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Image:- A visual representation of something is known as image. An image may be displayed through other media, including projection on a surface, activation of electronic signals, or digital display.

Type of image:- there are two type of image.

1.Raster

Raster files are saved in various formats:

- .tiff (Tagged Image File Format)
- .psd (Adobe Photoshop Document)
- .pdf (Portable Document Format)
- .jpg (Joint Photographics Expert Group)
- .png (Portable Network Graphic)
- .gif (Graphics Interchange Format)
- .bmp (Bitmap Image File)

2.Vector

Vector files are saved in various formats:

AI (Adobe Illustrator File)

EPS (Encapsulated PostScript)

PDF (Portable Document Format)

SVG (Scalable Vector Graphic)

Difference between raster and vector:-
Raster graphics are made up of orderly arranged coloured pixels to display any image .Raster-based images use bitmaps to store data which means the large the file, the larger the bitmap. The larger the size of the image, the more disk space it will take whereas, vector graphics are composed of paths using a mathematical formula that is a vector that directs the route and shape. These images have dedicated colour

gradients, scales, shadows, and shading, which means they can be scaled further without pixelating.

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Colour model:-Color models are ways to define color based on how they appear on the screen or on paper.Some common color models are:

- RGB (Red, Green, Blue): an additive color model based on transmitting light, used for TVs, projectors, and electronics screens.
- CMYK (Cyan, Magenta, Yellow, Black): a subtractive color model based on reflected light, used for physical printed surfaces.
- HSL (Hue, Saturation, Lightness): a color model that describes colors by their hue, saturation, and lightness, used for web design and graphic design.
- Lab Color: a color model that describes colors by their lightness, green-red axis, and blue-yellow axis, used for color matching and color conversion.
- RYB (Red, Yellow, Blue): a color model that uses red, yellow, and blue as the primary colors, used for art and painting.

Pixel and resolution:- Pixels are the smallest component of a digital camera sensor or a display screen. They record or show light and color, and there are millions of them in an image. Resolution is the number of pixels that exist within an image or a screen. It is measured in pixels per inch (PPI). The higher the resolution, the more detail and sharpness you will see

 1 pixel= 1/96 inches

DPI:-

DPI stands for Dots per Inch, referring to the number of ink droplets a printer will produce per inch while printing an image. The more dots of ink per inch the picture has, the more detail you will see when printed.

 DPI is used for printer resolution, to indicate the clarity and detail of an image on paper. It's an important measurement for photographers and designers, as it will

determine the quality of a printed asset – whether for a poster, a brochure or a glossy magazine

DPI is what makes an image look crisp and high-quality. The higher the number, the more ink droplets are tightly bunched together.

Video:-Video is an electronic medium for the recording, copying, playback, broadcasting, and display of moving visual media.

TYPES OF VIDEOS - Video files can have various file extensions, which indicate the format and encoding used to store the video data. Each extension is associated with a specific codec (compression-decompression algorithm) that determines how the video is encoded and decoded. Here are some common video file extensions:

1. .MP4: MP4 (MPEG-4 Part 14) is one of the most popular video file formats used for storing video and audio data. It provides good compression while maintaining high-quality video.

2. .AVI: AVI (Audio Video Interleave) is an older video file format developed by Microsoft. It can contain both audio and video data and is commonly used on Windows systems.

3. .MOV: MOV is the file format developed by Apple and is commonly associated with QuickTime media player. It is used for video and audio playback on macOS and iOS devices.

4. .WMV: WMV (Windows Media Video) is a video file format developed by Microsoft and is primarily used for Windows Media Player.

HTML -

HTML stands for "HyperText Markup Language." It is the standard

markup language used to create and structure the content of websites

and web pages. HTML provides a set of predefined tags (markup

elements) that define the structure and layout of a web page's content,

such as headings, paragraphs, links, images, and various other elements.

HTML documents consist of a series of tags, which are enclosed in angle

brackets ("< >") and usually come in pairs with an opening tag and a

closing tag. The opening tag denotes the beginning of an element, and

the closing tag indicates its end. The content between the opening and

closing tags defines the element's purpose and appearance on the web

page.

WEBSITE -

A website is a collection of related web pages hosted on a web server

and accessible through the internet. It is a digital platform designed to

provide information, content, services, or functionality to users across

the world wide web.

Websites are created using web development technologies such as

HTML (HyperText Markup Language) for content structure, CSS

(Cascading Style Sheets) for presentation and layout, and JavaScript for

interactivity. These technologies work together to create a user-friendly

and visually appealing experience for visitors.

HOSTING -

Hosting refers to the process of making a website, web application, or

digital product accessible and available to users over the internet.

Hosting involves storing all the necessary files, data, and resources

related to the product on a web server, which allows users to access and

interact with the product through their web browsers.

**When a website or web application is hosted, it becomes
accessible by its unique domain name (e.g.,
www.example.com), and users can visit the website by typing
the domain name into their web browsers. Hosting ensures
that the website's files and data are stored securely and are**

available for retrieval whenever a user requests to view the website.

AR/VR/MR -

AR, VR, and MR are terms related to immersive technologies that enhance the user experience by blending digital content with the real world or creating entirely virtual environments.

AR (Augmented Reality): Overlays digital content onto the real world, allowing users to interact with both real and virtual elements.

VR (Virtual Reality): Creates a fully immersive, computergenerated environment, isolating users from the physical world.

MR (Mixed Reality): Combines digital content with the real world, allowing virtual elements to interact with real-world objects and environments.