NAME: TAGOE ZAINAB NAA AYORKOR
STUDENT ID: 01233578B

COMPUTER SYSTEM INSTALLATION AND MAINTENANCE (ASSIGNMENT)

OUTLINE
[]OUTPUT DEVICES
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OUTPUT DEVICES

An output device is a peripheral device that receives data from a computer and converts it into a form that can be perceived by a human or another device. For example, a monitor, a printer, a speaker and a projector are all types of output devices. It allows us to interact with the digital world by displaying or producing output in various forms.

TYPES OF OUTPUT DEVICES

1.Visual output devices

2.Audio output devices

3.Tactile output devices

4.Physical reproduction output devices

Visual output devices

•Visual output devices are devices that produce output that can only be seen on a screen or surface.

~Monitors: These are output devices that display information in pictorial or textual form on a screen. A monitor can be connected to a computer, a video game console, a TV tuner, or other devices that produce video signals.

~Projector: It is an output device that projects images or videos onto a large screen or a wall. It is useful for showing presentations, movies, games, or photos to a large audience.

Audio output devices

•Audio output devices are output devices that produce output that can be heard through sound waves. Examples are speakers, headphones,earphones etc.

~Speaker: It is an output device that produces sound by converting electrical signals to sound waves. It can be connected to a computer, a smartphone, a music player, or other devices to produce audio signals.

~Headphone: It is used for listening to music, watching movies, playing games or communicating with others. They are designed to be portable, wireless, noise-canceling etc.

~Earphone: It is similar to a headphone, but it is smaller and fits inside or around the ear. Earphones can vary in size, shape, design, and quality.

Tactile output devices

•These devices produce output that can be felt by touch or force feedback. Examples are braille embossers, haptic devices etc.

~Braille embosser: It is an output device that produces text as a tactile braille cell on a paper for individuals who are blind or visually impaired. A braille embosser can receive data from a computer braille notetaker, a mobile device, or a USB flash drive, and use braille translation

software to convert it into braille. A braille embosser can print single-sided or double-sided, and

use 6-dot or 8-dot braille.

~Haptic devices: These are devices that produce output that can be felt by touch or force feedback. A haptic device can simulate the texture, shape, motion, or vibration of a virtual object or environment. Haptic devices enhance the user's experience and interaction with digital media, such as games, movies or simulation.the image below is an example of a haptic device:

Physical reproduction output devices

•These devices produce output that can be printed or reproduced on paper. Examples are printers, 3D printers, plotters etc.

~Printers: A printer is an output device that takes the electronic data stored on a computer or other devices and generates a hard copy of it.

~Plotter: It is a type of printer that uses a pen or a knife to draw or cut vector graphics on paper or other materials. The image below shows a plotter:

SOFTCOPY OUTPUT DEVICES

Softcopy Output devices are devices that produce output that can be viewed on a screen or heard through speakers, but not touched or printed. Examples are monitors, headphones, speakers, and projectors.

MONITOR

SPEAKER

HEADPHONE

PROJECTOR

HARDCOPY OUTPUT DEVICES

Hardcopy Output devices are output devices that produce output on printed paper or other permanent media that can be touched or carried. Examples are printers, plotters and braille embossers.

TYPES OF MONITORS AND PRINTERS

<>MONITORS

A monitor is an output device that displays information in pictorial or textual form on a screen.

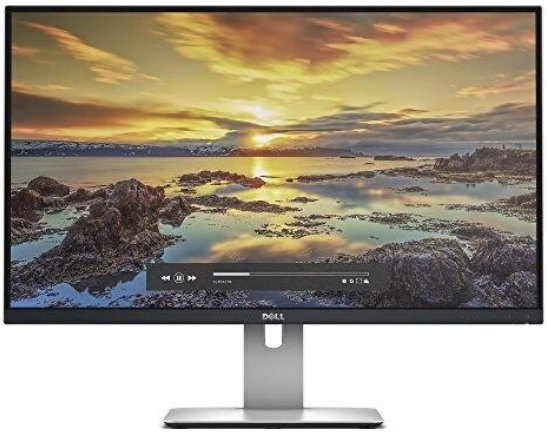
TYPES OF MONITORS

There are 8 types of monitors. They are: CRT, LCD, LED, OLED, Plasma, TFT, DIP and Touchscreen.

1.CRT(Cathode Ray Tube): These are the cheapest type of monitors, but are so large, heavy, and they consume a lot of power. They use an electron gun to fire a beam electron on a photophores-coated screen, creating an image. The image below is a CRT monitor.

2.LCD(Liquid Crystal Display): This is a thin, lightweight, and energy-efficient monitor that uses liquid crystals to allow or block the passage of light. They may have issues with contrast, viewing angles, and colour accuracy. The image below is a LCD monitor:

3.LED(Light Emitting Diode): This type of monitor is similar to LCD but it uses light-emitting diodes as backlight source instead of fluorescent lamps. LED monitors are more energy efficient, brighter, and have better contrast and colour quality than LCD monitors. However, they are also more expensive and may suffer from backlight bleeding. An image image of a LED monitor is shown below:



4.OLED(Organic Light Emitting Diode): These are monitors that use organic materials that emit light when an electric current is applied. They do not need a backlight, which means they can produce true blacks, high contrast, and wide view angles. They are also very thin and flexible, but they are very expensive and may have problems with lifespan, burn-in, and colour degradation.
5.Plasma: These are monitors that use gas-filled cells that are ignited by an electric current to create plasma, which emits ultraviolet light that excites phosphor to produce visible light. They can produce high contrast, bright colours, and fast response time, but they are also bulky, heavy, and consume a lot of power. They are also prone to image retention and screen burn-in.
6.TFT(Thin Film Transistor): These are variants of LCD monitors that use thin film transistors to improve the image quality and response time. They are also more expensive and have higher power consumption than LCD monitors.
7.DLP(Digital Light Processing): These are monitors that use an optical semiconductor called a digital micromirror device, which has millions of tiny mirrors that reflect light onto the screen. They can produce high contrast, sharp images, and vibrant colour, but they are also noisy, bulky, and expensive. They may also have a rainbow effect, where flashes of red, green, and blue colours are visible on the screen.
8.Touchscreen: These are monitors that can detect the touch or movement of a finger or a stylus on the screen, and send the input to the computer. They can be used for interactive applications, such as gaming, drawing, or navigation. They may use different technologies, such as a resistive, capacitive, infrared, or surface acoustic wave, to sense the touch.

<>PRINTERS

A printer is an output device that takes the electronic data stored on a computer or other devices and generates a hard copy of it.

TYPES OF PRINTERS

These are some types of printers. They are: Inkjet printers, Laser printers, Dye-sublimation printers, Dot-matrix printers and a 3D printer.
1.Inkjet printers: These printers use tiny nozzles to spray ink droplets onto paper. They are good for printing, photos, graphics and colour documents, but they are also slow, expensive to maintain, and prone to clogging. The image shown below an inkjet printer:

2.Laser printers: These printers use a laser beam to create an electrostatic image ona drum, which then attracts toner particles and transfers them to paper. They are fast, reliable, and cost-effective for high-volume printing, but they are also bulky, noisy, and not very good for photo printing.

3.Dye-sublimation printers: These Printers use heat to transfer dye from a ribbon onto paper or other materials. They produce high-quality, continuous-tone images that are resistant to fading, but they are also very expensive, slow and limited in paper compatibility. The image shown below is a dye-sublimation printer:

4.Dot-matrix printer: This printer uses a print head that moves back and forth and strikes an ink ribbon against paper, creating a series of dots. They are cheap, durable, and can print on multi-part

forms, but they are also noisy, low-resolution, and outdated. The image below in a dot-matrix printer:

5.3D printers: These printers use various methods to create physical objects from digital models, layer by layer. They can print with different materials, such as plastic, metal, or resin, and create complex shapes and structures. They are useful for prototyping, modeling, and manufacturing, but they are costly, time consuming, and require technical skills. The image below shows a 3D printer: