

## Understanding the EULA

- ✓ EULA stands for End User License Agreement.
- ✓ Specifies the conditions of the software's use.



## How is Software Built?

Software is built in four stages:

- Analysis** The programmer meets with the client and discusses the things the program will need to do.
- Design** The program concept is broken down and specific requirements are determined (memory, hardware)
- Programming** The program is written using a programming language determined in the Design step.
- Testing** The program is run and tested thoroughly with the intended audience, and is finally released.

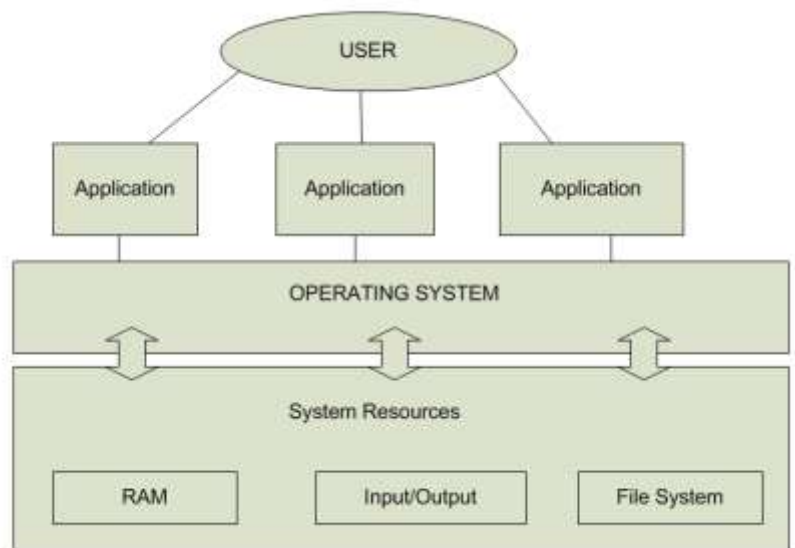
## Introduction to the Computer

At the core of your computer is the hardware; the physical pieces that use electricity and do work. Each hardware component can communicate over something called a bus, an electronic pathway used to send data and electricity.

Next, the operating system controls how the hardware is used allowing multiple things to happen at once. The operating system is often also a GUI (pronounced 'gooey'), or Graphical User Interface. This means there are pictures, icons, and text on the screen that allow a user to control hardware functions such as the copying of files from one place to another.

Running 'on top of' the operating system are applications. They are allocated hardware resources by the operating system so they can do their job.

Finally, the user is at the top and controls how both the applications and operating system (to a degree) function.



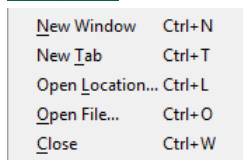
## GUI Components

GUI stands for Graphical User Interface. Though each one looks different, they all have the same elements.

**Icon**  
Double-click to open a file for launch a program.



**Menu**  
Categorized list of commands.



**Button**  
Click for specific command.



**Pointer**  
Use mouse to interact with things on screen.



**Window**  
Contains a program instance.



## Types of Disk Drives

Drive Type	Capacity	Read /Write speed
<b>Hard Drive</b>	Extremely high storage capacity (hundreds of gigabytes)	Faster than CD, DVD, or floppy
<b>DVD Drive</b> Note: Many DVD drives can read from CDs (compact disks) as well as DVDs.	High capacity (a writable DVD can have a capacity of 4+ gigabytes).  Published (professionally made) DVDs can have even higher capacities	Slower than a hard disk drive  Some DVD drives are read only (cannot be used to store data on a DVD), however, writable DVD drives are increasing in popularity
<b>CD Drive</b>	Fair capacity (a typical writable CD can have a capacity of around 650 megabytes)	Slower than a hard disk drive  Some CD drives are read only, but many newer CD and DVD drives allow you to write to a disk
<b>Floppy Drive</b> Note: Many early floppy disk drives are now obsolete	Very low by current standards (only 1.44 megabytes)	Slower than a hard disk drive

## Parts of a Computer

<b>Storage/Memory</b>	The parts of a computer where programs and data are kept.
<b>Input</b>	Devices that help convey data into the computer, such as a scanner, keyboard, mouse, or microphone.
<b>Output</b>	Devices that help the computer output information to the users, such as a printer, monitor, or speakers.
<b>Control/Processing</b>	These very important hardware components interpret the sequence of instructions in the computer's running program. Electronic signals (based on these program instructions) are then sent to the other hardware components to control their actions. A computer's Central Processing Unit (often called a CPU or processor) is a good example of a piece of control /processing hardware.

## Types of Computers

<b>Personal Computers</b>	A personal computer is a small, affordable computer that is intended for personal or individual use. Typically, the main element of a personal computer system consists of a box that contains the main memory, hard drives, processor (CPU, circuit boards, and related devices required to run software programs.	<b>Laptop</b>	A laptop is a small (usually between 5 and 10 pounds) portable computer that can be operated on battery power for a period of time without any dependence on an external power supply. When a laptop's battery loses power, the laptop can be plugged into an external power source by using an external AC/DC adapter.
<b>Mainframe Computers</b>	Mainframe computers are found at the opposite end of the computer spectrum from the PC (personal computer). Unlike a personal computer, a mainframe computer is large and expensive. A mainframe may be larger than a refrigerator in size, and can cost several millions of dollars.	<b>Personal Digital Assistant (PDA)</b>	PDA stands for Portable Digital Assistant. It refers to a small hand held device that offers many of the features of larger laptops and personal computers. Many PDAs incorporate a touch screen device into their design, allowing the user to interact with the items displayed on the viewing screen by touching it.  Because PDAs are so small, touch screens help to provide a more manageable user interface. Because of its small size, a PDA will have much less processing power, main memory, and storage capacity than a personal computer.
<b>Network Computers</b>	A network computer is a desktop machine that resembles a personal computer in outward appearance, with a screen, keyboard, and box. However, it does not have the same quantity of hard disk storage, main memory, or processing power that a personal computer can offer.		

## Memory Measurement

Measurement	Explanation
<b>Bit</b>	Can store a 1 or a 0
<b>Byte</b>	Can store 8 bits. This is enough room to store a single letter or symbol.
<b>Kilobyte (Kb)</b>	Roughly a thousand bytes. Files like spreadsheets, word processing documents, and images are often a few to a few hundred kilobytes in size.
<b>Megabyte (Mb)</b>	Roughly a thousand kilobytes (or a million bytes). Folders and very large files may be several megabytes in size. A floppy disk can hold about 1.44 megabytes. Frequently, computers will have 256 or 512 megabytes of RAM. A CD can hold about 650 – 700 megabytes of information.
<b>Gigabyte (Gb)</b>	A gigabyte is roughly a thousand megabytes (or roughly a billion bytes). Current generation computers often have 1 to 2 gigabytes of RAM. A DVD can typically hold 4+ gigabytes of information. A hard disk drive can store hundreds of gigabytes of information.
<b>Terabytes (Tb)</b>	A terabyte is roughly a thousand gigabytes (or roughly a trillion bytes). Some large capacity hard disks have a terabyte of storage space.

## Disk Drive Lingo

<b>Formatting</b>	Formatting refers to the preparation of a storage device for use. Formatting often consists of the creation of an indexing system that allows the data items written on the storage medium to be organized and accessed in a consistent, efficient manner.
<b>Reading</b>	The transfer of data from the storage medium into the computer's main memory.
<b>Writing</b>	The process of transferring data to the secondary storage medium.
<b>Seeking</b>	When speaking of hard disks and optical drives, seeking is the process of aligning the device's read/write heads over the correct part of the storage medium in preparation to read or write data.
<b>Direct Access</b>	This means that any part of the storage medium can be accessed directly. That is, the device can jump or move directly to the location of the data, as opposed to sequential access. (Ex: RAM, CD-ROM)
<b>Sequential Access</b>	The storage medium must be traversed in a sequential way to access the data. This means that some data can be accessed much more quickly than other data, depending on its location in the medium (Ex: Cassette tape)