

## TVL – COMPUTER SYSTEMS SERVICING 11

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Grade: \_\_\_\_\_

Section: \_\_\_\_\_

Quarter: 1 Week: 3 SSLM No. 3 ELC(s): Identify materials necessary to complete the work in accordance with established procedures and check against system requirements

➤ **Objective(s):**

- A. Classify common computer hardware components according to its group.
- B. Give the functions of computer peripherals.

➤ **Topic:** Devices and Peripherals



### Let Us Discover

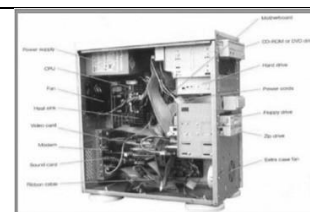
## DEVICES AND PERIPHERALS

### What are the devices of a computer?

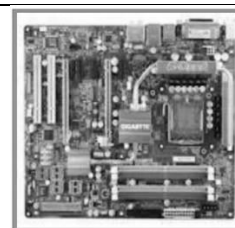
The physical, touchable, electronic and mechanical parts of a computer are called the hardware which is composed of different devices attached to the computer.

### Basic set of devices found in most personal computers

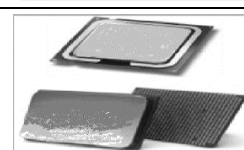
**1. System Unit-** The main part of a microcomputer, sometimes called the chassis. It includes the following parts: Motherboard, Microprocessor, Memory Chips, Buses, Ports, Expansion Slots and Cards.

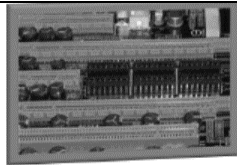
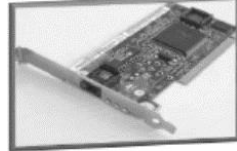
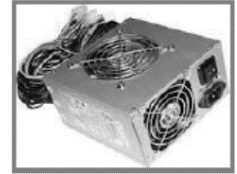
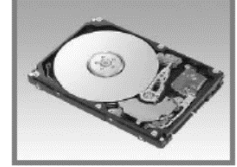

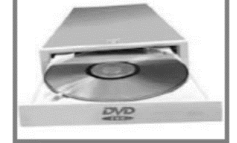


**2. Motherboard / Mainboard / System Board-** The main circuit board of a computer. It contains all the circuits and components that run the computer.



**3. CPU (Central Processing Unit) -** The processor is the main "brain" or "heart" of a computer system. It performs all of the instructions and calculations that are needed and manages the flow of information through a computer.










<p><b>4. Primary storage-</b> (internal storage, main memory or memory) is the computer's working storage space that holds data, instructions for processing and processed data (information) waiting to be sent to secondary storage. Physically, primary storage is a collection of RAM chips.</p> <p><b>Two (2) Types of Memory</b></p> <ol style="list-style-type: none"> <li><b>ROM</b> – (Read Only Memory) ROM is non-volatile, meaning it holds data even when the power is ON or OFF.</li> <li><b>RAM</b> – (Random Access Memory) RAM is volatile, meaning it holds data only when the power is on. When the power is off, RAM's contents are lost.</li> </ol>	
<p><b>5. Expansion Bus</b> - A bus is a data pathway between several hardware components inside or outside a computer. It does not only connect the parts of the CPU to each other, but also links the CPU with other important hardware.</p>	
<p><b>6. Adapters-</b> Printed-circuit boards (also called interface cards) that enable the computer to use a peripheral device for which it does not have the necessary connections or circuit boards. They are often used to permit upgrading to a new different hardware.</p>	
<p><b>7. Power Supply Unit (PSU)</b> - Installed in the back corner of the PC case, next to the motherboard. It converts 120vac (standard house power) into DC voltages that are used by other components in the PC.</p>	
<p><b>8. Hard Disk Drive (HDD)</b> - Also known as hard drive, is a magnetic storage device that is installed inside the computer. The hard drive is used as permanent storage for data. In a Windows computer, the hard drive is usually configured as the C: drive and contains the operating system and applications.</p>	
<p><b>9. Optical Drive-</b> An optical drive is a storage device that uses lasers to read data on the optical media. There are three types of optical drives: Compact Disc (CD), Digital Versatile Disc (DVD) and Blu-ray Disc (BD).</p>	
<p><b>10. Digital Versatile Disc (DVD)</b> - Designed to optically access data stored on a DVD. A laser moves back and forth near the disk surface and accesses data at a very fast rate.</p>	












### What are the input and output devices of a computer?

The devices attached to a personal computer can be classified into two- the input and output devices.

**Input Device** is composed of a device that accepts data and instructions from the user or from another computer system.

**Output device** is any piece of computer hardware that displays results after the computer has processed the input data that has been entered.

Two (2) Types of Input Devices	
<p><b>1. Keyboard Entry</b> – Data is inputted to the computer through a keyboard.</p> <p><b>Keyboard</b> - The first input device developed for the PC. Today's Keyboard types were designed using wireless technology like Infrared and Bluetooth that connect into a USB port.</p>	
<p><b>2. Direct Entry</b> – A form of input that does not require data to be keyed by someone sitting at a keyboard. Direct-entry devices create machine-readable data on paper, or magnetic media, or feed it directly into the computer's CPU.</p>	
Three Categories of Direct Entry Devices	
<p><b>1. Pointing Devices</b> - An input device used to move the pointer (cursor) on screen.</p> <p>Mouse - The most common 'pointing device' used in PCs. Every mouse has two buttons, and most have one or two scroll wheels.</p>	
<ul style="list-style-type: none"> <li>• <b>Touch screen</b>- A display screen that is sensitive to the touch of a finger or stylus. They are used in myriad applications, including ATMs, retail point-of-sale terminals, car navigation, and industrial controls. The touch screen became wildly popular for smartphones and tablets.</li> </ul>	
<ul style="list-style-type: none"> <li>• <b>Light Pen</b> - A light-sensitive stylus wired to a video terminal used to draw pictures or select menu options. The user brings the pen to the desired point on screen and presses the pen button to make contact.</li> </ul>	
<ul style="list-style-type: none"> <li>• <b>Digitizer Tablet</b> - A graphics drawing tablet used for sketching new images or tracing old ones. Also called a "graphics tablet," the user contacts the surface of the device with a wired or wireless pen or puck. Often mistakenly called a mouse, the puck is officially the "tablet cursor".</li> </ul>	
<p><b>2. Scanning Devices</b>- A device that can read text or illustrations printed on paper and translates the information into a form the computer can use.</p>	
 	
<p><b>3. Voice- Input Devices</b> - Audio input devices are also known as speech or voice recognition systems that allow a user to send audio signals to a computer for processing, recording, or carrying out commands. Audio input devices such as microphones allow users to speak to the computer to record a voice message or navigate software.</p>	
<p><b>Output Devices</b></p> <p><b>1. Computer Display Monitor</b>- It displays information in visual form, using texts and graphics. The portion of the monitor that shows the information is called the screen or video display terminal.</p>	

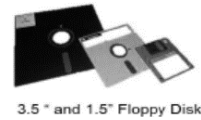
<b>Types of Monitor</b>	
<b>a. CRT Monitors</b> - Cathode Ray Tube (CRT) was the only type of display for use with desktop PCs. They are relatively big (14" to 16" deep) and heavy (over 15 lbs).	
<b>b. LCD Monitors</b> – Liquid Crystal Display (LCD) technology has been used in laptops for some time. It has recently been made commercially available as monitors for desktop PCs.	
<b>c. LED Monitors</b> (Light Emitting Diode) - A display and lighting technology used in almost every electrical and electronic product. From a tiny on/off light to digital readouts, flashlights, traffic lights, and perimeter lighting.	
<b>2. LCD Projectors</b> - utilize two sheets of polarizing material with a liquid crystal solution between them. An electric current passed through the liquid causes the crystals to align so that light cannot pass through them. Each crystal, therefore, is like a shutter, either allowing light to pass through or blocking the light.	
<b>3. SmartBoard</b> - A type of display screen that has a touch-sensitive transparent panel covering the screen, which is similar to a touch screen.	
<b>4. Printer</b> - A device that prints text or illustrations on paper.	
<b>Types of printer</b>	
<b>a) Ink-Jet or Bubble-Jet Printer</b> - spays ink at a sheet of paper. Ink-jet printers produce high-quality texts and graphics.	
<b>b) Laser Printer</b> - Uses the same technology as copy machines. Laser printers produce very high quality texts and graphics.	
<b>c) LCD and LED Printer</b> - Similar to a laser printer, but uses liquid crystals or light-emitting diodes rather than a laser to produce an image on the drum.	
<b>d) Line Printer</b> - Contains a chain of characters or pins that print an entire line at one time. Line printers are very fast but produce a low-quality print.	
<b>e) Thermal Printer</b> - An inexpensive printer that works by pushing heated pins against heat-sensitive paper. Thermal printers are widely used in calculators and fax machines.	
<b>5. Speakers</b> - Used to play sound. They may be built into the system unit or connected with cables. Speakers allow you to listen to music and hear sound effects from your computer.	

### What is a Storage Device?

Aside from the devices attached on a PC, there are also the so-called storage devices that perform a particular task in the computing system. A storage device is any apparatus for recording computer data in a permanent or semi-permanent form.

#### Types of Storage Devices

1. **Floppy diskette**- is random access, a removable data storage medium that can be used with personal computers. The term usually refers to the magnetic medium housed in a rigid plastic cartridge measuring 3.5 inches square and about 2 millimeters thick. Also called a "3.5-inch diskette," it can store up to 1.44 megabytes (MB) of data.



2. **Compact disc (CD)** – also called optical disc is a non-magnetic, polished metal disk used to store digital information. The disc is read by the CD-ROM.



3. **Digital Versatile Disc (DVD)** - an optical disc technology with 4.7-gigabyte storage capacity on a single-sided, one-layered disc, which is enough for a 133-minute movie.



4. **Thumb drive and USB flash drive**- is a plug-and-play portable storage device that uses flash memory and is lightweight enough to attach to a key chain. A USB drive can be used in place of a floppy disk, Zip drive disk, or CD.



5. **Hard drive**- is the main, and usually largest, data storage device in a computer. The operating system, software titles, and most other files are stored in the hard disk drive.

