Introduction to Computers

Keyboard diagram with labeled keys: indicators, Scroll, Print Screen, Delete, Backspace, Enter, Function, Escape, Capitals Lock, Shift, Control, Windows, Alt, Space bar, Menu, Shift, Control, Arrows, Number Pad
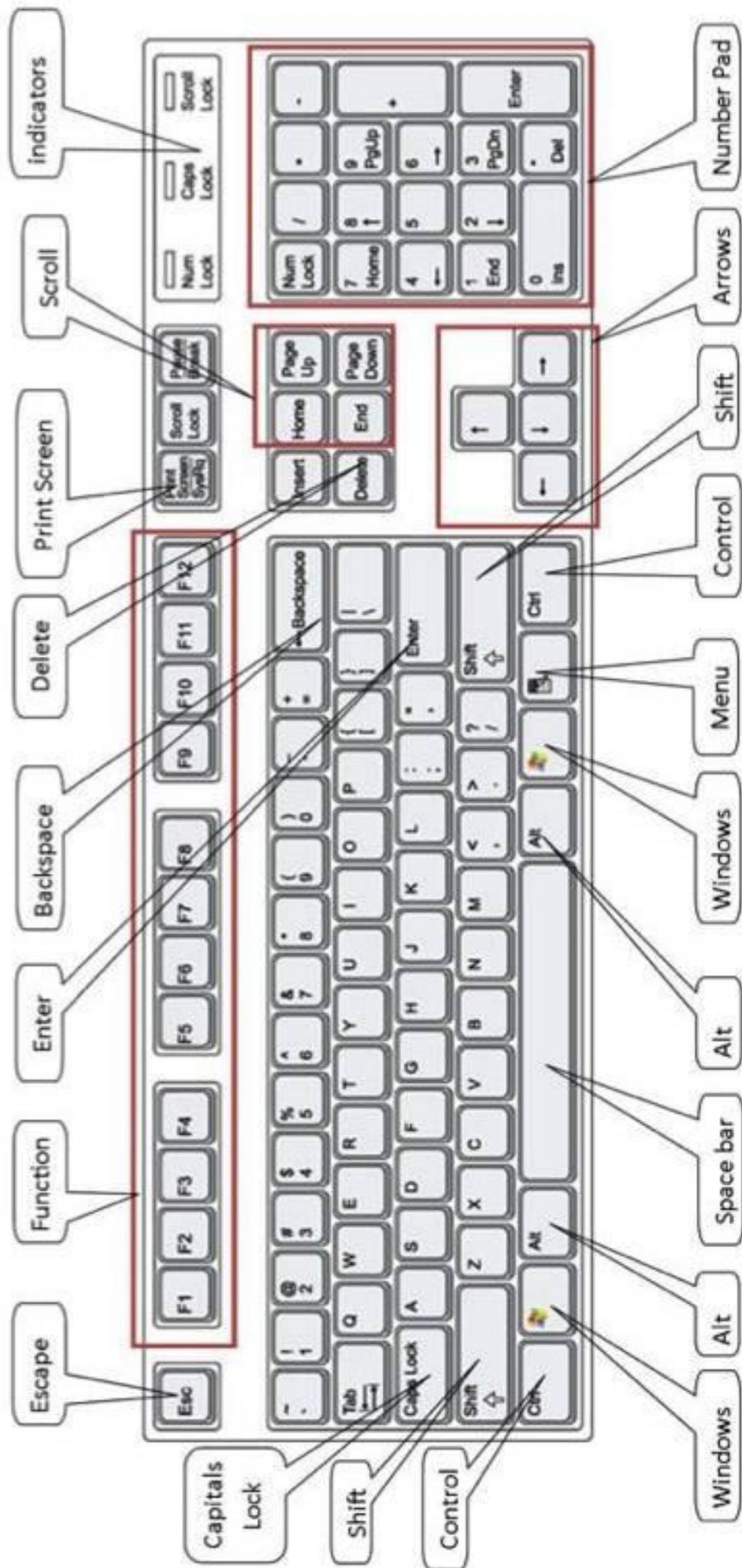
BASIC MOUSE FUNCTIONS

To use Windows, you will need to operate the mouse properly.

POINT: Move the mouse until the pointer rests on what you want to open or use on the screen. The form of the mouse will change depending on what you are asking it to look at in Windows, so you need to be aware of what it looks like before you click.

SINGLE-CLICK: The **left mouse button** is used to indicate choices from menus and indicate choices of options within a "dialog box" while you are working in an application program. Roll the mouse pointer on top of the choice and press the left mouse button once.

RIGHT-CLICK: With a single quick press on the **right mouse button,** it will bring up a shortcut menu, which will contain specific options depending on where the right-click occurred.

CLICK AND DRAG: This is used for a number of functions including choosing text to format, moving items around the screen, and choosing options from menu bars. Roll the mouse pointer over the item, click and hold down the left mouse button, and drag the mouse while still holding the button until you get to the desired position on the screen. Then release the mouse button.

DOUBLE-CLICK: This is used to choose an application program. Roll the mouse pointer on top of the icon (picture on the desktop or within a window) of the application program you want to choose and press the left mouse button twice very rapidly. This should bring you to the window with the icons for that software package. Double-click on the icon with the name of the program.
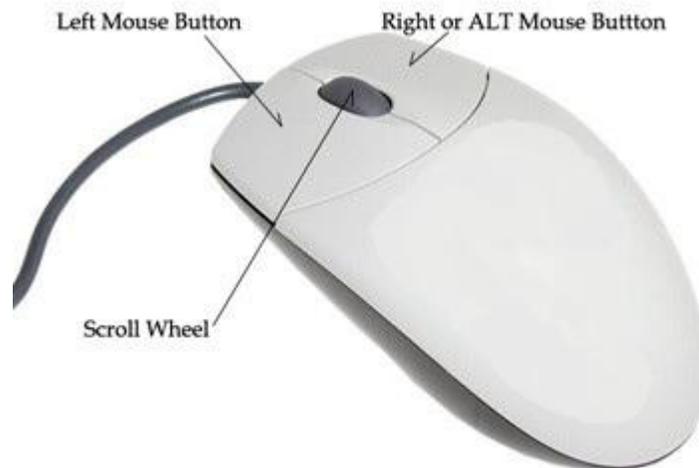
COMPUTER BASICS

Anatomy of a Computer

As with most products, computers are designed in a variety of ways. There are, however, major similarities regardless of the brand (e.g., Dell, Apple, Acer, HP, Lenovo) of the computer. There are three main types of computers, desktops and laptops. However, all computers have the following components:

The Monitor
The monitor looks like a television screen and is where you see what is happening on your computer. Think of this as the "face" of the computer.

The Casing (tower, laptop)
Computer parts, such as the CPU and hard disk are stored inside metal casing. The tall casing (tower) classifies a computer as a desktop, whereas slim cased computers are called laptops.

The Keyboard
The keyboard is one of two ways to interact with your computer. The keys should mostly mimic a traditional typewriter.

The Mouse
This is the other way to interact with your computer. Most mice have two buttons—a right and a left button—and a scrolling wheel. Mice are used as pointer devices to navigate through a computer. Think of this as your hand inside the computer.

WINDOWS BASICS

WHAT IS WINDOWS?

Microsoft Windows is what is referred to as an OPERATING SYSTEM (OS). An operating system is like a translator. Windows is the operating system or translator that acts as a link between you and your computer. Other OS exist, such as iOS (Apple devices), and Android OS (smart phones).
It is possible for computers to operate on proprietary OS made for specific functions.

WHAT IS A WINDOW?

A window is what Microsoft Windows uses to group information. Windows are generally rectangular boxes which are distinguishable by a title bar and an application control symbol (such as Computer picture for **My Computer**).

The **title bar** appears at the very top of the window and is generally a different color than the rest of the box. It displays the title of the application or file that you are currently working in. The **title bar** can be grabbed by your mouse if it is **restored down** (not in full screen mode).

Windows operate in layers and you can have more than one window open at the same time. When you first start windows, you are brought to the **Desktop** and **Start** button. Everything you do in Windows will start from the Desktop.

WORKING WITH THE DESKTOP AND START MENU BUTTON
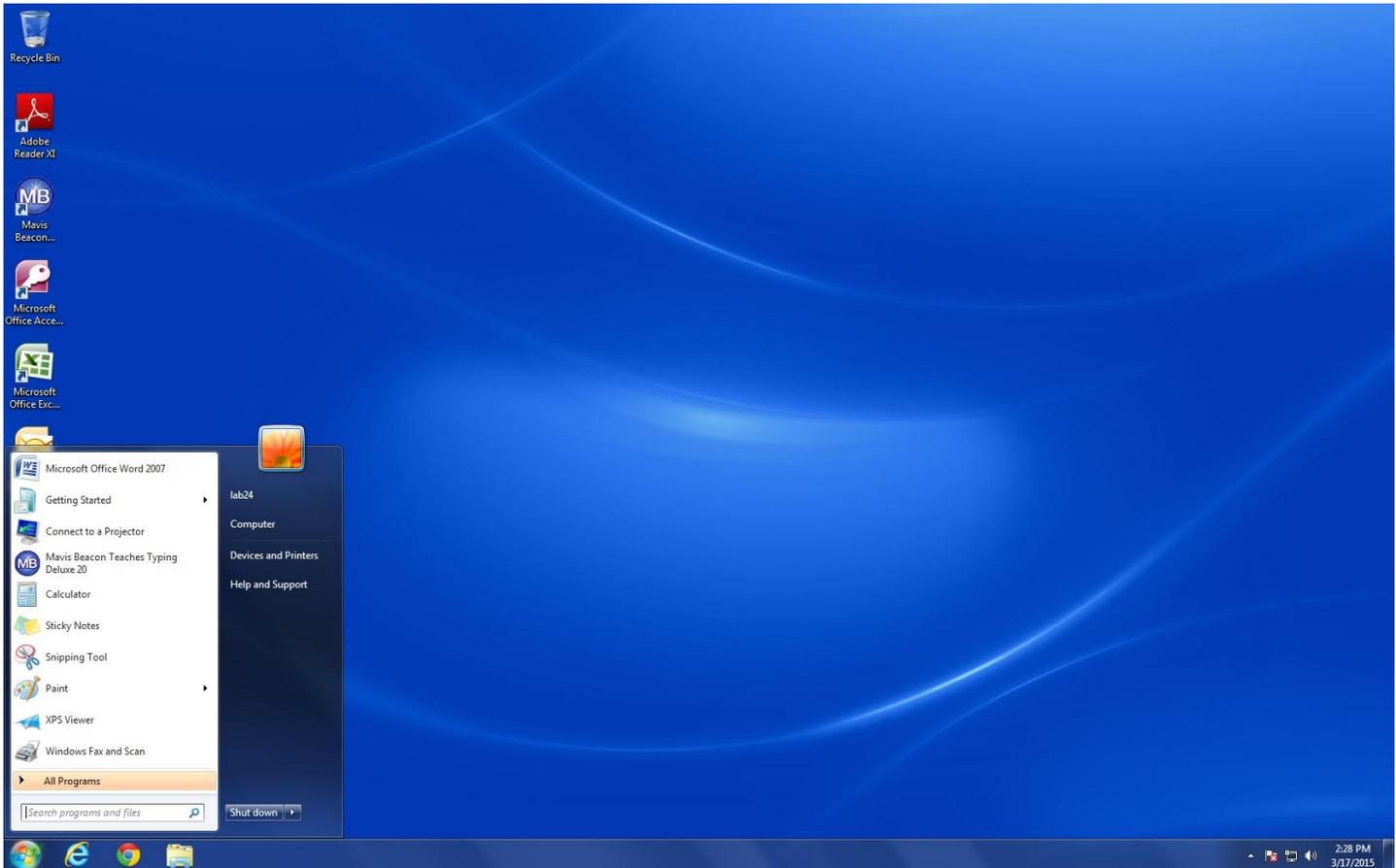
After you log on, the computer will display what is known as your desktop within a few seconds to a few minutes (if your computer is newer, this will probably go faster). Here you will see a digital representation of something similar to a real-life office space, complete with a workspace, files and file folders, and even a recycling bin.

The "Start Menu" is displayed on the Desktop. The desktop is the "background" screen, on which your windows will appear.

From the Start Menu, you can access all windows applications available to you.

START BUTTON AND TASKBAR

At the bottom of your screen is the **taskbar**. It contains the **Start** button, which you can use to quickly start a program or to find a file. When you open a program, document, or window, a button appears on the taskbar. You can use this button to quickly switch between the windows you have open.

When you click the Start Button, it will display the Start menu, which allows you to access Programs and submenus. Menu choices with a triangle beside them have submenus.
Example: Move the mouse pointer to the Start Button and left click once, Point to Programs, then Accessories, and choose one of the menu choices and left click.

OPENING A FILE OR PROGRAM FROM START MENU BUTTON

Opening Program through Menus

1. Click on the **Start Menu Button** on the bottom-left corner of the screen
2. Click on the Accessories folder
3. Once it opens, find a program to open up, such as **Calculator, or Paint**

Opening Program through Search Bar

1. Click on the Start Menu Button on the bottom-left corner of the screen
2. Directly above the Start Menu Button, type into the *"Search programs and files"* box
3. Type in any keywords to help you find any file, folder, or program on your computer
   a. Try finding Microsoft Word by simply typing "Word"
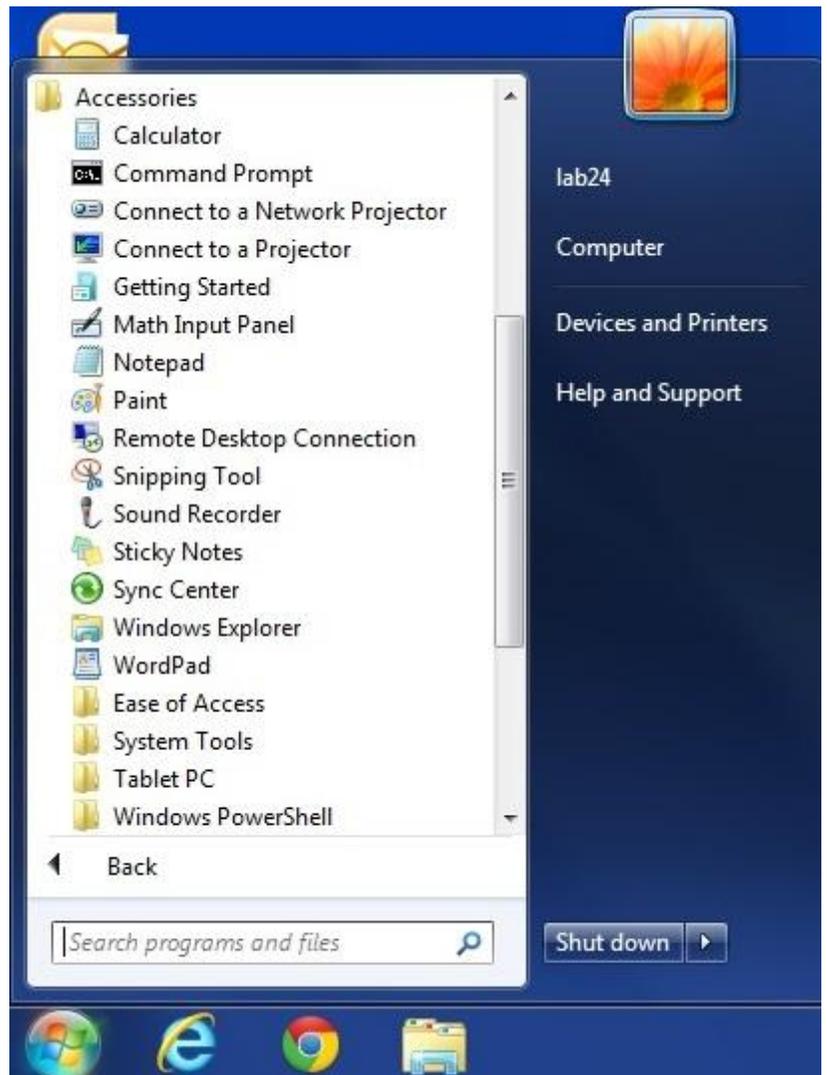
Other Uses of the Windows Start Menu Button

- The Start Menu button directs the user to any point or function on the computer. Some of the major system commands are done here, such as: **Shut Down, Restart, Sleep, Log Off, and Lock.**

- Accessing the Computer command will give the user access to the various internal storage devices and external devices plugged into the computer.

- Devices and Printers will allow users to check up on connected devices, such as printers.

- The Control Panel will display options to change the computer's settings.

OPENING A FILE OR PROGRAM FROM THE DESKTOP

**Opening Program
from the Desktop**

1. Find a **Desktop Icon** representing the program, file, or folder you wish to open
2. Instead of a single-left click, **double-left click** to open the icon.

Opening Program on the Taskbar

Icons on the Taskbar only have to be clicked once to be opened. Icons on the taskbar are **"pinned."** Any program can be pinned to the taskbar for easy access.

WORKING WITH THE TASKBAR
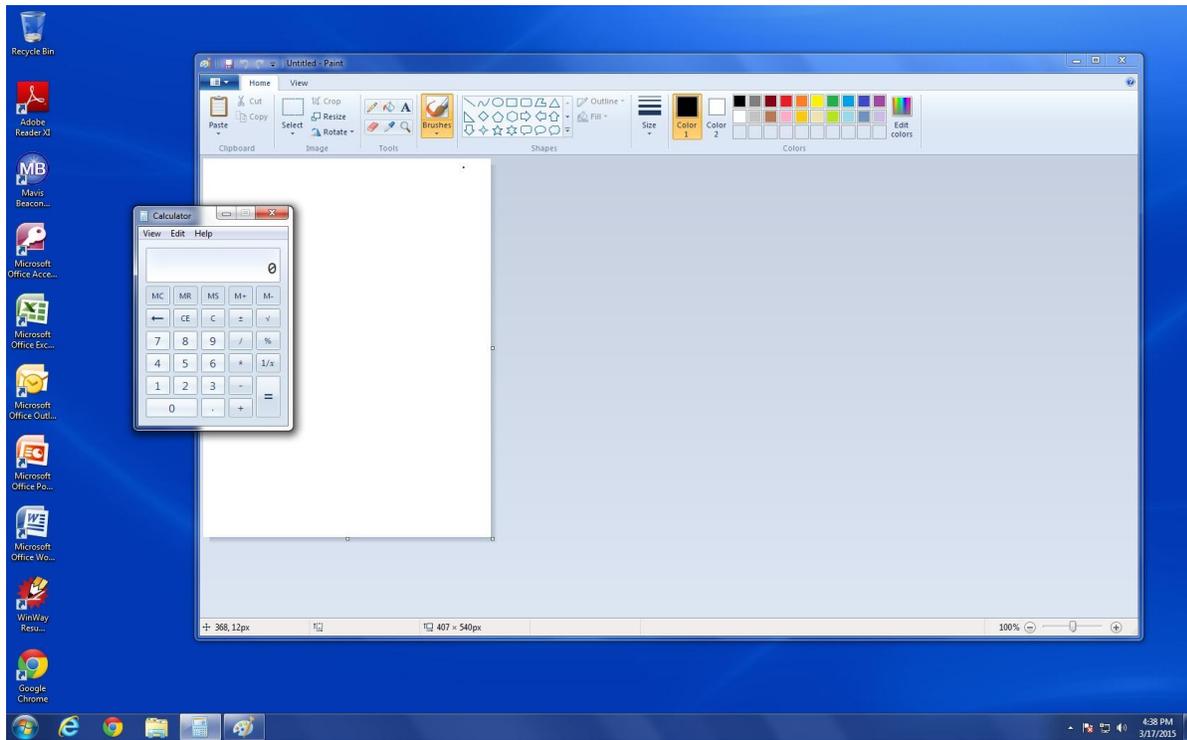
The **Taskbar** at the bottom of the screen contains the start button, pinned icons, the time and date, as well as other system controls such as **sound**. Open windows appear on the taskbar as transparent boxes containing the unique icon for the program. Click on those icons to open or minimize them.
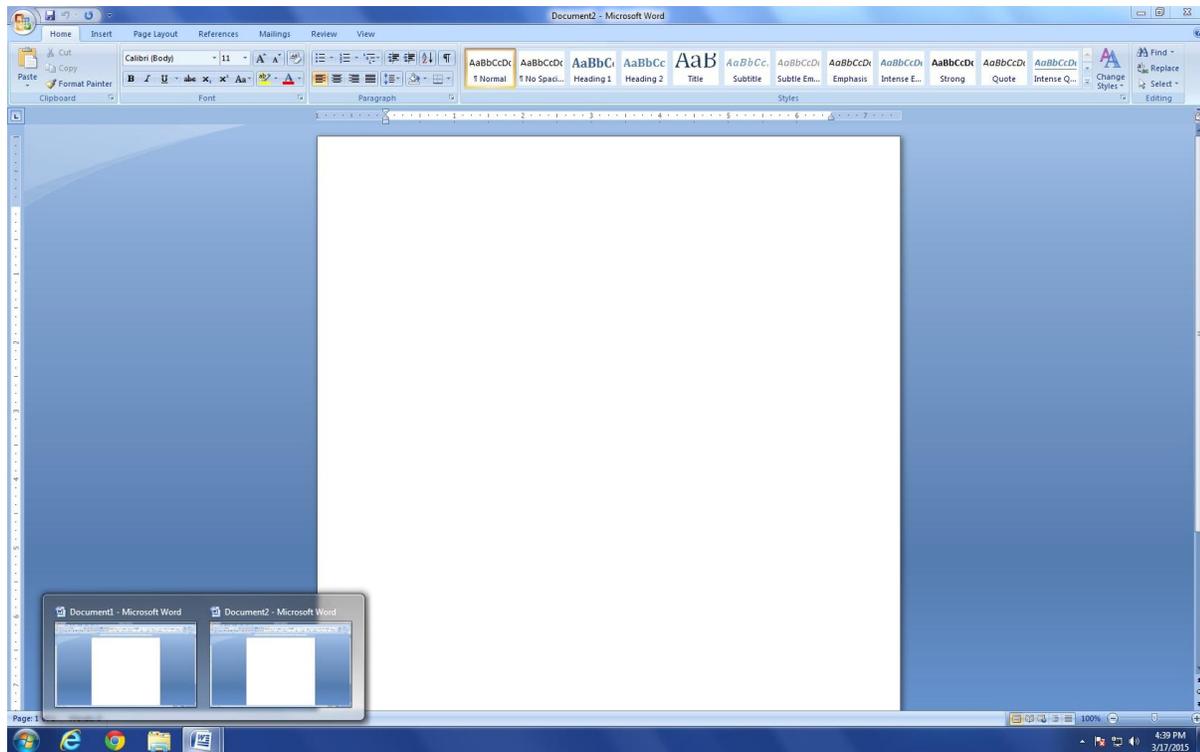

Windows operates in layers. When more than one window is open in the same program, you can cycle between the windows by hovering the mouse over the icon on the taskbar—then clicking on the desired window.

Maximize/Restore, Minimize, and Close Buttons

Managing "Windows"

Microsoft Windows is called "Windows" for a reason. Programs appear on your screen as "Windows" (rectangular shapes) and are laid 3-dimensionally on top of one another (see image below), just like on a real desktop. The desktop is your work surface, and all of your open windows appear on top of it. If you can see a window, it means that the program is *open* and running. It is possible to make the window bigger, smaller, or close it using the buttons in the top right corner of any window.
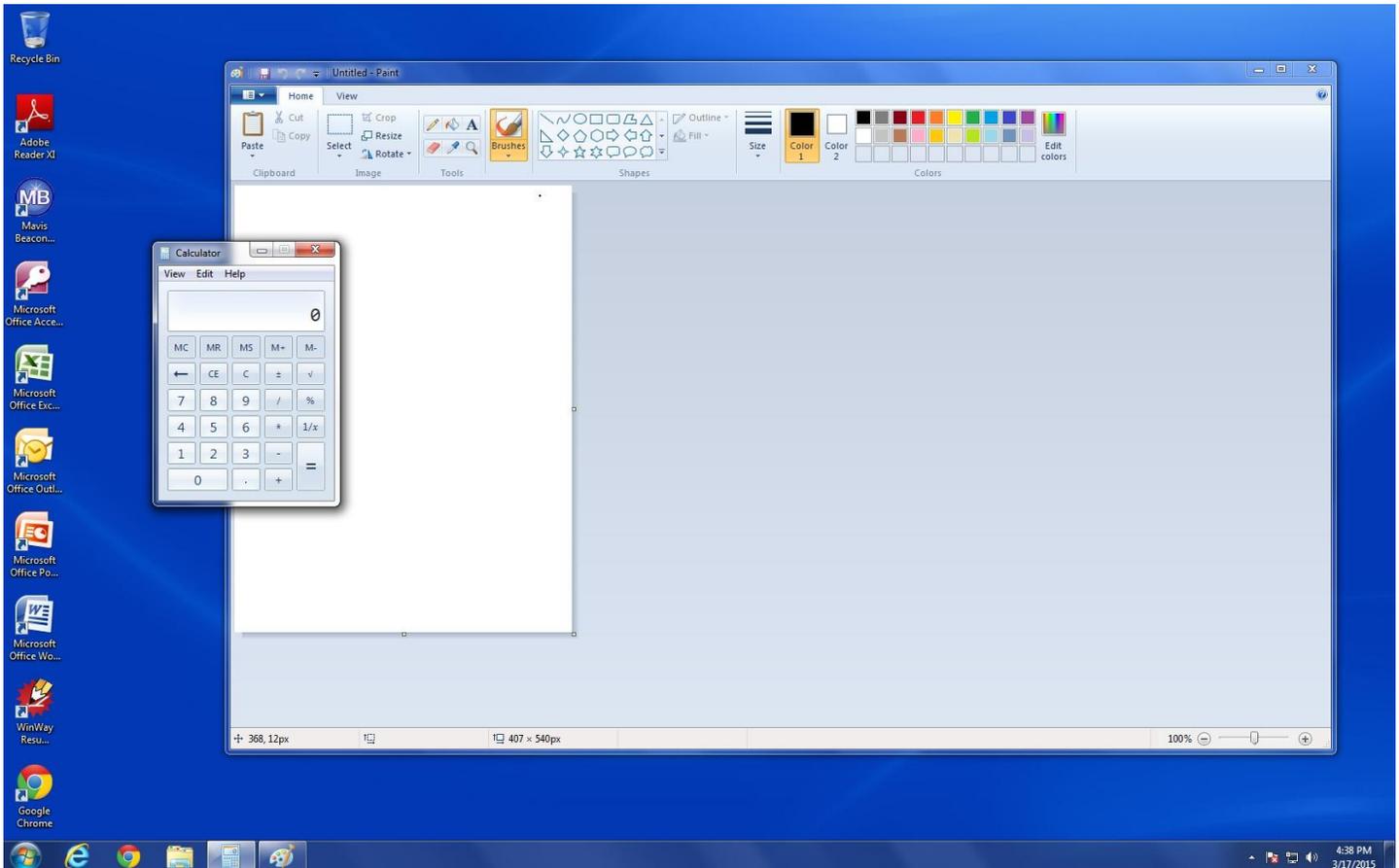
Minimize: Left-click this button to shrink the window down to a small button that will appear in the task bar (see below).

Maximize: Left-click this button to make the window full-screen. It should take up your entire screen.

Close: Left-click this button to close the window. The program will close and stop running.

Restore Down: Left-click this button to make the window smaller without minimizing it. While in full-screen from pressing Maximize, Restore Down is the method to shrink a window down.

COMPUTER PARTS AND TERMINOLOGY

How Computers Work

Hardware / Software

Computers use both hardware and software to perform their work. Think of hardware as the physical pieces of a computer—the monitor, all the pieces and parts inside the casing, the mouse, the keyboard, etc. Software, on the other hand, consists of programs that we use to interact with the computer. You cannot physically touch software like you can the keyboard, but you can still interact with it on the screen. A word processing program like Microsoft Word is a piece of software that you could use to type a grocery list. Games, such as Solitaire, are also considered software.

Information / Data

Computers are designed to work with a type of information commonly referred to as "data." Data comes in many forms, whether it is written data (such as a letter to a friend), audio data (like a song), video data (like a popular movie or DVD), and more. Certain types of software programs work with different types of data. For example, iTunes works primarily with audio data, while Microsoft Word, a word processing program, works primarily with written data.

The keyboard is just one of the ways in which you can create, interact with, and modify data. There are many ways to get data off of the computer, such as printing it out on paper, copying it to a CD or flash drive, or publishing it to the Internet.

Storage Devices

A storage device is used to store instructions, data, and information when they are not being used in memory. Three common types of storage devices include magnetic disk, optical discs, and miniature mobile storage.

Hard Disks (C:)

A hard disk (also called a fixed disk) is a storage device that contains one or more inflexible, circular patterns that magnetically store data, instructions, and information. The system unit on most desktop and notebook computers contains at least one hard disk. Although hard disks are available in removable cartridge form, most hard disks cannot be removed from the computer. Storage capacities of internally mounted fixed disks for personal computers range from several hundred GB (gigabyte = billions of characters) to more than a terabyte (terabyte = trillions of characters).

Optical Discs   (D:) DVD Drive   and   (E:) DVD-RAM Drive

An optical disc is a portable storage medium that consists of a flat, round, portable disc made of metal, plastic, and lacquer that is written and read by a laser. Optical discs used in personal computers are 4.75 inches in diameter and less than 1/20 of an inch thick. Nearly every personal computer today has some type of optical disc drive installed. On these drives, you push a button to slide the tray out, insert the disc, and then push the same button to close the tray. There are varying optical disc formats available today (CD-ROM, CD-R, CD-RW, DVD-ROM, DVD-R). The format specifies whether a user can read from the disc, write on the disc, and/or erase the disc.

Miniature mobile storage media   F:

Miniature mobile storage media are rewriteable media usually in the form of a USB flash drive (also referred to as jump drive and thumb drive).   Miniature mobile storage media allow mobile users to transport digital images, music, or documents easily to and from computers and other devices.

Flash memory cards are solid-state media, which means they consist entirely of electronics (chips, wires, etc.) and contain no moving parts.

USB flash drive is a flash memory storage device that plugs into a USB port on a computer or mobile device. USB flash drives are the portable storage media of choice among users today because they are small, lightweight, and have such large storage capacities. Capacities typically range from 4 GB to 16 GB and even higher.

Network Drives   S:

   A Network drive is a drive which exist on a computer called a file server. This computer has a very large hard disk which is divided into areas to create different network drives.

Hardware

Memory

Storage

Temporary

Permanent

Software

System

Application

Windows XP

Microsoft Word
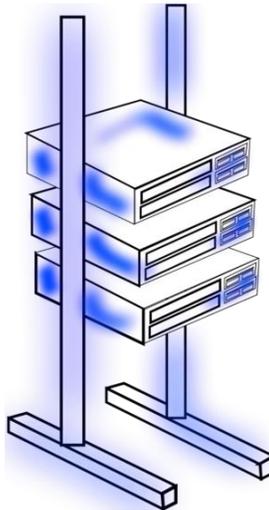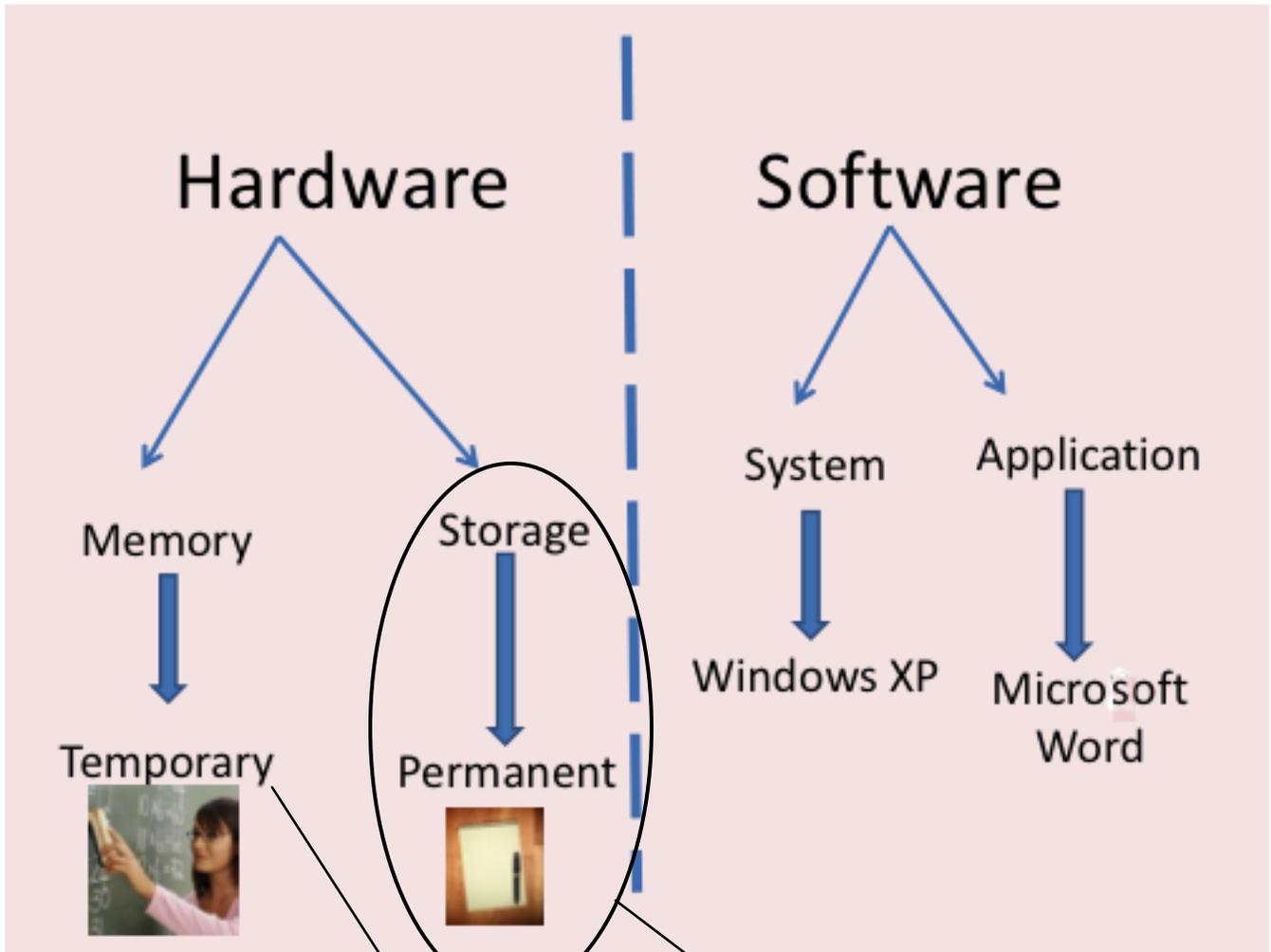
File Management

Why do we have to save our files?

Computers have temporary storage and permanent storage. Just like our brains, we only remember things that are important to us, but if something is not important to use we may lose the memory. Things like software (MS Word) are considered important, so a computer stores that on a permanent storage device (hard drive). Fleeting images that you may see on the internet will be stored on temporary memory that will be erased when the computer is shut down. The memory stick on the right is inside the computer. Every time the computer is turned on, the memory stick starts over with storing temporary information.

UNDERSTANDING STORAGE DRIVES AND FILE MANAGEMENT

C Drive –
Hard/Fixed Disk

Document:
(Inter Office Memo)

D & E Drives
DVD Drives

Network
Drives: S

My Documents
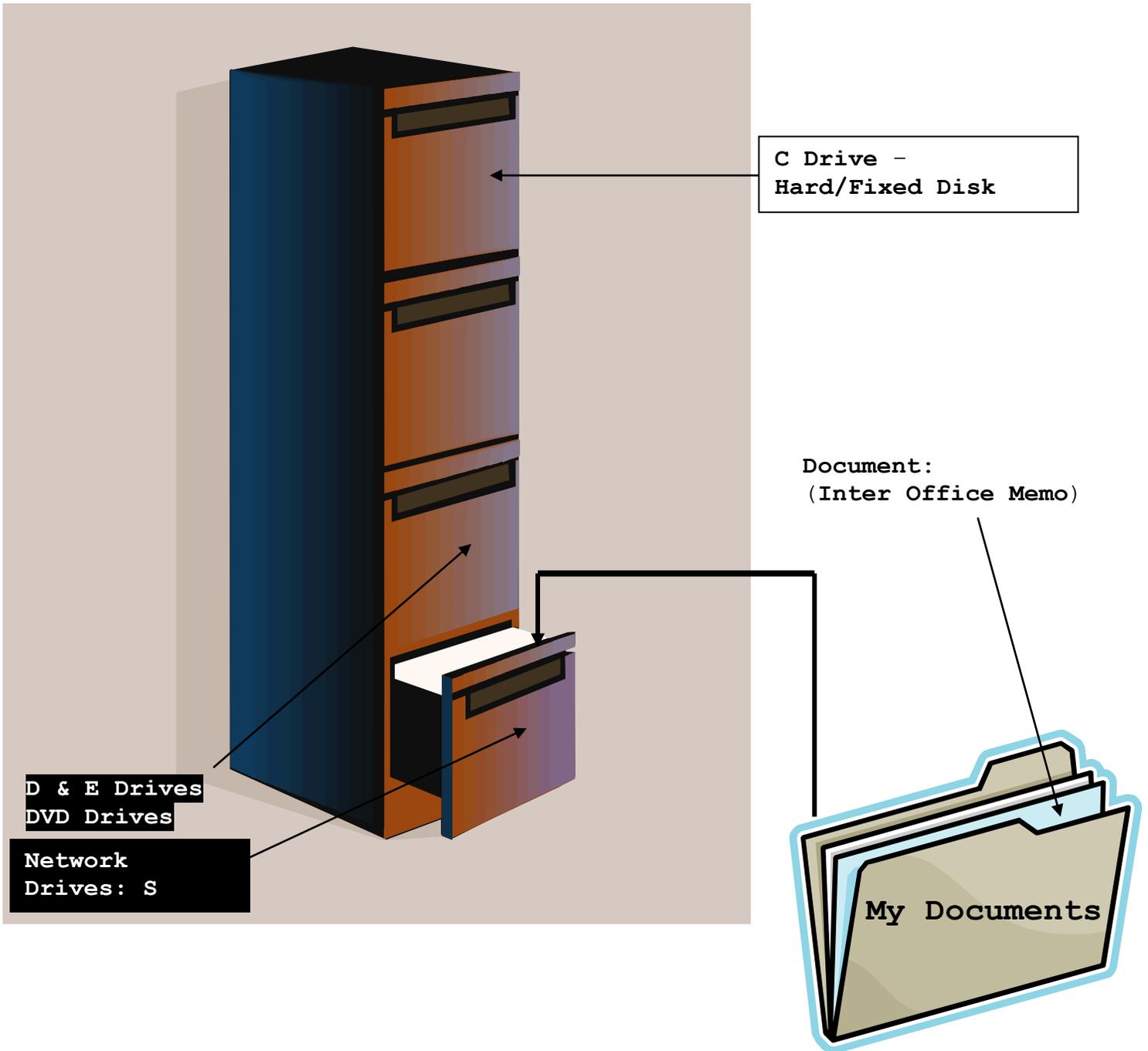
Once you have created and saved numerous files, the process of organizing and keeping track of all your files can be challenging. This process is referred to as **File Management**.

Windows provides tools to keep your files organized so you can locate the files you need, move files to new locations, and delete files you no longer need. There are two main tools for managing your files: **My Computer** and **Windows Explorer**.

We will be learning to manage files with the **My Computer** file management tool.

Windows gives a user the ability to create **Folders** in which to save and organize files. Folders are areas on a computer storage drive (flash drive, or hard drive) that help organize files, just as folders in a filing cabinet help to store and organize papers. Folders can also contain other folders which create a more complex structure of folders and files called a
File Hierarchy.
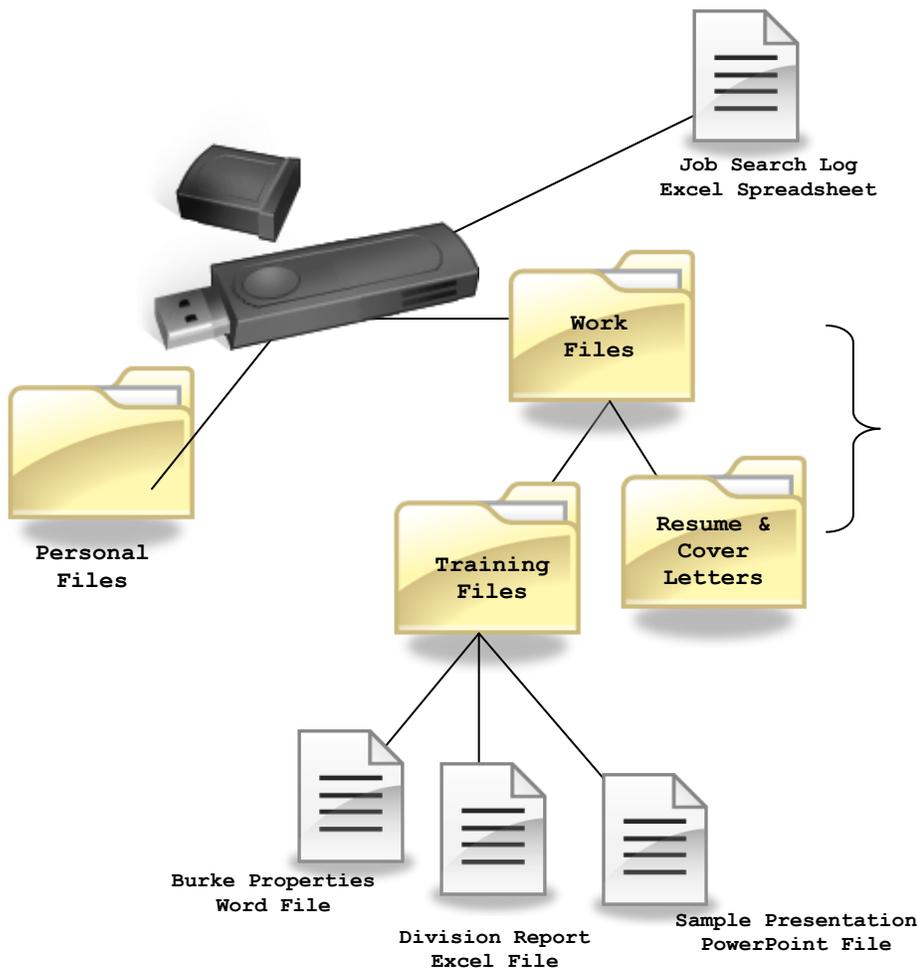
These two folders are <u>Subfolders</u> of the Work Files Folder.

Job Search Log Excel Spreadsheet

Work Files

Personal Files

Training Files

Resume & Cover Letters

The <u>Personal Files</u> folder, the <u>Work Files</u> folder and the <u>Job Search Log</u> are in the "**Root Directory**" because they are not within another folder

Burke Properties Word File

Division Report Excel File

Sample Presentation PowerPoint File

15

If you decide a file belongs in a different folder, it can be **moved** to another folder or another disk drive. It can also be **renamed** if you decide that a different name is more appropriate. If you want to keep a **copy** of a file in more than one folder, you can copy it to a new folder or to a new disk drive.

Deleting files and folders you are sure you don't need frees up disk space and keeps your file hierarchy more organized.

As you create more files and folders, you may forget where you placed a certain file or you may forget what name you used when you saved a file. With the **Search** command or **Search bar**, you can locate files by providing only partial names (keywords) or other facts you know about the file such as the date the file was created or modified.
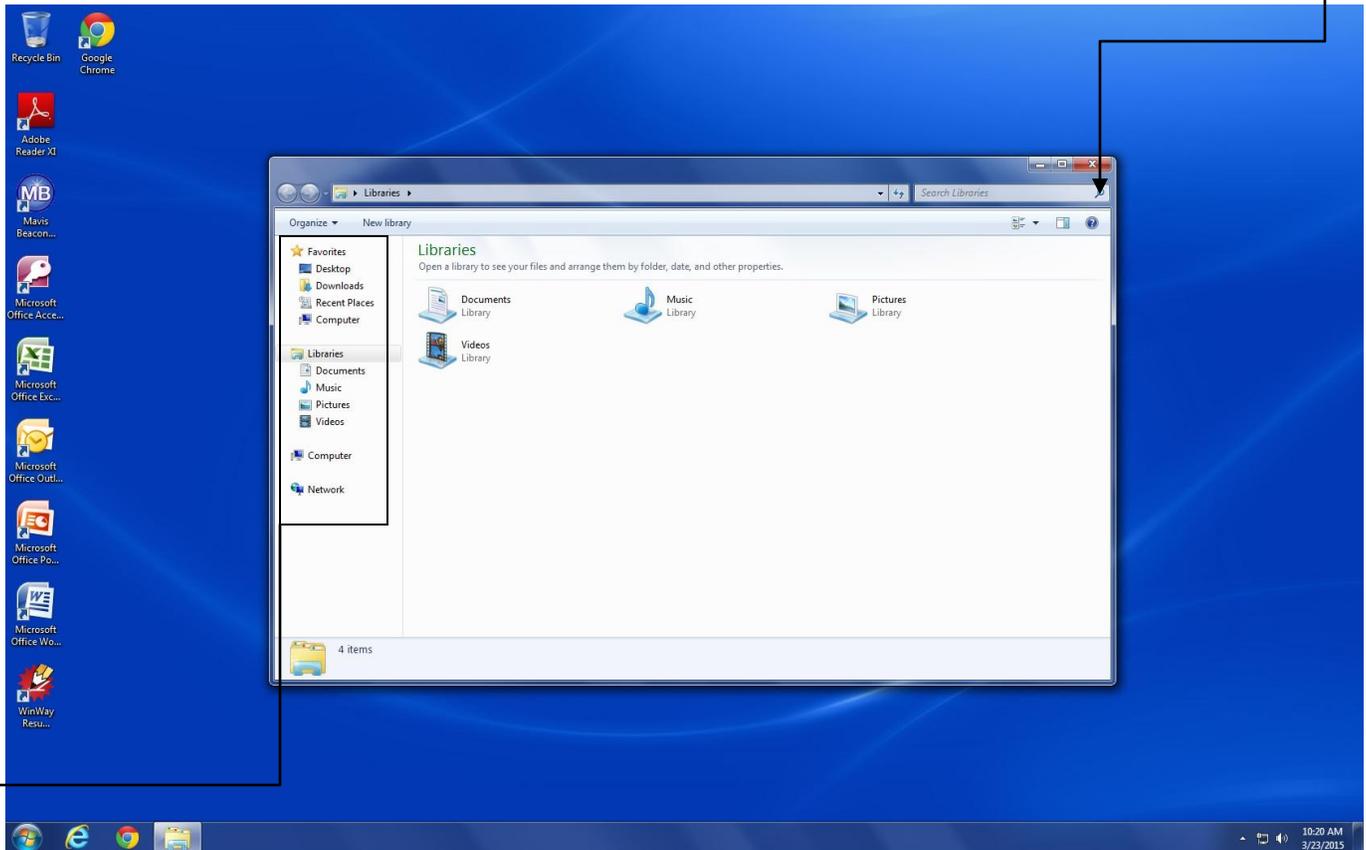
Click on the *folder icon* on the **Taskbar** to open up the Windows Explorer and Libraries window.

On the left panel, you will be able to navigate your computer's various folders and file storage locations, such as Desktop, Documents, Pictures, and Computer.

Get familiar with this window as you will be brought to it when saving, opening, or uploading files from your computer (placing a file in a job application, or attaching to an email).
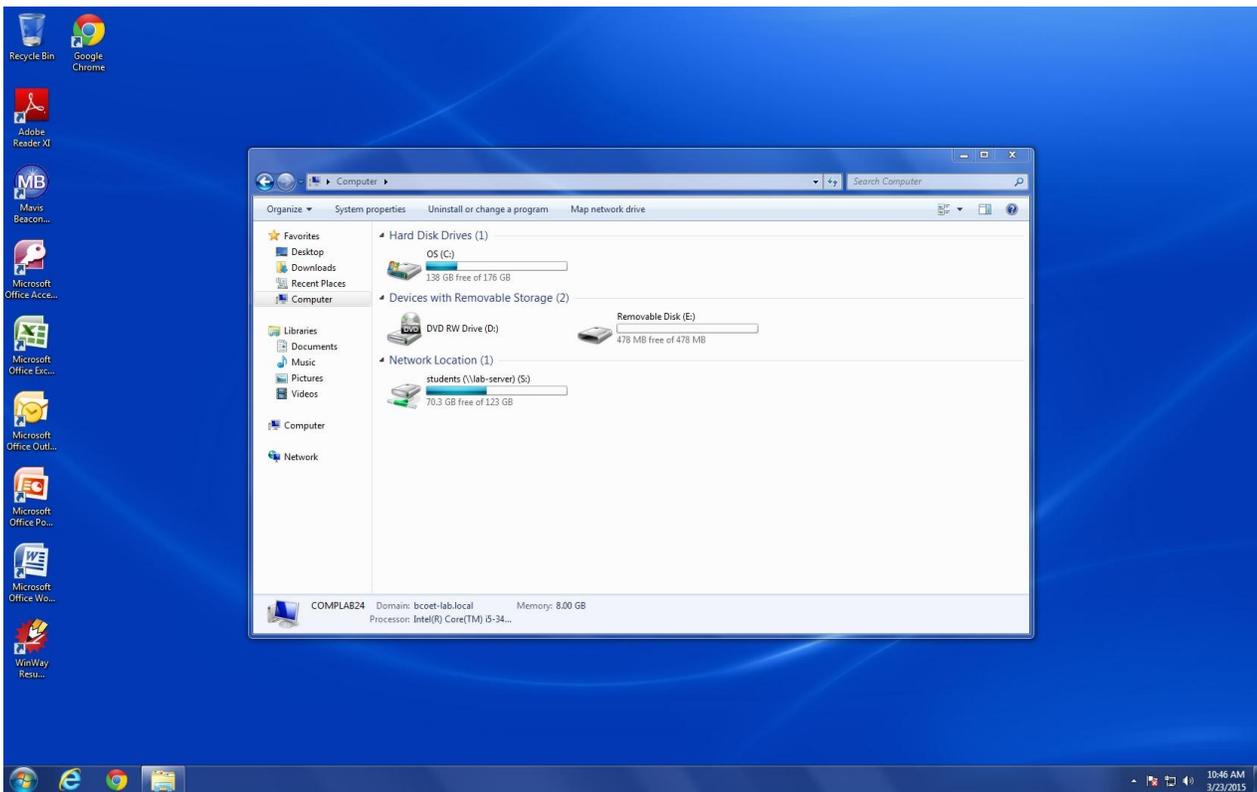
Above is the **Computer** section of Windows. This is where you will see all of the connected storage devices, such as the hard disk drive, DVD drive, and the Removable Disk (flash drive memory). This window is updated if any of the storage devices are added/removed. Double-click on the Removable Disk icon to see what is inside.

Click here on **New Folder**.
Overwrite the highlighted text after clicking on New Folder.

When saving files, you can place them in the ready-made Windows folders (libraries) or in your own custom folders. To organize files, it is best to create sub-folders within the libraries (such as "Holiday Pictures 2014" folder saved in the Pictures library).