

## CHAPTER 10

### HTML LINKS

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#### Learning Objectives:

After reading this INFORMATION SHEET, YOU MUST be able to:

- ❖ Create a link within a web page to navigate from one page to another page;

Nowadays every activity like browsing, surfing, downloading depends only on links. Basically links are divided into two types as listed below. This chapter demonstrates about the HTML Links.

### CHAPTER 10.1: Text Links

A webpage can contain various links that take you directly to other pages and even specific parts of a given page. These links are known as hyperlinks.

Hyperlinks allow visitors to navigate between Web sites by clicking on words, phrases, and images. Thus you can create hyperlinks using text or images available on a webpage.

#### Linking Documents

A link is specified using HTML tag `<a>`. This tag is called **anchor tag** and anything between the opening `<a>` tag and the closing `</a>` tag becomes part of the link and a user can click that part to reach to the linked document. Following is the simple syntax to use `<a>` tag.

```
<a href = "Document URL" ... attributes-list>Link Text</a>
```

#### Example

Let's try following example which links <http://www.facebook.com> at your page –

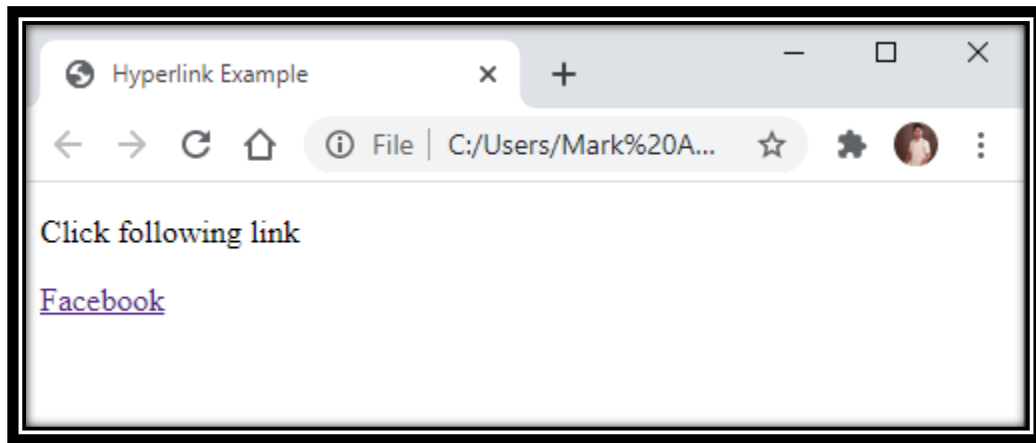
```
<!DOCTYPE html>
<html>

  <head>
    <title>Hyperlink Example</title>
  </head>

  <body>
    <p>Click following link</p>
    <a href = "https://www.facebook.com" target = "_self">Facebook</a>
  </body>

</html>
```

This will produce the following result, where you can click on the link generated to reach to the home page of Tutorials Point (in this example).



## The target Attribute

We have used **target** attribute in our previous example. This attribute is used to specify the location where linked document is opened. Following are the possible options –

Sr.No	Option & Description
1	<b>_blank</b> Opens the linked document in a new window or tab.
2	<b>_self</b> Opens the linked document in the same frame.
3	<b>_parent</b> Opens the linked document in the parent frame.
4	<b>_top</b> Opens the linked document in the full body of the window.
5	<b>targetframe</b> Opens the linked document in a named <i>targetframe</i> .

## Example

Try following example to understand basic difference in few options given for target attribute.

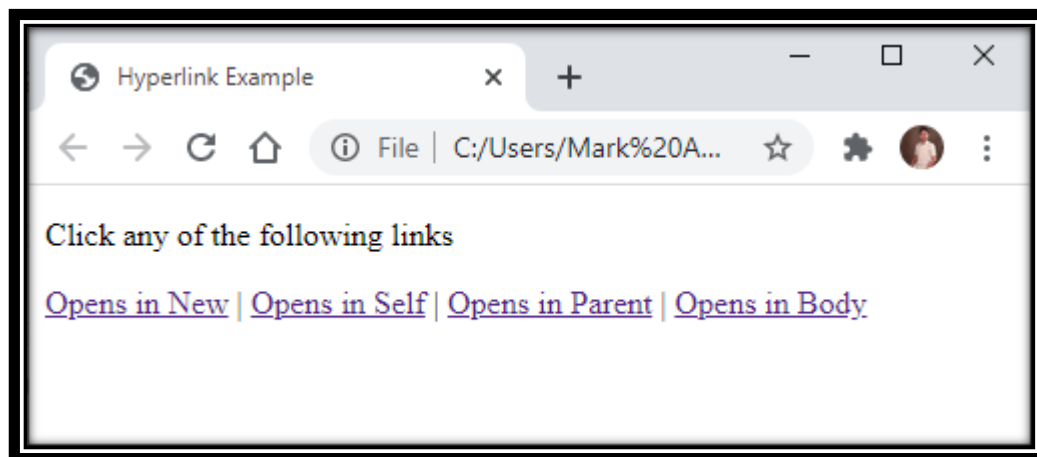
```
<!DOCTYPE html>
<html>

  <head>
    <title>Hyperlink Example</title>
    <base href = "https://www.facebook.com/">
  </head>

  <body>
    <p>Click any of the following links</p>
    <a href = "/signup" target = "_blank">Opens in New</a> |
    <a href = "/signup" target = "_self">Opens in Self</a> |
    <a href = "/signup" target = "_parent">Opens in Parent</a> |
    <a href = "/signup" target = "_top">Opens in Body</a>
  </body>

</html>
```

This will produce the following result, where you can click on different links to understand the difference between various options given for target attribute.



## Use of Base Path

When you link HTML documents related to the same website, it is not required to give a complete URL for every link. You can get rid of it if you use **<base>** tag in your HTML document header. This tag is used to give a base path for all the links. So your browser will concatenate given relative path to this base path and will make a complete URL.

### Example

Following example makes use of **<base>** tag to specify base URL and later we can use relative path to all the links instead of giving complete URL for every link.

```
<!DOCTYPE html>
<html>

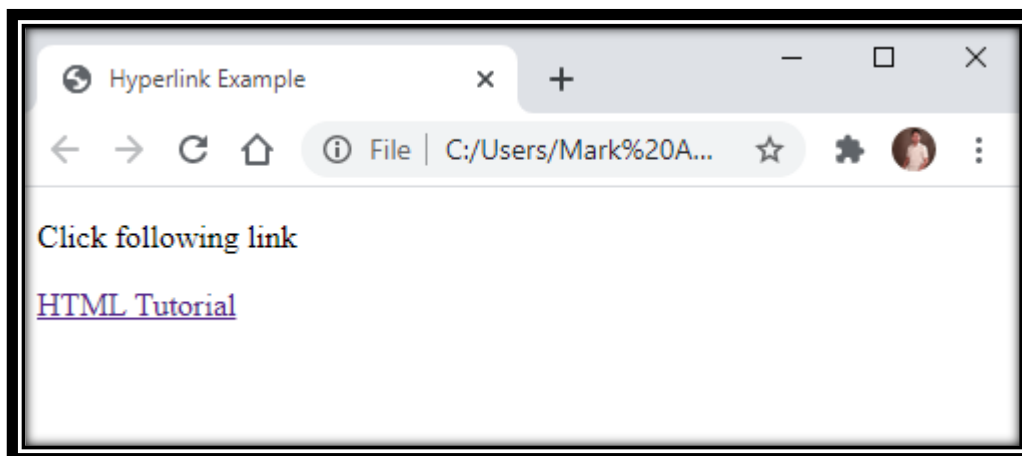
  <head>
    <title>Hyperlink Example</title>
    <base href = "https://www.facebook.com/">
  </head>

  <body>
    <p>Click following link</p>
    <a href = "/signup" target = "_blank">HTML Tutorial</a>
  </body>

</html>
```

This will produce the following result, where you can click on the link generated **HTML Tutorial** to reach to the Facebook Signup.

Now given URL **<a href = "/signup">** is being considered as **<a href = "https://www.facebook.com/signup">**



## Linking to a Page Section

You can create a link to a particular section of a given webpage by using **name** attribute. This is a two-step process.

**Note** – The *name* attribute deprecated in HTML5. Do not use this attribute. Use *id* and *title* attribute instead.

First create a link to the place where you want to reach with-in a webpage and name it using `<a...>` tag as follows –

```
<h1>HTML Text Links <a name = "top"></a></h1>
```

Second step is to create a hyperlink to link the document and place where you want to reach –

```
<a href = "/html/html_text_links.htm#top">Go to the Top</a>
```

This will produce following link, where you can click on the link generated **Go to the Top** to reach to the top of the HTML Text Link tutorial.

[Go to the Top](#)

## Setting Link Colors

You can set colors of your links, active links and visited links using **link**, **alink** and **vlink** attributes of `<body>` tag.

### Example

Save the following in test.htm and open it in any web browser to see how **link**, **alink** and **vlink** attributes work.

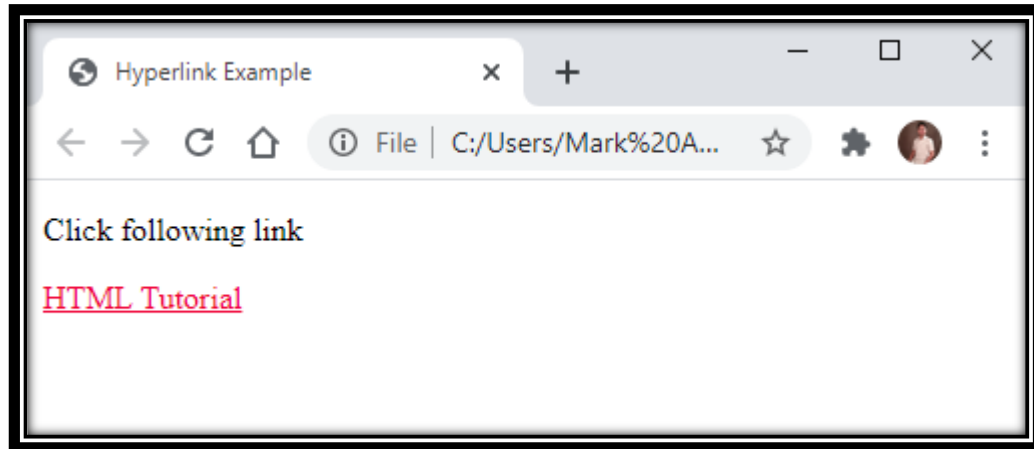
```
<!DOCTYPE html>
<html>

  <head>
    <title>Hyperlink Example</title>
    <base href = "https://www.tutorialspoint.com/">
  </head>

  <body alink = "#54A250" link = "#040404" vlink = "#F40633">
    <p>Click following link</p>
    <a href = "/html/index.htm" target = "_blank" >HTML Tutorial</a>
  </body>

</html>
```

This will produce the following result. Just check color of the link before clicking on it, next check its color when you activate it and when the link has been visited.



## Download Links

You can create text link to make your PDF, or DOC or ZIP files downloadable. This is very simple; you just need to give complete URL of the downloadable file as follows –

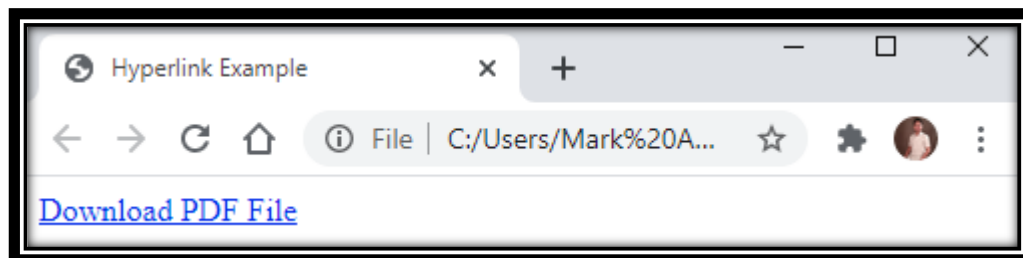
```
<!DOCTYPE html>
<html>

  <head>
    <title>Hyperlink Example</title>
  </head>

  <body>
    <a href = "https://www.tutorialspoint.com/page.pdf">Download PDF File</a>
  </body>

</html>
```

This will produce following link and will be used to download a file.



## CHAPTER 10.2: Image Links

We have seen how to create hypertext link using text and we also learnt how to use images in our webpages. Now, we will learn how to use images to create hyperlinks.

### Example

It's simple to use an image as hyperlink. We just need to use an image inside hyperlink at the place of text as shown below –

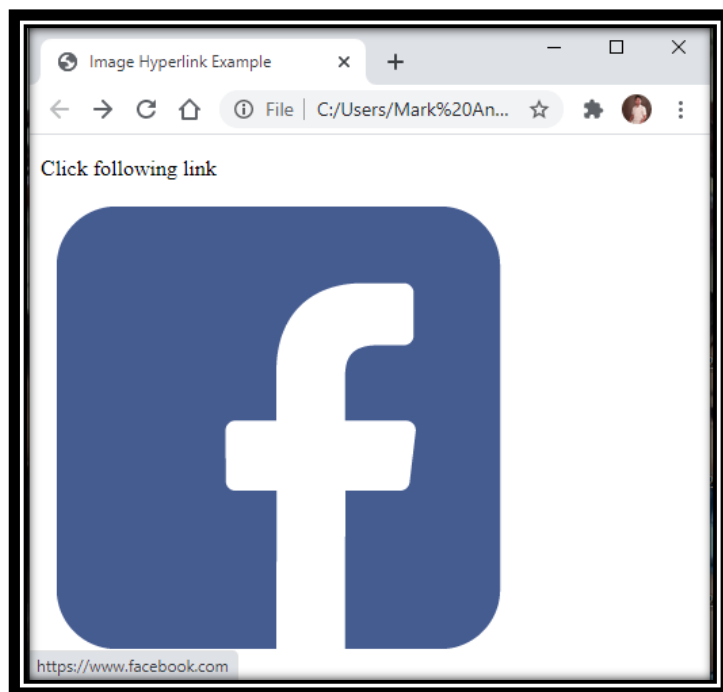
```
<!DOCTYPE html>
<html>

  <head>
    <title>Image Hyperlink Example</title>
  </head>

  <body>
    <p>Click following link</p>
    <a href = "https://www.facebook.com/" target = "_self">
      <img src = "/fb.png" alt = "Facebook" border = "0"/>
    </a>
  </body>

</html>
```

This will produce the following result, where you can click on the images to reach to the home page of Facebook.



This was the simplest way of creating hyperlinks using images. Next we will see how we can create Mouse-Sensitive Image Links.

## Mouse-Sensitive Images

The HTML and XHTML standards provide a feature that lets you embed many different links inside a single image. You can create different links on the single image based on different coordinates available on the image. Once different links are attached to different coordinates, we can click different parts of the image to open target documents. Such mouse-sensitive images are known as image maps.

There are two ways to create image maps –

- **Server-side image maps** – This is enabled by the **ismap** attribute of the `<img>` tag and requires access to a server and related image-map processing applications.
- **Client-side image maps** – This is created with the **usemap** attribute of the `<img>` tag, along with corresponding `<map>` and `<area>` tags.

### Server-Side Image Maps

Here you simply put your image inside a hyper link and use **ismap** attribute which makes it special image and when the user clicks some place within the image, the browser passes the coordinates of the mouse pointer along with the URL specified in the `<a>` tag to the web server. The server uses the mouse-pointer coordinates to determine which document to deliver back to the browser.

When *ismap* is used, the href attribute of the containing `<a>` tag must contain the URL of a server application like a cgi or PHP script etc. to process the incoming request based on the passed coordinates.

The coordinates of the mouse position are screen pixels counted from the upper-left corner of the image, beginning with (0,0). The coordinates, preceded by a question mark, are added to the end of the URL.

For example, if a user clicks 20 pixels over and 30 pixels down from the upper-left corner of the following image –

This has been generated by the following code snippet –



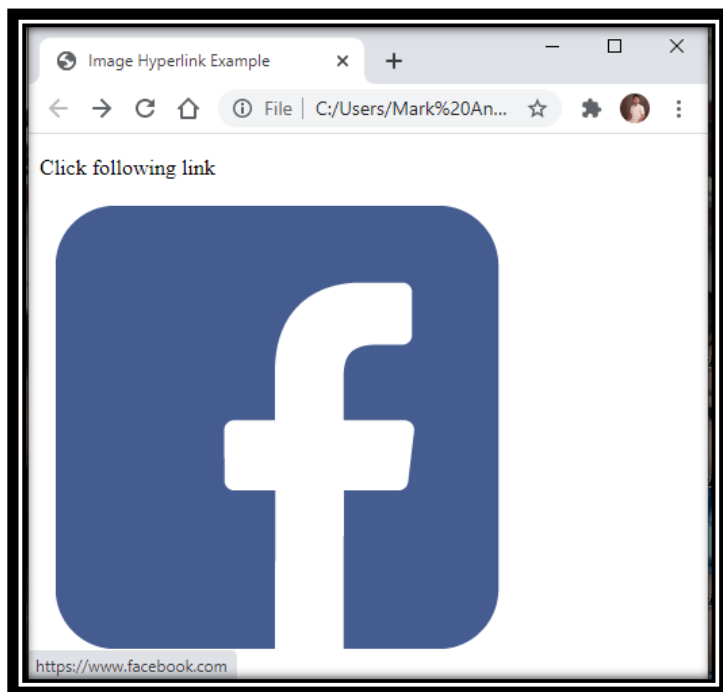
```
<!DOCTYPE html>
<html>

  <head>
    <title>ISMAP Hyperlink Example</title>
  </head>

  <body>
    <p>Click following link</p>

    <a href = "/cgi-bin/ismap.cgi" target = "_self">
      <img ismap src = "/images/logo.png" alt = "Tutorials
Point" border = "0"/>
    </a>
  </body>

</html>
```



Then the browser sends the following search parameters to the web server which can be processed by **ismap.cgi** script or **map file** and you can link whatever documents you like to these coordinates –

/cgi-bin/ismap.cgi?20,30

This way you can assign different links to different coordinates of the image and when those coordinates are clicked, you can open corresponding linked document. Search the internet to learn more about **ismap** attribute.

## Client-Side Image Maps

Client side image maps are enabled by the **usemap** attribute of the `<img />` tag and defined by special `<map>` and `<area>` extension tags.

The image that is going to form the map is inserted into the page using the `<img />` tag as a normal image, except it carries an extra attribute called **usemap**. The value of the `usemap` attribute is the value which will be used in a `<map>` tag to link map and image tags. The `<map>` along with `<area>` tags define all the image coordinates and corresponding links.

The `<area>` tag inside the map tag, specifies the shape and the coordinates to define the boundaries of each clickable hotspot available on the image. Here's an example from the image map –

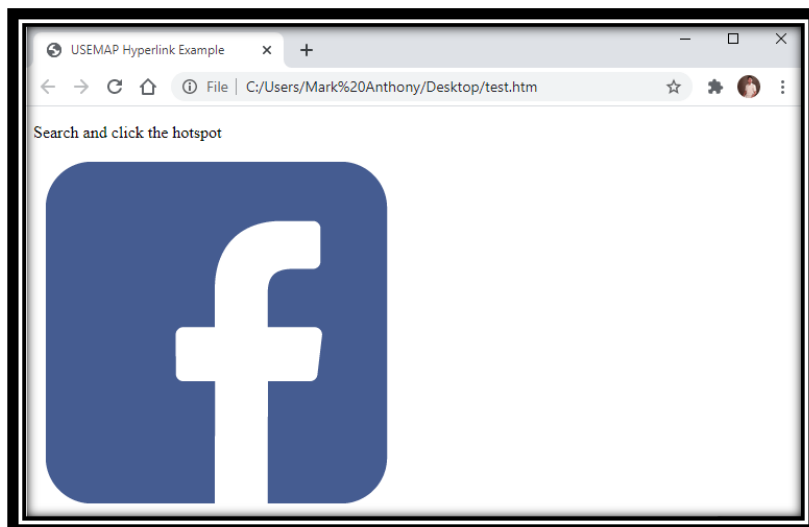
```
<!DOCTYPE html>
<html>
  <head>
    <title>USEMAP Hyperlink Example</title>
  </head>

  <body>
    <p>Search and click the hotspot</p>
    <img src = /images/html.gif alt = "HTML Map" border = "0" usemap =
"#html"/>
    <!-- Create Mappings -->

    <map name = "html">
      <area shape = "circle" coords = "80,80,20"
        href = "/css/index.htm" alt = "CSS Link" target = "_self" />

      <area shape = "rect" coords = "5,5,40,40" alt = "jQuery Link"
        href = "/jquery/index.htm" target = "_self" />
    </map>
  </body>
</html>
```

This will produce the following result –



## Coordinate System

The actual value of coords is totally dependent on the shape in question. Here is a summary, to be followed by detailed examples –

- **rect =  $x_1, y_1, x_2, y_2$**

$x_1$  and  $y_1$  are the coordinates of the upper left corner of the rectangle;  $x_2$  and  $y_2$  are the coordinates of the lower right corner.

- **circle =  $x_c, y_c, \text{radius}$**

$x_c$  and  $y_c$  are the coordinates of the center of the circle, and radius is the circle's radius. A circle centered at 200,50 with a radius of 25 would have the attribute *coords* = "200,50,25"

- **poly =  $x_1, y_1, x_2, y_2, x_3, y_3, \dots x_n, y_n$**

The various x-y pairs define vertices (points) of the polygon, with a "line" being drawn from one point to the next point. A diamond-shaped polygon with its top point at 20,20 and 40 pixels across at its widest points would have the attribute *coords* = "20,20,40,40,20,60,0,40".

All coordinates are relative to the upper-left corner of the image (0,0). Each shape has a related URL. You can use any image software to know the coordinates of different positions.

## CHAPTER 10.1: Email Links

It is not difficult to put an HTML email link on your webpage but it can cause unnecessary spamming problem for your email account. There are people, who can run programs to harvest these types of emails and later use them for spamming in various ways.

You can have another option to facilitate people to send you emails. One option could be to use HTML forms to collect user data and then use PHP or CGI script to send an email.

### HTML Email Tag

HTML **<a>** tag provides you option to specify an email address to send an email. While using **<a>** tag as an email tag, you will use **mailto: email address** along with *href* attribute. Following is the syntax of using **mailto** instead of using http.

```
<a href = "mailto: abc@example.com">Send Email</a>
```

This code will generate the following link which you can use to send email.

[Send Email](mailto:abc@example.com)

Now, if a user clicks this link, it launches one Email Client (like Lotus Notes, Outlook Express etc. ) installed on your user's computer. There is another risk to use this option to send email because if user do not have email client installed on their computer then it would not be possible to send email.

## Default Settings

You can specify a default *email subject* and *email body* along with your email address. Following is the example to use default subject and body.

```
<a href = "mailto:abc@example.com?subject = Feedback&body =  
Message">  
Send Feedback  
</a>
```

This code will generate the following link which you can use to send email.

[Send Feedback](#)

## **VIDEO TUTORIAL LINK**

HTML – Links

<https://www.youtube.com/watch?v=VuNS-OA9CZA&list=PLWPirh4EWFpFI-w62QiV62FOVHcXnynon&index=12>

### **REFERENCES:**

- [https://www.tutorialspoint.com/html/html\\_text\\_links.htm](https://www.tutorialspoint.com/html/html_text_links.htm)
- [https://www.tutorialspoint.com/html/html\\_image\\_links.htm](https://www.tutorialspoint.com/html/html_image_links.htm)
- [https://www.tutorialspoint.com/html/html\\_email\\_links.htm](https://www.tutorialspoint.com/html/html_email_links.htm)