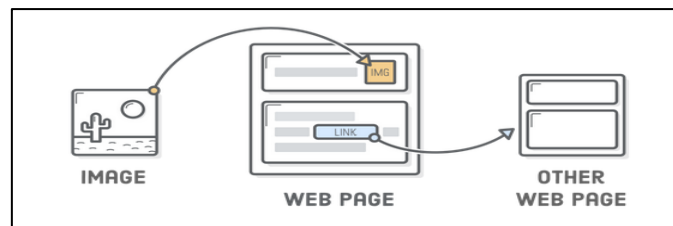- How hyperlink works
- Anchor tag and HREF
- Attributes
- Absolute vs Relative links
- Border
- E-mail links
- Table Tags & Table Attributes,
- RowAttributes, Cell Attributes,
- Merging Rows & Columns.

♣ **How hyperlinks works:-**

A hyperlink is an element in an HTML document that links to either another portion of the document or to another document altogether. On webpages, hyperlinks are usually colored purple or blue and are sometimes underlined.

A hyperlink can be thought of as an interface that links a source to a target. Clicking the hyperlink at the source will navigate to the target. Hyperlinks can assume any of the following appearances:

- Text
- Images
- URLs
- Controls (for example, a button)

In computing, a **hyperlink**, or simply a **link**, is a reference to data that the user can follow by clicking or tapping. A hyperlink points to a whole document or to a specific element within a document. Hypertext is text with hyperlinks. The text that is linked from is called anchor text. A software system that is used for viewing and creating hypertext is a *hypertext system*, and to create a hyperlink is *to hyperlink* (or simply *to link*). A user following hyperlinks is said to *navigate* or *browse* the hypertext.

The document containing a hyperlink is known as its source document. For example, in an online reference work such as Wikipedia, or Google, many words and terms in the text are hyperlinked to definitions of those terms. Hyperlinks are often used to implement reference mechanisms such as tables of contents, footnotes, bibliographies, indexes, letters and glossaries.

In some hypertext, hyperlinks can be bidirectional: they can be followed in two directions, so both ends act as anchors and as targets. More complex arrangements exist, such as many-to-many links.

The effect of following a hyperlink may vary with the hypertext system and may sometimes depend on the link itself; for instance, on the World Wide Web most hyperlinks cause the target document to replace the document being displayed, but some are marked to cause the target document to open in a new window. These hyperlinks may also be followed automatically by programs. A program that traverses the hypertext, following each hyperlink and gathering all the retrieved documents is known as a Web *spider* or crawler.

Anchor Tag & HREF:

- ✓ Anchor text is a type of hyperlink represented by plain text. Anchor text is very important in SEO (search engine optimization).
- ✓ With HTML, easily add hyperlinks to any HTML page. Link team page, about page, or even a test by creating it a hyperlink. You can also create a hyperlink for an external website. To make a hyperlink in an HTML page, **use the <a> and tags**, which are the tags used to define the links.
- ✓ The <a> tag indicates where the hyperlink starts and the tag indicates where it ends. Whatever text gets added inside these tags, will work as a hyperlink.
- ✓ Add the URL for the link in the .
- ✓ Just keep in mind that you should use the <a>… tags inside <body>…</body> tags.

Example:

```
<html>
  <head>
    <title>HTML Hyperlinks</title>
  </head>

  <body>
    <h1>Company</h1>
    <p>
      We're a <a href="/about/about_team.html"> team </a>
       of professionals working hard to provide free learning content.
    </p>
  </body>
</html>
```

HREF: (**H**ypertext **REF**erence) The HTML code used to create a link to another page. The HREF is an attribute of the anchor tag, which is also used to identify sections within a document. The HREF contains two components: the URL, which is the actual link, and the clickable text that appears on the page, called the "anchor text."

Syntax:

```
<a href="URL">…. </a>
```

Above, URL is the url you need to mention, which can be a relative link, absolute link, script, protocol, etc.

Example:

```
<html>
```

```
<head>
  <title>HTML Hyperlinks</title>
</head>

<body>
  <h1>Company</h1>
  <p>
    We're a <a href="/about/about_team.htm"> team </a> of professionals working hard to provide
free learning content.
  </p>
</body>
</html>
```

↓ Absolute vs Relative links:

A file path specifies the location of a file inside a web folder structure. Its like an address of a file which helps the web browser to access the files. File paths are used to link external resources such as images, videos, style sheets, JavaScript, displaying other web pages etc.

To insert a file in a web page its source must be known. For example, the syntax (<img src=" " alt=" ">) is used to insert an image file, where the path of the file is mentioned in the source (src). File paths are of two types:

- Absolute File Paths
- Relative File Paths

Absolute File Paths: It describes the <u>full address (URL)</u> to access an internet file.

```
<html>
    <head>
            <h1>This is image test with Absolute Path</h1>
    </head>
    <body>
            <br>
            <img src="file://C:/Pictures/ ArmyJawan.jpg" alt="Simply Easy Learning"
            width="400" height="200">

            <a href="C:/MyFolder/SecondFile.html" alt="Simply Easy Learning"> Click here</a>
    </body>
</html>
```
Relative File Path: It describes the path of the file relative to the location of the current web page file.

Example 1: It shows the path of the file present in the same folder of the current web page file.

```
<html>
    <head>
            <h1>This is image test with Relative Path</h1>
    </head>
    <body>
            <br>
            <img src="Nature1.jpg" alt="Simply Easy Learning" width="400"
            height="200">

            <a href="SecondFile.html" alt="Simply Easy Learning"> Click here</a>
    </body>
</html>
```

♦ Border:

In Html, we can add the border using the following two different ways:

1. Using Inline Style attribute
2. Using Internal CSS

1) Using Inline Style attribute

If we want to add the border in Html using the inline style attribute, then we have to follow the steps which are given below. Using these steps, any user can easily create the border.

Step 1: Firstly, we have to type the Html code in any text editor or open the existing Html file in the text editor in which we want to use the inline property for adding the border.

Step 2: Now, place the cursor inside the opening tag of that text around which we want to add the border. And then, we have to type the style attribute. And then, we have to type the border property in the style attribute same as shown in the following block:

Step 3: And then we have to give the border color in the border property.

Step 4: We can also give the **style and width** of the border which we want to add in the Html code. If we want to add then we have to type the **border-width** and **border-style** property just after the **border** property. The `border-style` property specifies what kind of border to display.

The following values are allowed:

- `dotted` - Defines a dotted border
- `dashed` - Defines a dashed border
- `solid` - Defines a solid border
- `double` - Defines a double border
- `groove` - Defines a 3D grooved border. The effect depends on the border-color value
- `ridge` - Defines a 3D ridged border. The effect depends on the border-color value
- `inset` - Defines a 3D inset border. The effect depends on the border-color value
- `outset` - Defines a 3D outset border. The effect depends on the border-color value
- `none` - Defines no border
- `hidden` - Defines a hidden border

Step 5: And, at last, we have to save the Html file and then run the file in the browser.

Final Example:

```
<Html>
    <Head>
        <Title> Add the border using inline property  </Title>
    </Head>
    <Body>
        <font style="border:blue;
                    border-width:10px;
                    border-style:outset;">
            HTML Borders
        </font>
        <center>
            <h1 style="border:orange; border-width:5px; border-style:solid ;">
                Hello. Good Morning!!!
            </h1>
            <h2 style="border:green; border-width:8px; border-style:dashed">
                Your are at HTML Site!....
```

```
                    </h2>
              </center>
          </Body>
</Html>
```

➕ **E-mail links:**

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.

Send Email

This code will generate the following link which you can use to "Send Email". 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.

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.

   Send Feedback

Example:

```
<html>
      <head> <title> E-mail Link Demo </title> </head>
      <body>
            <h2>
            <p>To create a link that opens in the user's email program, use mailto: inside the href
attribute:</p>
            <p><a href="mailto:someone@example.com">Send email</a></p>
            </h2>
      </body>
</html>
```

➕ **Table Tag:**

- ✓ A table is an arrangement of **Row** and **Columns** that organizes and positions data or images.
- ✓ A **Table** is defined by **<table>** tag.
- ✓ A **Row** is defined by **<tr>** tag.
- ✓ Each row has two kind of cell/column- HEADING and DATA.

Roll No.	101
Name	xyz

```
<HTML>                              <TR>
<BODY>                                  <TH> Name </TH>
<TABLE>                                 <TD>XYZ </TD>
    <TR>                            </TR>
        <TH> Roll No. </TH>     </TABLE>
        <TD>101  </TD>          </BODY>
    </TR>                       </HTML>
```

- ✓ The HEADING is declared by **<th>** tag.
- ✓ The DATA is declared by **<td>** tag.
- ✓ An HTML table may also include <caption>, <colgroup>, <thead>, <tfoot>, and <tbody> elements.
- ✓ But the required tags to form a table are <table>, <th> and <td>
- ✓ For example –

```
<html>
<body>
<h2>Basic HTML Table</h2>
<table>
    <tr>
        <th> Sr. No. </th>
        <th> Name </th>
    </tr>
    <tr>
        <td> 1 </td>
        <td> Pranali </td>
    </tr>
    <tr>
        <td> 2 </td>
        <td> Kiran </td>
    </tr>
    <tr>
        <td> 3 </td>
        <td> Aishwarya </td>
    </tr>
    <tr>
        <td> 4 </td>
        <td> Shubhangi </td>
    </tr>
    <tr>
        <td> 5 </td>
        <td> Tushar </td>
    </tr>
</table>
</body>
</html>
```

Attributes

The HTML <table> tag also supports the following additional attributes −

Attribute	Value	Description
border	pixels	Specifies the border width. A value of "0" means no border.
align	right left center justify char	Visual alignment.
bgcolor	rgb(x,x,x) #hexcode colorname	Specifies the background color of the table.
cellpadding	pixels or %	Specifies the space between the cell borders and their contents.
cellspacing	pixels or %	Specifies the space between cells.
width	pixels or %	Specifies the width of the table

✦ Row Attributes, Cell Attributes, Merging Rows & Columns:

- ✓ Rows and Columns both are the fundamental part of any table.
- ✓ These are a vital geometric arrangement which divides any data set on the basis of attributes.
- ✓ While **rows** are meant to run horizontally, **columns** are drawn vertically.
- ✓ The HTML tables allow web authors to arrange data like text, images, links, other tables, etc. into rows and columns of cells.
- ✓ A **Row** is defined by **<tr>** tag

✓ Each row has two kind of cell/column- HEADING and DATA.
  ✓ The HEADING is declared by **\<th\>** tag.
  ✓ The DATA is declared by **\<td\>** tag.

Attributes of TR tag:

1. <u>height</u> = pixels   "150"
2. <u>style</u>   =text-align: left/center/right/justify
3. *<u>style</u>   =background-color: color-name*
4. <u>style</u>   = vertical-align: top/bottom/middle
5. <u>style</u>   =color: *color-name*

Attributes of TH tag:

1. <u>style</u>   =   background-color: *color-name*
2. <u>Width</u> =   pixels   "400"
3. <u>style</u>   =   color: *color-name*

<u>Merging of Row and Column:</u>

<u>Merging Columns:</u> The colspan attribute in HTML specifies the number of columns a cell should span. It allows the single table cell to span the width of more than one cell or column. It provides the same functionality as "merge cell" in the spreadsheet program like Excel.

Usage: It can be used with \<td\> and \<th\> element while creating an HTML Table.

- **\<td\>:** The colspan attribute when used with \<td\> tag determines the number of standard cells it should span.

- **Syntax:**

        \<td colspan = "value"\>table content...\</td\>

The **value** specifies the number of columns that the cell fills. The value must be an integer.

<u>Example:</u>

```
<html>
    <body>
    <h2>Colspan in HTML Table</h2>
    <table >
        <tr>
            <th colspan="2">
                Temperature
            </th>
            <tr>
              <th> 0 Celsius </th>
              <th> 0 Fahrenheit</th>
            </tr>
        </tr>
        <tr>
                <td>41</td>
                <td>98</td>
            </tr>
            <tr>
                <td>30</td>
                <td>94</td>
            </tr>
            <tr>
                <td>15 </td>
                <td>80</td>
            </tr>
    </table>
    </body>
</html>
```

Merging Rows: The rowspan attribute in HTML specifies the number of rows a cell should span. That is if a row spans two rows, it means it will take up the space of two rows in that table. It allows the single table cell to span the height of more than one cell or row. It provides the same functionality as "merge cell" in the spreadsheet program like Excel.

Usage: It can be used with <td> and <th> element in an HTML Table.

- **<td>:** The rowspan attribute when used with <td> tag determines the number of standard cells it should span.
- **Syntax:**

<td rowspan = "value">table content...</td>

The **value** specifies the number of rows that the cell fills. The value must be a integer.

Example:

```
<html>
<body>
<h1>Rowspan attribute</h1>
<table border="2">
 <tr>
  <th>Month</th>
  <th>Salary</th>
  <th>Total Salary</th>
 </tr>
 <tr>
  <td>January</td>
  <td>35500</td>
  <td rowspan="2">75200</td>
 </tr>
 <tr>
  <td>February</td>
  <td>39700</td>
 </tr>
</table>

</body>
</html>
```

Caption tag:

The **caption** tag is used to specify the caption of a table. This tag will be inserted just after the <table> tag. Only one caption can be specified for one table. It is by default aligned to the center.

 Syntax:

<caption align = "value" ></caption>

Attributes: This tag accepts a single attribute as mentioned above and described below.

- **align:** This is used to specify the alignment of text content. Values are Left, Right, Center.

Example:

<table>

<**caption align="Left"**>This is the caption</caption>………. </table>

Try with these examples:

Column 1	Column 2	Column 3
A	B	
	C	D
E	F	
G		
H		

All these... ...images wrap... ...by float: right

Multiplication table

×	1	2	3
1	1	2	3
2	2	4	6
3	3	6	9
4	4	8	12
5	5	10	15

Heading
432.1
43.21
4.321

Rotated column headers using {{vertical header}}

Date/Page	VG: Project	VG: Talk	VG: Portal	VG: Article guidelines	VG: Templates	VG: Sources	VG: Assessment	VG: Cleanup	VG Requests
05/08	4266	7828	7282	1105	224	161	916	506	231
04/08	4127	6190	6487	1139	241	205	1165	478	301

Table Headers

Horizontal headers:

Name	Email	Phone
John Doe	john.doe@example.com	123-45-678

Vertical headers:

Name:	John Doe
Email:	john.doe@example.com
Phone:	123-45-678

Student Name	Obtained Marks		Total
	WD	C Prog.	
Kiran	86	78	164
Rakesh	49	71	120

✳ ✳ ✳ ✳ ✳ ✳