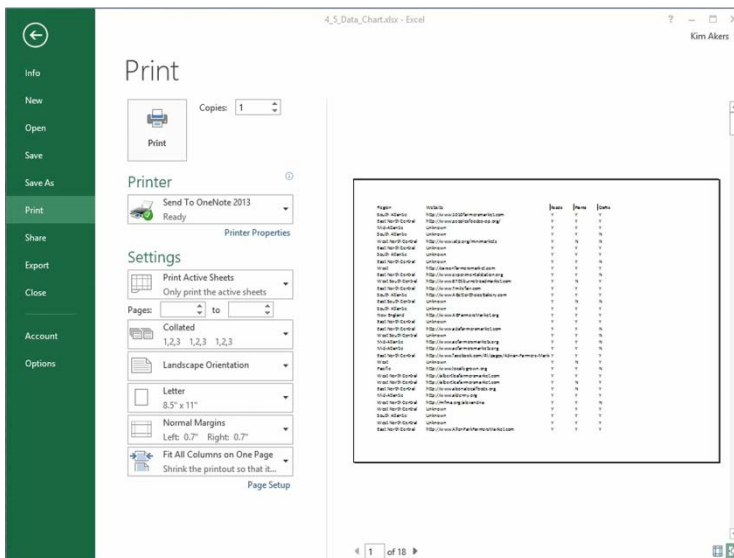
You'll find the printing menu on the file tab.
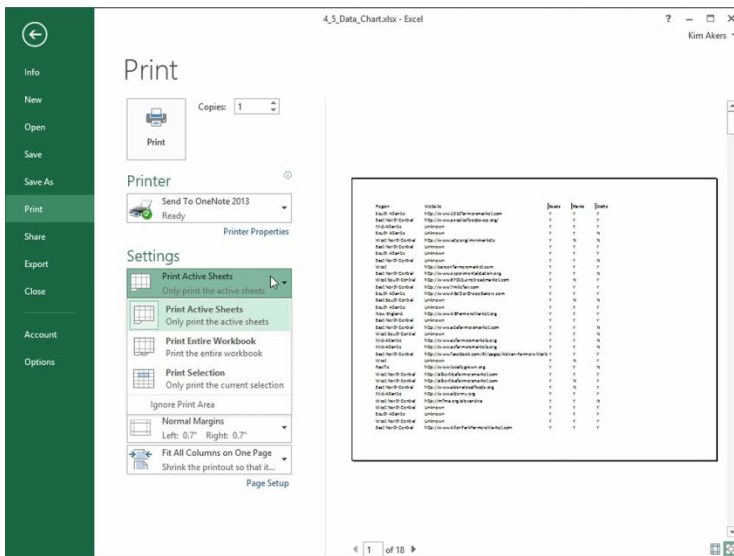
Under settings you can choose whether to print just the active sheets in the *workbook* or print the entire workbook.
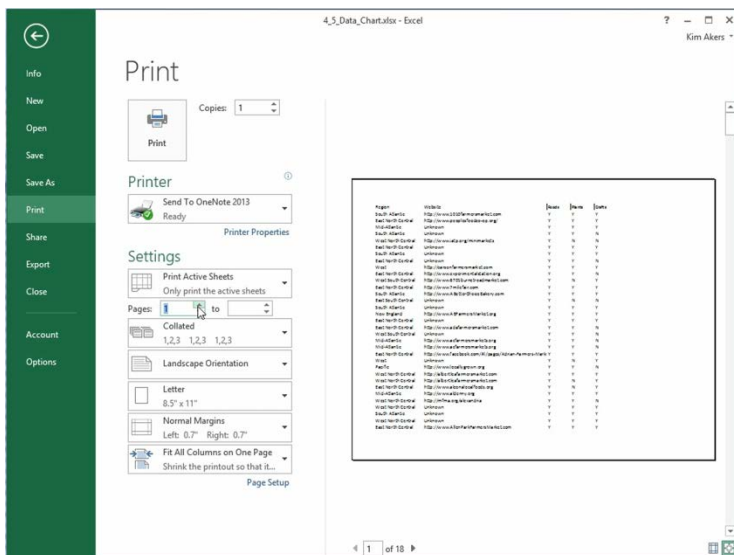
You can specify which page numbers you would like to print
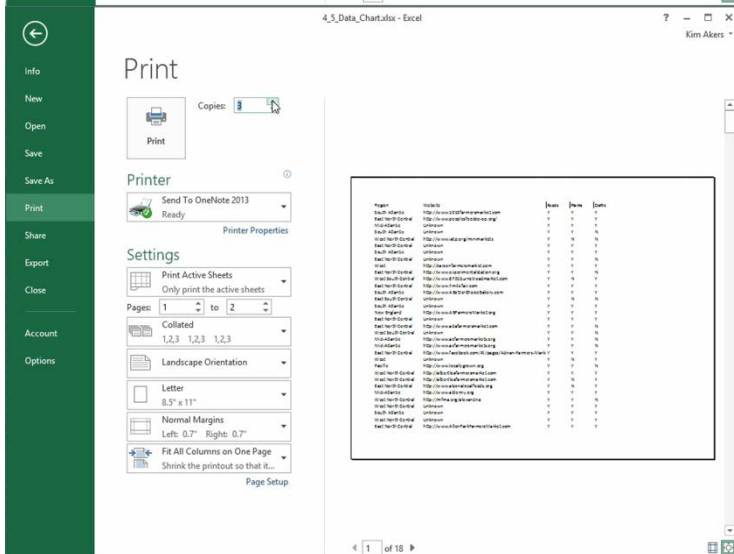
And how many copies you would like to print.
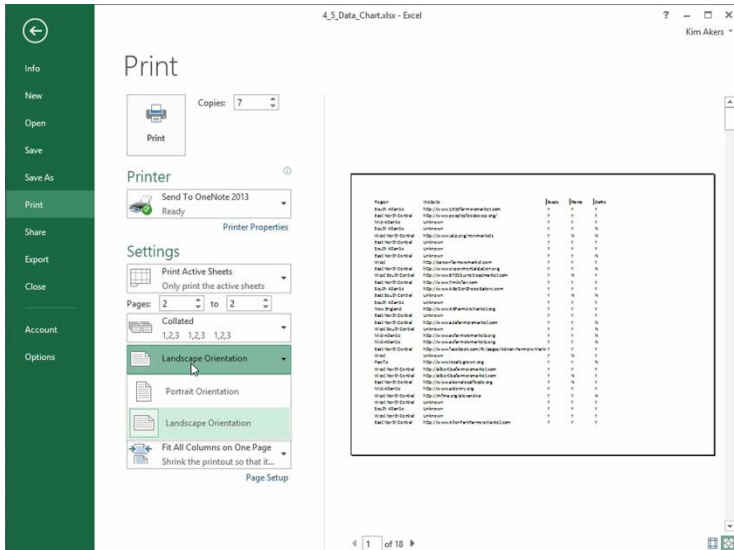
You can adjust the orientation of the Worksheet on the paper by selecting the Portrait Orientation Command or Landscape Orientation command.
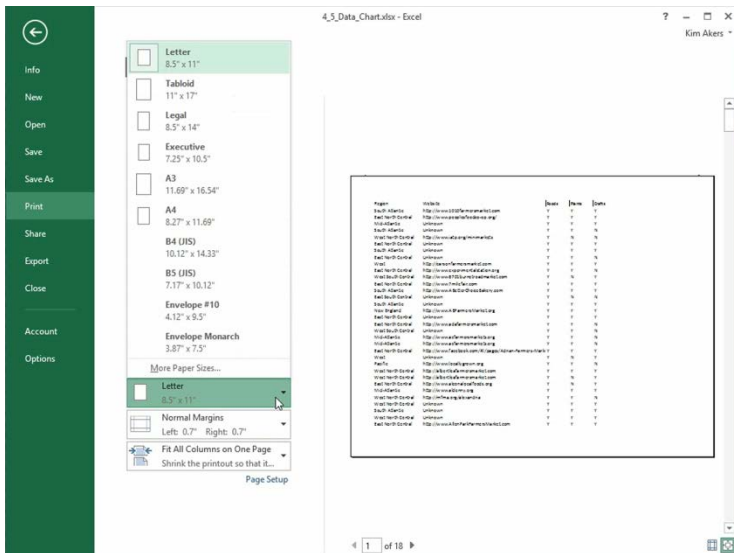
Make sure you have the correct paper size and margin settings set before you send you worksheet to the printer.
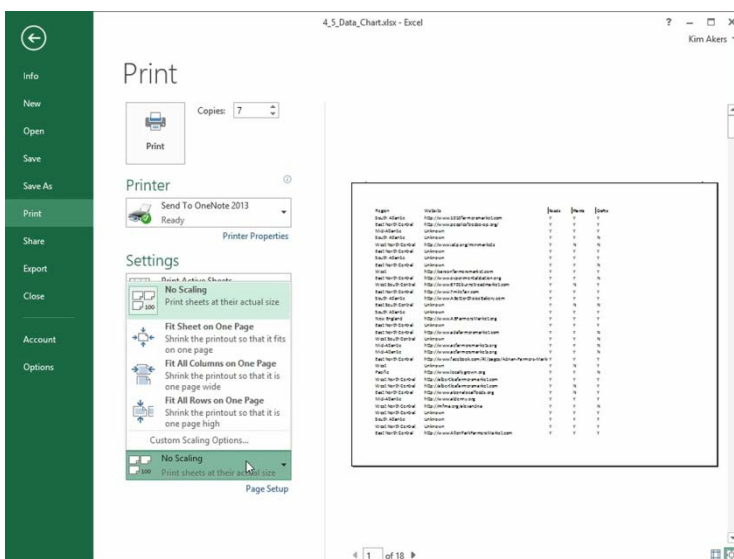
Excel 2013 provides custom scaling settings for finding the best fit for your print out.

By default the actual size of the data is printed.
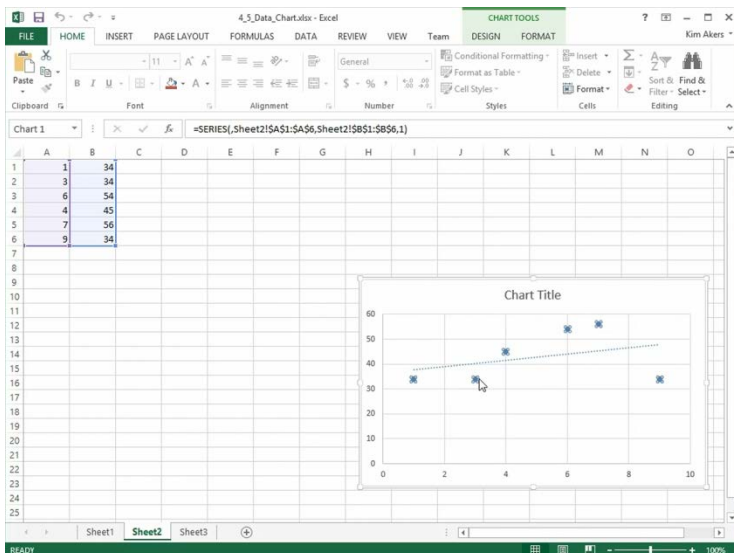
You can print charts by selecting the specific chart you want to print in the worksheet before you enter the Print menu.
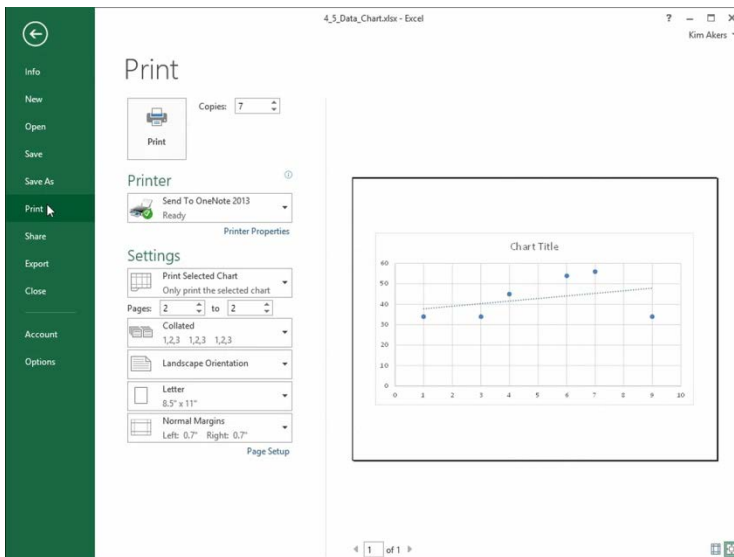
Notice the chart appears in the preview window of the print settings.
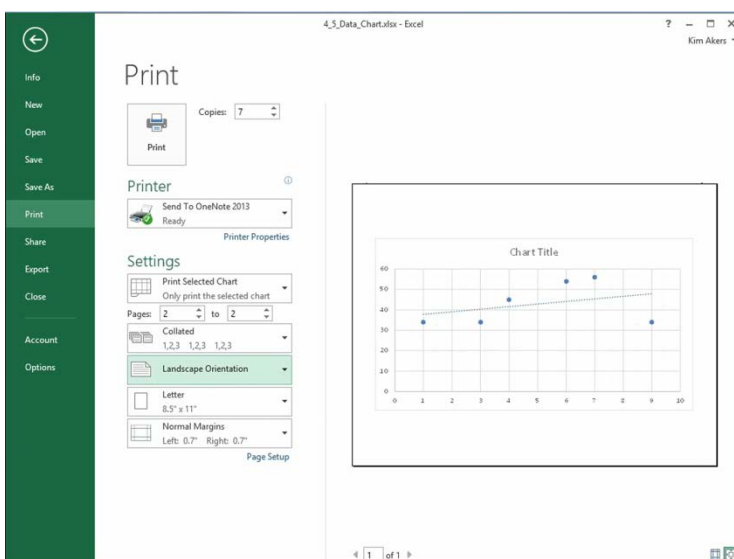
Now you know the additional features Excel 2013 provides for printing data.

Knowledge check

You have a spreadsheet with data in a number of columns that doesn't fit on a single printed page using the default settings. What can you do to present the data on a single printed page?

- o Use landscape orientation
- o Use the printing settings to only print one page

You can print specific pages of an Excel spreadsheet.

- o True
- o False

Answers –

#1 – Landscape orientation allows you to print a spreadsheet with more width than the default portrait orientation.

#2 – True. You can select a single page to print or a range of pages to print.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Identify the components of a spreadsheet.
- Enter data into a spreadsheet.
- Perform basic mathematical tasks in a spreadsheet.
- Insert charts in a spreadsheet.
- Print a spreadsheet.
- Create an online spreadsheet.

Introduction to Presentation Programs

PowerPoint 2013 is Microsoft's Presentation Program. This specialized program allows you to create a presentation for business, school, or for personal use. A presentation can include the following:

- Text
- Graphics
- Charts
- Video
- Audio
- And more

In this lesson, you will learn about the basic elements of a presentation program, how to create a presentation, and how to add graphics and multimedia to a presentation. You will also learn to identify the various options available to print your presentation in different formats and create a new online presentation.

Power Point 2013 allows you to develop presentations. Presentations consist of slides containing text and images. Presentations can be displayed visually as a slide show or printed for distribution. Power point uses the Office 2013 interface to quickly add text and images to slides.

The Introduction to Presentation Programs simulation can be accessed online at http://www.microsoft.com/digitalliteracy.

Knowledge check

PowerPoint 2013 slides can display charts, spreadsheets, and documents from other Office products.

- o True
- o False

What view allows you to edit the number of slides to put on each printed page?

- o Notes
- o From Beginning
- o Handout Master

Answer –

#1 – True. You can insert charts, spreadsheets and documents from other Office programs into PowerPoint slides.

#2 – The Handout Master view allows you to set the slides per page, the page orientation and other print settings.

Creating a presentation

Most presentations consist of several slides of content. The appearance of the slide can be themed to improve the look of your presentations. Many times transitions are added to the content to add higher quality of professionalism. After you create a presentation it is important to review the presentation to insure it behaves as intended.
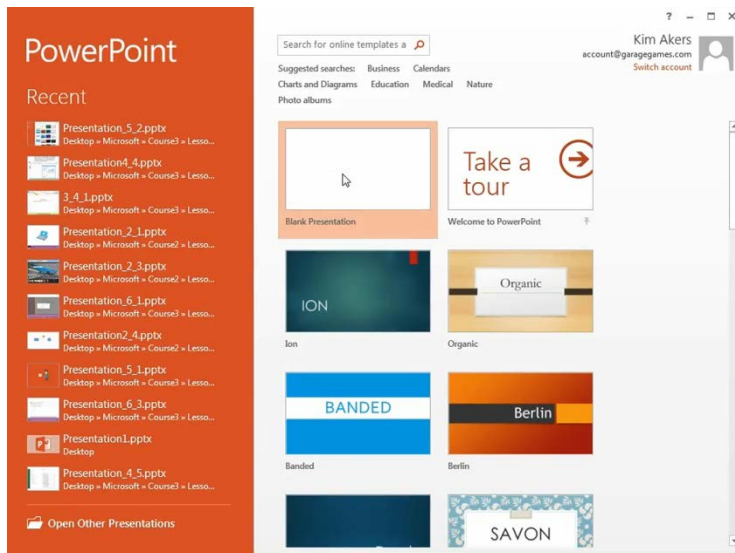
Text is the most direct way to add content to a slide.
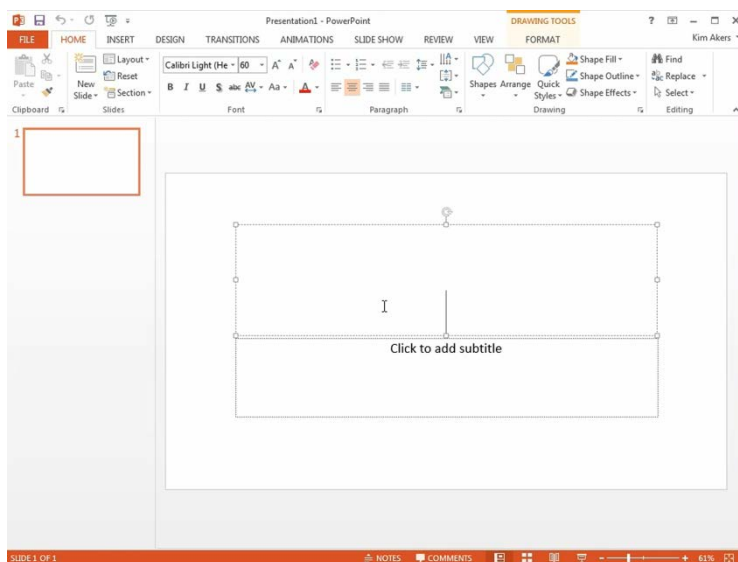
The default slide has two text areas, one for a title and another for a subtitle.
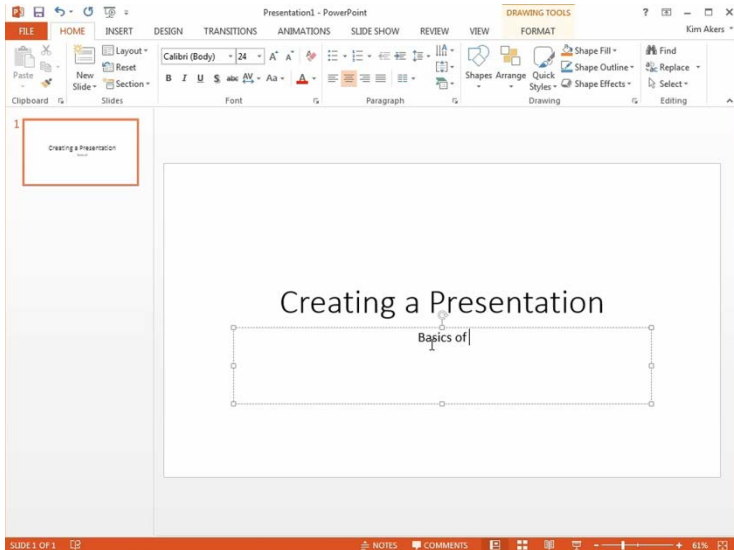
To add text simply click on the text area and start typing.
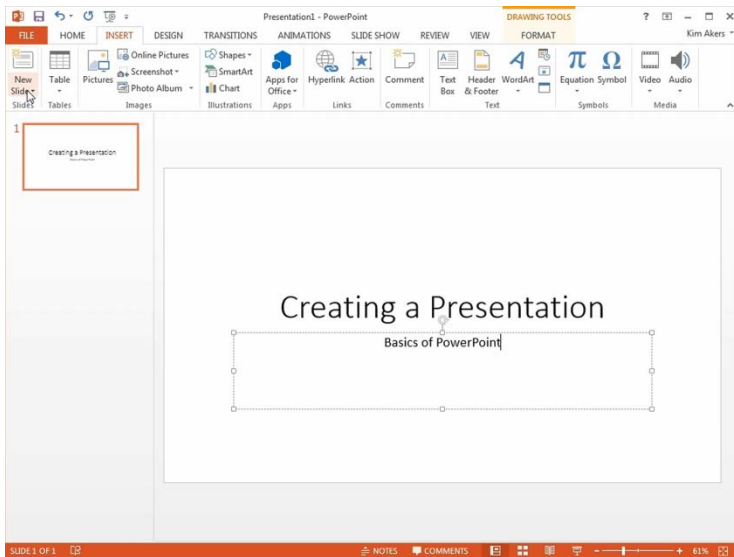
To add a new slide select the 'New Slide' Command from the Insert Ribbon.
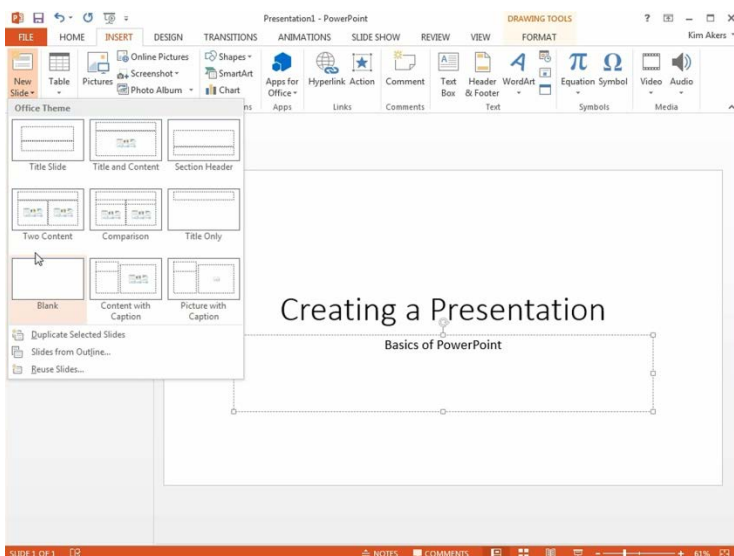
To add a new slide select the 'New Slide' Command from the Insert Ribbon.

There are several layouts to choose from, we will select the blank slide layout and add our own elements.
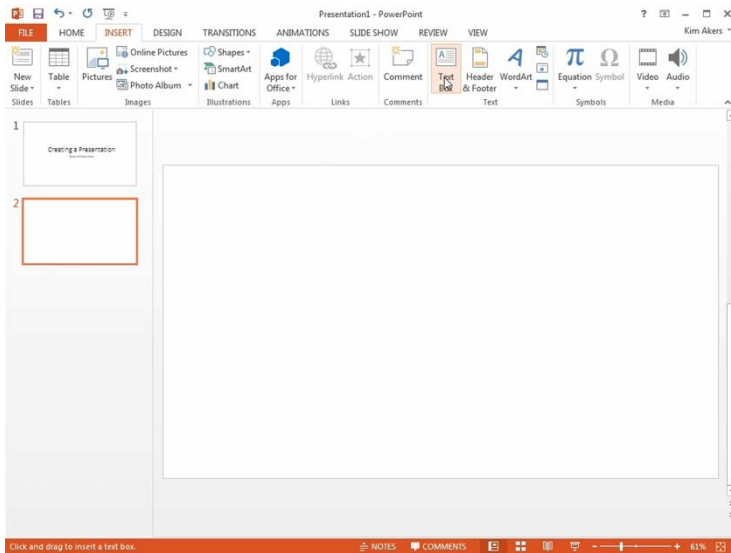
Here we will select the 'Text Box' command from the Insert Ribbon.
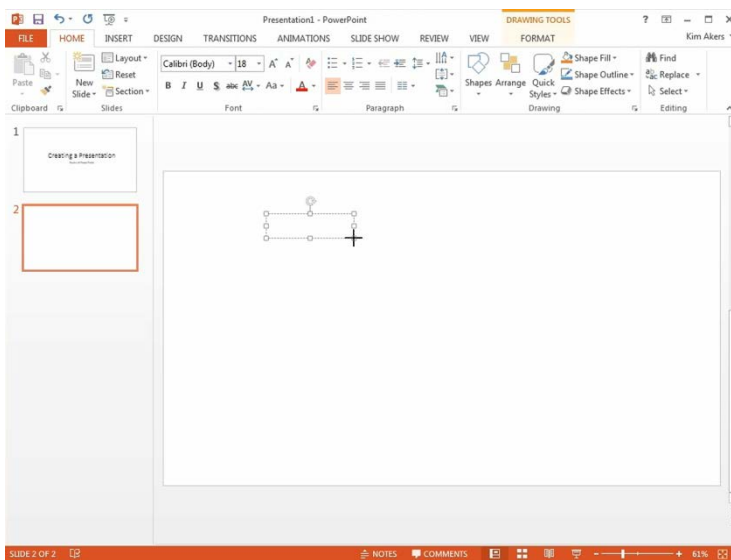
Clicking on the slide will place the text box on our slide.
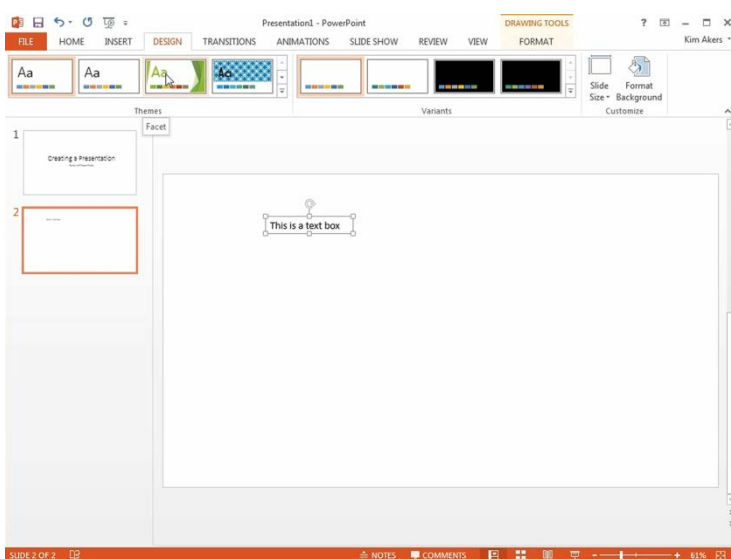
To give all the slides in your presentation a consistent look PowerPoint offers a variety of themes found on the Design tab.
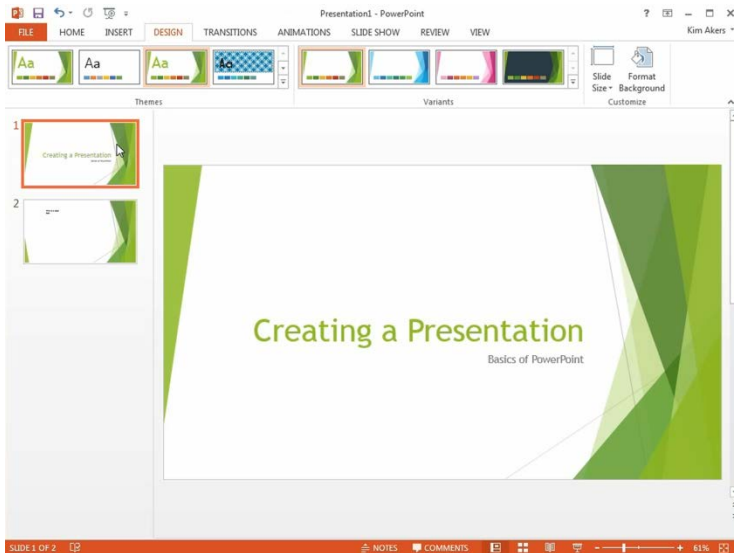
We will use the Facet Style for this presentation.
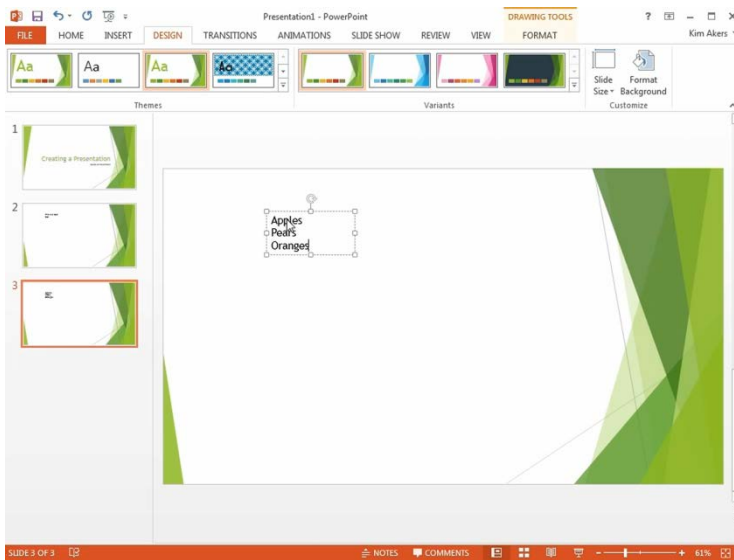
PowerPoint 2013 supports the fonts and styles you're familiar with from working with other Office 2013 programs.
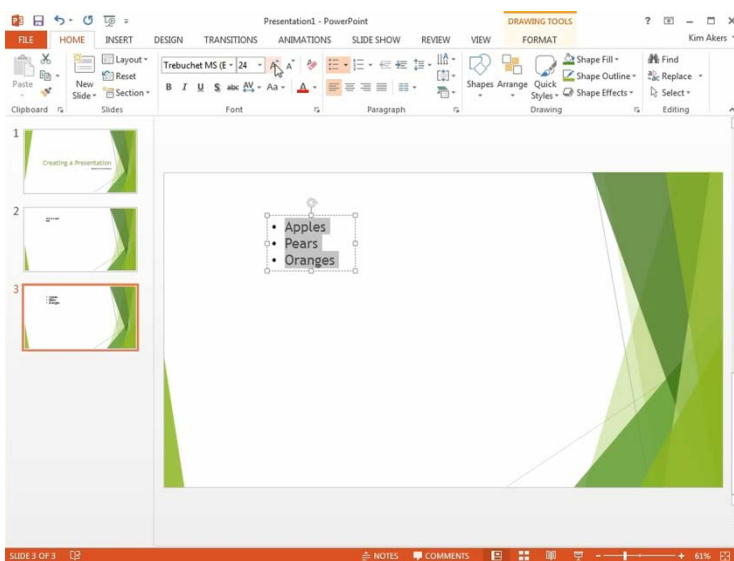
We will add a bulleted list and adjust the font size
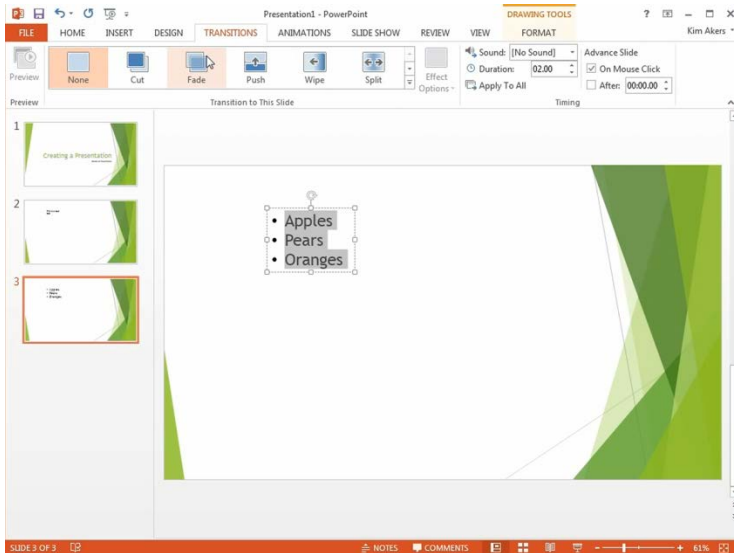
Presentations can benefit from adding an animated transition to the slide.

To add a transition select a slide, then select the Transitions Tab, finally select a Command from the 'Transition to this Slide' group.

An example of the transition will play.

It is best practice to use just one type of transition for all your slides.
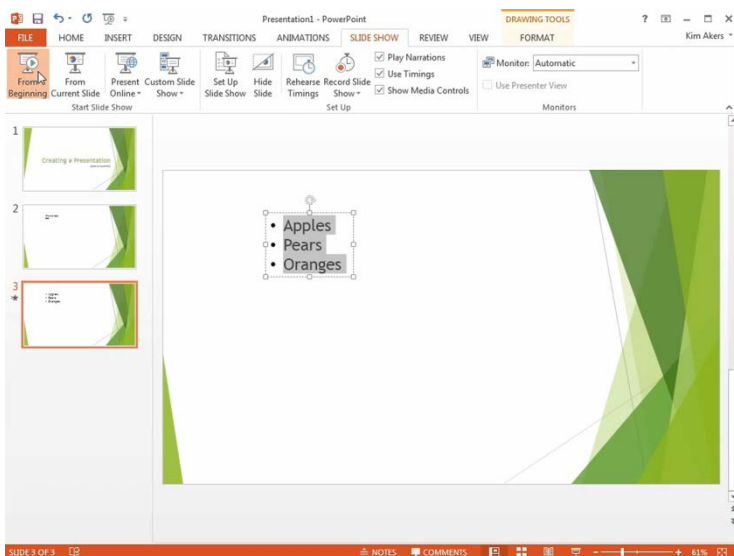
Once you have created your presentation it is important to test the presentation from the beginning.

To test your presentation select the Slide Show Tab and select 'From the Beginning' Command or press F5
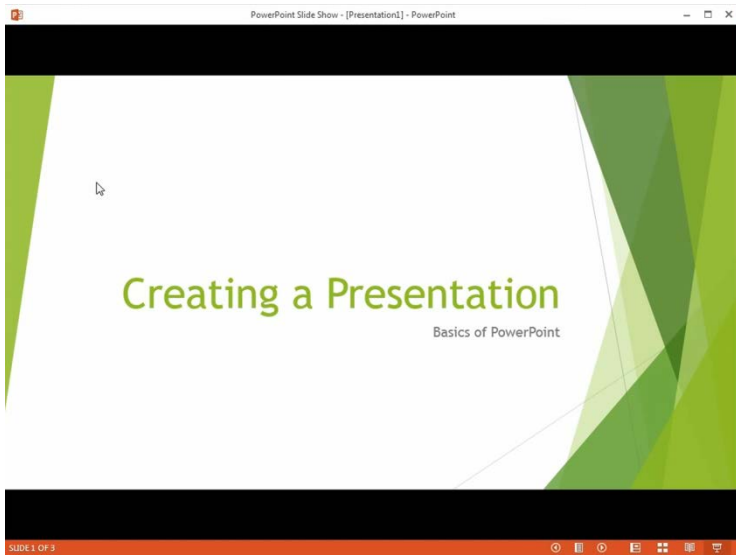
Knowledge check

When making a presentation, it is a best practice to use a wide variety of transitions.

- o True
- o False

Text areas can be repositions after they are placed on a slide.

- o True
- o False

Answer –

#1 – False. You want to be conservative in using transitions so they don't become a distraction.

#2 – True. You can edit the size and position of text areas after they are placed on a slide.

Adding graphics and multimedia

Most presentations are designed to show the audience some content. Many times the best way to express the content is with images, tables and charts. Power Point 2013 supports content from other Office 2013 products. The content can be pasted from other Office 2013 products or built directly within Power Point 2013. Let's look at some of the ways we can improve the content of a presentation.

The Adding Graphics and Multimedia simulation can be accessed online at
http://www.microsoft.com/digitalliteracy.

Knowledge check

You cannot build charts in PowerPoint 2013.

- o True
- o False

Images can be dragged directly into PowerPoint 2013.

- o True
- o False

Answer –

#1 – False. PowerPoint allows you to build charts from scratch to display on a slide.

#2 – True. You can drag and drop images right onto a slide.

How to print a presentation

Power Point 2013 provides many options for printing spreadsheets, for instance you can adjust how many slide appear on a page. You may want to include your notes when printing or show just the text. Let's look as some of the way you can print spreadsheets in Power Point 2013.
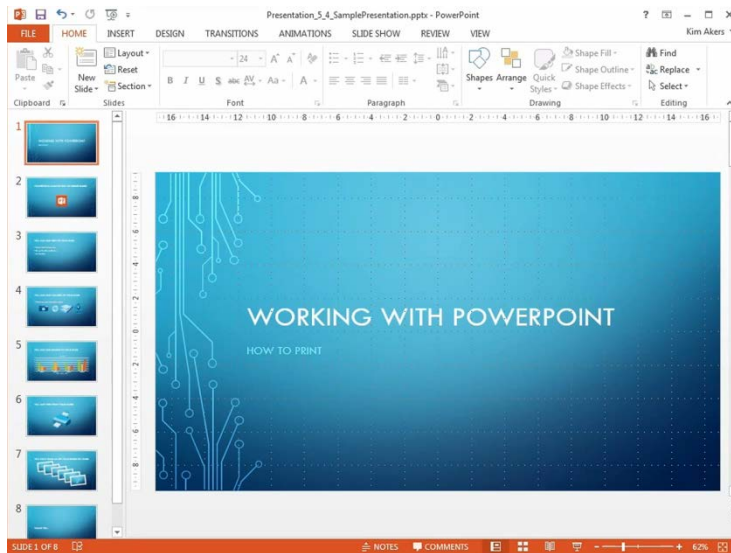
Power point 2013 lets you adjust the layout of the handouts of your Presentation.
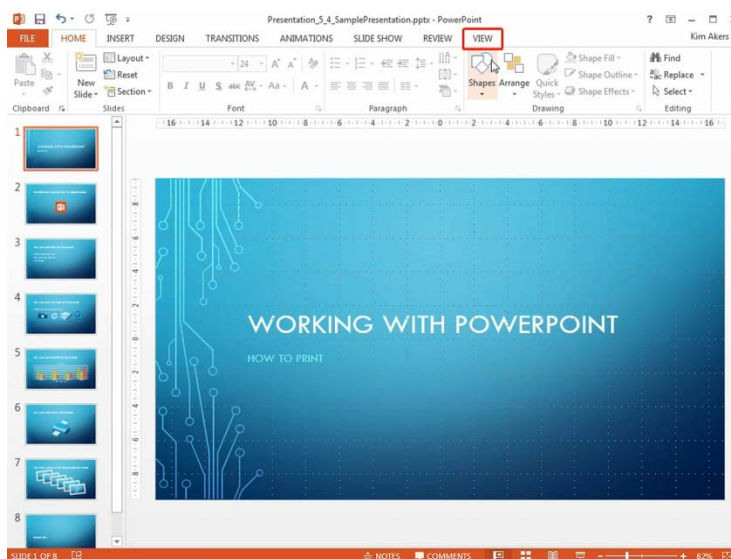
Select Handout Master from the View Ribbon.
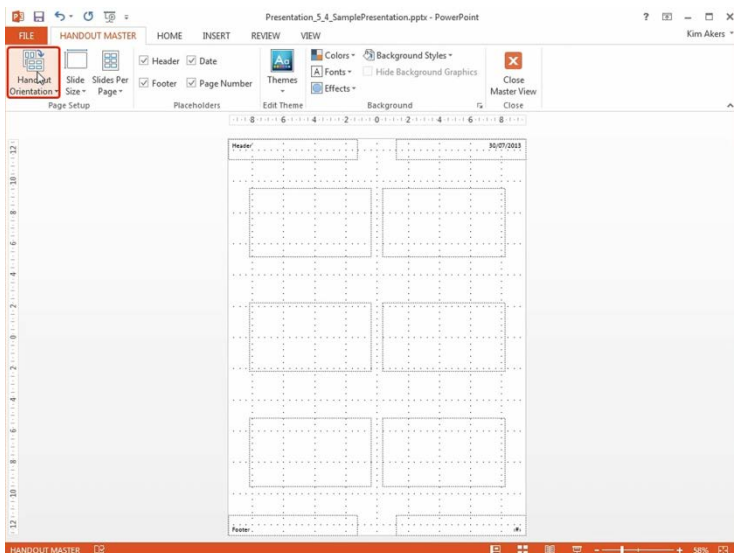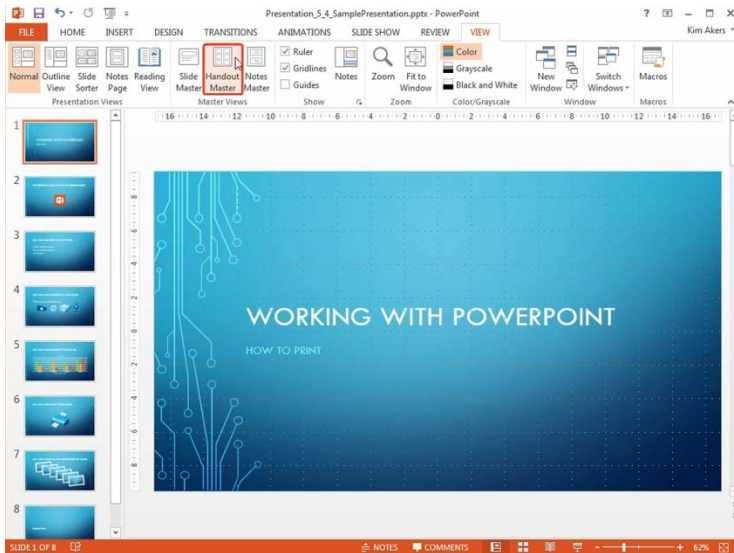
The Master View offers many options, here we change the handout's layout to be Landscape.
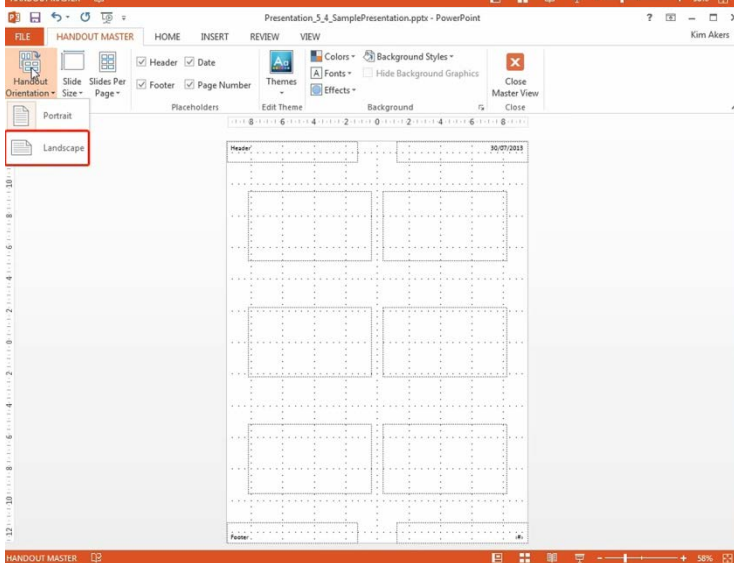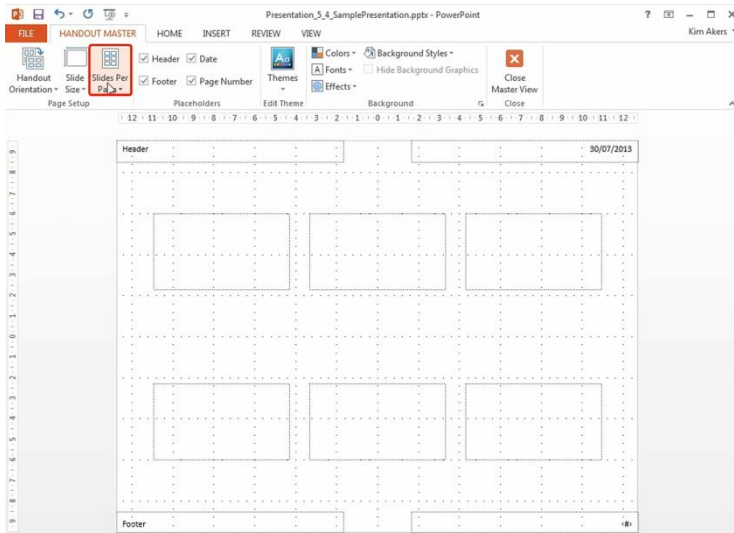
You can also have more than 1 slide to be printed out on each page.

Here we will set PowerPoint to put 4 slides on each printed page.
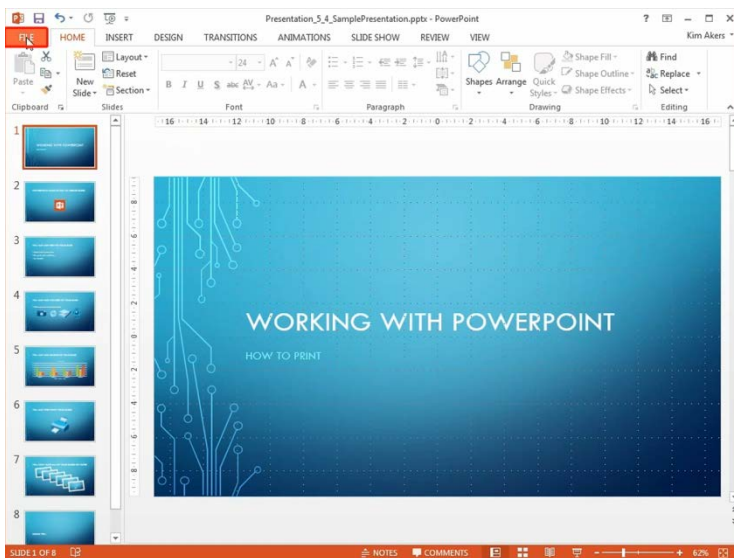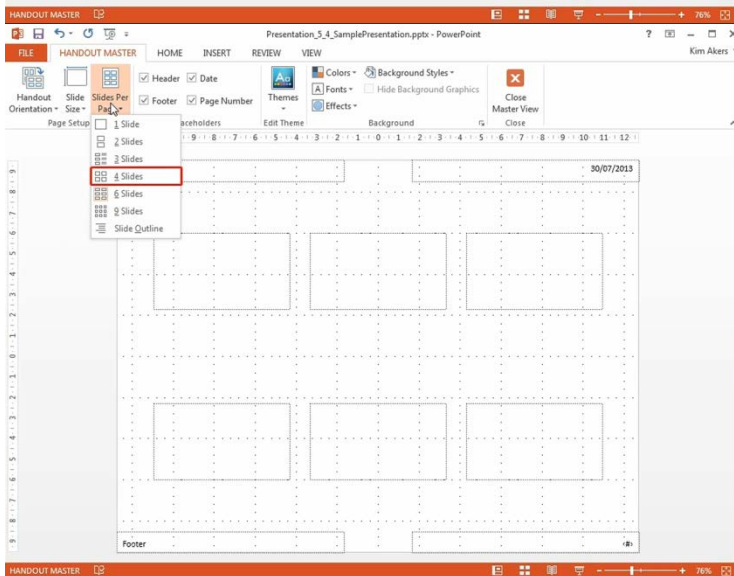
When you are ready to print, select the Print button in the backstage view.
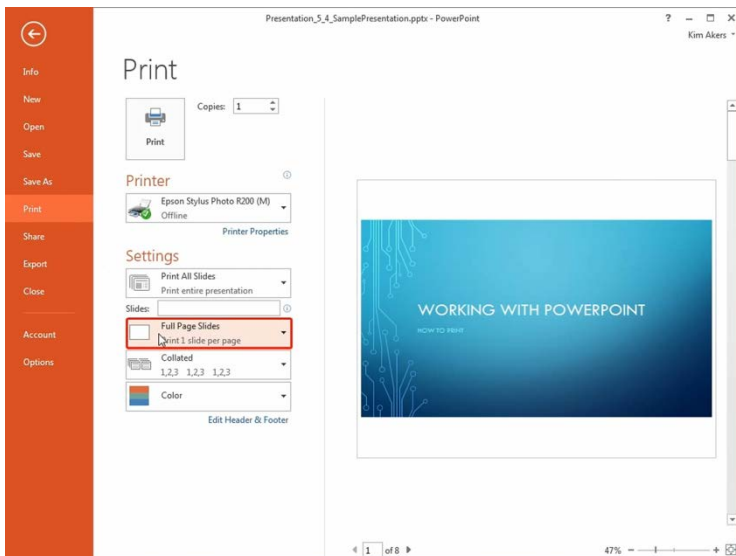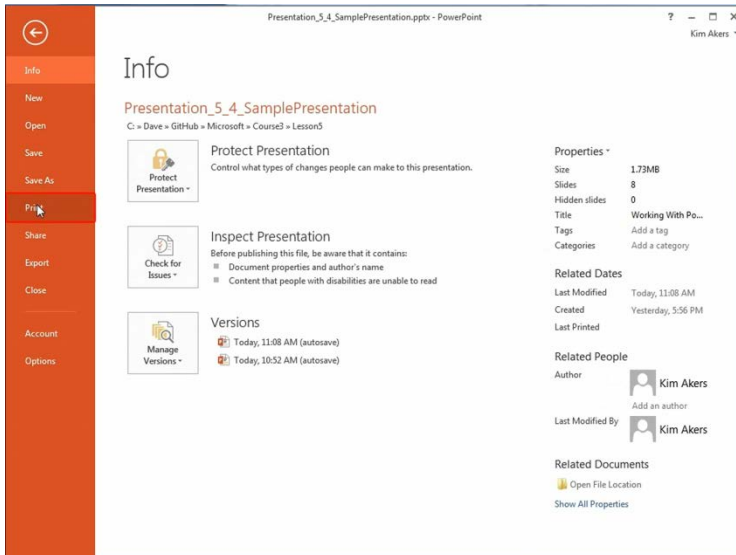
In Settings choose the 'Slide 4 Horizontal' from the Handout section.
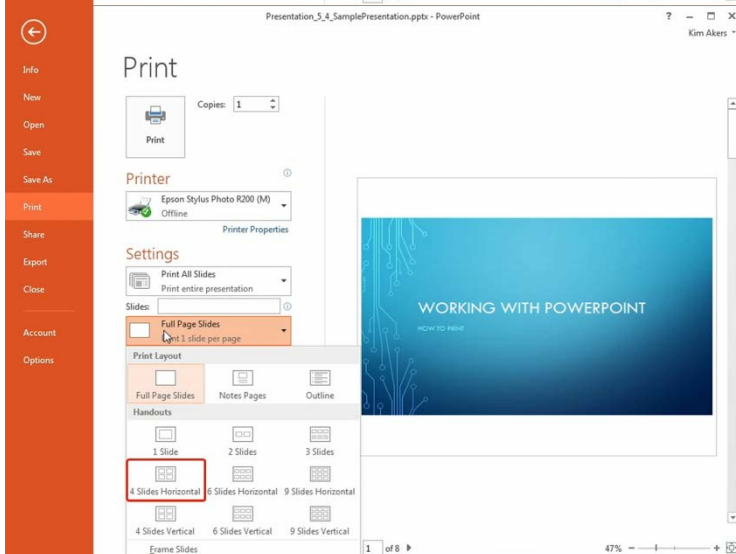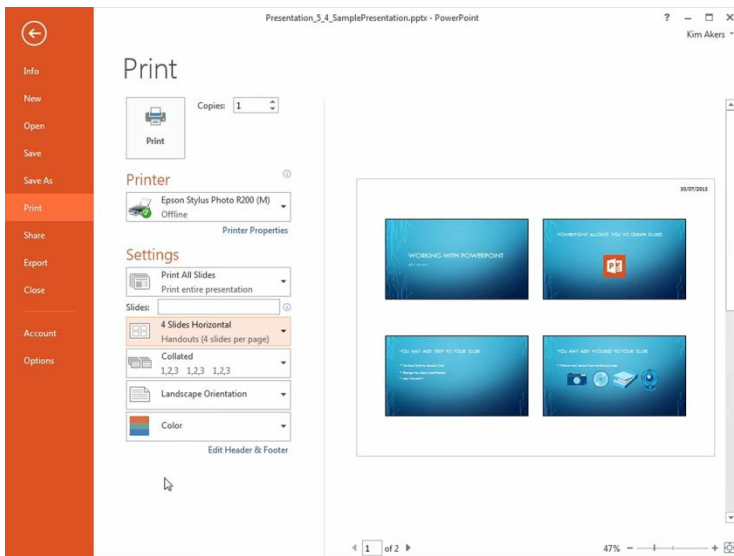
An example of the Layout is displayed in the preview window.
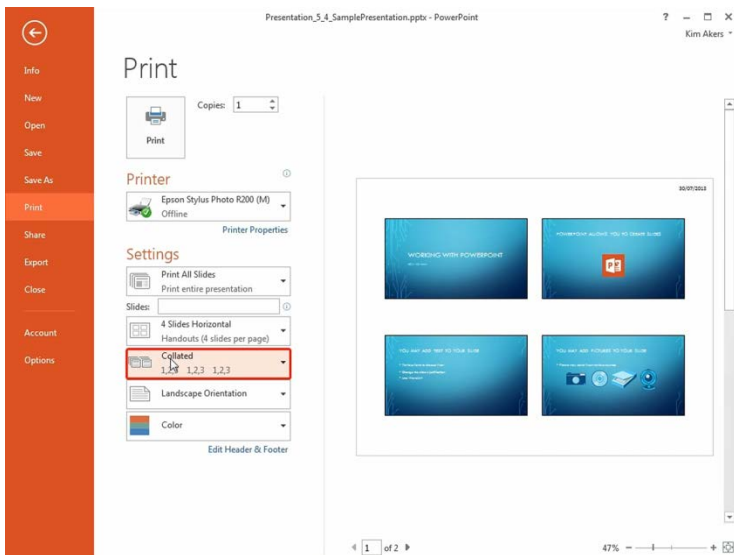
When printing multiple copies, you can print one complete presentation at a time or print one slide at a time with the Collated and Uncollated Commands under Settings.
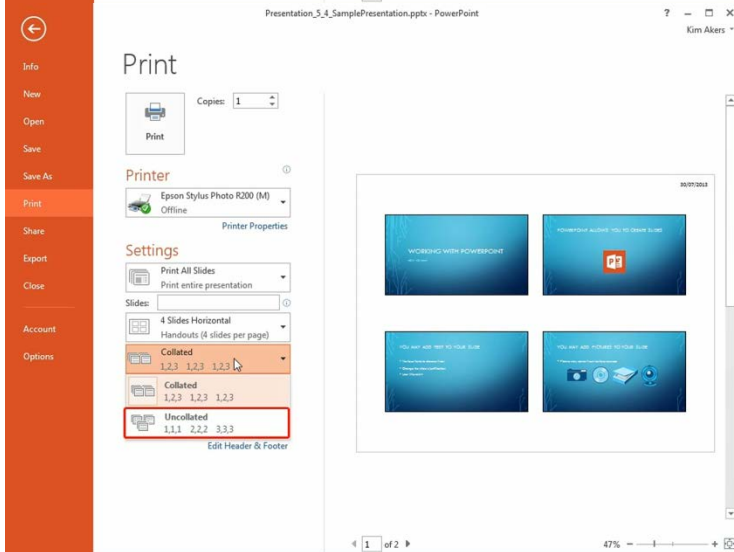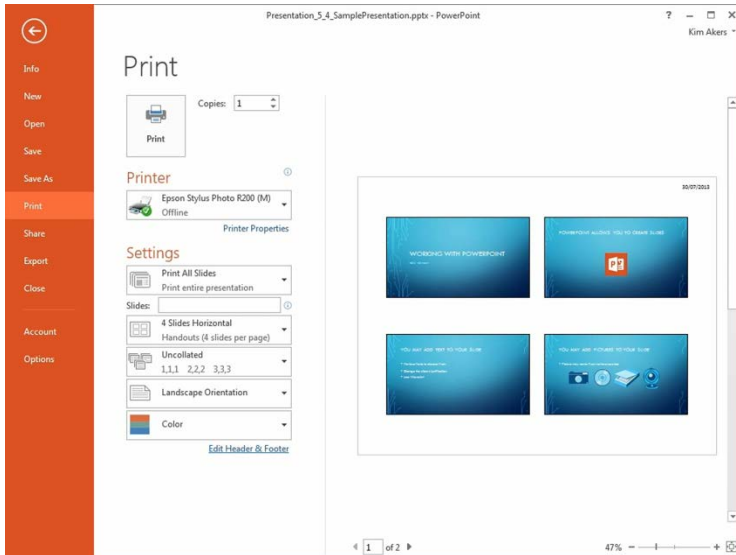
Now you have the basics of printing for Power Point 2013 presentations.

Knowledge check

You can only print one slide per page.

- o False
- o True

You can include your presentation notes when printing.

- o True
- o False

Answers –

#1 – False. You can change the print settings to print as many as 9 slides on a page.

#2 – True. You can change the print settings to either include or hide slide notes when printing your presentations.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Identify the elements of a presentation program.
- Create a presentation.
- Add graphics and multimedia to a presentation.
- Use the print options that are available in a presentation program.
- Create a new online presentation.

Introduction to Database Programs

Access 2013 is Microsoft's *database program*. This specialized program allows you to create a *database* for:

- Providing information
- Keep certain items organized
- Keep track of money
- classify certain things
- And more

In this lesson, you will learn about the basic tasks that you can perform by using a database program. You will learn how to create and use a database. In addition, you will learn how to generate various types of reports by using queries.

Businesses generate a lot of data, consider how many times you have been asked for your name and email just to sign up for a new account on a website. Your name and address are examples of data. Databases are designed to store and access data. This data is usually stored in several different tables, when someone wants to verify your account they check the submitted data to that stored in the database. Access 2013 allows you do build these tables, fill them with data and then look at the data. Let's look at an overview of the process.

The Overview of Databases simulation can be accessed online at
http://www.microsoft.com/digitalliteracy.

Knowledge check

Access 2013 uses a unique field to connect data between tables, what is it called?

- o Data Type
- o Field Name
- o Primary Key

Databases can only contain one table.

- o True
- o False

Answers –

#1 – The primary key is the field where data can be looked up, making a search much easier when the database is large.

#2 – False. A database can contain as many tables as the user needs.

Creating a database

Databases contain several tables. A table needs a description of the data before data can be entered. For any column we must specify if the data will be text, a number, a date or something more sophisticated. By specifying the data type we can insure the data is valid when it is add to the table. Let's look at how we added a table to a database.
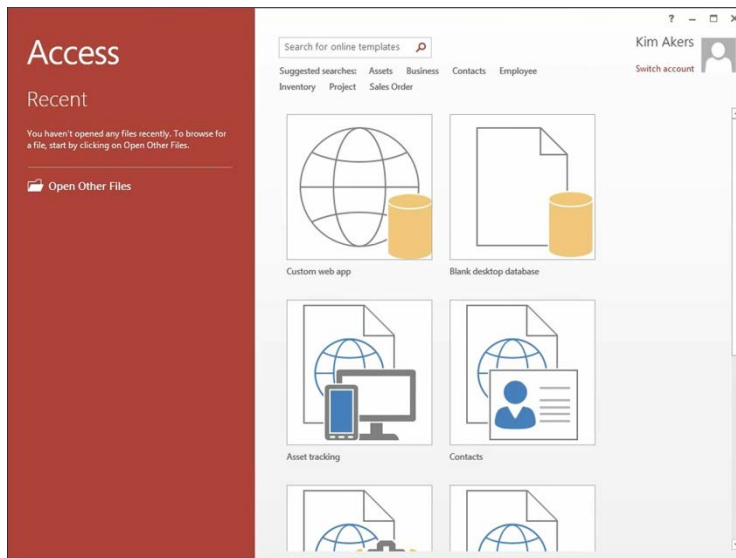
As you can see there are several types of Databases, we will create a Blank Desktop Database and name the file TestDB.
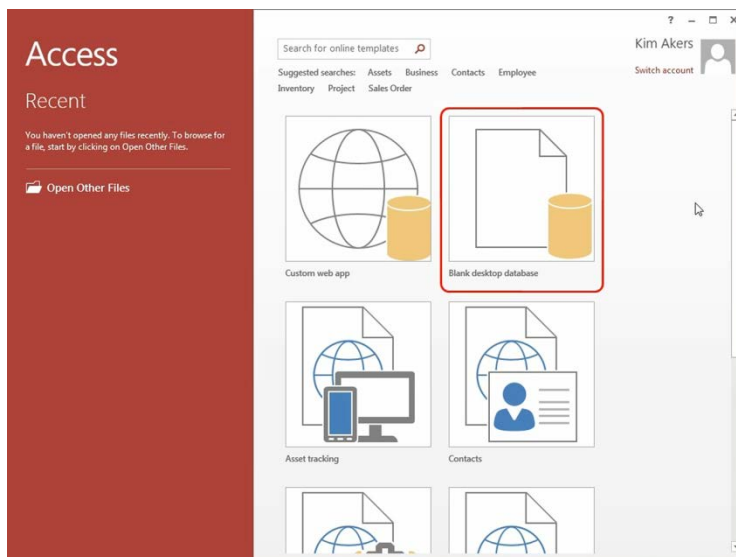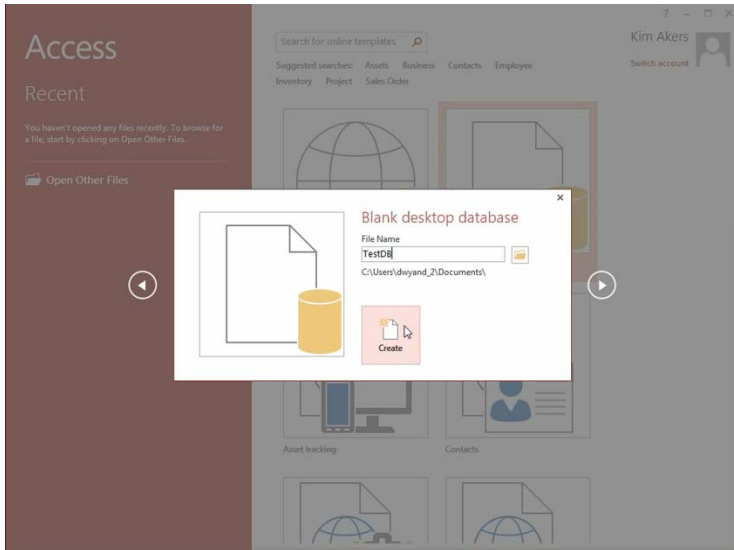
Click the Create button to open the database file.
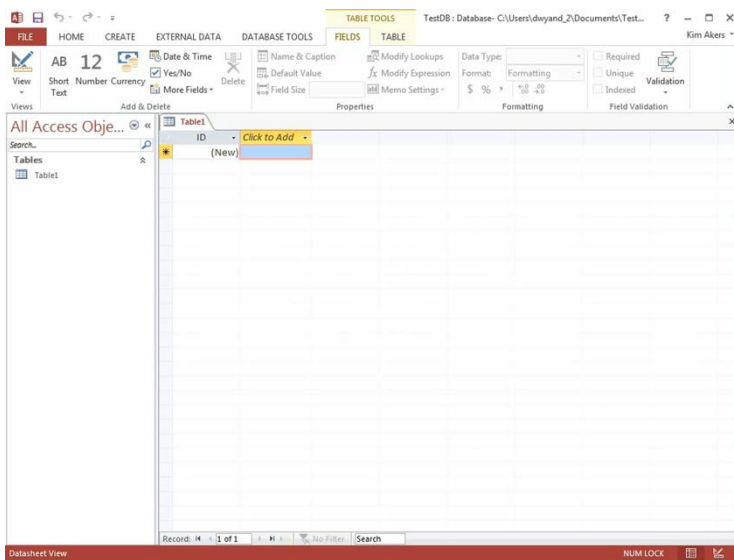
By default Access 2013 shows you a table in DataSheet View.
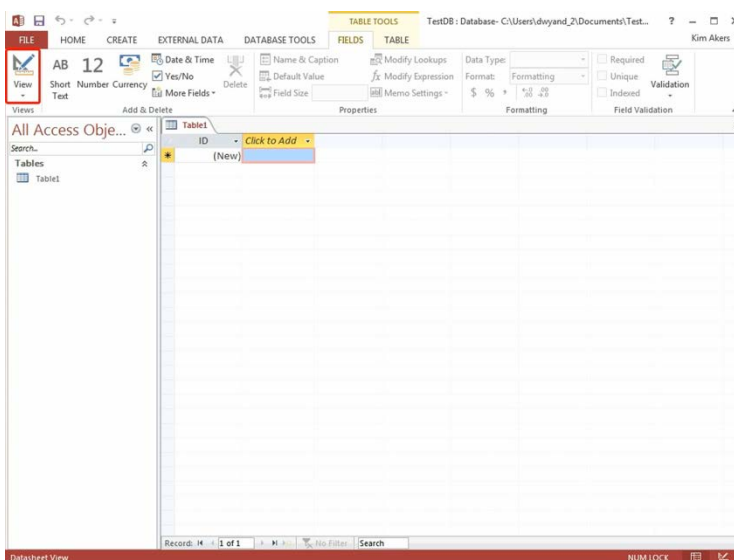
You can change views, with the View button on the Home Tab.
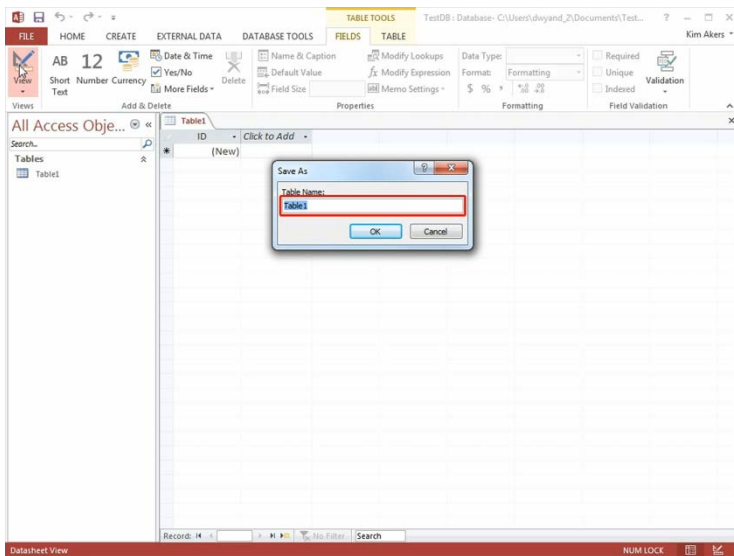
Notice how Access 2013 will ask you to provide a name for your table.
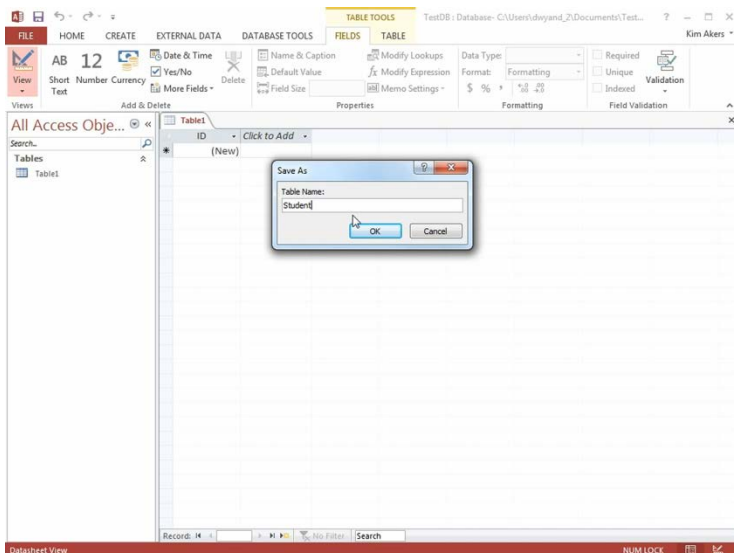
Let's call our table "Student" and click OK.
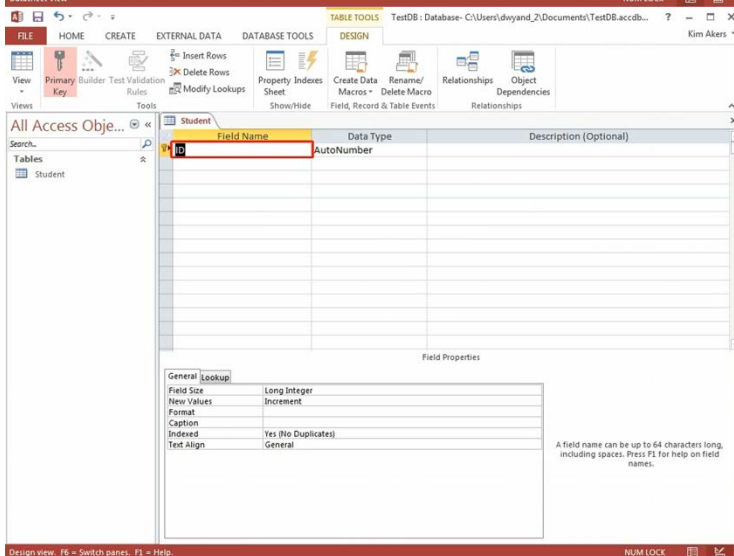
Each table starts with a piece of data called ID whose data type is Autonumber.
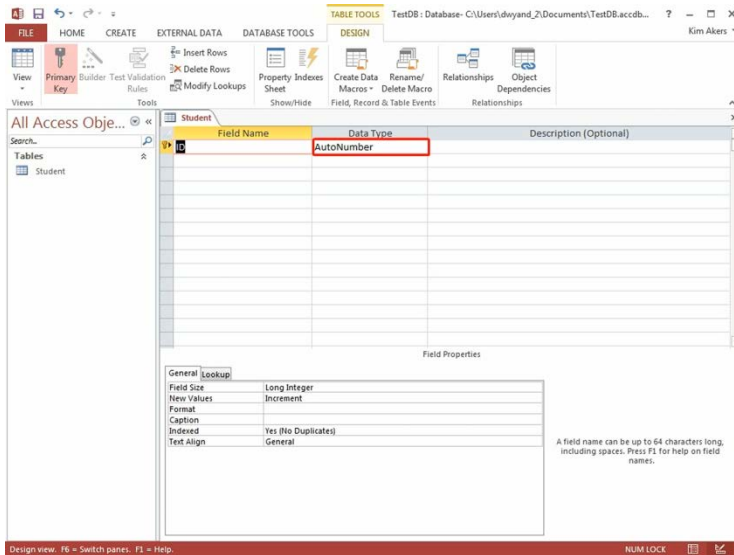
Notice how the Primary Key button is highlighted in the Ribbon when the ID row is selected.
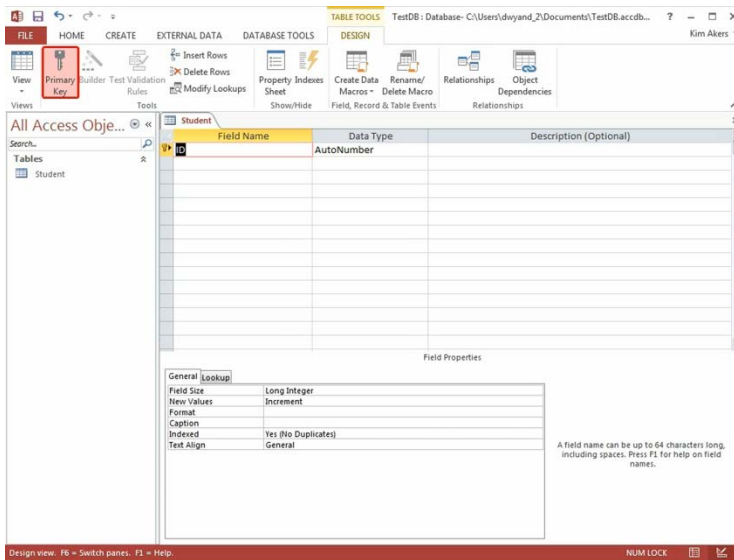
You can toggle which row will be the table's Primary key.
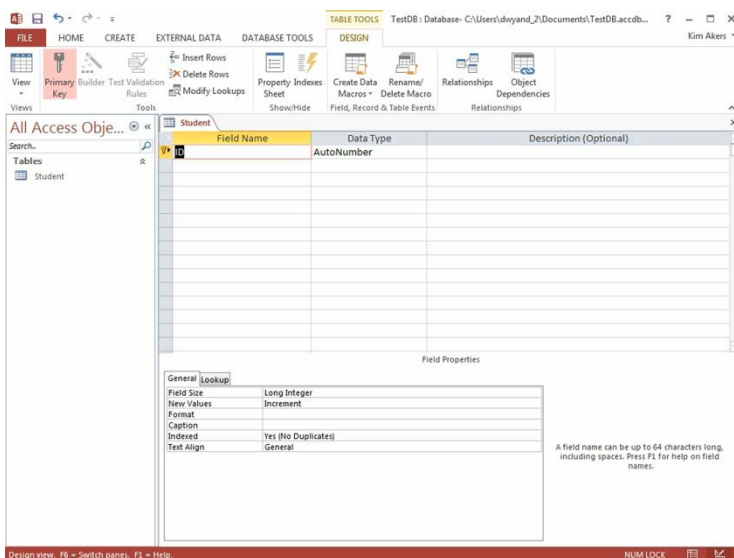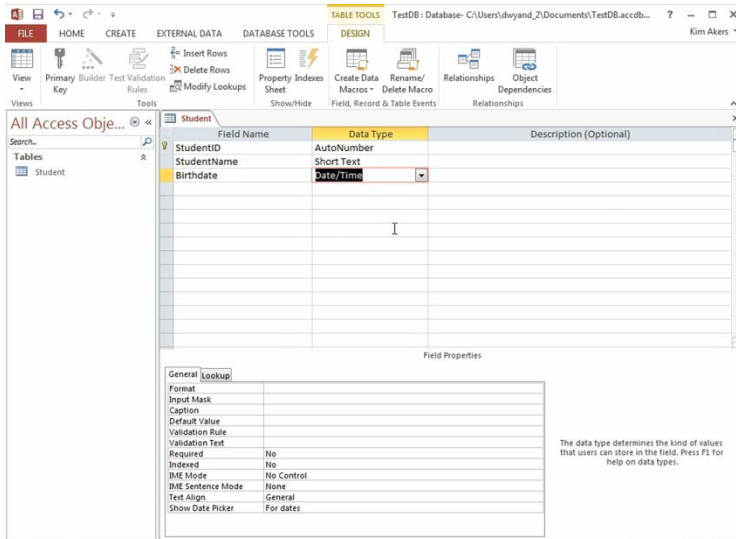
Lets add a couple more rows of entries on our table one for StudentName as a Short Text Data Type and one of Birthdate as a Date and Time Data type.
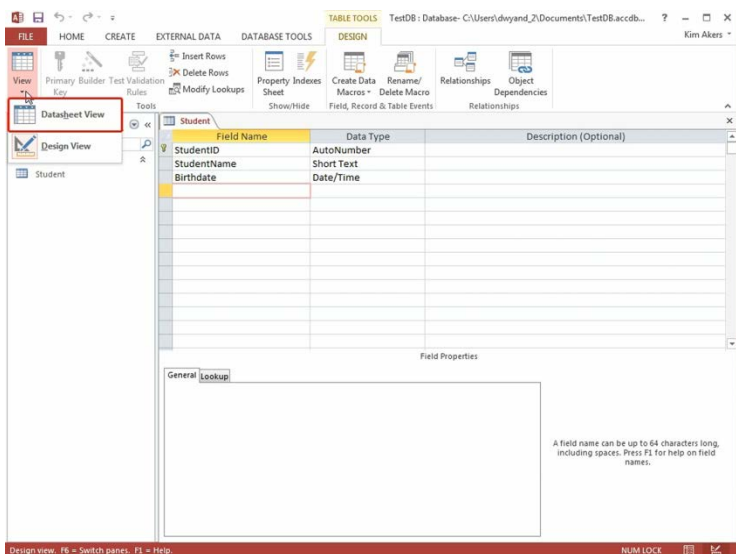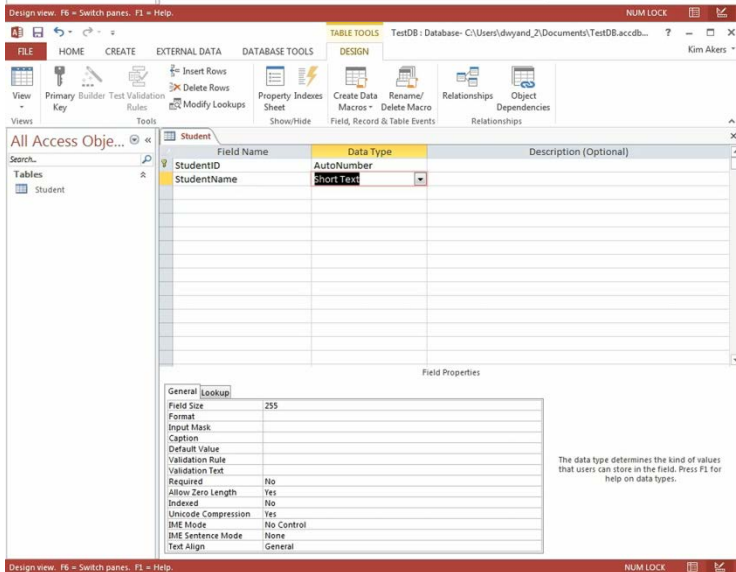
In DataSheet View notice that the field names we created are now the column headers.
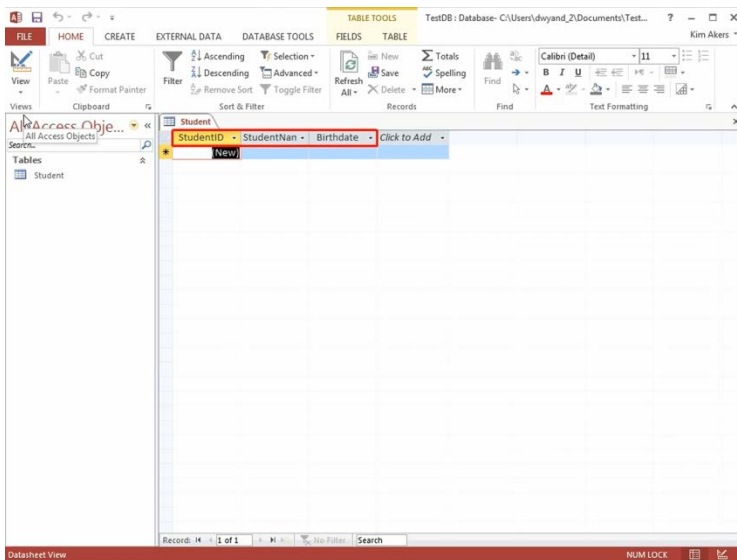
In DataSheet View notice that the field names we created are now the column headers
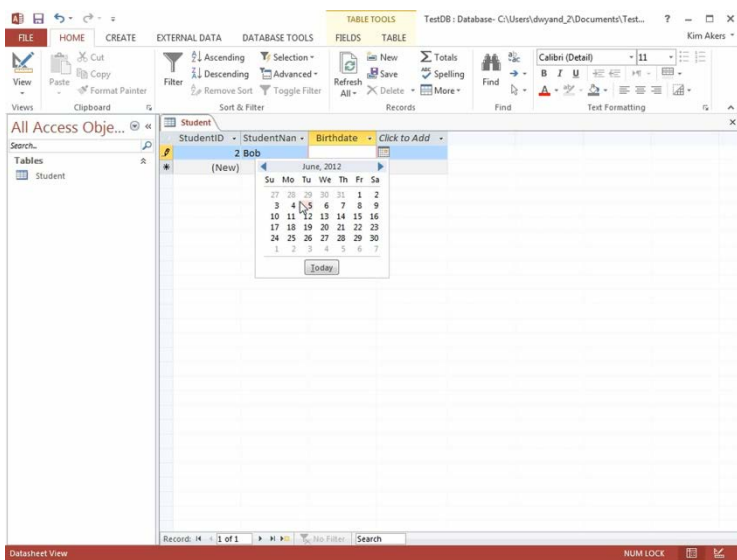
You can type directly into the cell or in certain cases, like a date, we can choose a value with the Calendar widget.
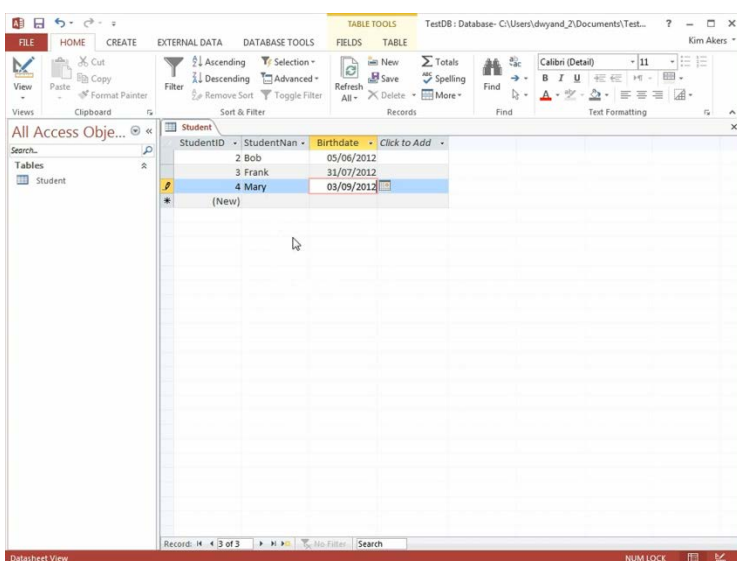
Notice that with each new entry in the table Access automatically updates the StudentID number.

Access 2013 allows database designers an interface to create their tables quickly.

Take some time to learn which data type will best suit your information and records.

Knowledge check

The first row in a table must be the Primary Key of the table.

- o True
- o False

This data type insures that I have unique numbers.

- o Number
- o Short Text
- o Autonumber

Answers –

#1 – False. The primary key can be anywhere and not necessarily the first row.

#2 – Autonumber will make sure you have unique numbers for each line of data.

Working with records in a database

Access 2013 databases hold a collection of tables and Excel 2013 creates tables. It is natural to wonder 'How does one import an Excel table?' Access 2013 supports a wide range of formats for importing and exporting. In this lesson let's focus on the Excel Importer Wizard.

The Working with Records in a Database simulation can be accessed online at
http://www.microsoft.com/digirtalliteracy.

Knowledge check

I cannot change the data type of a column once it is loaded into Access 2013.

- o True
- o False

I can use the first row in an Excel spreadsheet to be the name fields in my Access table.

- o True
- o False

Answers –

#1 – False. The data type can be changed at any moment.

#2 – True. Excel and Access are compatible with each other.

Database queries

Queries allow database designers to change or retrieve data from a database. Access 2013 allows queries to be built with a graphical interface. There is also support for SQL queries. Let's look at how we can create a query.

You use a query to retrieve specific information from a database.

It helps you view specific data to modify or analyze it.

You use a database program to enter a query in the form of a question.

The database program then performs the required operations to present the answer in the form of a report.
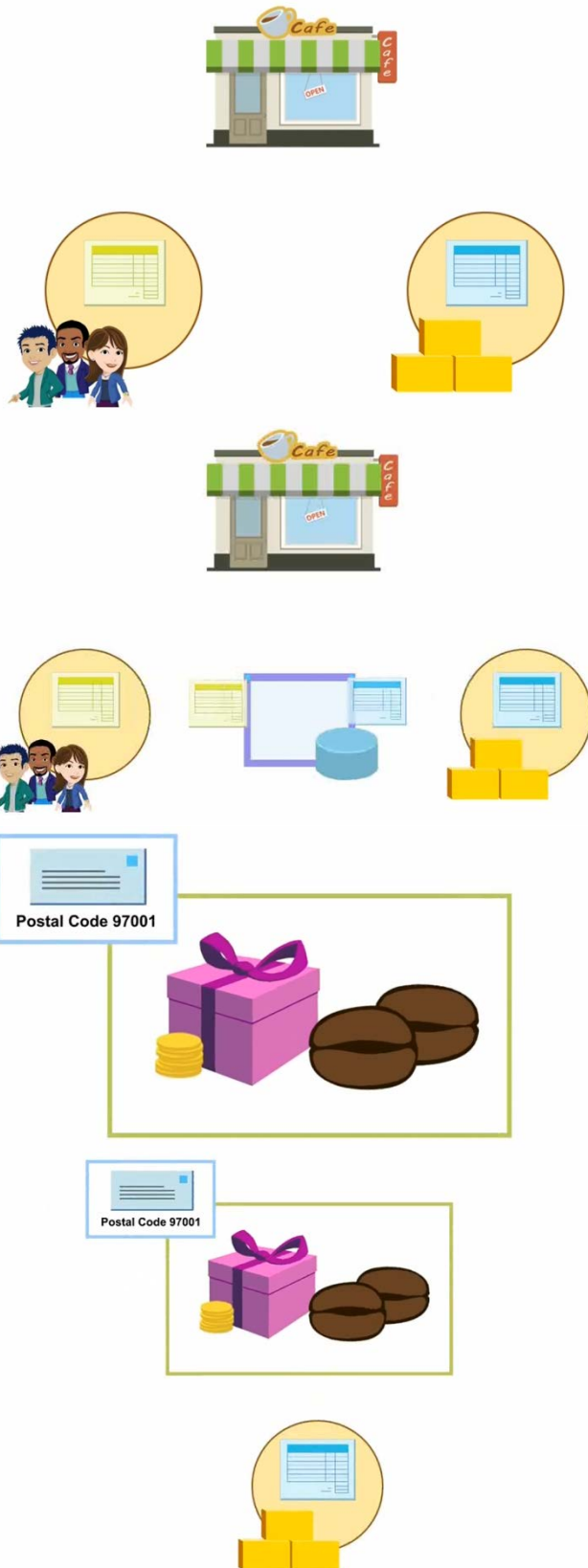
Suppose you own a coffee shop and you store detailed information about your customers in a Customer table and data about the sales of all the products in a Product table.

These two tables form part of a database.

You want to introduce a special discount offer on the less popular flavor of coffee beans in the area with postal code 97001.

For this, you need to retrieve the sales details to help you make this decision.

Postal Code 97001

Postal Code 97001

You decide to use a query for this.

Queries work on search conditions called filters to retrieve specific information from a database.
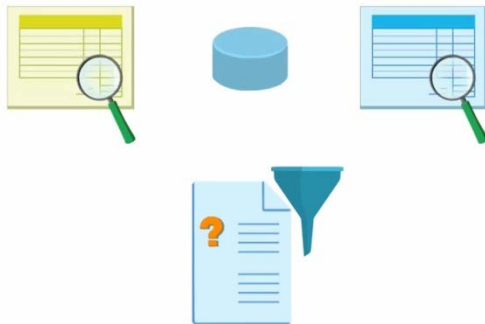
To define a filter, you need to first select the tables from which you want to retrieve data.

The common fields in the tables are shown as connected.
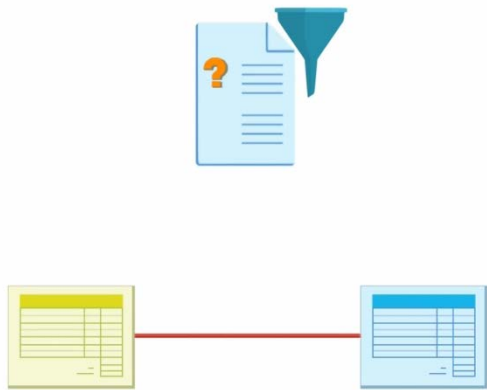
You then specify the fields, known as criteria fields, on which you want to base your query.
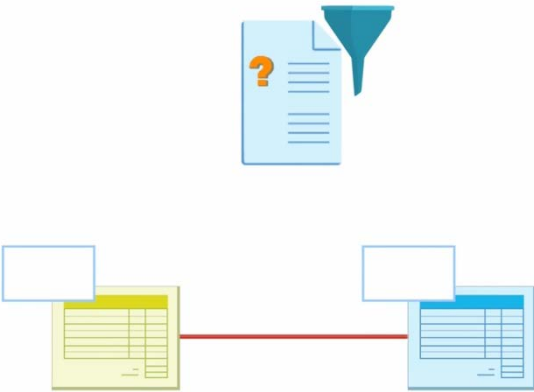
In this case, you would use the postal code field.

Next, you select the fields you want to view.
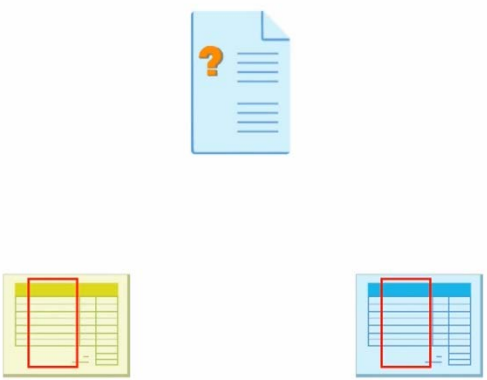
You can specify these
fields by dragging them
from the tables.

By default, all the fields
you specify appear in your
report.

You can also choose to
show only specific fields
in the report.

After you execute the
query, the result appears
as a report.
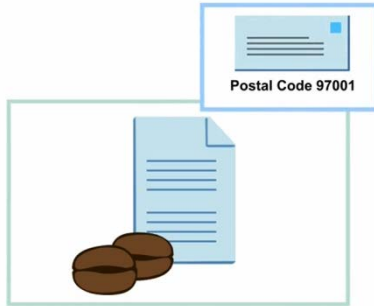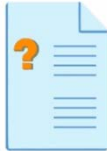
This report contains the sales details of all the coffee bean sold in the area with the postal code 97001.

Knowledge check

SQL is not support by Access 2013.

- o True
- o False

A query is a fast way to look at data in your dataset.

- o True
- o False

Answers –

#1 – False. SQL is supported in Access 2013.

#2 – True. A query allows you to quickly compare and filter all the data in your database.

Working with reports

Access 2013 allows you to developer reports on the content of the database. _Reports_ are useful for meetings and presentations when you want to distribute part of your database. The Report Wizard also offers options to show statistical analysis on the data. Let's see how to use the Report Wizard.
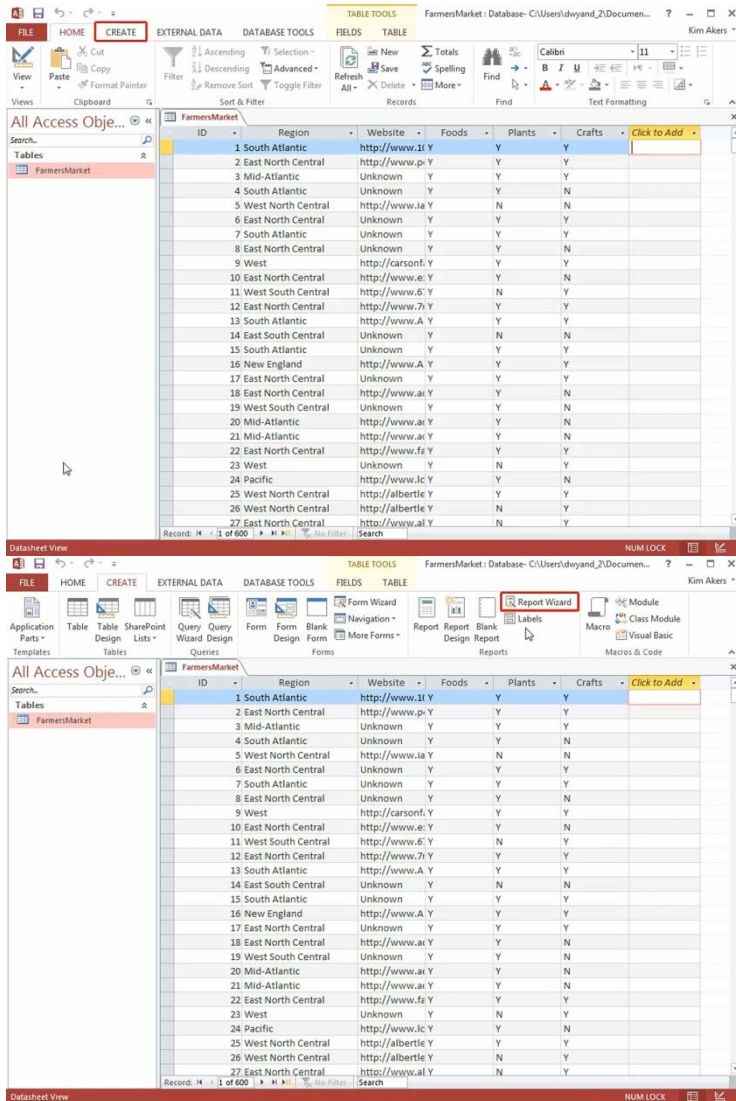
On the Create Tab you will find Access 2013's Report Wizard in the reports group.

The Report Wizard helps you to customize and print reports from your data.
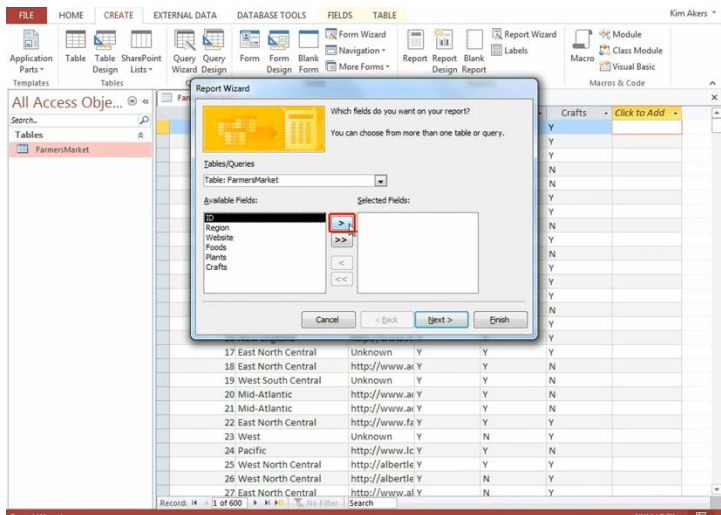
Start by selecting which fields you want in your report and then click Next.
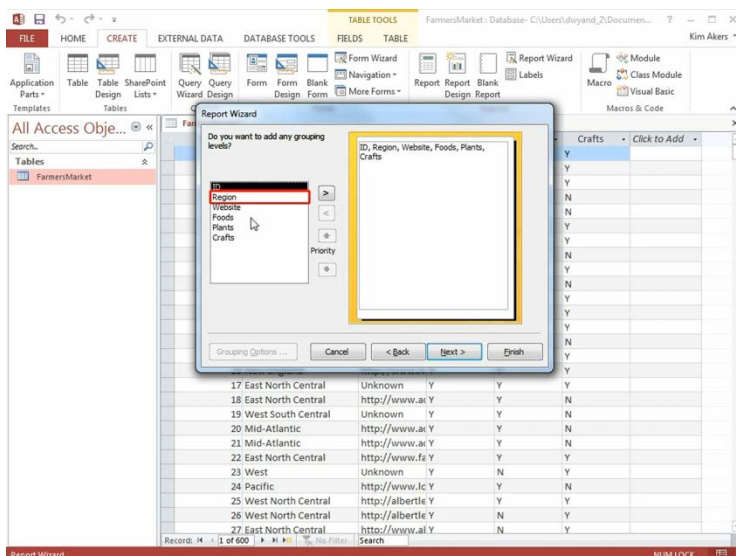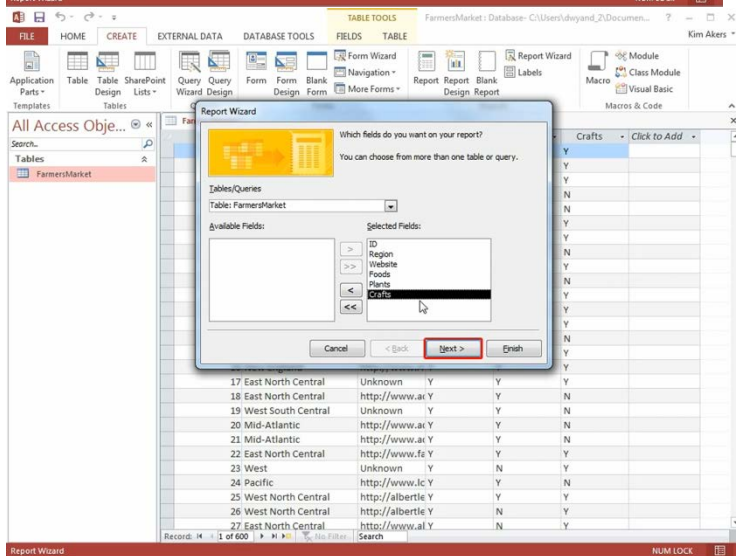
You can group data by an individual attribute, we will organize our report by Region and press Next.
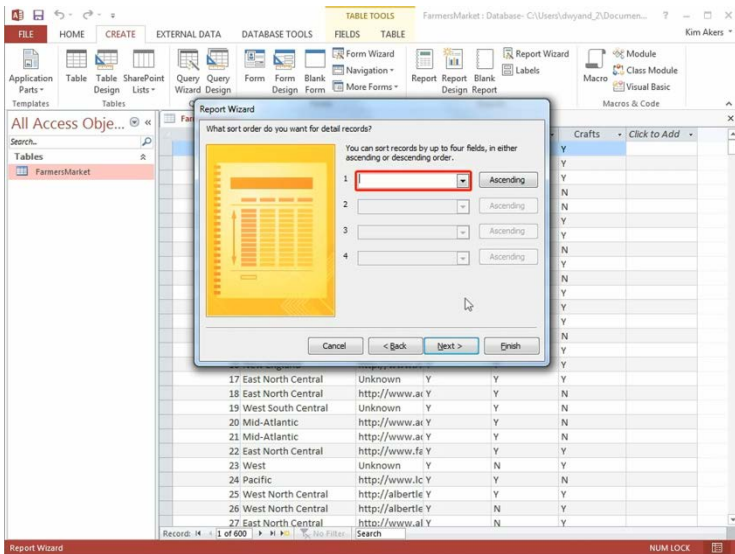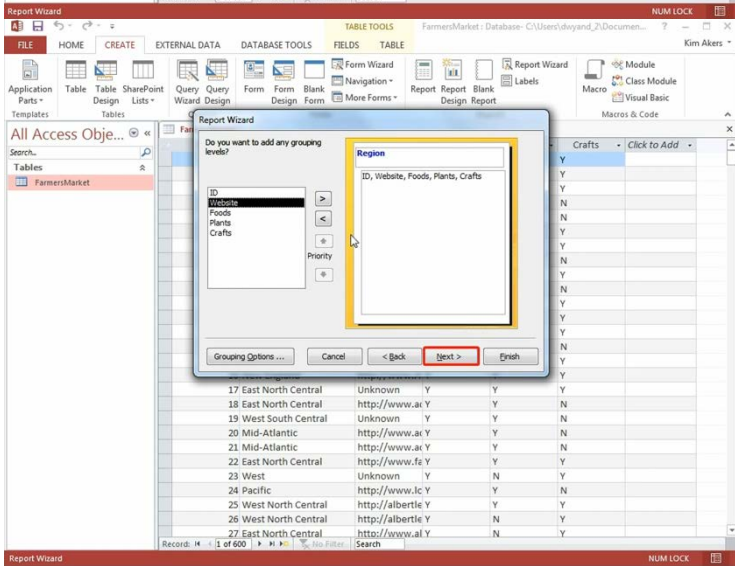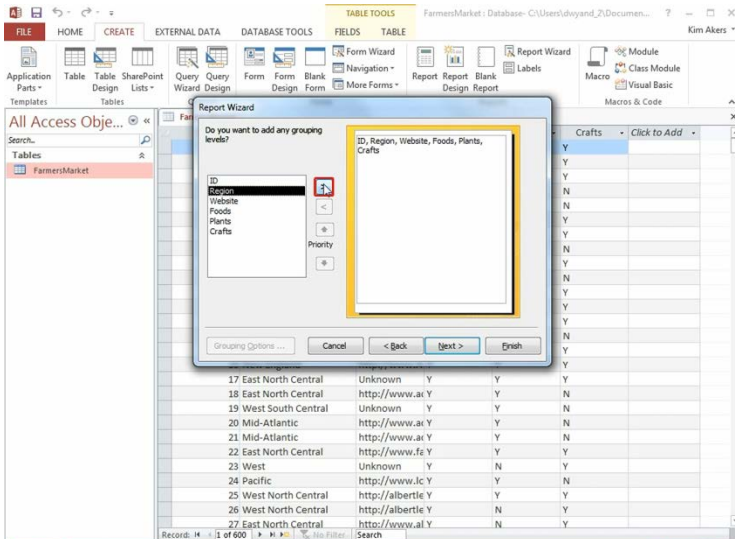
Access 2013 can arrange the values for each columns
to be in ascending or descending order.
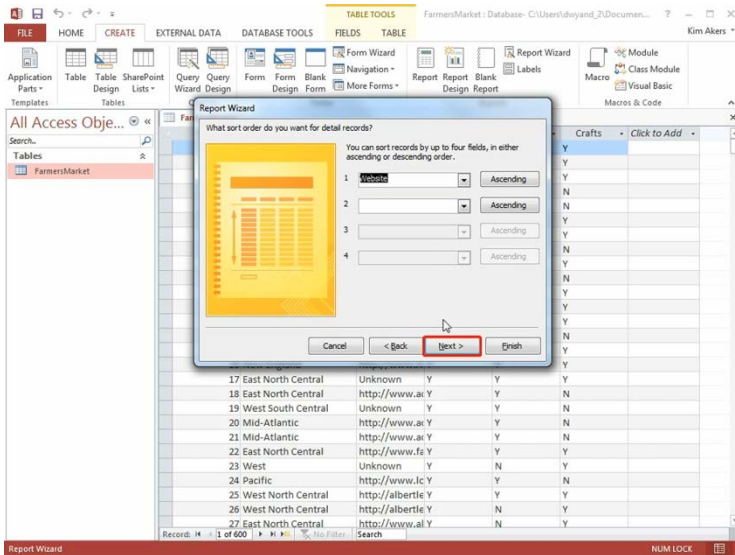
The Wizard also offers some basic formatting choices such as the layout and orientation of the page.
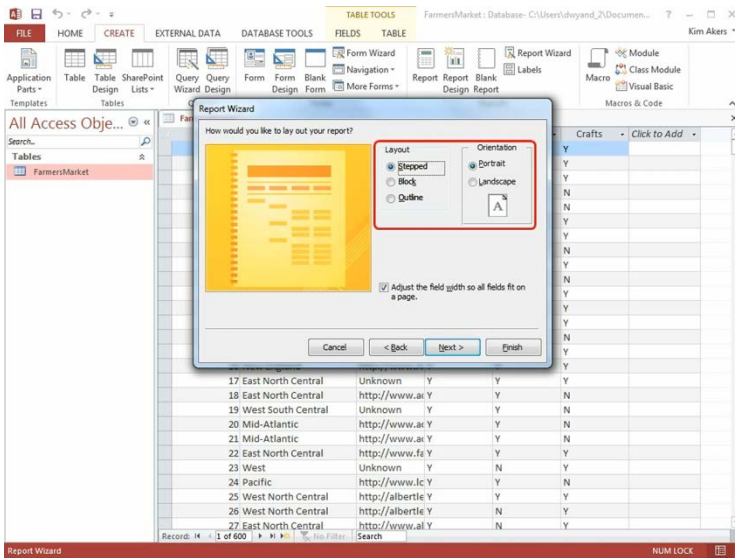
On the last step you can name your report and then click Finish to preview it.
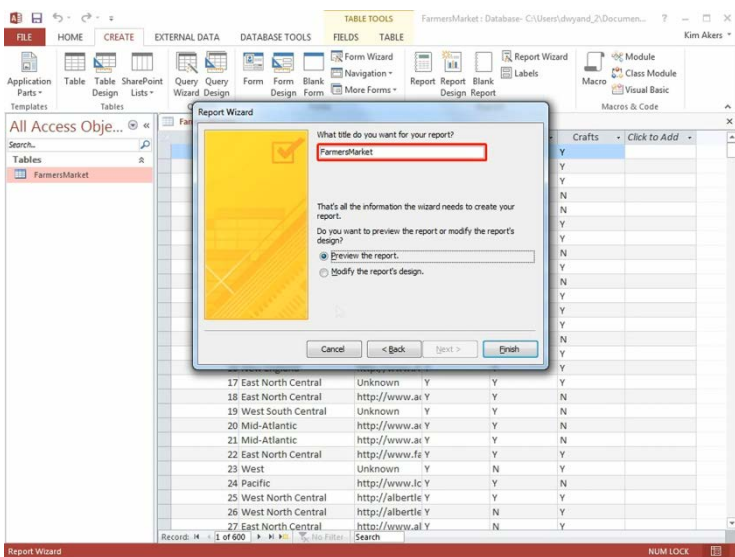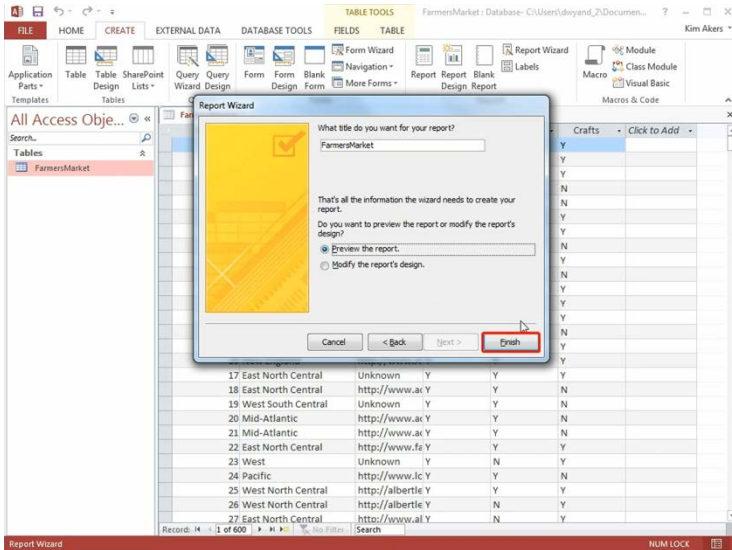
Here is a preview of the report, you may notice that the value for Region is cut off.
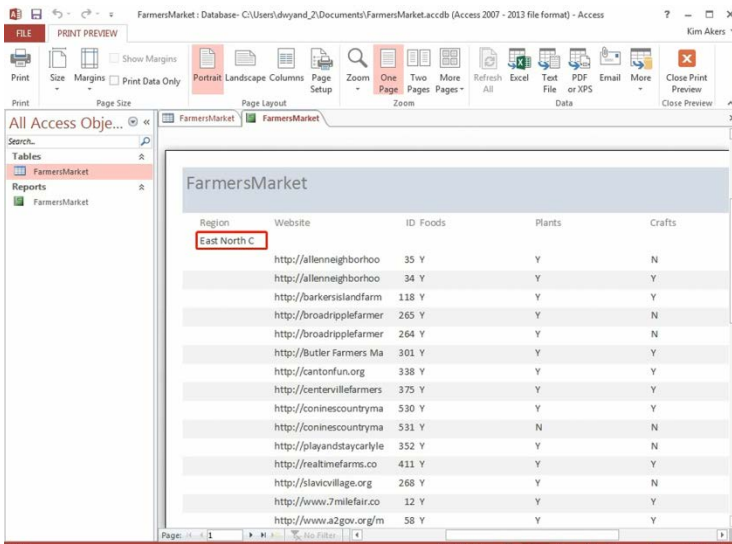
We can change the formatting of the report in Design view by closing the print preview.
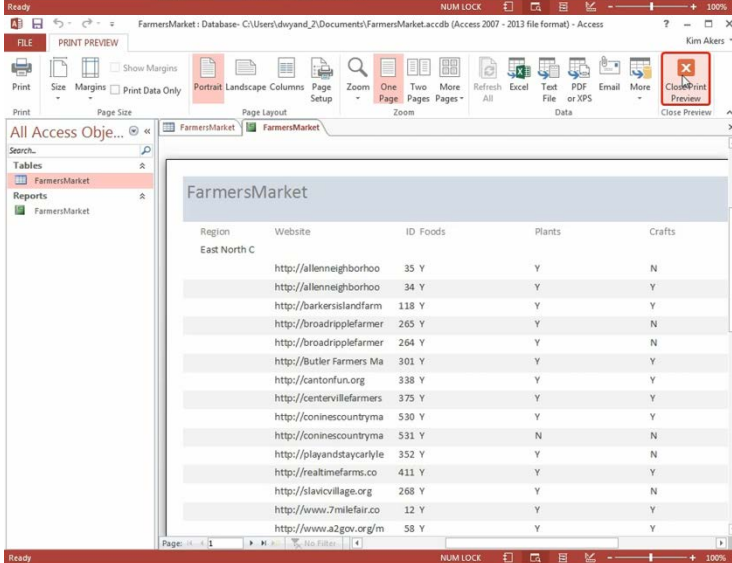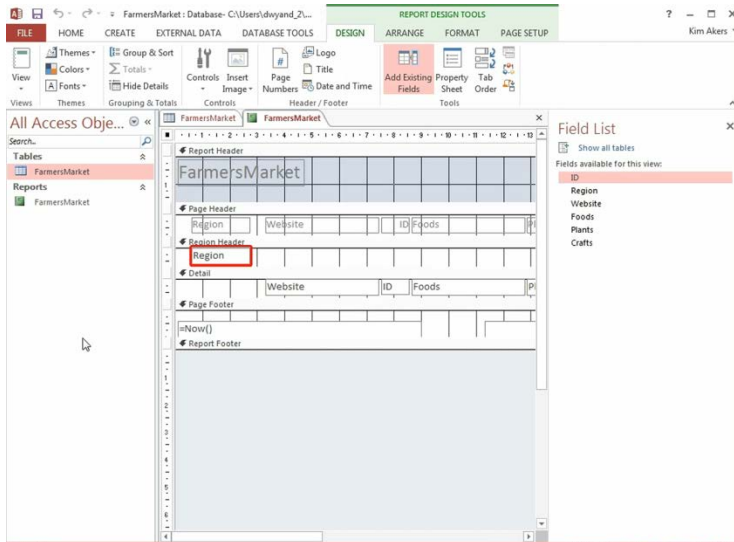
Lets select and rescale the Region Header object on the report.
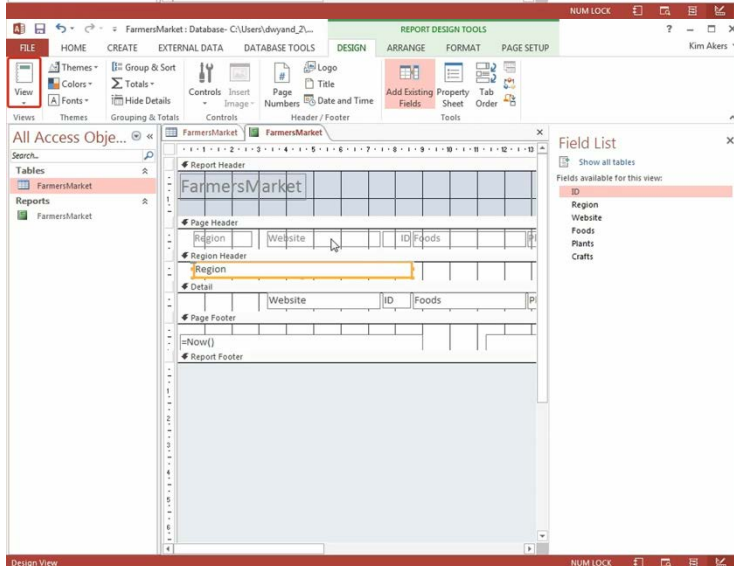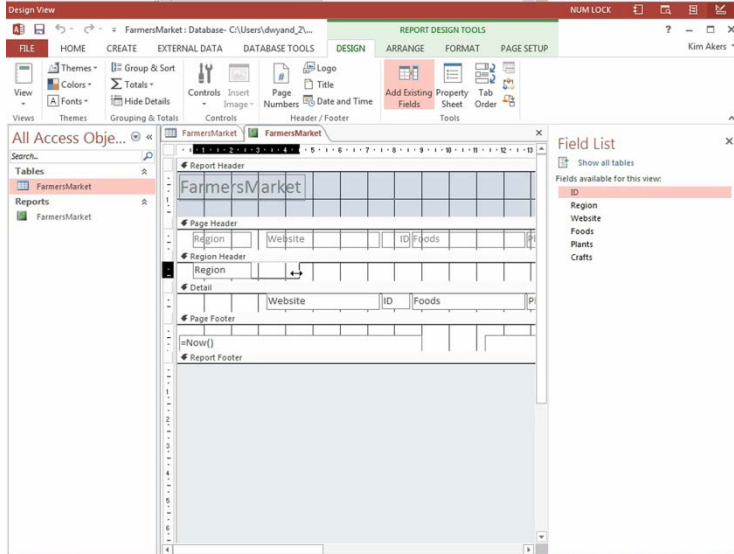
When you are done, change to Report View to double check your formatting.
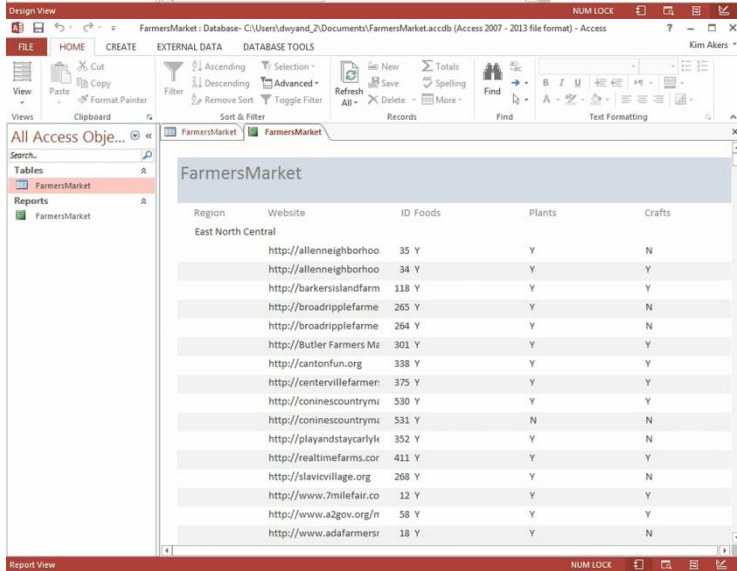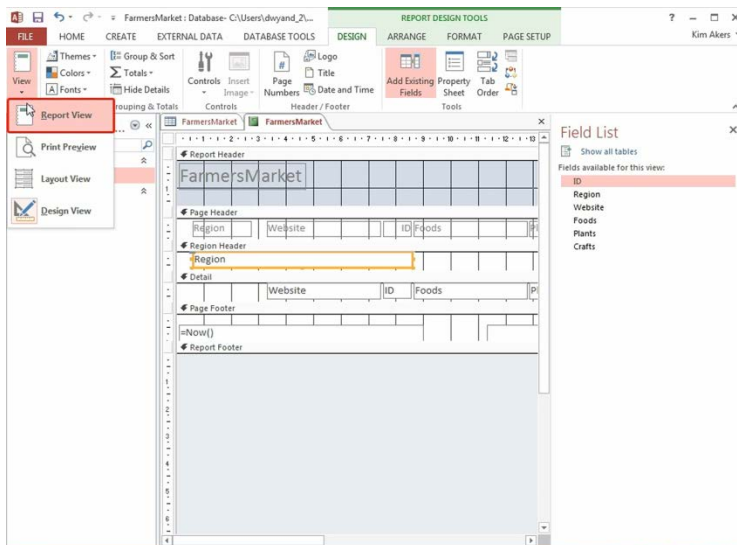
Now you know the basics of the Access 2013 Report Wizard.

Try making a report and changing the look to match your presentation.

Knowledge check

You cannot change the formatting of a report.

- o True
- o False

Reports can provide averages or summations to the data.

- o True
- o False

Answers –

#1 – False. Formatting can be changed at any time for any report.

#2 – True. Reports can summarize advanced queries and calculations.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Explain basic concepts of a database.
- Create a database.
- Work with records in a database.
- Explain what database queries are and how they work.
- Work with reports.

Glossary

A

Active Cell

An active cell is the cell in which you are working currently. There can be only one active cell at a time.

C

Cell

A cell is formed by the intersection of a row and a column. You can use a cell to store and display different types of data such as text, numbers, or formulas.

Cell address

Each cell in a worksheet is identified by a cell address. A cell address is made of the column letter and row number of the cell. For example, the cell formed by the first column and first row has the cell address A1. The cell address indicates the exact location of a cell in a worksheet.

Cell pointer

A cell pointer is the highlighted rectangular border formed around an active cell.

Cell range

A cell range is a block of cells selected to implement a formula in a worksheet.

Cell value

Cell value is the actual numeric value of the data in a cell. This value might not be the same as the data displayed in the cell.

Columns

The vertical divisions in a worksheet are called columns. Each column is identified by a letter. For example, the first column in a worksheet is A.

Contextual Tabs

Tabs which are displayed only when a particular object type is selected.

Cursor

The cursor is a blinking vertical bar on the screen that marks the location at which the inserted text appears. You can also use the cursor to select text or graphics in a document.

D

Database
A database contains objects that help you to store, edit, and format information.

Database programs
You use database programs to store and manage data in an organized way. By using these programs, you can also sort or search for the information stored in a database.

Desktop publishing (DTP) programs
DTP programs are used to combine text and graphics to create documents such as brochures, greeting cards, annual reports, books, or magazines.

F

Flat file database
A flat file database contains all the data in a single table.

Formula bar
The formula bar is used to enter or modify data in a worksheet. When you type data in a cell, the data is displayed simultaneously in the active cell and in the formula bar. However, when you enter a formula in a cell, the formula is displayed in the formula bar, whereas the numeric value of the formula is displayed in the corresponding cell.

G

Group
A group is a labeled set of closely related commands.

L

Label
A label is a text entry that is used to identify the type of information in a row or a column of

a worksheet. Labels do not have any cell value associated with them.

M

Mouse

The *mouse* is the primary input device used to interact with objects in Microsoft Windows.

P

Pointer

The on-screen arrow or shape that moves when you move your mouse or other pointing device. It changes to a variety of shapes to indicate its current behavior.

Presentation software

You can use presentation software to combine graphics and text to create presentations.

Productivity software

These are specialized programs that help you create and work with various types of documents. Common categories of productivity software are word processors, spreadsheets, presentation software, and databases.

Programs

A sequence of instructions that can be executed by a computer. A program is also known as software.

Q

Query

A query is a database object that enables you to locate the desired information in a database.

R

Relational database
A relational database stores data in multiple tables.

Reports
You can create reports in a database program, such as Access 2007, to organize, summarize, and perform calculations on data stored in a database.

Rows
The horizontal divisions in a worksheet are called rows. Each row is identified by a number. For example, the first row in a worksheet is 1.

S

Scroll bars
Scroll bars are vertical and horizontal bars located at the side or at the bottom of a display area. You can use scroll bars to move to a specific location in the work area.

Spreadsheets
You use spreadsheet programs to create budgets, manage accounts, perform mathematical calculations, and convert numerical data into charts and graphs.

Status bar
The status bar is a horizontal bar that is at the bottom of some productivity programs. This bar displays information about the current status of the program or document that you are viewing.

T

Title bar
The title bar is the horizontal bar that contains the name of the window. Most title bars also contain buttons to close, minimize, and resize the window.

Toolbar
The toolbar is a block of buttons or menus that you can use to quickly perform common tasks.

W

Word processors
Word processors are used to create and modify text-based documents.

Work area
The work area is the blank space within the program where you enter information.

Workbook
A workbook is a file created in Excel 2007. A workbook can contain one or more worksheets and related items.

Worksheet
A spreadsheet is called a worksheet in Excel 2007.

X

X-axis
The x-axis is the horizontal line in a chart. Typically, you show time on the x-axis.

Y

Y-axis
The y-axis is the vertical line in a chart.

Computer Security and Privacy

Computer
Security
and
Privacy

Welcome

Description

This course helps you to identify the various threats to your computer and the data stored on it. You will explore how to protect your computer from these threats by taking some preventive measures. Finally, this course explains the ethical and legal issues related to Internet usage.

Benefits

Like any other electronic device, your computer is at risk from damages caused by accident or by intention. Some of these damages can be permanent. You can prevent your computer hardware, software, and the data stored on it from a number of damages by taking certain preventive measures.

Computer Security and Privacy

If you use computers regularly, you may have a lot of information stored on the computer. You need to ensure that this information is not viewed by other people without your permission. You also need to protect this information from getting damaged. Any information can be damaged or stolen; so protecting it is important, to protect information like the following:

- Tax Details
- Personal Letters
- Business Correspondence
- Projects
- And more

In this lesson, you will explore the need for protecting your computer hardware, software, and electronic data from damage, loss, and theft. You will also learn about the various solutions and devices that you can use to protect the data on your computer.

Computer security and privacy are two significant issues today. Computer security pertains to intrusion with personal accounts. Privacy pertains to how companies handle information you have given them. As we grow with more technology the social perception will evolve. In this lesson we will look at various aspects of computer security and privacy.

The Computer Security and Privacy can be accessed online at http://www.microsoft.com/digitalliteracy

Knowledge check

Is any potential damage to your computer a threat?

- o Yes
- o No

What is <u>computer privacy</u>?

- o Keeping your personal files and data secure and a secret.
- o Keeping your computer away from everyone.
- o Keeping someone else's information.

Answers –

#1 – Yes. Any damage that can happen to your computer is always a threat.

#2 – Keeping your personal files and data secure and a secret from unauthorized viewing or tampering is called computer privacy.

Natural threats

Computer security and privacy can be threatened by natural dangers such as earthquakes, flooding or lightning storms. These natural threats can lead to fires, extreme temperatures and even electric shocks to your computer, causing potential physical damage and loss of data.

Fire

Fire
Fire can be devastating to your computer. Beyond direct damage from flames, the heat generated can melt sensitive components within the computer. Smoke can damage the CPU fan which can also cause over-heating. In case of a fire, always get yourself to a safe place before trying to rescue your computer.

Extreme temperature

Extreme temperature
Generally, computers are designed to function within a moderate temperature range. Excessive heat or cold can cause important components to malfunction or break. In cases of drastic temperature changes, it is best to allow the computer to return to room temperature before using it.

Lightning strikes

Lightning strikes
Lightning strikes are a huge threat to your computer, even if it never actually touches your hardware. Sometimes a lightning strike will create an electric surge (or spike) that amplifies the voltage to your computer through the power supply. This sudden surge of electricity can destroy crucial components of your computer including your motherboard.

Knowledge check

Can flames melt components of the computer?

- o Yes
- o No

Where is a component that a power surge can destroy?

- o Screen
- o Keyboard
- o Motherboard

Answers –

#1 – Yes. The extreme heat can melt sensitive components.

#2 – The motherboard can be destroyed by a sudden power surge.

Measure for protection from natural threats

Natural threats can cause considerable damage to your computer. The following table explains the measures that you can take to protect your data and computer from natural threats.

Back up data

Back up data

Backing up data involves creating multiple copies of your data. Events like floods and earthquakes can strike without warning. Making a backup helps you recover your data in case of any data loss using external hard drive or use an online data backup site such as Cloud. This way, you can view and save your data online on any computer. To provide better recoverability, keep a copy of your important data in a physically separate location, such as in another building or city.

Install computers in secure locations

Install computers in secure locations

Install your computer in a place where it is not likely to get damaged due to natural factors. For example, avoid installing computers in rooms that are exposed to excessive dust or moisture.

Install protective electrical devices

Install protective electrical devices

Install devices such as an Uninterruptible Power Supply (UPS) that can provide battery backup in case of a power outage. A UPS prevents software damage caused by abrupt shutting down of your computer. A UPS also provides surge protection and line-conditioning features, which help protect your computer against spikes and surges on the power line. You can

also install separate surge protectors and line conditioners. However, in case of a strong surge, caused by events such as a major storm, you should turn off the computer and unplug it from the power to avoid damage.

Insulate computers from fire

Insulate computers from fire

Insulate the computers from fire by housing them in fire retardant surroundings. In addition, you can install adequate fire safety equipment and procedures for quick damage control.

Maintain appropriate temperatures and humidity
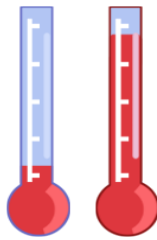
Maintain appropriate temperatures and humidity

You should maintain an optimum temperature and humidity level to ensure the smooth functioning of your computer. You can do this by installing devices such as air conditioners and humidity controllers. If you are using a desktop computer (a computer designed to fit conveniently on top of a typical office desk), then you can install or upgrade a fan that attaches to either the front or back of the case, install a water cooling kit, etc.

Knowledge check

Plugging the computer into the wall power outlet will protect it from damage.

- o True
- o False

What additional measures can be taken to protect your computer from physical damage?

a. Installing an air conditioner
b. Housing the computer in fire retardant surroundings
c. Turning off the computer during a storm
d. Putting the computer outside

- o Both a and b
- o Both b and c
- o Both c and d
- o a, b, and c

Answers –

#1 – False. A computer that is plugged directly into the wall outlet is vulnerable to damaging power surges.

#2 – a, b and c. Installing an air conditioner, using fire-retardant surroundings,

Threats from human actions

Threats from human actions

A malicious human source could be a threat to your computer. A <u>hacker</u> is a person who tries to illegally access your computer when you connect it to the Internet. Hackers are normally programmers who can gain unauthorized access to other computers. They can sabotage your personal information, finances, your computer, other computers, and programs. Hackers send out personal information to advertisement companies. In addition to malicious human threats, human errors such as accidental deletion of data and physical damage are also a threat to your computer.
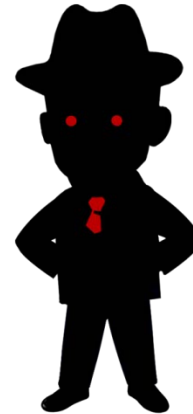
Theft

Anyone can steal your computer or its components, if they have access to it. With the popularity of portable computers, such as laptops, physical theft of computers has become very common.

You can also become a victim of virtual theft, when your computer is connected to the Internet.

An example of virtual theft is identity theft. Identity theft happens when someone, usually a hacker, steals your personal information and uses it without your permission to assume your identity. The hacker will use your identity to gain access to your finances or perform illegal actions. The hacker can also wreck your reputation, which is more reason to prevent identity theft.

Another example of virtual theft is <u>software piracy</u>, which is theft of a computer design or program. It may also mean unauthorized distribution and use of a computer program or confidential documents.

Viruses, worms, and trojan horses	Viruses, worms, and trojan horses are computer programs that can damage the data or software on your computer or steal the information stored on your computer. These viruses can reach your computer, without your knowledge, through the Internet or through storage devices, such as floppy disks and CD-ROMs.
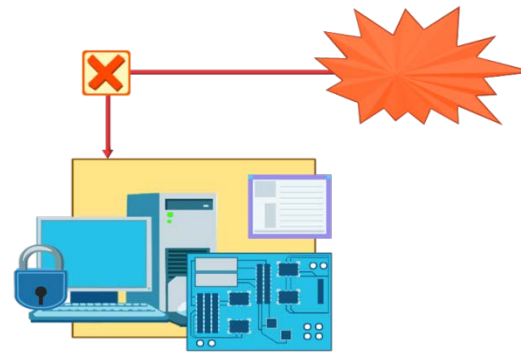
Worms are malicious programs that self-replicate, and then penetrate an operating system with the spread of malicious code. The worms are designed to spread by computer networks, sending copies of the original code to other computers. This can cause harm by consuming bandwidth or possibly the deletion of files or sent documents.

A Trojan horse is a type of malware designed to provide authorized access to a user's computer. Unlike worms, trojan horses do not have the ability to replicate. Trojan horses can deal critical damage to your computer. Trojan horses can lead to viruses being installed on a machine because it is being controlled by the trojan's creator. This can allow data to be stolen, installing more malware, key logging, and various illegal actions. |

Spyware	Spyware are programs that can be installed on your computer without your knowledge. Spyware collects the owner's private information such as your browsing habits, downloads, or your personal data like your name or address. There are many different strains of spyware. Some spyware can redirect you to a different site, install additional software that causes to slow down your computer's performance, change your computers' settings, change the home page, or serve you a personal advertisement known as adware.

Internet Scams	While using the Internet, you might come across some attractive offers through email messages or chat room communication. They may appear real at first, although they are usually fake. They can deal damage by stealing your personal information and can steal money from you.	
Online predators		<u>Online predators</u> are individuals who lure anybody online into inappropriate and unethical relationships and habits. It is common that an online predator can attack a victim by manipulating them causing them to be unaware of the dangers. Normally, an online predator can be found in instant messaging rooms, chat rooms, and social networking sites.
Accidental deletion of data	Many times, damage to a computer is due to unintentional human errors. Accidental deletion of an important file can disrupt the integrity of data or prevent other files or programs from working. For example, you may accidentally delete an important file, causing the computer to malfunction.	
Accidental damage to hardware		Computer components are extremely delicate; being delicate make them run the risk of getting damaged due to carelessness. For example; if you accidentally drop your laptop computer, this might result in damage to the hardware components, such as motherboard or CD-ROM. As a result you could lose the data stored on the computer. In addition, physical damage to data due to spilling of food and beverages on storage devices can affect your computer.

Knowledge check

What is a hacker?

- o A person that tries to illegally access your computer
- o A weapon that can damage your computer
- o A program to protect your program

Identity theft is an example of virtual theft.

- o True
- o False

Answers –

#1 – A person that tries to illegally access your computer is a hacker.

#2 – True. Your identity can be stolen virtually.

Measures for protection against threats from human actions

You can take some simple measures to minimize the risks associated with malicious human threats and human errors.

Store data safely

Store data safely

To minimize the possibility of theft or tampering of data, keep your data in safe and secure locations that people have limited access to. A safe and secure location could be your private home office or a place where people cannot have easy access to your files. If you feel as if you do not have a safe place to store your data, then put a strong password on your account. Make sure your password is not simple, like the name of your pet or your birthday. Your password should be longer than eight characters, have numbers and special characters, and have both upper and lowercase letters.

Encrypt data

Encrypt data

To prevent lost, stolen, or hacked documents and files from being seen, you can encrypt data by using the BitLocker or BitLocker To Go features available for you on Windows 8. BitLocker is compatible with Windows 7, Vista Enterprise, Windows 7 and Vista Ultimate or Windows Server 2008 and R2. BitLocker will not encrypt any hard drives from Windows XP, Windows 2000, or Windows 2003. BitLocker is a feature that protects your computer's files from being readable. If your information ever becomes lost, stolen, hacked, or tampered. Your files will be encrypted which means that the contents can be read only by someone who has the right encryption key to unscramble it. BitLocker does not allow anybody to have access to your internal hard drive, and even external hard drives like Universal Serial Bus (USB) drives. BitLocker helps protect attacks offline as well as online. Although it is not likely, an offline attack comes from a malicious user taking your hard drive from your computer and connecting it to another computer, so they can harvest your data.

Install antivirus and antispyware programs

Install antivirus and antispyware programs

When using the internet, you might encounter a spyware or virus. Viruses and spyware can do great damage to your computer. It is important to download an antivirus and antispyware program that can prevent and remove the viruses. Antivirus and spyware programs present in the computer's memory can alert and prevent viruses from entering. You must regularly update these programs because they update their database about new viruses and spyware, which further protect your computer. Most programs offer an automatic update feature that automatically installs the updated version of the program.

Because many viruses, spyware, and Trojan Horses do come from email sources, and email software. Windows Live Mail, allows you to block junk email messages, filter messages from viruses, Trojan

horses, and spyware, and allows you to scan your attachments.

In Windows 8, there is a built-in feature called Windows Defender which is a free program that helps protect your computer against pop-ups, slow performance, and security threats caused by viruses, spyware, and other malicious software. Windows Defender runs in the background. It can warn you if there is any suspicious program or activity, although you can run your own scan. Another built-in feature is Windows Smart screen which is a new safety feature in Windows 8 and Windows RT (Windows 8 operating system designed for mobile devices and tablets). Windows Smart screen helps protect you from new malware that antimalware software hasn't detected yet. Smart screen features anti-phishing protection, download manager protection, application reputation, and anti-malware protection.

Install firewall

Install firewall
Another effecting step, you can take to protect against malicious threats is to install a firewall. A firewall system prevents unauthorized access to a private network from network traffic. A firewall system forms a barrier between trusted and untrusted websites from threats like hackers and worms. You can configure your firewall management into two different ways, default-deny policy and default-allow policy. A default-deny policy allows only the listed network services. A default-allow policy blocks the listed network services, and accepts everything else. Windows 8 comes with a Windows Firewall, which blocks unwanted access to your computer.

A firewall program does not protect you from all viruses, so it is necessary to install an antivirus or anti-malware app. Windows Defender can help you with protect against viruses that firewall does not protect from.

Back up data
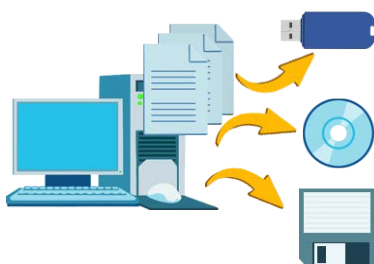
Back up data
You may lose your data by accidental deletion or the destruction of data. You can back up important computer data to help restore lost or deleted items. Your windows computer comes with a backup system. You can locate the backup data option by clicking the Start button, clicking Control Panel, click System and Security, and then clicking Backup and Restore. Click Back up now, if you are not an administrator, you may need the administrator password or confirmation. If you follow the steps in the Wizard, you'll be able to choose where you would like to back up the information and what you want to back up. If you have backed up your information before, you can wait until the next scheduled back up maintenance or continue to back up your information. It is good to back up your information regularly because you may have new programs or files that cannot be found when restoring your old information. It is best to back up in multiple places such as an external hard drive or a cd. This way you always have a backup if anything such as digital or physical damage and theft is done.

Keep computer in safe environment

Keep computer in safe environment

Keep the computer in an area that is room temperature, dust-free, free from vibrations, and out of the way of possible impact.

A table or shelf housing the computer should be steady and stable to keep the computer from falling, even if anybody bumps into the computer.

Recommended room temperature should range from 65° to 70°F (18° to 21°C) for optimal system reliability. If the room temperature is too cold, it can create humidity levels to be too high which can cause water condensation to occur resulting into hardware corrosion and component failure. When the room is too hot it can cause humidity levels to become low. If the humidity is too low, it can allow electrostatic discharge that can affect sensitive components. Hot rooms can also cause overheating, which can greatly reduce the life of electronics. You should maintain your computer space to the relative humidity. Relative humidity is the amount of moisture in the air at a given temperature in relation to the maximum amount of moisture can be held at the same temperature.

To keep computers at a safe temperature, you can install a fan into your computer. Specific fans can cool systems using liquid circulation systems.

Knowledge check

How often should you back up data?

- o Once in a while
- o After the computer is stolen or malfunctions
- o On a regular schedule

A firewall is an effective way to protect against threats.

- o True
- o False

Answers –

#1 – Back up your data on a regular schedule so that your backups include current files and programs.

#2 – True. A firewall is one of the recommended strategies for protecting against threats.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Explain computer security and privacy.
- Identify natural threats to your computer.
- Identify measures to protect your computer from natural threats.
- Identify threats to your computer from human actions.
- Identify measures to protect your computer against threats from human actions.

Protecting your computer
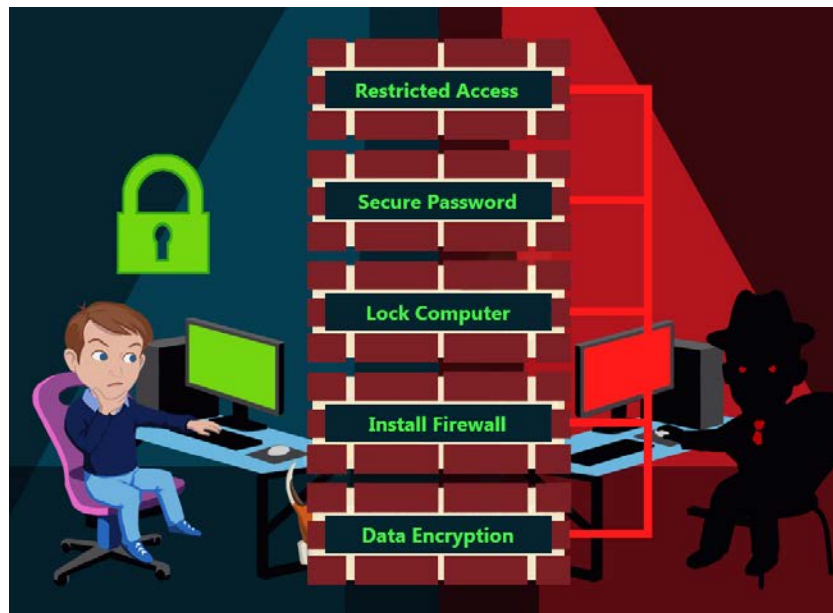
You need to provide your identification to access your bank locker or your safe deposit box. This identification is to ensure that no one else is able to access your items. Similarly, you can implement various security measures to minimize the threat to your computer and the data on it.

This lesson introduces you to some common best practices that will help you protect your operating system, software, and data on your computer.

You need to secure your computer to protect the data and files on it and to protect your identity. The simulation on this page will introduce you to ways you can protect your computer.

Guidelines for protecting your computer can be accessed online at http://www.microsoft.com/digitalliteracy.

Knowledge check

Restricting access to your computer can keep data safe from others.

- o True
- o False

You should keep your password a secret.

- o True
- o False

Answers –

#1 – True. You can set different levels of access to control who sees your information.

#2 – True. A password ensures that only you can log on.

Best practices for securing online and network transactions

Having your computer connected to the Internet gives you access to all kinds of activities and services. But it also introduces risks. Unauthorized people may gain access to your computer or you may download files and programs that can harm your computer. Read through the text on the right to learn some ways to secure your computer.

Strong password

Strong password
A strong password is one that is complex enough that it cannot be guessed or accidentally discovered. A strong password combines different password elements such letters in both uppercase and lowercase, numbers, and unique keyboard characters such as '!', "#', or other symbols. The best passwords are not complete words and could not be guessed by someone who knows you or by a stranger.

A strong password is most crucial to protect your data on websites but is also used to limit access to networks, sites with personal or sensitive information on file and even to protect data on your own computer.

Spyware and hacking protection

Spyware and hacking protection
Spyware programs can be picked up from the Internet without your knowledge and transmit personal information about you to a hacker. This illegal attack on your computer could come from anywhere in the world, regardless of where you are. Hackers try to put spyware on your computer so they can steal your confidential data.

You should utilize all the protection you can get including Windows built-it antispyware and online security support from your Internet service provider (ISP). Often this support will be in the form of anti-spyware software recommendations, firewall protections and email screening and spam protection.

Periodically clear your browsing history

Periodically clear your browsing history
For your convenience, websites you visit on the Internet while browsing are saved and can be easily found again in your browser history. Your computer uses temporary memory called a cache memory to store your Internet browsing history. Often, some of this temporarily stored data is in the form of personal information you have given to a site, such as credit card information you have given to purchase an item. Hackers can attempt to recover this information but you can limit this risk by regularly deleting your browser history and cache memory.

Cookies are another type of file created to make Internet browsing and shopping easier. They are used to save preferences and often

needed information to sites that you visit often. They allow things like your name and password to be remembered and offers people a more personal, less hassle experience.

Cookies can also become a threat to your computer privacy because, once again, hackers can steal this personal data. As with deleting your browser history, making it a practice to regularly delete cookies is a smart routine.

Avoid sharing personal information

Avoid sharing personal information
Before you give a website any personal information make sure you are dealing with a reputable company and that the information requested is appropriate for the services offered. Making online purchases will often require credit card information and leave you vulnerable to hackers and fraud. To minimize your risks be sure any Internet commerce is on a secured website and read carefully how your information will be shared with others. Best practice is to avoid giving any personal information on the Internet unless you know exactly who you are giving it to and what they will do with it.

Make online transactions only on secured sites

Make online transactions only on secured sites
Eventually you are going to use the Internet to make a purchase. This will require you sharing your credit card number or some other form of personal data. When you are ready to make a transaction it is crucial you make sure the website is a secure website. To identify a secure website be sure its site names has the prefix https. This prefix tells you the website implements the Secure Sockets Layer (SSL) protocol and uses encrypted communications and certifies the website is what it says it is.

Make sure to always check the security certificate of any website before offering your personal information or performing an online transaction.

Disable active content

Disable active content
Active content are small programs that install into your computer to enhance your browsing experience on the Internet. Often they provide toolbars or video to make interacting on the Internet easier of more immersive. In some case, however, these programs are used by malicious persons to attack your computer and steal your data without your knowledge. You can disable active content on your computer through your browser settings.

Knowledge check

M1cr0s0ft! is a strong password?

- o True
- o False

When making an online transaction, you must provide your credit card number.

- o True
- o False

Answers –

#1 – True. This password has a lowercase and an uppercase letter and also a symbol and number.

#2 – True. Https tells you that the website uses encrypted communication.

Measures for securing email and instant messaging

The next few course pages are videos that will introduce you to ways to keep you safe using email and instant messaging software.
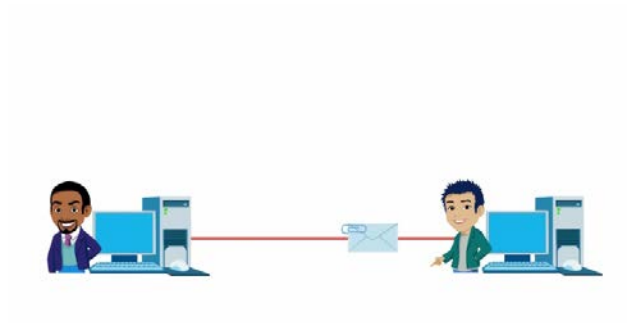
You can send email attachments to share files with your friends.
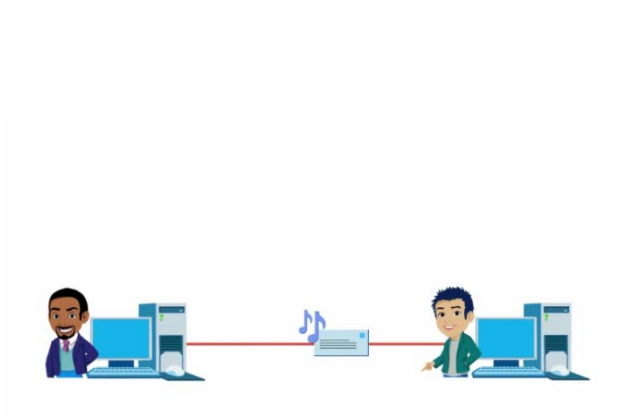
You might receive a photograph or a music file as an attachment in an email message,
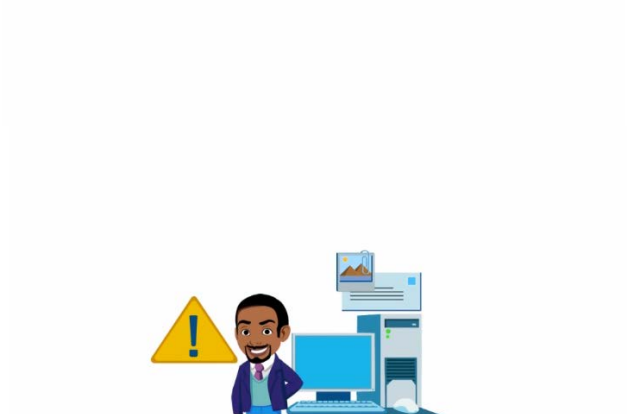
however, you need to be cautious while opening any mail containing an attachment

because it is the most common pathway for the spread of viruses.

Spam and junk mail

You may receive a number of unwanted email messages from unknown senders;

including individuals and companies that are advertising their products or services.

These messages may also be in the form of online surveys that require you to fill out personal information.

These unsolicited messages are known as spam or junk mail.

Junk mail or spam can often include content that can be harmful to your computer.

In addition junk mail is often used for stealing identities and you might accidentally share sensitive information by responding to certain messages.

You should always avoid replying to any spam or junk mail message.

You should delete any spam or junk mail message when you receive it.
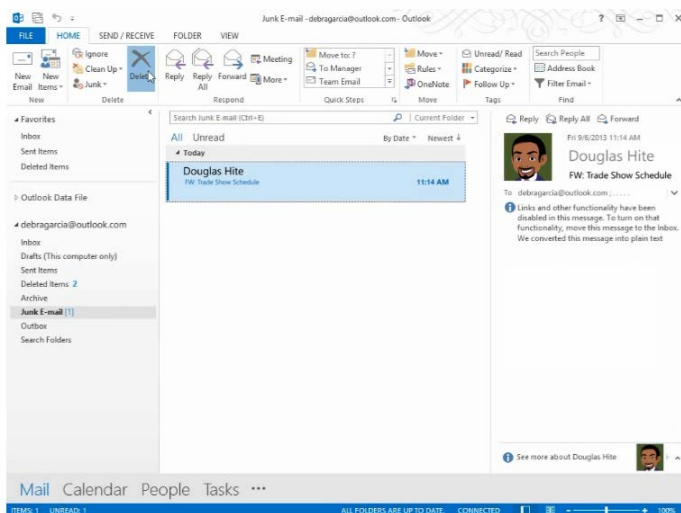
Email programs such as Microsoft Outlook include a spam or junk mail folder where spam and junk mail messages can be directed and automatically deleted.

Phishing

Phishing is a common activity used to extract personal information from computer users

and then use the information for malicious purposes

For example someone may send an email message to you
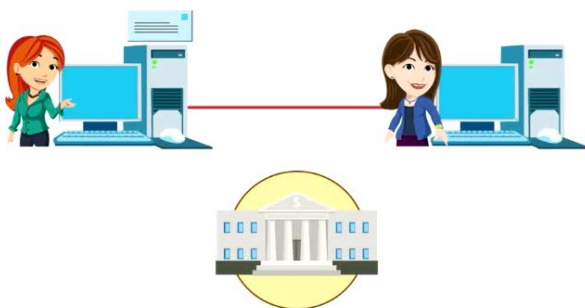
pretending to be from a bank or another trustworthy organization.

The email asks you for sensitive information such as your credit card number or password.

This information might be sold to someone else or immediately used to cause you financial loss.
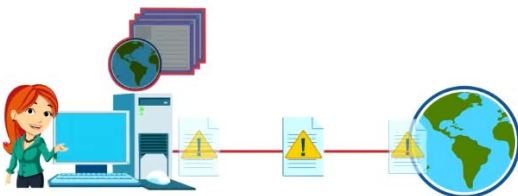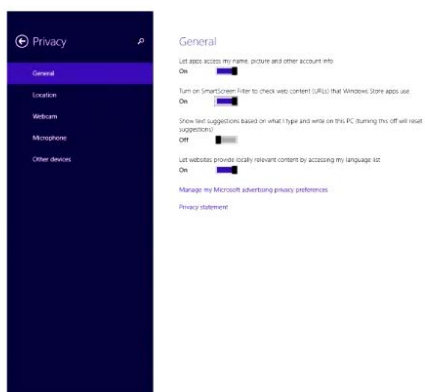
It's important that you verify the authenticity of any email message that asks you to respond with personal information.

INTERNET EXPLORER 11
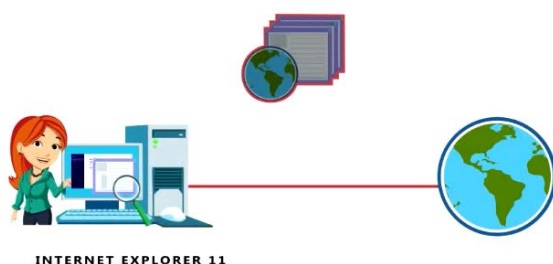
There are various fishing websites on the internet that will use fake email messages to try and collect your personal information.

Internet Explorer 11 helps protect you from fishing websites with privacy settings and the smart screen filter.

Online communication

You should only chat online with people that you know.

Having online communication with people you do not know

can make you vulnerable to threats such as online predators

and scams.

Instant messaging

Instant messaging is a common pathway for malicious attachments.
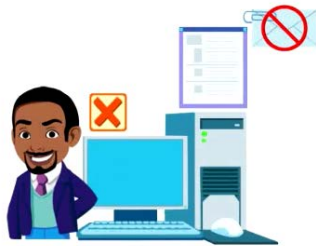
You should avoid opening any attachments from an instant message

unless you are absolutely sure about its origin and that it is safe.
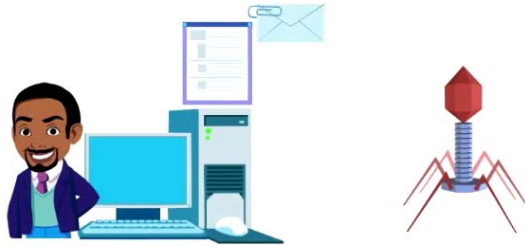
An instant messaging attachment could contain a virus or spyware that can harm your computer.
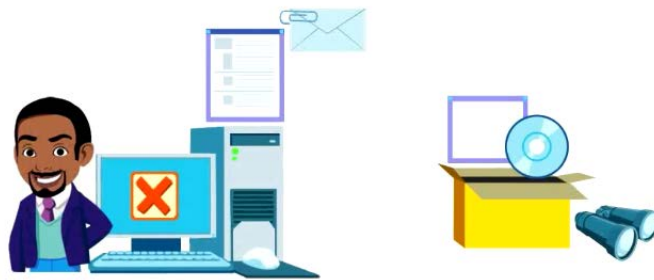
Knowledge check

Phishing is a common activity used to extract personal information from computers users and use the information for malicious purposes.

- o True
- o False

An Instant Message can have attachments that are meant for malicious purposes.

- o True
- o False

Answers –

#1 – True. Phishing extracts personal information and uses it for malicious purposes.

#2 – True. Do not open an instant message attachment unless you are sure of its origin.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Identify guidelines for protecting your computer.
- Identify best practices for securing online and network transactions.
- Identify measures for securing email and instant messaging transactions.

Protecting your family from security threats

Computers are not only used at schools, colleges, and offices, but are also commonly used in homes. Every member of your family can find some use for the computer. With the increase in the use of computers at home and at work, it is important that you and your family understand the various threats associated with the use of computers and the Internet. Since every member can use the computer for various purposes, such as:

- Keeping household accounts
- Writing email
- Browsing the Internet
- Playing games
- Music
- And more

In this lesson, you will learn about the various measures that can help protect your computer from these threats.

Measures to protect your privacy

Protecting your computer ranges includes from preventing malicious software from infecting your computer to hiding private information on websites. Antivirus software, email filters and privacy setting are methods to protect your privacy. In this lesson we will play a game to show you which software to use to protect your privacy.

Measures to protect your privacy can be accessed online at http://www.microsoft.com/digitalliteracy.

Knowledge check

Spam emails can be stopped with which of the following:

- o   Antivirus software
- o   Privacy settings
- o   Email filters

Trojan viruses can be stopped with which of the following:

- o   Antivirus software
- o   Privacy settings
- o   Email filters

Answers –

#1 – Email filters. An email filter will move any spam to the junk email folder.

#2 – Antivirus software can stop most viruses that try to infect your computer.

Online predators

Online predators target children and the elderly for inappropriate relationships. In this lesson you will learn some strategies to reduce the risk of being a victim.

Measures to protect your privacy can be accessed online at http://www.microsoft.com/digialliteracy.

Knowledge check

Online Predators target

- o Children
- o Elderly
- o All of the above

Parents should talk to their children about Online Predators

- o True
- o False

Answers –

#1 – Both children and the elderly are often targeted.

#2 – True. Parents should always be informed and speak to their children and other loved ones to protect them.

Guidelines for protection from online predators

Do not let you or your family members become victims of online predators. Use the following guidelines to prevent online predators from harming you and your family.

Identify signs of predator behavior

Identify signs of predator behavior
Online predators can display certain behaviors that should seem odd to the careful observer. For one, they have a goal in mind to get to know you as well and as soon as possible. This often comes out being overly friendly or familiar early in the acquaintance. They are impatient for the natural progression of a normal online relationship and will push unearned affection, quickly getting frustrated with even slight rejection. If an online contact wants to meet a minor at any time in the real world, it should be a warning sign.

Be cautious of offers by strangers

Be cautious of offers by strangers
Online predators often try and gain trust by offering gifts or tempting offers of kindness. Always be aware of gifts offered to minors. Even adults need to be careful of offers that seem unearned or inappropriate. Even if the gift is genuine, the intentions behind the gift may not be.

Educate friends on online safety

Educate friends on online safety
There are many precautions you can take to create greater online safety for your friends and family. Instruct loved ones to never use their real name in a chat room. In addition, they should never divulge any personal information about themselves including age or any contact information such as where they live or even a phone number.

Above all else, never under any circumstances reveal any of your private usernames or passwords to anyone, stranger or not.

Monitor your children on the internet

Monitor your children on the internet
Parents or guardians should always keep an eye on what their children are doing on the Internet. They must be protected from inappropriate websites and potential online predators. It is always recommended that a

parent or guardian be present when a child is visiting online sites.

Know what sites your child visits

Know what sites your child visits

It is important to know what sites your child has visited. If you cannot be there in person to always monitor their online activities, it is a good idea to track what sites they have been to through their browser history. There is also special software you can buy to monitor your children's computer habits and website history.

Block access to inappropriate websites

Block access to inappropriate websites

Be sure to block any website you find unsuitable for your child, including adult content sites, message boards where minors unknowingly interact with adults and any other site that you do not want your child visiting.

Monitor chat history

Monitor chat history

There are also programs parents can buy that will track and monitor your child's chat room activities. These programs can instantly flag and call your attention to common issues in chat rooms such as inappropriate language or images.

Knowledge check

There are programs that will monitor or track chat room activities.

- o True
- o False

It is possible to block websites.

- o True
- o False

Answers –

#1 – True. Parents and guardians can use these programs to learn about their children's online activities.

#2 – True. Every computer allows websites to be blocked.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Identify measures that you can use to protect your privacy.
- Explain how online predators operate.
- Identify guidelines to protect your family from online predators.

Keeping your computer secure and updated

When you connect your computer to the Internet, your computer software and data are accessible to the rest of the world. Connecting to the Internet increases the threat to your computer from viruses, spyware, and hackers. However, you can minimize these security threats by configuring the security settings on your computer and keeping security-related software up-to-date.

In this lesson, you will learn the importance of securing a computer and how to maximize the security of your computer by configuring the security settings on your operating system. The lesson also explains how to configure your computer to automatically update its security software.

Securing a computer

When you are on the Internet, the biggest security risk to your computer comes from viruses and hackers. Often, threats such as these can be greatly reduced simply by making sure your computer security settings are correct and that your security software is up to date.

Windows 8 can help keep your computer secure and free of viruses by alerting you to security and maintenance issues and by offering virus protection, a network firewall and system backups. Each of these security settings can further be adjusted depending on your security needs.

The following can all be accessed via Windows 8 to help protect your computer:
- Firewall settings to restrict unauthorized access to your computer while online.
- Settings to allow your computer to automatically download and install security updates to protect against the latest viruses.
- Privacy and security settings you can set on individual Internet sites that you visit.

- Malware protection settings to detect and eliminate dangerous software that could harm your computer.
- Maintenance tools that can perform tasks such as troubleshooting Windows and offering the latest updates.

Knowledge check

The biggest security risks to your computer are:

a) Hackers
b) Friends
c) Viruses
d) Physical Damage

- o Both a and d
- o Both a and c
- o Both b and c
- o All of the above

Windows 8 can keep your computer secure and virus free.

- o True
- o False

Answers –

#1 – All of the above. All are potential risks to your computer and your information.

#2 – True. Windows 8 comes with antivirus protection.

Keeping the computer up-to-date

Making sure your computer is updated with the most current security and system updates will not only keep your computer secure but will also help with speed and performance.

Keeping the computer up-to-date simulation can be accessed online at
http://www.microsoft.com/digitalliteracy.

Knowledge check

A new computer can become outdated.

- o True
- o False

Update for Windows 8 must be done manually.

- o True
- o False

Answers –

#1 – True. Updates happen often, and updating is recommended. Even a brand new computer needs to be updated right away.

#2 – False. Windows 8 has an option for automatic updates on a set schedule.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Explain the importance of securing a computer.
- Configure computer security settings using Windows Action Center.
- Identify the options for keeping your computer up-to-date

Computer ethics

Searching the Internet is often the fastest and easiest way to gather information, at any time. For example, you can use the Internet to search for information for your school assignments, or ideas to include in an office presentation. You can also download songs and movies from various Web sites. You do not have to pay for downloading information from most of the Web sites. But, these free downloads may not actually be free. The information in a Web site is legally owned by the author who created it or by the Web site that published it. Therefore, you may need the permission of the author or the owner of the Web site to use the contents. You need to be aware of the rights or permissions you have on the contents available in a Web site before downloading them. That includes the downloads of the following:

- Songs
- Movies
- Software
- And more

This lesson explains the meaning of intellectual property in the field of computing, and how unauthorized use of intellectual property can lead to copyright violation. In this lesson, you will also learn about the various legal concerns associated with information exchange.

What is intellectual property?

What is intellectual property simulation can be accessed online at http://www.microsoft.com/digitalliteracy.

Knowledge check

All information on the Internet is free.

- o True
- o False

It is okay to distribute others material without permission.

- o True
- o False

Answers –

#1 – False. You need to review the rights and required permissions for any content you want to use on the Internet.

#2 – False. It is illegal to distribute material without permission.

Copyright violation and prevention

Copyright violation and prevention simulation can be accessed online at
http://www.microsoft.com/digitalliteracy.

Knowledge check

What is a copyright violation?

- o Copying the rights of an item
- o Using others intellectual property without permission
- o Taking a picture from your collection of photos

Downloading a poem you have written is piracy.

- o True
- o False

Answers –

#1 – Using others' intellectual property without permission is a copyright violation.

#2 – False. Because you wrote the poem, you can download it. You would need permission to download someone else's poem.

Legal concerns with information exchange

With the extensive use of the Internet, there is potential for you to get involved in illegal and unethical activities, such as gambling and defamation. You need to be aware and cautious of these illegal and unethical issues. Also, remember that these issues vary from country to country, and even within parts of a country.

Defaming someone's reputation

Defaming someone's reputation

When you communicate with others by using email, chat, or online public forums, be careful not to make any statements that may result in defamation of someone. Defamation means making false statements about a person that can negatively affect the person's reputation. For example, suppose you post a message on an online forum falsely stating that your neighbor, who is a celebrity, owns illegal property. This can be considered as defamation because you are spreading false information that may harm your neighbor's credibility.

Libel and slander are two forms of defamation. Libel means written defamation which has been published, whereas slander means verbal defamation. The legal system of most countries considers both libel and slander as punishable offenses. You may face criminal or civil penalties according to the legal system of your country. The punishment may range from monetary penalty to severe punishment such as jail terms. Sometimes, the severity of the offense depends on the situation. For example, in some countries, any insult to the President is a criminal offense. However, in some other countries, public officials have less

protection than the average citizen. Therefore, be aware of the local laws before making any defamatory statements.

Note: A false statement can be considered defamatory, even if it is not derogatory. Sometimes, even true statements can be considered as defamatory if the statements harm someone's reputation.

Visiting inappropriate web sites

Visiting inappropriate web sites
Some web sites offer services that carry out activities that are restricted by the legal system of your state or country. It is possible to access these sites over the Internet because there are no boundaries and policing over the Internet. For example, you can access a gambling site even if the law of your country bans gambling. But, this may cause legal troubles for you.

You also need to be aware that the legal system is different in different states and countries. For example, the products that you can legally buy or sell in one country may be an illegal purchase or sale in another country. So, though a Web site may not restrict you from buying an item that is illegal in your country, you may face legal charges for buying the item.

Knowledge check

Defamation is making false statements of someone that can negatively affect them.

- o True
- o False

Websites can offer services that may be illegal in your state or country.

- o True
- o False

Answers –

#1 – True. Defamation is not allowed.

#2 – True. Websites can offer products or services that may be illegal where you are, so always do your research.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Explain the intellectual property and copyright as they apply to computing.
- Identify the various acts of copyright violation and measures to prevent those acts.
- Identify the legal concerns that are associated with information exchange.

Glossary

A

Active Content

A small program that gets installed on a computer while browsing the Internet. The basic function of active content is to provide an interactive Internet experience through videos and toolbars. Sometimes, active content is used to gain unauthorized access to a computer, and then damage the data stored on it or install malicious software on it.

B

Back Up

The act or instance of making a duplicate copy of a program, a disk, or data. The duplicate copy is called a backup.

C

Cache Memory

Temporary memory on your computer that is sometimes used to store local copies of files opened when you browse the Internet.

Computer Privacy

Keeping a user's data, including personal files and e-mail messages, such that the data is not accessible by anyone without appropriate permission

Computer Security

The protection of a computer system and its data from accidental or intentional loss and tampering.

Cookie

A small file on a computer that is created when a user visits a Web site. A Web site uses cookies to identify users who visit the site, and also track the preferences of the users.

Copyright

A method of protecting the rights of an originator of a creative work, such as text, piece of music, painting, or computer program, through law.

D

Decryption

The process of reconverting the encrypted data into a readable and usable form.

E

Encryption

The process of converting data into an unreadable and unusable form. Encryption is done to prevent unauthorized access of data, especially during data transmission over the Internet.

F

Firewall

A filter that blocks unreliable and unauthorized information from the Internet before it reaches your computer or a private network. It provides additional protection against threats such as hackers and viruses. A firewall also helps to ensure computer privacy by restricting external access by any unauthorized user.

H

Hacker

A person who uses computer expertise to gain unauthorized access to a computer, and then misuses or tampers the programs and data stored on the computer.

I

Intellectual Property

Any information available on the Internet is an intellectual property, which is legally owned

by the person who created it. The owner of an intellectual property has the exclusive rights to control the use of this information.

Internet Service Provider (ISP)
A company that provides Internet connectivity to individuals, businesses, and organizations.

L

Libel
Written defamation that has been published. Libel is a punishable offense.

O

Online Predator
An individual who develops contact with Internet users, through chat rooms, online forums, or e-mail, to exploit them financially or involve them in dangerous relationships.

P

Password
A unique string of characters that a user types in as an identification code. It is a security measure used to restrict access to computer systems and sensitive files.

Phishing
The act of extracting personal information, such as passwords and credit card details, from computer users and then use the information for malicious purposes.

Plagiarism
The act of copying someone's work and using it as if it is your own work, without mentioning the source.

Power Surge
A sudden increase in line voltage, which may lead to the damage of electronic devices, such as computers.

S

Secure Sockets Layer (SSL)
An Internet security protocol that ensures secure data communication by encrypting the information transmitted. The SSL protocol certifies that a Web site is genuine and ensures that the data provided to the site is not misused.

Slander
Verbal defamation. Slander is a punishable offense.

Software Piracy
Unauthorized copying of copyrighted software without obtaining the license or permission of its copyright owner is software piracy.

Spam
An irrelevant and unsolicited e-mail message sent by an unknown sender. A spam is sent to distribute a message to many recipients at one time.

Spyware
A computer program that is installed on your computer without your knowledge. Spyware can secretly send out information about your Web browsing habits or other personal details to another computer through the network.

T

Trojan Horse
A destructive computer program disguised as a game, utility, or software. When run, a Trojan horse does something harmful to the computer system while appearing to do something useful.

U

Username
The name by which a user is identified to a computer system or network. To access a computer protected by username and password, a user needs to enter the correct combination of username and password.

V

Virus

A computer program that is designed to cause malfunctioning of a computer or damage the data stored on the computer.

W

Worm

A computer program that propagates itself across computers, usually by creating copies of itself in each computer's memory. A worm might duplicate itself in one computer so often that it causes the computer to crash.

Digital Lifestyles

Digital
Lifestyles

Microsoft

Welcome

From cell phones to MP3 players to digital cameras, computers are changing our everyday lives. This course introduces you to digital technologies, including digital audio, digital video, and digital photography. It explores how these and other computing technologies are creating new career opportunities and shaping the world we live in.

Benefits

Digital technology is used in all areas of life today. It has changed the way people work and entertain themselves. This module explains the scope of digital technology at home, at work, and at play. It also identifies the different career opportunities made available because of the extensive use of computers in various fields.

Digital Lifestyles

Technology is expanding with different devices to enhance our digital outlook and the features of media devices.

In this lesson, you will learn the different benefits of digital technology. Computers, laptops, tablets, and phones have made difficult tasks simple. You will also learn how digital technology expands the features of media devices such as cameras, digital audio devices, and camcorders. Digital technology has allowed sharing, organizing, and editing different media fast and easy.

Digital technology has changed the way you manage your work, communicate with others, and entertain yourself.
Digital technology has changed the way you manage your work, communicate with others, and entertain yourself.

Benefits of digital technology can be accessed online at http://www.microsoft.com/digitalliteracy.

Knowledge check

Digital technology has integrated what we listen to, watch, and how we communicate.

- o True
- o False

You can download movies, music, and other media to all your devices including a smart TV, phone, tablet and computer.

- o True
- o False

Answers –

#1 – True. Digital technology has integrated what we listen to and watch, how we share information, and how we communicate.

#2 – True. All of your devices can share and use the same digital files.

Digital devices

Today, the functions of telephones, cameras, video recorders, media players, and Internet devices are being merged into smaller and portable devices.

Today, the functions of telephones, cameras, video recorders, media players, and Internet devices are being merged into smaller and portable devices.

Digital devices can be accessed online at <u>http://www.microsoft.com/digitalliteracy</u>.

Knowledge check

With a _____ you can call, text or email from just about anywhere.

- o Tablet
- o Laptop
- o Smart phone

A video game console can expand your viewing surface and run business and writing applications

- o True
- o False

Answers –

#1 – Smartphone. You can make phone calls, send text messages and email by using a smartphone.

#2 – False. A tablet can expand your viewing space and run business and writing applications.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Describe the benefits of digital technology.
- Explain how digital technology expands the features of media devices.

Introduction to Digital Audio

Organizing CDs and creating play lists is easier with the use of technology. In this lesson, we will learn how to identify the characteristics of digital audio.

There are different types of audio files and we will learn the concepts of recording, copying, and converting digital audio. You will be able to identify the features of speech technology to be able to work with your computer by speaking.

Copying digital audio
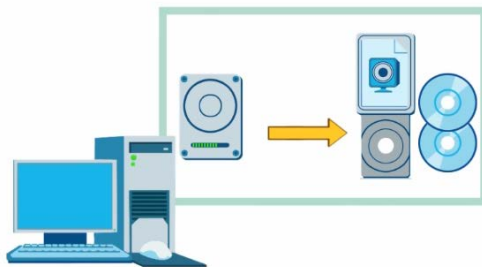
You can copy audio from storage devices such as a computer hard drive and store it on a recordable CD or DVD.
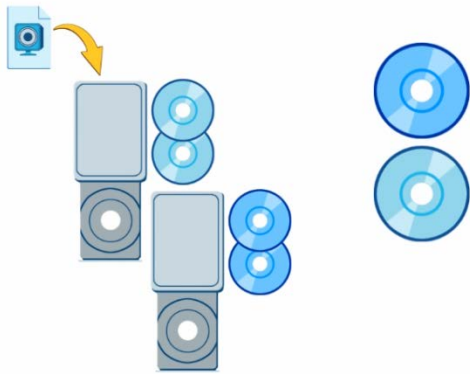
This process of copying audio and storing it on a recordable CD or DVD is referred to as burning.

You need special hardware such as a CD writer or a DVD writer to burn audio files.

A CD writer allows you to burn only recordable CDs.
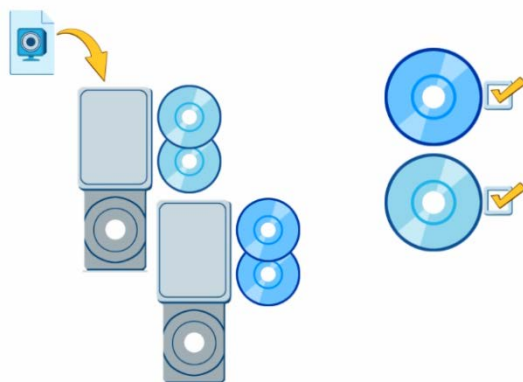
Most DVD writers allow you to burn both recordable CDs and DVDs.

Along with hardware you will also need software to copy audio to a recordable CD or DVD.

You can use the software to create different types of CDs such as data CDs, audio CDs, and mixed mode CDs.
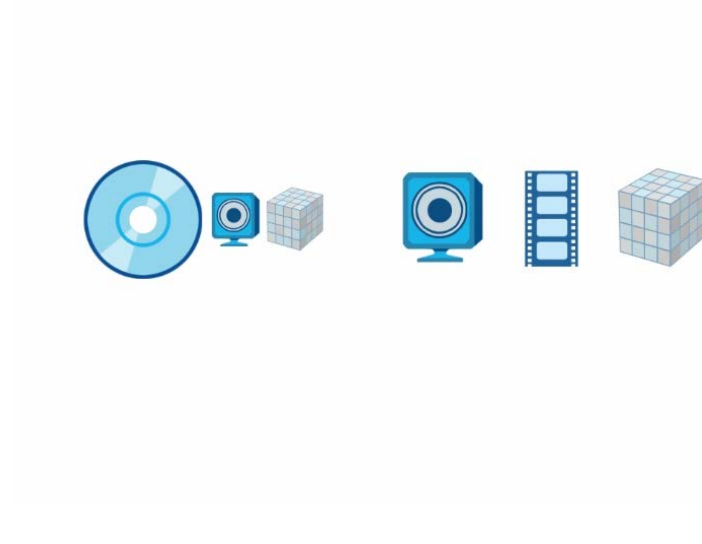
Mixed mode CDs can contain audio, video, and data files.
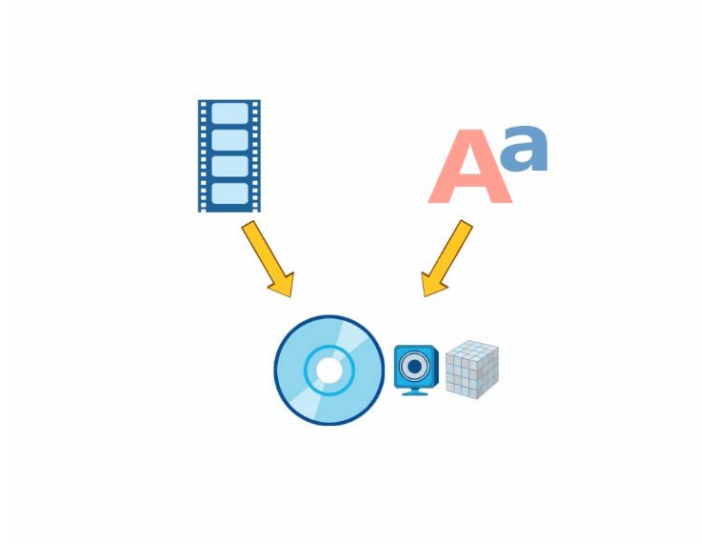
For example you can create an audio CD and then add video files and text files to it to create a mixed mode CD.
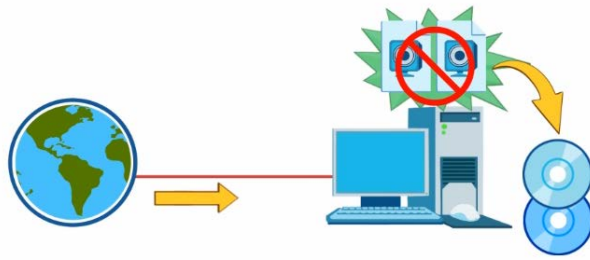
Copying audio directly from the Internet and storing it on recordable CDs can be illegal.
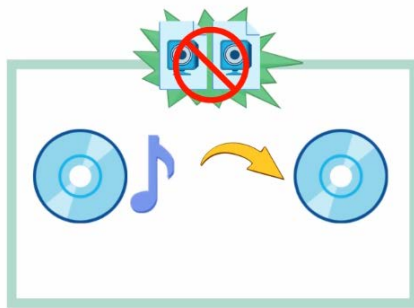
It can also be illegal to copy music from CDs and DVDs.

Ensure that you have permission before you copy any material.

Converting digital audio
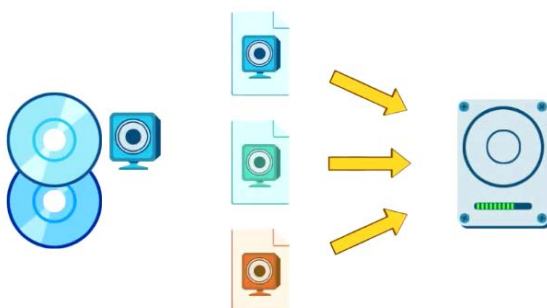
You can convert audio from a CD or a DVD to a different format to be able to store and play it from a hard drive.

For example you can convert your favorite song from a CD to an MP3 file that can be stored and played on your computer.
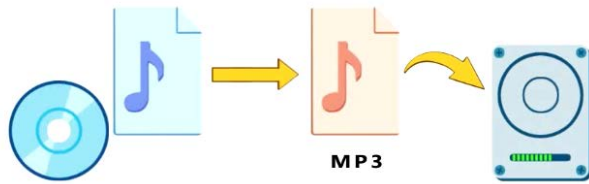
You must have audio conversion software such as Microsoft Windows Media Center installed on your computer to convert audio files.
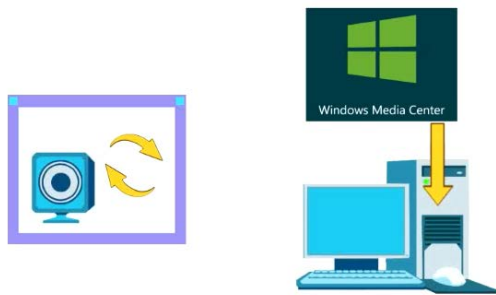
The software changes the format of the audio and may also compress the audio so the files take up less space on the hard drive.
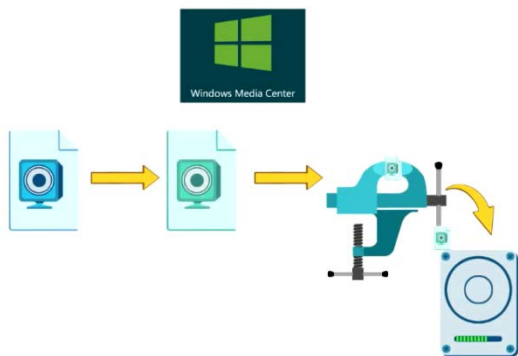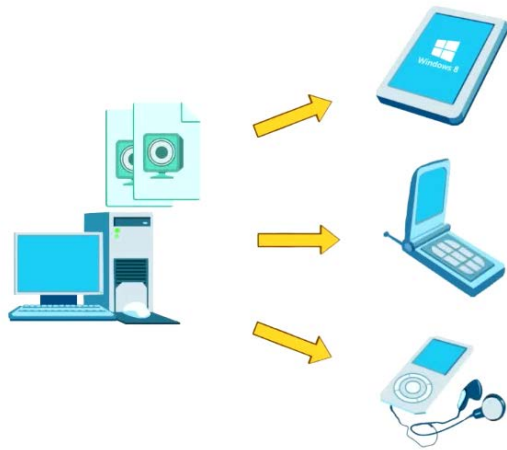
You can then transfer these audio files from your computer to a digital device such as a tablet computer a mobile phone or an MP3 player
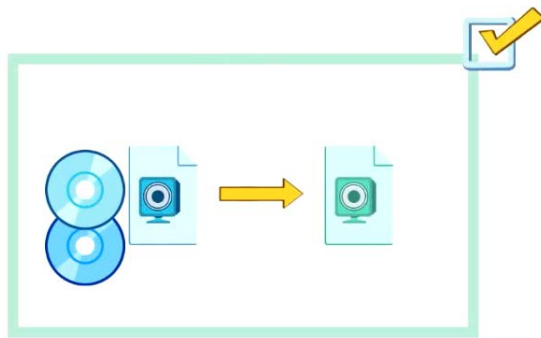
Converting audio from CDs and DVDs to a different format can be illegal so be sure that you have permission to convert audio to a different format before doing any conversions.

Characteristics of digital audio

Digital audio has many characteristics that allow you to edit, organize, and share your music. With audio editing software you can add sound effects to your audio files. By compressing audio files you can save space on your computer and more easily transfer your audio files to the Internet.

You can stream digital audio files to listen to audio without having to download a large audio file.

It is important to know the different audio file formats and how they are used.

WAV **WAV**
A wave (WAV) file is a universal audio file format developed by Microsoft. This format retains decent audio quality but the files are uncompressed and are larger than other formats.

MP3 **MP3**
MP3 is an audio file format designed by the Moving Picture Experts Group (MPEG). This is a common audio file format for streaming music on the Internet because the files are compressed and smaller but still have a good quality sound.

WMA **WMA**
WMA or Windows Music Audio is a compressed audio file format that works with the Windows Media Player and other Windows software.

Knowledge check

Which of the following audio file formats is commonly not compressed.

- o WAV
- o MP3
- o WMA

MP3 files are commonly used to stream music on the internet.

- o True
- o False

Answers –

#1 – WAV are commonly not compressed in order to keep the highest possible sound quality.

#2 – True. MP3 is a very popular file format for streaming audio on the Internet.

Digital devices

Today, the functions of telephones, cameras, video recorders, media players, and Internet devices are being merged into smaller and portable devices.

Today, the functions of telephones, cameras, video recorders, media players, and Internet devices are being merged into smaller and portable devices.

Speech recognition and synthesis

Speech recognition and synthesis can be accessed online at http://www.microsoft.com/digitalliteracy.

Knowledge check

Speaking to your computer to write a document is an example of what?

- o Audio digital technology
- o Speech recognition
- o Speech synthesis

All computers can use speech synthesis.

- o True
- o False

Answers –

#1 – Speech recognition allows users to speak to a computer to dictate text documents.

#2 – False. Speech synthesis requires speech to text software, and speakers (or headphones) and any required sound cards.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Identify the various characteristics of digital audio.
- Explain the concepts of recording, copying, and converting digital audio.
- Identify the features of advanced speech technologies.

Introduction to Digital Video

Digital videos are not only used by professional movie producers. Anyone can make digital videos with the use of a camcorder or webcam.

In this lesson, we will identify the characteristics of digital video. Then we will identify what digital video editing is and the different output formats for digital video. You will also learn about the features of video editing software.

Characteristics of digital video files

One characteristics of digital video is that you can edit the video files on a computer with digital video editing software. You can edit videos to include titles, add a sound track, or special effects.

Characteristics of digital video files can be accessed online at http://www.microsoft.com/digitalliteracy.

Knowledge check

Why are digital video records and camcorders smaller than older video cameras?

- o Technology always makes things smaller
- o Digital video doesn't require tape
- o Digital video camcorders aren't smaller

You can only share digital video with editing software.

- o True
- o False

Answers –

#1 – Because you don't have to use tape, digital video camcorders are smaller than earlier video recorders.

#2 – False. You can share video directly from many digital video recorders using the Internet and social media sites.

Digital video editing

With digital video editing software you can improve your videos with special effects, audio, and enhance the video quality.

Digital video editing can be accessed online at http://www.microsoft.com/digitalliteracy.

Knowledge check

What kind of editing allows you to find and edit frames in an instant?

- o Linear editing
- o Nonlinear editing
- o Digital editing

You can only share digital video files on the internet.

- o True
- o False

Answers –

#1 – Nonlinear editing allows you to find and edit frames quickly, and even move or delete any scenes that you want.

#2 – False. You can also burn digital video files to a CD or DVD to share with other users.

Digital streaming
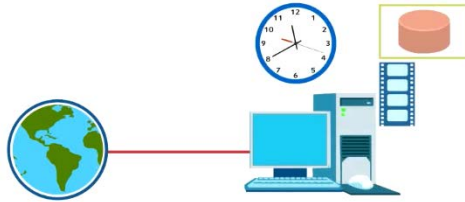
Generally digital video files are large and can take a long time to download.
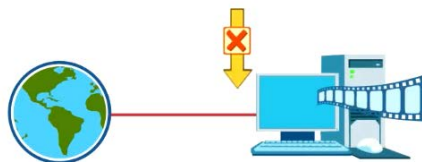
Video streaming allows you to view video files over the Internet without downloading them.
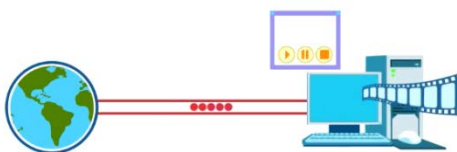
In this case the video file is sent to your computer in a continuous stream.

You need a streaming video player to view the video file over the internet.

You might need to download a streaming video player and install it on your computer

before you can play streaming video files.

There are two types of video streaming, real time and on demand

In real time video streaming you can view a live event over the internet.
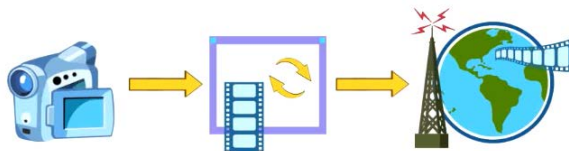
A camera is used to capture the live event and a converter is used to change the captured file into the video streaming format so that it can be broadcast in real time over the Internet
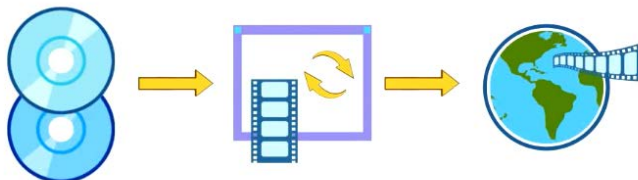
In on demand video streaming a video is taken from a storage device such as a CD or a DVD and converted into a streaming video format, this video is then distributed over the Internet.
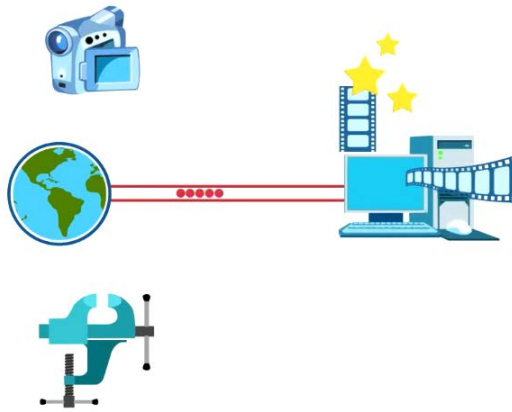
The quality of streaming video depends on the hardware used to capture the video and the speed of the internet connection.

It also depends on the compression technique used because each compression technique preserves the quality of the original file in a different manner.

Digital downloading

You can also download video files such as video presentations, movie trailers, or music videos from the Internet.

In this case a copy of the video file is downloaded onto your computer.

Sometimes when you are downloading a file you can play the file after a major portion of the file is downloaded.

But usually you need to wait until the entire file is saved on your computer.

Web conferencing
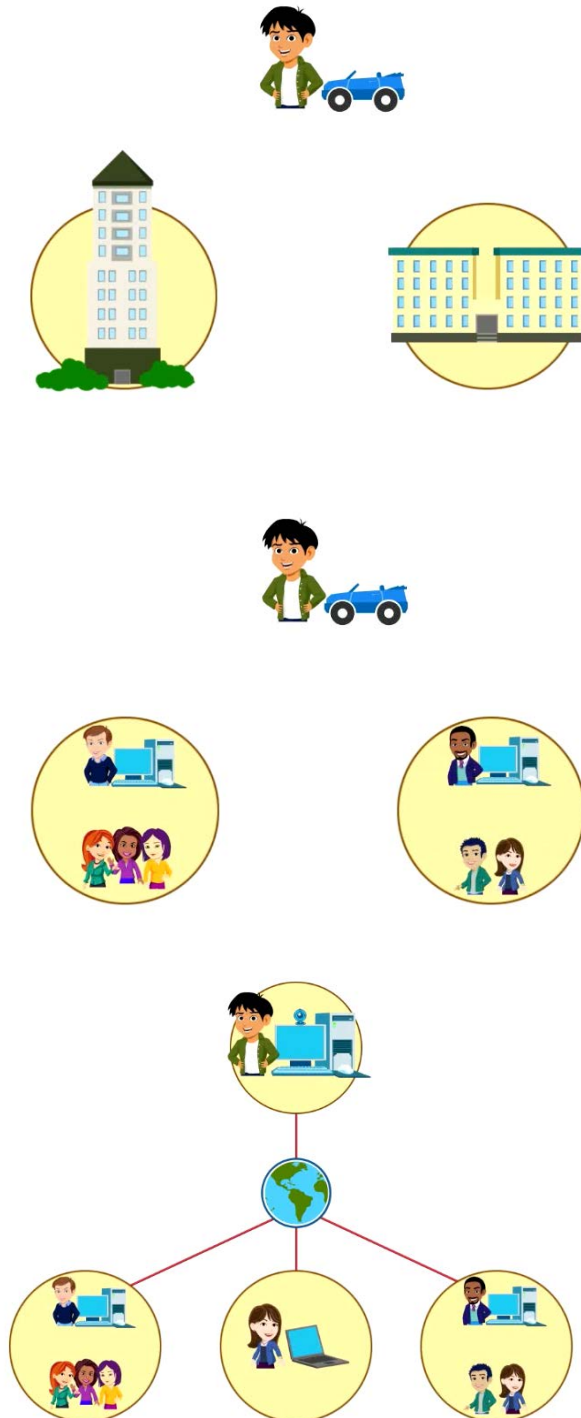
Today you do not need to travel from one place to another to attend conferences and seminars.

Instead you can use web conferencing so that all the participants can communicate with each other over the Internet.

One of the features of web conferencing is that it allows you to hold a virtual conference where you can see and hear others in real time.

You can also use tools such as virtual white boards and slide presentations during the web conference.

Another feature of web conferencing is screen sharing where the participants can see what is on the presenters desktop.
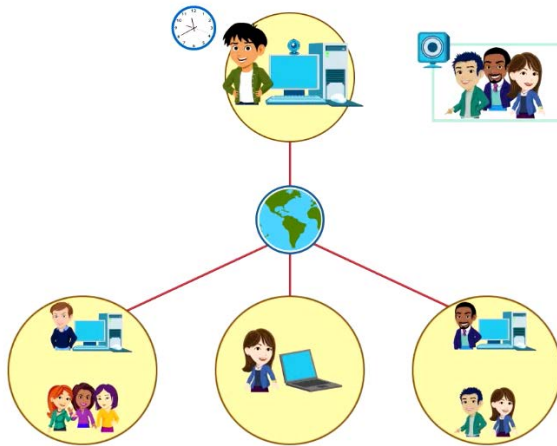
Web conferencing also allows voice communication between the participants so they can share their views and discuss their opinions.
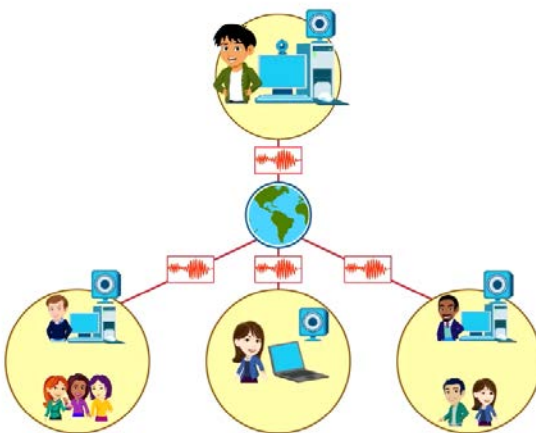
Voice communication could be voice over internet protocol VOIP or voice communication by using telephone conferencing.

Web conferencing also allows you to use text chatting if voice communication is not possible.
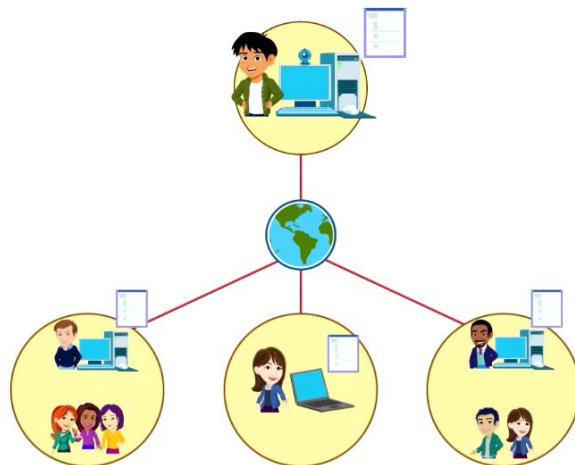
Microsoft Lync is one application that enables web conferencing.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Identify the characteristics of digital video.
- Explain what digital video editing is and the various output formats for digital video.
- Identify the features of different Web video technologies.

Introduction to Digital Photography

Instead of using a film camera, you can use an electronic camera that can take pictures in an instant without the use of film. Cameras are easy to use and have become inexpensive over the years.

In this lesson, we will discuss the benefits, features, and the workings of a digital camera. Digital cameras can hold all your pictures from different years without the need to insert film, so we will discuss how to manage these digital images and even how to edit them. After you have taken pictures, you will want to print them. Well now, you can print these pictures at home with the same quality as photo developing shops. We will identify the features of different types of printers that are available for print photos.

Digital camera

A digital camera, unlike a traditional camera, does not use film to store pictures.

A digital camera stores each picture in a digital format on a storage device such as a flash memory card or a hard drive inside the camera.

Like a traditional camera, a digital camera has a dark box with a lens that focuses light to create an image.
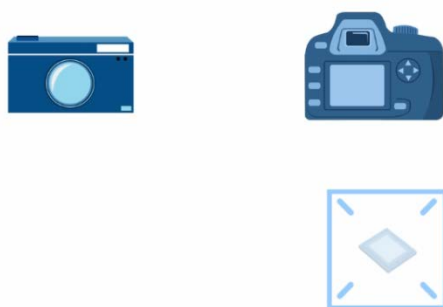
However unlike traditional cameras, which focus the light onto a piece of film, a digital camera focuses light on a sensor.

The sensor creates the image which is then stored on the cameras storage device.
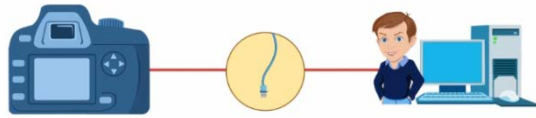
You can transfer pictures taken with a digital camera to a computer. You can use a USB cable to transfer pictures.

You can then enhance the pictures on a computer by using image editing software including software available with Windows 8.

Editing and managing digital images

Editing and managing digital images

With digital cameras, you can transfer pictures to a computer where you can edit the digital images to enhance their quality.

Editing and managing digital images can be accessed online at http://www.microsoft.com/digitalliteracy.
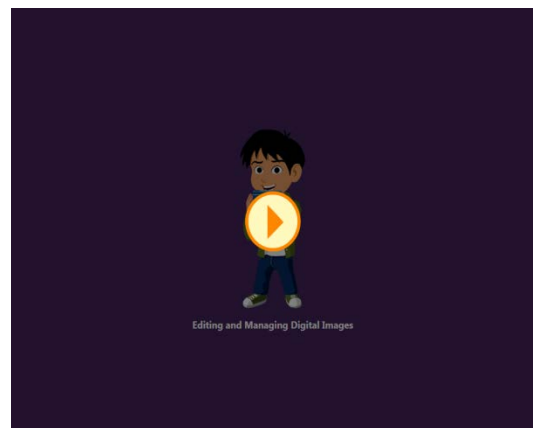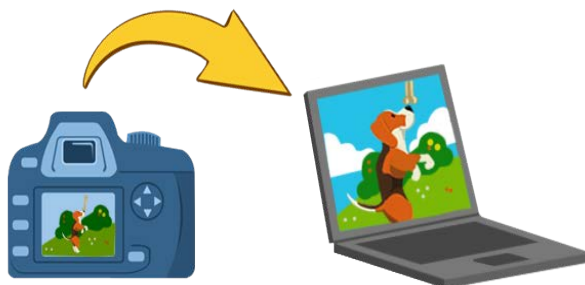
Knowledge check

All digital cameras allow you to edit photos and digital images.

- o True
- o False

Which of the following is NOT a common feature of image or photo editing?

- o Red-eye removal
- o Sound effects
- o Contrast
- o Crop

Answers –

#1 – False. Some digital cameras might allow some editing. But most digital image editing is accomplished by transferring your photos or images to a computer.

#2 - Photo and image editing do not commonly use sound effects.

Printing digital images

To share pictures and digital images, you can print the pictures using a personal printer or a professional photo printer.

Printing digital images can be accessed online at <u>http://www.microsoft.com/digitalliteracy</u>.

Knowledge check

How do inkjet printers work?

- o Lasers print color onto the paper
- o Spraying tiny drops of colored ink
- o All of the above

High quality _____ is another option for near photographic quality prints.

- o High speed internet
- o Smart printer technology
- o High definition printing
- o Photo printing paper

Answers –

#1 – The printer sprays tiny drops of colored ink.

#2 – For quality prints you can use high-quality printing paper.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Explain the benefits, features, and working of a digital camera.
- Explain how digital images can be managed and edited.
- Identify the features of different types of printers that are available for printing photos.

Introduction to Digital TV and Media on Your Computer

Computers can be used as TVs. You can watch your digital videos that you have made, view your photos, and listen to recordings or songs. Not only that, but you can buy TV movies, subscriptions to shows, and different sources of media, to view on your own computer. In this lesson, you will learn:

- How to describe how to use your computer as a TV
- How to view digital TV on your computer
- How to organize your digital media on your computer
- How to listen to digital audio and view digital photographs and videos on your computer

Organizing digital media on your computer

You can view and play digital media, such as music, photographs, and videos, on your computer. As your media library grows, it is important to keep it organized. You can view and play digital media, such as music, photographs, and videos, on your computer. As your media library grows, it is important to keep it organized.

Organizing digital media on your computer can be accessed online at http://www.microsoft.com/digitalliteracy.

Knowledge Check

Digital media purchased through the video app icon are automatically organized on your computer.

- o True
- o False

You can move media files that stored externally onto your computer.

- o True
- o False

Answers –

#1 – True. Windows 8 automatically organizes the digital media you purchase by clicking the video app.

#2 – True. External video files that you move into your video library will be detected and played through the video app.

How to enjoy digital media on your computer

Do not let you or your family members become victims of online predators. Use the following guidelines to prevent online predators from harming you and your family.

Online entertainment services

Online entertainment services

With an Internet connection, your computer can function like a TV. There are many website services that you can download or stream thousands of choices of movies and entertainment either for free or for a fee. Purchases are automatically accessed by your computer and then can be viewed on any of your smart devices you have linked to your account. You usually have options of buying your own copy or just rent for a single viewing. Movies you purchase by download can also be accessed via the Cloud on your smart devices.

DVD

DVD

Your computer can also play a DVD of a movie or show that you purchased from a store. Place the DVD into the DVD player and it will automatically give you the option of starting your movie. Be sure to check if your computer is capable of playing a DVD or a Blu-ray disk before you make your purchase

Digital copies

Digital copies

Newer movies purchased on DVD often come with a digital download option that allows you to view the movie on your computer or smart device via a code that comes with the DVD. This option allows you to watch the movie anytime without having the disk through your media player.

Knowledge check

Which of the following allows you to stream TV shows or movies on the Internet?

- o Online entertainment services
- o DVDs
- o Digital Copies

What option do newer movies on DVD now come with so that you can watch a movie on a smart device?

- o DVD
- o Online
- o Digital Download
- o None of the Above

Answers –

#1 – Online entertainment services allow you to stream TV shows or movies for a fee or sometimes for free.

#2 – Newer movies purchased on DVD often come with a digital download option.

Using the computer as a TV

You can use your computer to play media files such as audio, video, and photographs. There are also services that allow you to access media files by streaming them from the Internet.

Using the computer as a TV can be accessed online at http://www.microsoft.com/digitalliteracy.

Knowledge check

You must always have an Internet connection to watch TV or movies on your computer or smart device.

- o True
- o False

Watching TV shows and movies is limited to a desktop or laptop computer.

- o True
- o False

Answers –

#1 – False. You can buy and download TV shows or movies to watch later without an Internet connection.

#2 – False. You can watch TV shows and movies on most any smart device.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Organize digital media on your computer.
- Explain how to view digital TV on your computer.
- Explain how to listen to digital audio and view digital photographs and videos on your computer.

Digital Technology and Career Opportunities

With the expansion of technology, many jobs have required the use of technology allowing the way people work. It has allowed people to become more efficient in their careers. Advanced technology has allowed people to be able to work from remote locations whether you are working from home, in your office, or even in a different country. Technology has allowed different career opportunities to open such as IT professionals, developers, and information workers. In this lesson, you will be able to explain:

- How digital technology helps people work from different locations
- How to identify the different career opportunities available for information workers
- How to Identify the different career opportunities for IT professionals
- How to Identify the different career opportunities available for developers

Digital technology and the work place

Digital technology has changed the way people work. Today, work is no longer a place where you have to go. Advanced digital technology allows people to work from remote locations.

Digital technology and the work place can be accessed online at
http://www.microsoft.com/digitalliteracy.

Knowledge check

What allows people to meet on the Internet and send or display graphics or other files?

- o Video conferencing
- o E-mail
- o This is not possible

Video conferencing requires a high-speed Internet connection.

- o True
- o False

Answers –

#1 – Videoconferencing on the Internet allows people to see each other and talk, and send or display files.

#2 – True. A high-speed Internet connection is required for videoconferencing.

Career opportunities as information workers

Information worker careers

With computer skills and knowledge you can find a career as an information worker. There are many occupations that fall under this category of gathering and recording information. The following list is just a start.

Graphic artist

Computer graphics are in high demand and require the latest in graphic editing software. Graphic artists often work to create graphics and animation for video games and movies.

Technical writer

As a technical writer you will create documents to help explain and troubleshoot technical issues. You may be working for a tech company writing manuals for employees or as journalist, writing about the latest devices and digital advances.

Transcriber

There are millions of paper documents that need to be transferred to digital content. Also known as a typist, this occupation focuses on maintaining digital records, reports and files.

Receptionist   Modern receptionists' positions constantly utilize digital technology and most jobs require excellent computer skills these days. Organization, employee and customer files, and everything else that maintains office efficiency is greatly facilitated by computers.
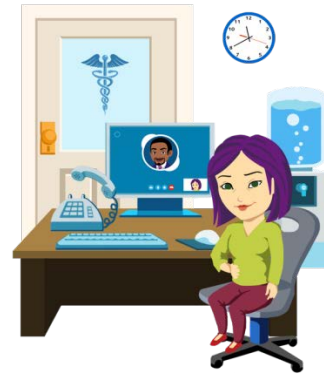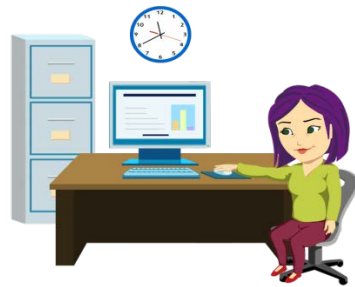
Manager   Computers have greatly aided managers of all areas of business. For example, computers can track inventories, employee schedules and entire customer bases in a click of a button. Integrating computer skills with management skills is a must in the modern workplace.

Desktop publishers   Using office software, desktop publishers create newsletters, blogs, online magazines and much more. They often utilize digital editing to create incredible brochures.

Knowledge check

Which of the following career opportunities create newsletters, blogs and online magazines?

- o Desktop publisher
- o Transcriber
- o Technical writer

Graphic Artists create animations for video games and movies.

- o True
- o False

Answers –

#1 – Desktop publishers create newsletters, blogs, online magazines, and more.

#2 – True. Companies that produce video games and movies employ graphic artists to create animations.

Career opportunities as IT professionals

Information Technology is a growing field for those with technical expertise, experience and qualifications. The following describes some opportunities that are in demand right now.

Network administrator

Network administrator
Companies depend on their computer networks operating correctly and accurately. Network administrators make sure the network is working at full capacity. They are also in charge of maintaining the list of authorized users and generally keeping track of user access.

Database administrator

Database administrator
Databases are maintained by database administrators, who are responsible for keeping company databases organized and useful for storing information. They are also in charge of allowing or restricting access to the database.

Web administrator

Web administrator
Web administrators maintain and manage websites on the Internet. They can facilitate a website's initial creation or manage its functionality. Often a web administrator runs the site of a client who owns it and ensures it is secure, legal and updated.

Knowledge check

Which IT professional is in charge of keeping information stored and organized?

- o Network administrator
- o Database administrator
- o Web administrator

Which IT professional maintains and manage websites?

- o Network administrator
- o Database administrator
- o Web administrator

Answers –

#1 – Database administrators are responsible for storing information and keeping company databases organized.

#2 – Web administrators maintain and manage websites on the Internet for large and small businesses.

Career opportunities as a developer

A developer is someone who creates or programs software applications. There are many types of development careers to choose from:

Programmer

Programmer
Programmers write code that is used to create various software. They often also test and maintain software. Programmers will sometimes work alone on small projects, or on teams for big projects.

Software developer

Software developer
A software developer is in charge of integrating all the different aspects and employees creating software. They coordinate programmers and others on the team to make sure tasks are done correctly and on time. They are crucial in streamlining the process of software development.

Website designer

Website designer
A Website designer is in charge of designing and maintaining a company or organization's website. They are responsible for coordinating the budget, tracking visitors and making the website functional, accurate and entertaining.

Game designer

Game designer
Game designers conceive, design and create video games. They create game design documents that will determine the look and play of the game for programmers to work from. They also must bring written and visual skills to convey the images and tone of the game.

Knowledge check

Which of the following is a website designer responsible for?

- o   Tracking visitors
- o   Coordinating website budget
- o   All of the above

Who is in charge of integrating all the different aspects of creating software?

- o   Programmer
- o   Software developer
- o   Website designer
- o   Game designer

Answers –

#1 – All of the above. Website designers are responsible for coordinating budget, tracking visitors and making websites functional, accurate and entertaining. All of the above.

#2 – Software developers are in charge of integrating all the different aspects of creating software programs.

Congratulations

Congratulations on completing the lesson!

You should now be able to:

- Explain how digital technology helps people work from any location.
- Identify the different career opportunities available for information workers.
- Identify the different career opportunities available for IT professionals.
- Identify the different career opportunities available for developers.

Glossary

A

Add-in

A component that provides added functions by allowing the Web browser to access and execute files that are included in Web pages.

C

Camcorder

A digital video camera used to record video.

CD

A storage device used to store data in a digital format.

D

Digital camera

A camera that stores images digitally on a memory device, such as a flash memory card or a mini hard disk.

Digital versatile disk (DVD)

A storage device used to store data in a digital format.

E

Electronic mail (e-mail)

The process of converting data into an unreadable and unusable form. Encryption is done to prevent unauthorized access of data, especially during data transmission over the Internet.

H

Home office
An arrangement that allows people to work from home.

I

Internet
A worldwide collection of public networks that are linked to each other for information exchange.

Intranet
A special type of network used to communicate and share information within an organization.

M

Mobile phone
A wireless device that has the capabilities of a traditional wired phone. A mobile phone allows you to make a call from almost any location.

MPEG Audio Layer 3 (MP3)
A format developed by Moving Picture Experts Group to allow compression of audio and video for digital distribution.

N

Network
A group of computers and associated devices that are connected to share resources and exchange information.

P

Personal digital assistant (PDA)
A handheld computer that is used as a personal organizer. A traditional PDA includes features such as an address book, task list, and a calculator.

Pixels
The small units that make up a picture. The higher the number of pixels, the better the quality of the picture.

R

Regional work centre
A remote office that is connected to the company's head office by either the company's network or the Internet.

Resolution
Measure of the clarity and sharpness of a picture.

S

Speech recognition
A technology that allows you to communicate with a computer by using only your voice to enter data and to issue commands.

Speech synthesis
A technology that allows the computer to speak to you. In speech synthesis, the computer communicates to you by converting text to digital audio.

T

Telecommuting
An arrangement that allows people to work from home or from a remote office.

U

USB cable

A cable that helps you connect digital devices to a computer without turning off the computer.

W

Web site

A collection of one or more Web pages that are linked together and made available through a Web server.

Wide Area Network (WAN)

A network that connects devices in geographically separated areas.

Windows audio wave (WAV)

An audio file format developed by Microsoft. WAV format is used to store audio files in a digital format.

Windows media audio (WMA)

An audio file format developed by Microsoft. WMA helps to store digital audio files in a compressed format. Role of computers

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