ADDING GRAPHICS TO HTML DOCUMENT

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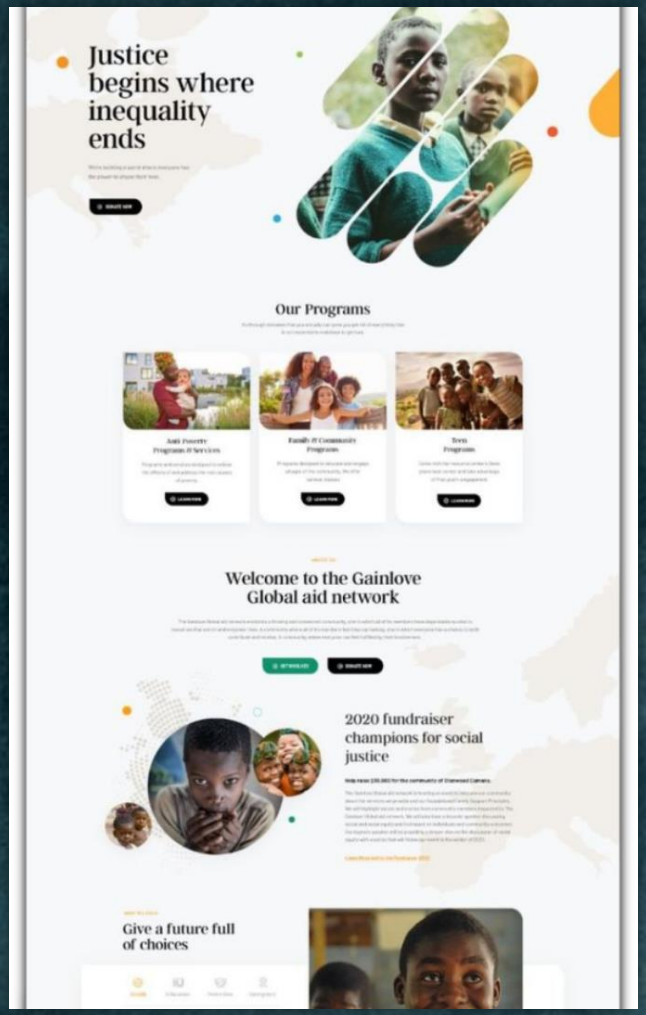
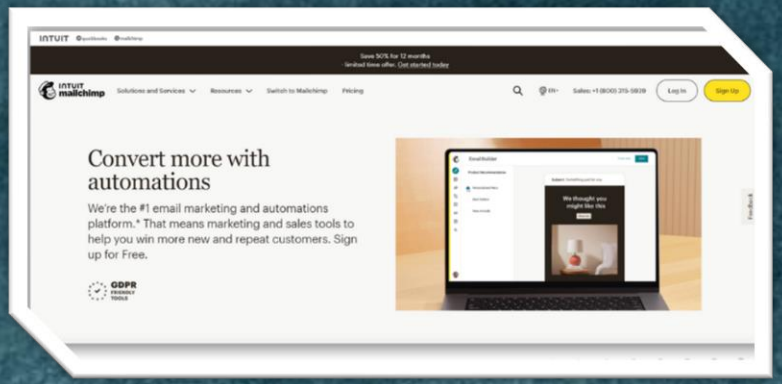
INTRODUCTION



Images can improve the design and the appearance of a web page. It helps to Visualize your web page. It makes the Web page more **attractive and self-explanatory.** Image can be used in many ways, such as displaying photographs, logos, banners, product and maps etc.



ADVANTAGES AND DISADVANTAGES

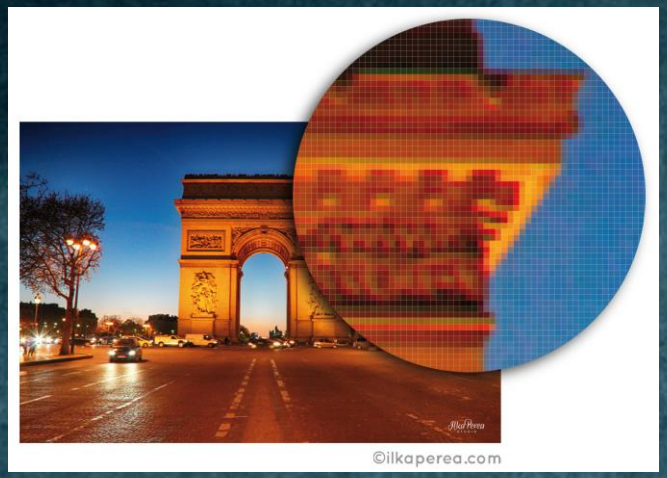
+ They can help you reinforce specific brand elements.	- Adding images, make the retrieval time high for a document.
+ They can draw attention to specific web page elements.	- Large, high-resolution images require more time to download, which can result in slow page load times.
+ Images make the web page colourful and attractive.	
+ Images are the tools to clarify and illustrate the contents of your web page.	- you need to consider visually impaired and colorblind users when planning your content.

IMAGE BASICS

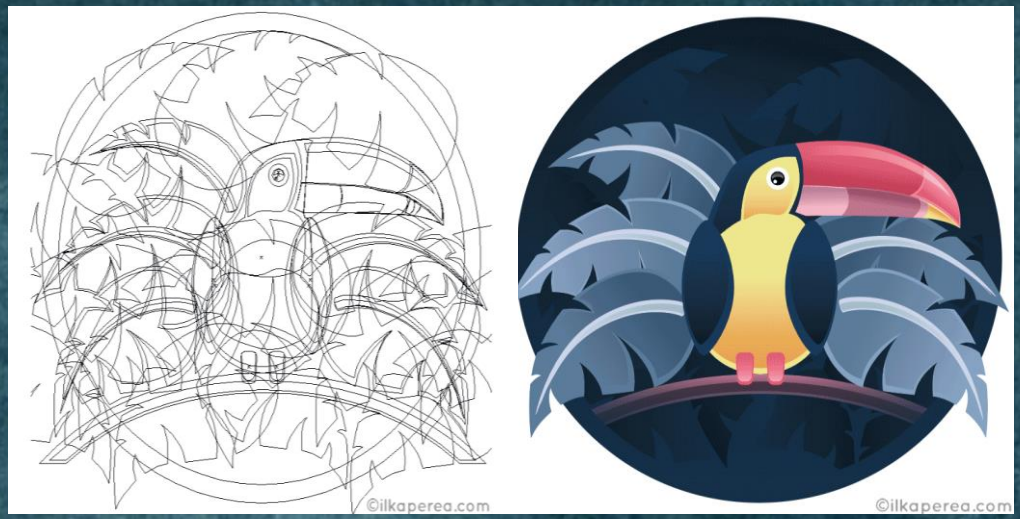
- **PIXEL:-**
  - PIXEL stands for picture element which is the basic building block of an image. A computer screen is broken up into thousands of tiny dots arranged in the form of rows & columns and pixel is one or more dots that are treated as a unit

➢ BITMAP AND VECTOR GRAPHICS:-

A bitmap (also called a raster) graphic is created from a grid of pixels, tiny squares of individual colors. The pixels form the image. The images that appear on a computer monitor, are downloaded from the Internet, printed in communications, scanned photos, and taken by digital cameras are bitmap images. Ex:- Jpg, gif, png



Vector images are generated by mathematical equations. Vectors are made up of lines joining points in different directions and are combined to generate drawings, known as vector shapes. Using mathematical formulas, vector images can define position, shape, color, and other attributes that together create an image. Ex:- svg, ai, eps



<IMG>ELEMENT

- The HTML <img> tag is used to **embed** an image in a web page.
- Images are not technically inserted into a web page. Images are linked to web pages. The <img> tag creates a holding space for the referenced image.
- The <img> tag is empty, it contains attributes only, and does not have a closing tag.

- **SYNTAX OF ATTRIBUTES:-**

  <tag name attributeName = “attribute value”>

- **SYNTAX OF <IMG> ELEMENT:-**

```
<body>
    <img src="address_of_image.extension" alt="This is an image">
</body>
```

ATTRIBUTES OF <IMG> TAG

ATTRIBUTE	VALUE	DISCRIPTION
Src	url	Specifies the URL of an image
Alt	text	Specifies an alt text for an image
Height	pixels(default)/%/in/ cm/pt/em/rem	Specifies the height of an image
Width	pixels(default)/%/in/ cm/pt/em/rem	Specifies the width of an image
Title	text	Specifies title text of an image
Align	top/bottom/left /right	Specifies the alignment of an image. (deprecated)
Border	pixels(default)/%/in/ cm/pt/em/rem	Specifies the width of the border around an image. (deprecated)

CODE AND OUTPUT

```
<body>
<img src="flower_image.jpeg" alt="This is an image of a flower" height="250" width="250"
title="This is an image" align="right" border="7" >
</body>
```

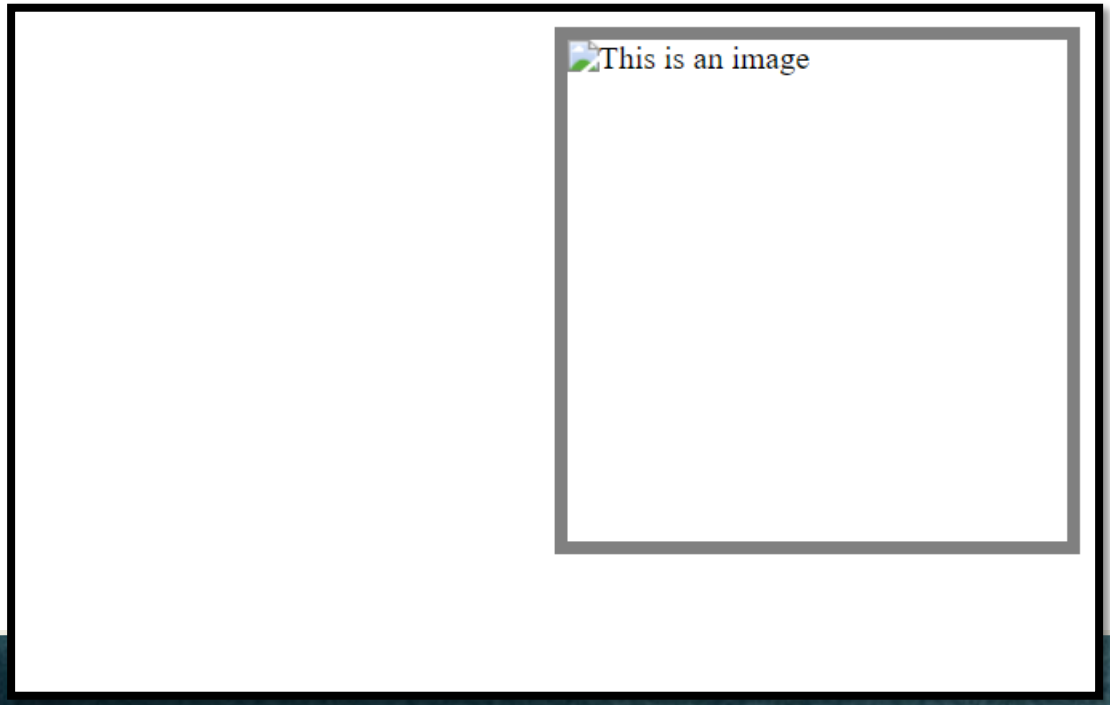


IMAGE AS LINKS

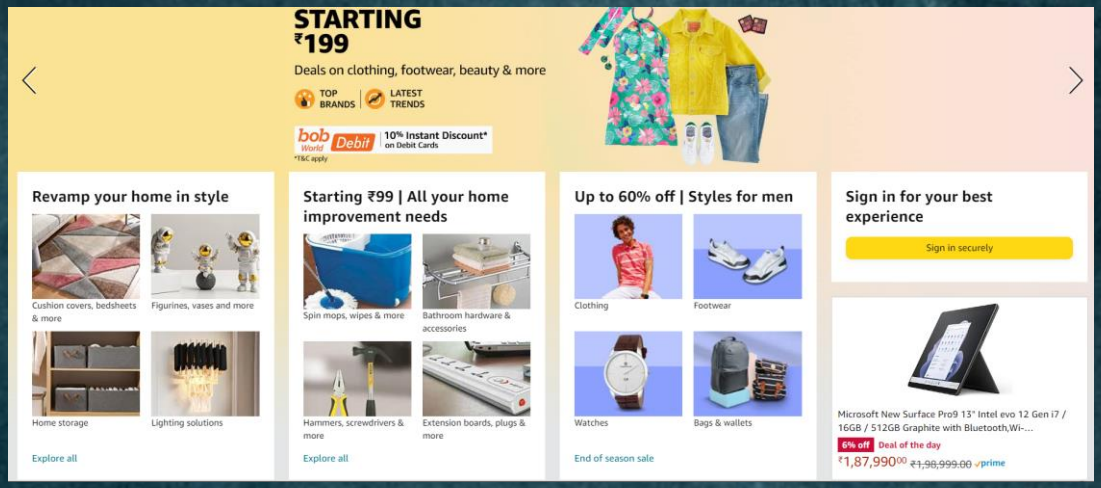


Image can also work as a link or clickable image. It is extremely helpful in those situations when you want to display a large number of images on a single page. The <img> and the <a> tags together is the most common way of adding a clickable image link in HTML.

```
<body>
    <a href="product description"><img src="image.jpg"></a>
</body>
```

URL

URL (Uniform Resource Locator) is an address which allow us to move to the destined location.

Types of URL:-

- Absolute URL
- Relatiove URL

Absolute URL:- An absolute URL is the full URL. It include start to end path i.e. source file → target file. Absolute URL is used to link the webpage already uploaded in the server → external webpage.

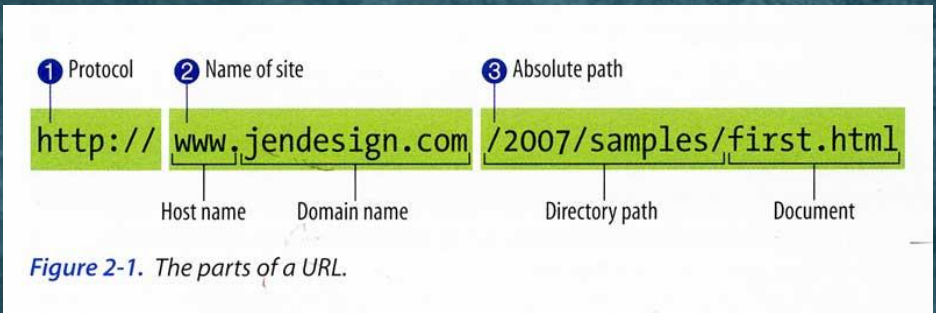


Figure 2-1. The parts of a URL.

Relative URL:- Relative URL is local links - render to the image which you want to display in your web page. It is used to move from current file to the target file path.

Moving into the file location

- **Files in the same folder** → Write the target file name with extension in the URL.

For Ex:- <img src="index.html">

- **Moving into the folders** → If the image is in another folder next to the source file. Then Write the name of the folder and file name separated by **/**

For Example:- FolderName/filename.extension

```
<body>
    <img src="flower.jpg">
    <img src="images/flower.jpg">
    <img src="../images/flower.jpg">
</body>
```

IMAGE FILE TYPES

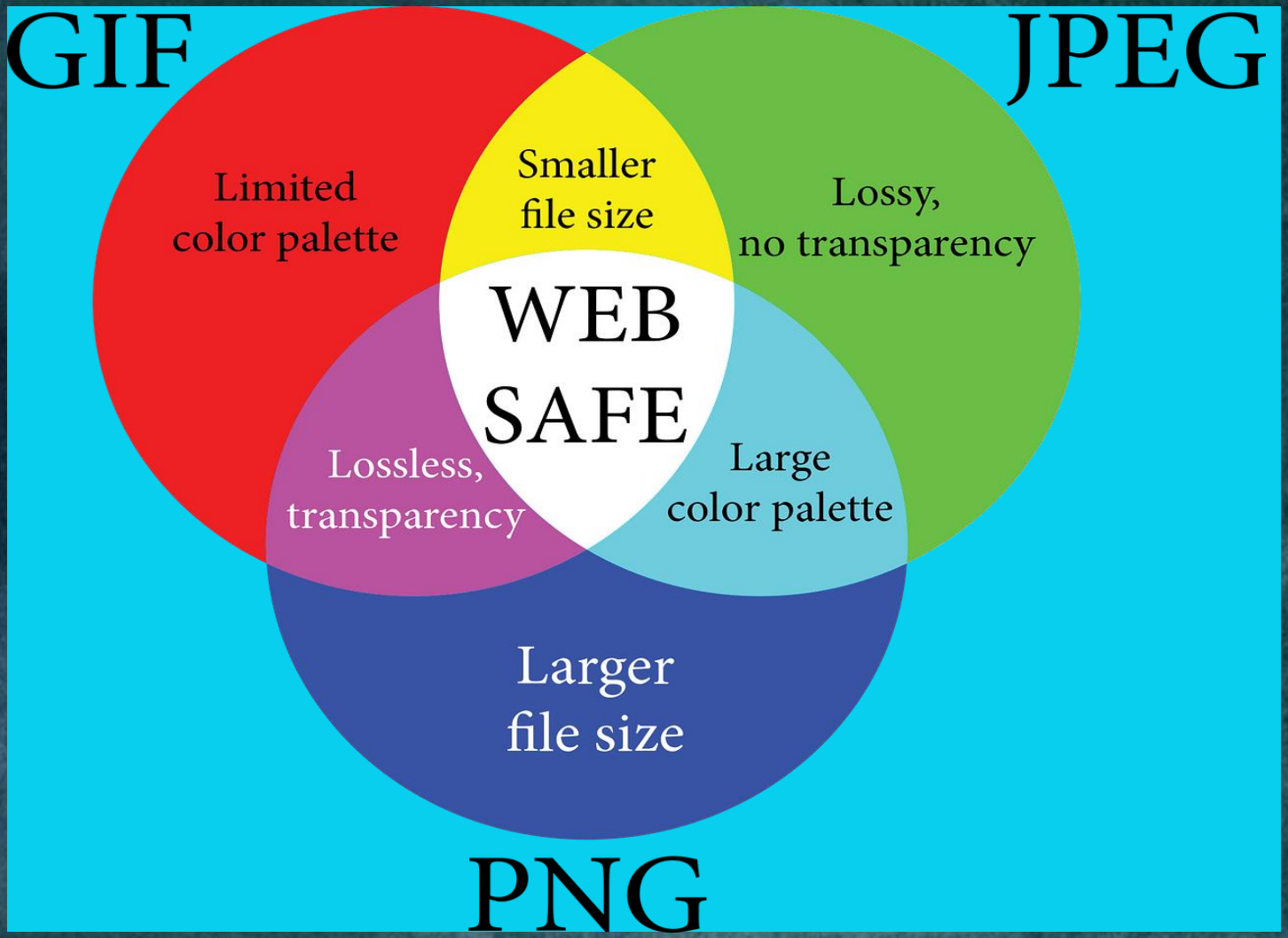


IMAGE FILE TYPES

JPEG/JPG :- JPEG (Joint Photographic Experts Group). The JPEG file type is one of the world's most widely used image file formats. This format use 24-bit colors. It is used when small file size is more important than image quality. These type of file use the extensions .jpg or .jpeg

PNG :- PNG (Portable Network Graphics) is used to display high-quality digital images. It is mostly used in logos, icons, line-art. PNG support transparency for 24 bit RGB images. Ex:- .png

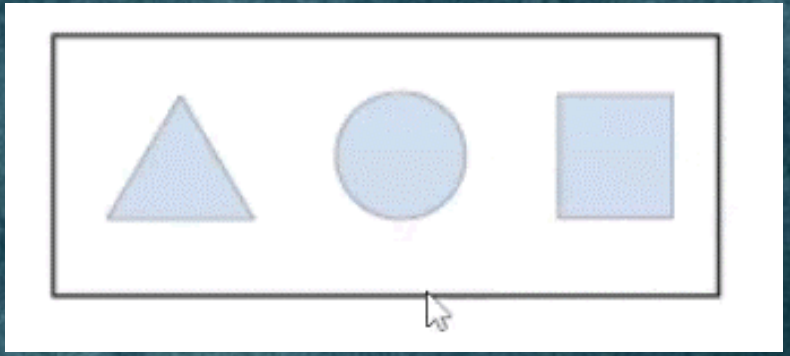
GIF :- GIF (Graphics Interchange Format) is used to display animated images. It offers transparency and animation. Ex:- .gif

IMAGE MAPPING

An **Image Map** is another hyperlink technique that is used to link two or more different hyperlinks to a single image file.
For example:- map of country having different states that boundary of each state is separated from the other, whenever a visitor clicks a particular image on corresponding to a state, the web browser displays the webpage linked with that region.

Types of Image Mapping:-

- Server side Image Maps
- Client side Image Maps



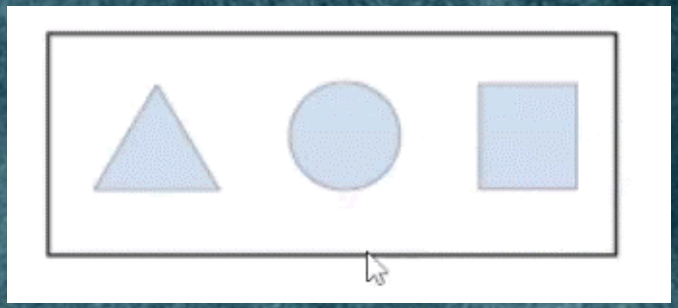
- **Server side Image Maps :-** Server-side image maps give positional information to the server through web browser, about the position on an image where the user clicks. The server makes pixe-by-pixel decisions about what content to return in response.

```
<body>
    <a href="/file-path/ismap.map"><img src="/file-path/sun.jpg" alt="Image Mapping" ismap></a>
</body>
```

The ismap image attribute is used to identify an image as part of a server-side image map.

- **Client side Image Maps :-** A client side image map, specify a list of areas that will be used as the links. In this type of image mapping the user can immediately view that clicking on the particular area is useful or not, in contrast to the server-side image map where user have to wait for reply from server.

```
<body>
    <h1>Geometrical shapes</h1>
    <img src="images/mapping.jpg" alt="shapes" title="Shapes" height="300" width="500" usemap="#geo_shape">
    <map name="geo_shape">
        <area shape="circle" coords="70,130,70" href="circle.jpeg" alt="circle" title="circle">
        <area shape="rect" coords="200,70,300,210" href="cube.jpeg" alt="cube" title="cube">
        <area shape="poly" coords="430,15,370,190,490,180" href="cone.png" alt="cone" title="cone">
    </map>
</body>
```



THANK YOU!