Output Devices

- Devices that display, print, or transmit the results of processing from the computer’s memory.
- Before an output can be produced by a computer it must have an output device connected to it.

Visual Display Unit (VDU)

- A visual Display Unit (VDU) or Monitors are the most popular output devices used for producing soft-copy output.
- Monitors can display graphics, text and video. The size of a monitor is measured in inches diagonally across the screen; 15, 17, 19 and 21 inch monitors are the most common sizes. A color monitor can display from 16 to over 1 million different colors.

Printers

- A printer is an output device that produces a printout or hard copy of the output from a computer. There are many types of printer available.
- The speed of printers can be measured in characters per second (CPS) or pages per minute (PPM), the higher the values are, the faster the printer can produce output.

Types of Printers

- **Impact Printers**: An impact printer forms characters and graphics on a piece of paper by striking a mechanism against an ink ribbon that physically contacts the paper.
- **Non-Impact Printers**: A non–impact printer forms characters and graphics on a piece of paper without actually striking the paper.
**TYPES OF PRINTERS**

- Daisy Wheel Printer
- Dot-Matrix Printer
- Line Printer
- Ink-Jet Printer
- Laser Printer
- Plotter

**Dot Matrix Printer**
- A dot matrix printer forms characters and graphics on the paper by producing pattern of dots.
- Dot matrix printers are relatively cheap and so is the stationery that they use.
- Dot-matrix printers are generally noisy.
- Slow, with speeds usually ranging between 30 to 600 characters per second.

**Inkjet Printer**
- This is a non-impact printer that forms characters and graphics by spraying tiny drops of liquid ink onto a piece of paper.
- Inkjet Printers are very quite to operate and can produce good quality printouts of both graphics and text.
- Inkjet printers are generally quiet.
- Inkjet printers can produce high quality color output.

**Laser Printer**
- The mechanism of how a laser printer works is similar to a photocopier. Laser printers are also known as page printers because they process and store the entire page before they actually print it.
- Laser printers can print text at speeds of four to over thirty pages per minute.
- The cost per page of toner cartridges is lower than other printers.
- Laser printers are quiet and fast.

**Daisy Wheel Printer**
- A daisywheel printer is an impact printer that uses a wheel as a print head. As the wheel rotates, a hammer strikes the backside of the spoke and presses it against the paper to print a character.
- Can print letter quality characters.
- Printing speed is very slow.

**Plotter**
- A plotter is a large printer that generates high-quality documents by moving ink pens over the surface of a page.
- Plotters are particularly useful to engineers and architects, as they produce high-quality blueprints, maps, and floor plans.
- Can print on large printers.
- High quality printing.
- Plotters are expensive.
A speaker, or speaker system, converts an electrical signal to sound.

The term loudspeaker can refer to individual transducers (known as drivers), or to complete systems consisting of an enclosure incorporating one or more drivers and electrical filter components.

Loudspeakers are the most variable elements in an audio system and are responsible for the greatest degree of audible differences between sound systems.