HTML Images

In earlier times, the web pages only contains textual contents, which made them appear quite boring and uninteresting. Fortunately, it wasn't long enough that the ability to embed images on web pages was added for users. How to add images to the web page that will make the website attractive & various methods to insert the images.

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The <img> tag is an empty tag, which means that, it can contain only list of attributes and it has no closing tag.
We can use PNG, JPEG or GIF image file based on your comfort but make sure you specify correct image file name in **src** attribute. Image name is always case sensitive.The **alt** attribute is a mandatory attribute which specifies an alternate text for an image, if the image cannot be displayed.

There are 2 ways to insert the images into a webpage:

By providing a full path or address (URL) to access an internet file.

By providing the file path relative to the location of the current web page file.

Adding images on a webpage: The <img> tag is used to add or embed the images to a webpage/website. The "img" tag is an empty tag, which means it can contain only a list of attributes and it has no closing tag. The addition of the images improves the quality along with enhancing the design structure, appearance of the webpage. Nowadays, a website does not directly add images to a web page, as the images are linked to web pages by using the <img> tag which holds space for the image.

Syntax:

<img src="url" alt="some_text" width="" height="">

```
<!DOCTYPE html>
<html>
<head>
<title>Using Image in Webpage</title>
 </head> <body> <p>Simple Image Insert</p>
<img src = "C:\Users\KIRAS3\Pictures\pic1.jpg" alt = "Test Image" />
<img src = "KIRAS/Pictures/pic2.jpg" alt = "Test Image" />
<img src = "https://cdn.pixabay.com/photo/2012/03/01/00/55/flowers-
19830_1280.jpg" alt = "Test Image" />
</body> </html>
```

Simple Image Insert

Test Image

Attribute: The **<img>** tag has following attributes:

src: It is used to specify the path to the image.

alt: It is used to specify an alternate text for the image. It is useful as it informs the user about what the image means and also due to any network issue if the image cannot be displayed then this alternate text will be displayed.

crossorigin: It is used to import images from third-party sites that allow cross-origin access to be used with canvas or tag specifies that CORS (Cross origin resources sharing) is supported when loading video files from a third party server or domain. CORS is a standard mechanism used to retrieve files from other domains.

height: It is used to specify the height of the image.

width: It is used to specify the width of the image.

ismap: It is used to specify an image as a server-side image map.

loading: It is used to specify whether a browser should defer the loading of images until some conditions are met or load an image immediately.

longdesc: It is used to specify a URL to a detailed description of an image.

referrerpolicy: It is used to specify which referrer information to use when fetching an image i.e. no-referrer, no-referrer-when-downgrade, origin, origin-when-cross-origin, unsafe-url.

sizes: It is used to specify image sizes for different page layouts.

srcset: It is used to specify a list of image files to use in different situations.

usemap: It is used to specify an image as a client-side image map.

src: The src stands for source. Every image has an src attribute which tells the browser where to find the image you want to display. The URL of the image provided points to the location where the image is stored. When the webpage loads for the first time, then the browser gets the image from a web server and inserts it into the page. If the image is not spotted by the browser then users will get a broken link icon. It might be possible if the file path is wrong or the image got deleted from that location.

alt: If the image cannot be displayed then the alt attribute acts as an alternative description for the image. The value of the alt attribute is a user-defined text. It generally happens when the user, for some reason, cannot view it due to a slow internet connection or an error in the src attribute, or if the user uses a screen reader.

Setting width and height of Image: The width and height attributes are used to specify the height and width of an image. The attribute values are specified in pixels by default. The width and height attributes are always declared in pixels.
width="300"
 height="300"
<img src="img_girl.jpg" alt="Girl in a jacket" style="width:500px;height:600px;">
Alternative method:
<img src="img_girl.jpg" alt="Girl in a jacket" width="500" height="600">

```
<!DOCTYPE html>
<html>
<head>
<title>Using Image in Webpage</title>
 </head> <body> <p>Simple Image Insert</p>
<img src = "C:\Users\KIRAS3\Pictures\pic1.jpg"  style="width:300px;height:400px;"
alt = "Test Image" />
</body>
</html>
```

Simple Image Insert

Adding titles to Image: Along with the images, titles can also be added to images to provide further information related to the inserted image. For inserting a title, the title attribute is used.

```
title="Logo of GeeksforGeeks"
```

inserted image using <img> tag:

Logo of GeeksforGeeks

Setting style to the Image: We are using the border property to decorate the image. By default, every picture has a border around it. By using the border attribute, the thickness of the border can be changed. A thickness of "0" means that there will be no border around the picture.

```
border="5"
```

Aligning an Image: By default, an image is aligned on the left side of the page, but it can be aligned to the centre or right using the align attribute.

```
align="right"
```

```
<!DOCTYPE html>
<html>
<head>
<title>Using Image in Webpage</title>
</head> <body> <p>Simple Image Insert</p>
<img src = "C:\Users\KIRAS3\Pictures\pic1.jpg" width="200" height="300" border="5"
align="right" alt = "Test Image" />
<img src = "C:\Users\KIRAS3\Pictures\pic1.jpg" style="width:300px;height:400px;" alt =
"Test Image" />
</body>
</html>
```

Simple Image Insert

Using Image as a background: An image can be used as a background for a webpage. For this, we use the background-image property of CSS.

```
<body style="background-image: url>
```

```
<!DOCTYPE html>
<html>
<head>
<title>Using Image in Webpage</title>
</head>
<body <body style="background-image:url('https://fileinfo.com/img/ss/xl/jpg_44.png');">
<p>Simple Image Insert</p>
<img src = "C:\Users\KIRAS3\Pictures\pic2.jpg"  width="200" height="300" border="5"
align="right" alt = "Test Image" title="Nature"  />
<img src = "C:\Users\KIRAS3\Pictures\pic1.jpg"
style="width:300px;height:400px;title:Nature;" alt = "Test Image" />
</body>
</html>
```

Supported Browsers:
Google Chrome 93.0
Internet Explorer 11.0
Microsoft Edge 93.0
Firefox 92.0
Opera 78.0
Safari 14.1

Adding Image as a Link: An image can work as a link with a URL embedded in it. It can be done by using the "img" tag inside an "a" tag. We need to specify the file path in order to render the image on the webpage. File paths are used to link external resources such as images, videos, style sheets, JavaScript, displaying other web pages, etc. To insert a file on a web page its source must be known.

File paths are of two types:

Absolute File Paths: It always contains the root element along with the complete directory list required to locate the file.

Relative File Paths: It is the hierarchical path representation that locates the file or folder on a file system beginning from the current directory.

```
<!DOCTYPE html>
<html>
<head>
<title>Image Link Page>
</title>
</head>
<body>
<h2>Image as a Link</h2>
<a href="https://www.youtube.com">
<img src="C:\Users\KIRAS3\Pictures\youtube.png"
width="80" height="80">
</a><br/>
<a href="https://www.facebook.com">
<img src="C:\Users\KIRAS3\Pictures\facebook.png"
width="80" height="80">
</a>
</body>
</html>
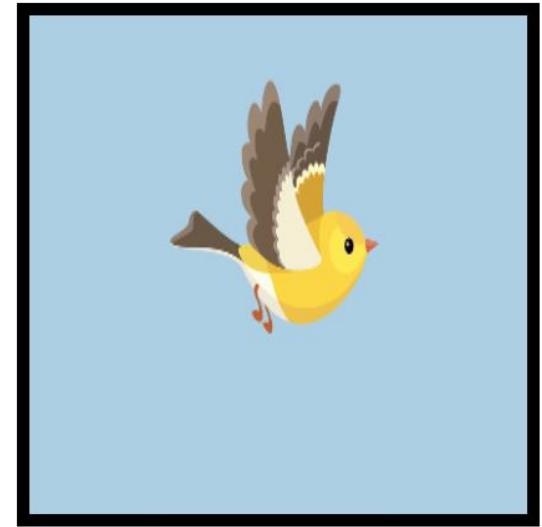```

**Image as a Link**

**Animated Images**
HTML allows animated GIFs:

```
<!DOCTYPE html>
<html>
<head>
<title>Using Image in Webpage</title>
</head>
<img src = "https://www.adorama.com/alc/wp-
content/uploads/2021/05/bird-wings-flying-feature.gif" alt =
"Test Image" width="400" height="400" border="10"
align="centre" title="Hello"/>
</body>
</html>
```

Image Map

In image mapping an image is specified with certain set of coordinates inside the image which act as hyperlink areas to different destinations. It is different from an image link since in image linking, an image can be used to serve a single link or destination whereas in a mapped image, different coordinates of the image can serve different links or destinations.

Elements required in Mapping an Image :
There are three basic html elements which are required for creating a mapped image.
Map : It is used to create a map of the image with clickable areas.
Image : It is used for the image source on which mapping is done.
Area : It is used within the map for defining clickable areas.

```html
<html>
<body>

<h2>Image Maps</h2>
<p>Click on the computer, the tablet, or the mobile to go to a new page and read
more about the topic:</p>

<img src="C:\Users\KIRAS3\Pictures\device.jpg"  alt="Workplace"
usemap="#workmap" width="400" height="379">

<map name="workmap">
  <area shape="rect" coords="34, 44, 200, 200" alt="Computer" href="
https://www.tutorialspoint.com/computer_fundamentals/computer_overview.htm
">
  <area shape="rect" coords="290,172,333,250" alt="Tablet"
href="https://www.tutorialspoint.com/basics_of_computer_science/basics_of_com
puter_science_types.htm">
  <area shape="rect" coords="350,300,380,44" alt="Mobile"
href="https://www.oreilly.com/library/view/mobile-design-
and/9780596806231/ch01.html">
</map>
</body>
</html>
```

Image Maps

Click on the computer, the tablet, or the mobile to go to a new page and read more about the topic:

HTML Audio Tag

HTML audio tag is used to define sounds such as music and other audio clips. Since the release of HTML5, audios can be added to webpages using the "audio" tag. Previously, audios could be only played on web pages using web plugins like Flash. The "audio" tag is an inline element that is used to embed sound files into a web page. It is a useful tag if want to add audio such as songs, interviews, etc. on webpage. Currently there are three supported file format for HTML 5 audio tag.

mp3

wav

ogg

Browser	MP3	WAV	OGG
Google Chrome	Yes	Yes	Yes
Internet Explorer	Yes	No	No
Firefox	Yes	Yes	Yes
Opera	Yes	Yes	Yes
Safari	es	Yes	No

Syntax:

```
<audio>
 <source src="sample.mp3" type="audio/mpeg">
</audio>
```

Attributes: The various attributes that can be used with the "audio" tag are listed below:

- Controls: Designates what controls to display with the audio player.
- Autoplay: Designates that the audio file will play immediately after it loads controls.
- Loop: Designates that the audio file should continuously repeat.
- src: Designates the URL of the audio file.
- muted: Designates that the audio file should be muted.
- preload:It specifies the author view to upload audio file when the page loads.

```
<html>
<head>
<title>Audio Page</title>
</head>
<audio controls autoplay>
<source src =
"C:\Users\KIRAS3\Downloads\audio/audio2.wav" type =
"audio/wav"  />
 </audio>
 </body>
</html>
```

Adding audio with multiple sources: Multiple sources of audios are specified so that if the browser is unable to play the first source, then it will automatically jump to the second source and try to play it.

```html
<html>
<head>
<title>Audio Page</title>
</head>
<audio controls autoplay>
<source src = "C:\Users\KIRAS3\Downloads\audio/audio1.wav"
type = "audio/wav" />
 <source src = "C:\Users\KIRAS3\Downloads\audio/audio2.wav"
type = "audio/wav" />
 </audio>
 </body>
</html>
```