**Welcome**

Submitted by
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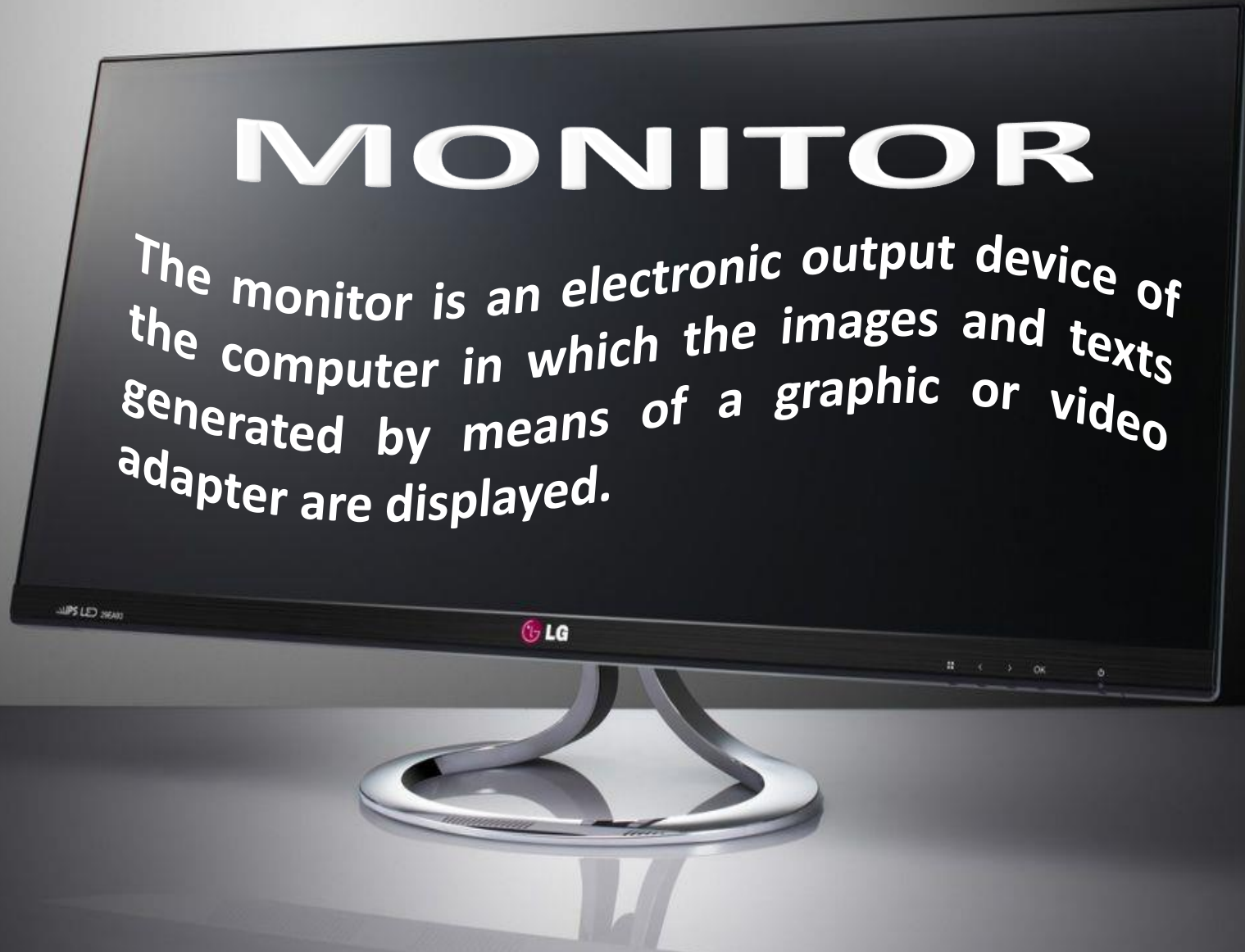**Remya T R**
**Sudeesha S D**

# OUTPUT DEVICES

# MONITOR

The monitor is an electronic output device of the computer in which the images and texts generated by means of a graphic or video adapter are displayed.

# DIFFERENT TYPES OF MONITORS

# CRT (Cathode Ray Tube) Monitors

➤ In CRT monitors, electrons are fired at phosphor dots on the screen.

➤ The dots are grouped into pixels, which glow when struck by electrons.

➤ In color CRTs, each pixel contains a red, green, and blue dot. These glow at varying intensities to produce color images.

# Flat Panel Screen Monitors

➢ Flat panel displays are thinner than CRTs.

➢ Reduced volume, weight and power requirement compared to a CRT.

➢ Two main categories:

• Emissive Displays

Electrical energy → Light Energy

Eg :- LED

• Non- Emissive Displays

Sun light → Graphics

Eg :- LCD

**Brand**       **Dell**
**Model**       **E2318H**
**Screen Size**       **23"**

**₹ 9304.55**

**Brand**       **Dell**
**Model**       **SE2717Hr**
**Screen Size**       **27"**

**₹ 11364.49**

**Brand**       **Dell**
**Model**       **P4317Q**
**Screen Size**       **43"**

**₹ 69469.07**

| | | |
|---|---|---|
| **Model** | : | **25BL55WY-B** |
| **Resolution** | : | **1920x1200 Pixels** |
| **Screen Size** | : | **25"** |

**₹ 25000**

| | | |
|---|---|---|
| **Model** | : | **32MN58HM-P** |
| **Resolution** | : | **1920 X 1080 Pixels** |
| **Screen Size** | : | **32"** |

**₹ 25000**

| | | |
|---|---|---|
| **Model** | : | **34WK95U-W** |
| **Resolution** | : | **5120 x 2160 Pixels** |
| **Screen Size** | : | **34"** |

**₹ 120000**

**Model**             :    **K242HYL Abd**

**Resolution**      :    **1920 X 1080 Pixels**

**Screen Size**     :  **24"**

**₹ 6392.21**



**Model**             :    **G276HL Kbix**

**Resolution**      :    **1920 X 1080 Pixels**
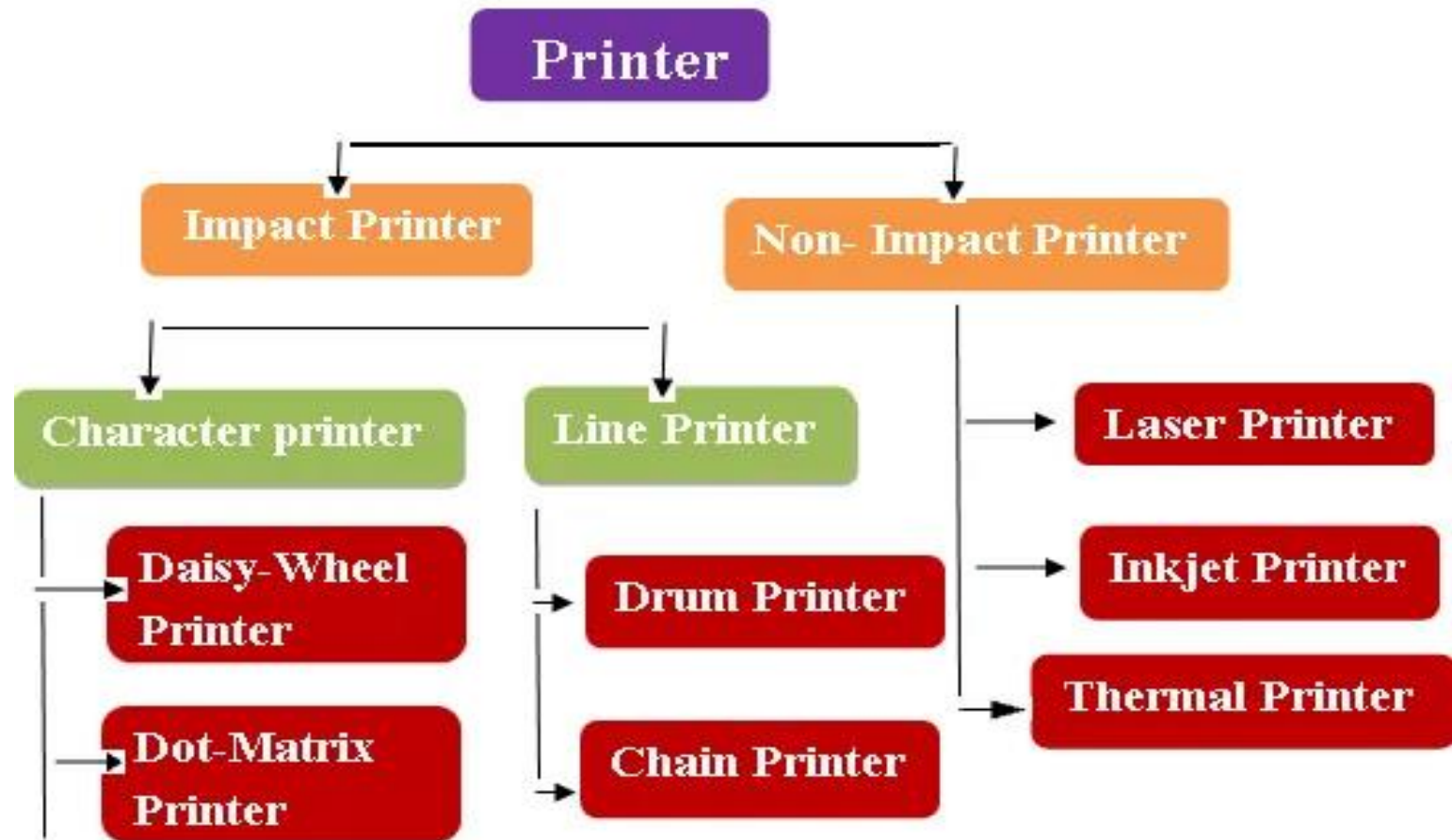
**Screen Size**     :  **27"**

**₹ 10654.16**

**PRINTERS**

# PRINTER

❑ A printer is a hard copy output device that accepts data from a computer and generates output in the form of graphics / text on a paper.

❑ Printers vary in size, speed, sophistication, and cost.

❑ In general, more expensive **printers** are used for higher-resolution color **printing**.

# TYPES OF PRINTERS

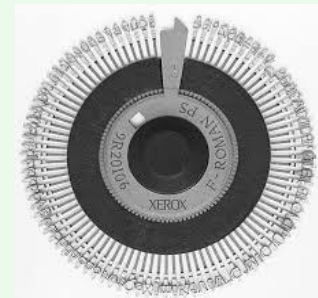# Impact Printers - An impact printer makes contact with the paper.

1. **Character printer** - Prints one character at a time

## Dot-Matrix Printers



- Print heads contains 9 to 24 pins
- Pins produce patterns of dots on the paper to form individual characters
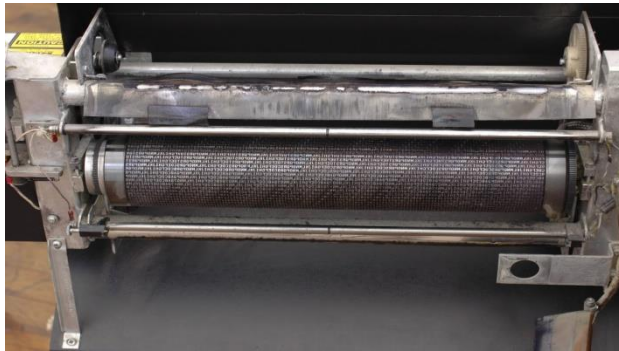- Pins strike the ribbon from left to right, then right to left, and so on.

## Daisy-Wheel Printers



- Same principle as a ball-head typewriter.
- Daisy wheel is a disk made of plastic or metal on which characters stand out in relief along the outer edge.
- Cannot print graphics
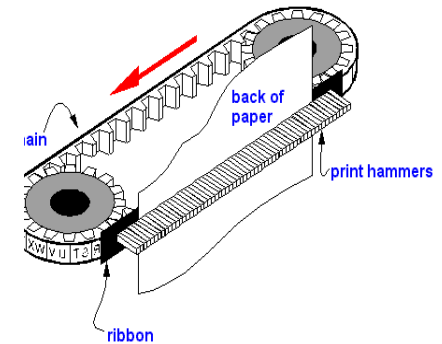- 10 to 75 characters per second.

**Line printer -** prints one entire line of text before advancing to another line.

- DRUM PRINTER



- CHAIN PRINTER



- Uses a cylindrical **drum** which contains **characters** embossed around it.
- Can not print images and different font styles.
- Cannot be used for color printing.

- Type slugs are linked together to form a chain .
- The chain spins horizontally around a set of hammers.

# **Non impact Printers** - Produces output without striking on the paper

- 1) Thermal printers:- It prints output on a special heat sensitive waxy paper. The image created on the this paper by burning dots on it.

- 2) Laser printer:- The laser printer transfers the image of output on paper using LASER technology and toner.

- 3) Inkjet printers:- It creates output on paper by spraying tiny drops of liquid ink.

# TOP PRINTERS

## Canon Maxify MB2750
*High-capacity printing at home*



**Category:** 4-in-1 colour inkjet printer

**Print speed:** 23ppm

**Paper capacity:** 500 sheets

**Paper size:** up to A4

**Weight:** 12.1kg

## Brother DCP-J774DW
*Well-built inkjet for business and pleasure*



**Category:** 3-in-1 colour inkjet printer

**Print speed:** 15ppm

**Paper capacity:** 100 sheets

**Paper size:** up to A4

**Weight:** 8kg

## Kyocera Ecosys P5026
*Rapid laser printing for the busy home office*



**Category:** colour laser printer

**Print speed:** 26ppm

**Paper capacity:** 250 sheets

**Paper size:** up to A4

**Weight:** 21kg

# Canon Pixma TR8550

*An elegant home MFD that means business*



**Category:** 4-in-1 colour inkjet printer

**Print speed:** 15ppm

**Paper capacity:** 100 sheets

**Paper size:** up to A4
**Weight:** 8kg

# Ricoh SP213w

*Prompt mono printing in a conveniently compact laser*



**Category:** mono laser printer

**Print speed:** 22ppm

**Paper capacity:** 150 sheets

**Paper size:** up to A4

**Weight:** 7.2kg

# Samsung Xpress C1810W

*Simple design, smart home printing*



**Category:** colour laser printer

**Print speed:** 18ppm

**Paper capacity:** 250 sheets

**Paper size:** up to A4
**Weight:** 16.6kg

SPEAKERS

# COMMON TYPES OF COMPUTER SPEAKERS

## MULTIMEDIA SPEAKERS

+ Cheap 2.0 speakers, kind of portable.
- Sound quality not really that great.

## SURROUND SPEAKERS

+ Good surround sound.
- Takes up a lot of space.

## SOUNDBAR

+ Long speaker that sits under screens.
- May need to be mounted.

## HOME THEATER

+ Superb sound quality.
- Expensive, takes time to setup.

## PORTABLE SPEAKER

+ Portable.
- Limited battery life, not really good sound quality.

## INTERNAL SPEAKER

+ Built into the device.
- Like it or not, it's stuck inside.

A computer speaker is an output hardware device that connects to a computer to generate sound. The signal used to produce the sound that comes from a computer speaker is created by the computer's sound card.

# THE BEST COMPUTER SPEAKERS

**Logitech G560**

The best RGB gaming speakers

**Weight:** 1.79kg (satellites) 5.5kg (sub)
**Size:** 5.8 x 6.5 x 4.6 in (satellites) 15.9 x 10 x 8.1 in (sub)
**Drivers:** 6.5-in subwoofer, 2-in tweeters
**Supported Connectivity:** USB, 3.5mm, Bluetooth

**Creative A250**

The best budget computer speakers

**Weight:** 258g (9.1oz) (left satellite) 361g (12.7oz) (right satellite) 1.56kg (3.44lbs) (sub)
**Size:** 2.83 x 5.79 x 3.11 in (satellites) 7.20 x 8.86 x 7.48 in (sub)
**Supported Connectivity:** 3.5mm

# Klipsch R-15PM

The best high end computer speakers

**Weight:** 10.3 lbs (4.67kg)
**Size:** 12.5 x 7 x 8.11 in
**Drivers:** 5.25-in subwoofer, 1-in tweeters
**Supported Connectivity:** USB, Optical, 3.5mm, Bluetooth

# Harmon Kardon SoundSticks Wireless

The best designed computer speakers

**Weight:** 1.5 lb (0.7kg) satellites 4.9 lb (2.2kg) sub
**Size:** 2 x 10 in (satellites) 9.19 x 10.19 in (sub)
**Drivers:** 6-in subwoofer, 1-in tweeters
**Supported Connectivity:** 3.5mm, Bluetooth

# HEADSET

**Headset** is a combination of speakers and microphone. It is mostly used by gamers, and is also a great tool for communicating with family and friends over the internet using some VOIP program or other.

# PROJECTOR

A device that is used to project rays of light, especially an apparatus with a system of lenses for projecting slides or film on to a screen.

# Different Kinds of Projectors

There are two common types of projectors: DLP (digital light processing), and LCD (liquid crystal display).

- CRT projectors
- LCD projectors
- DLP projectors

NOTE- A latest technology LCOS( Liquid Crystal On Silicon) has entered into the picture which is considered as a more recent variant of the LCD technology.

# CRT PROJECTORS

In the early days of projectors, CRT (cathode ray tube) projectors were commonly used. They utilized three tubes, one for each of the primary colors. Due to their large size, low light output and the frequent need to converge and align the images projected from each of the three tubes, they are no longer commonly used.

LCD projectors work by utilizing polarized mirrors that pass and reflect only certain colors of light. This causes each channel of red, green and blue to be separated and later re-converged via a prism after passing through an LCD panel that controls the intensity and saturation of each color.

LCD PROJECTORS

# DLP projectors

Type of projector technology that uses a digital micromirror device. DLP's one chip is with a reflective surface having 1,000s of tiny mirrors coordinated with a light source to reflect digital imagery to any surface.

# best projectors

## LG CineBeam HU80KSW

A 4K HDR projector with a whole home cinema system thrown in



A true one-box system
4K HDR picture is more than capable
Still need speakers for optimum sound

## BenQ HT3550

Performs like a dream



Support for 4K and HDR
Vivid, contrast-filled picture
Could be brighter
Basic, dated software

# Anker Nebula Capsule II Mini Projector

A tiny, quality home cinema projector



Android TV built-in
Full-size HDMI port
Could be brighter
Netflix must be sideloaded

# Anker Prizm II

A cheap, easy-to-use projector – though a bit on a bulky side



Very affordable
Easy to angle projection
Bulky design
Could be brighter

**Plotter** – this generates a hard copy of a digitally depicted design. The design is sent to the plotter through a graphics card, and the design is formed by using a pen. It is generally used with engineering applications, and essentially draws a given image using a series of straight lines.