DAY 3: HTML Links, HTML Images, HTML Favicon, HTML Tables, HTML Lists.

**HTML Links**

HTML links are hyperlinks. You can click on a link and jump to another document. When you move the mouse over a link, the mouse arrow will turn into a little hand.

*Syntax:*

*<a href="url">link text</a>*

The most important attribute of the <**a**> element is the **href** attribute, which indicates the link's destination. The link text is the part that will be visible to the reader. Clicking on the link text, will send the reader to the specified URL address.

*Example:*

*<a href="https://www.w3schools.com/">Visit W3Schools.com!</a>*

* An unvisited link is underlined and blue
* A visited link is underlined and purple
* An active link is underlined and red

**HTML Links - The target attribute**

The target attribute specifies where to open the linked document. The target attribute can have one of the following values:

* **\_self** - Default. Opens the document in the same window/tab as it was clicked
* **\_blank** - Opens the document in a new window or tab
* **\_parent** - Opens the document in the parent frame
* **\_top** - Opens the document in the full body of the window

*Example:*

*<a href="https://www.w3schools.com/" target="\_blank">Visit W3Schools!</a>*

**Absolute URLs:**

In absolute URL we’ll specify the full web address with **http** in the **href** attribute**.**

*Example:*

*<p><a href="https://www.w3.org/">W3C</a></p>*

**Relative URLs:**

In relative URL a local link (a link to a page within the same website) is specified with a relative URL (without the <https://www>).

*Example:*

*<p><a href="html\_images.asp">HTML Images</a></p>*

**Link to an Email Address**

Use **mailto**: inside the href attribute to create a link that opens the user's email program.

*Example:*

*<a href="mailto:someone@example.com">Send email</a>*

**Button as a Link**

*Example:*

*<button onclick="document.location='default.asp'">HTML Tutorial</button>*

**Bookmark in HTML**

Bookmarks can be useful if a web page to create a bookmark - first create the bookmark, then add a link to it. When the link is clicked, the page will scroll down or up to the location with the bookmark.

*Example:*

*<h2 id="C4">Chapter 4</h2>*

*<a href="#C4">Jump to Chapter 4</a>*

**HTML Images**

The <**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.

The <**img**> tag has two required attributes:

* **src** - Specifies the path to the image
* **alt** - Specifies an alternate text for the image

Syntax:

*<img src="url" alt="alternatetext">*

*Example:*

*<img src="img\_chania.jpg" alt="Flowers in Chania">*

**HTML Image Maps**

With HTML image maps, you can create clickable areas on an image. The HTML <**map**> tag defines an image map. An image map is an image with clickable areas. The areas are defined with one or more <**area**> tags.

**Image:**

The image is inserted using the <**img**> tag. The only difference from other images is that you must add a **usemap** attribute.

*<img src="workplace.jpg" alt="Workplace" usemap="#workmap">*

The **usemap** value starts with a hash tag **#** followed by the name of the image map, and is used to create a relationship between the image and the image map.

**Create Image Map:**

Add a <**map**> element this element is used to create an image map, and is linked to the image by using the required **name** attribute.

*<map name="workmap">*

The name attribute must have the same value as the <**img**>'s **usemap** attribute.

**Areas:**

Add the clickable areas. A clickable area is defined using an <**area**> element. Define the **shape** of the clickable area, and you can choose one of these values. The various types are as follows:

* **rect** - defines a rectangular region
* **circle** - defines a circular region
* **poly** - defines a polygonal region
* **default** - defines the entire region

*Example:*

|  |
| --- |
| *<html>*  *<body>*  *<h2>Image Maps</h2>*  *<p>Click on the computer, the phone, or the cup of coffee to go to a new page and read more about the topic:</p>*  *<img src="workplace.jpg" alt="Workplace" usemap="#workmap" width="400" height="379">*  *<map name="workmap">*  *<area shape="rect" coords="34,44,270,350" alt="Computer" href="computer.htm">*  *<area shape="rect" coords="290,172,333,250" alt="Phone" href="phone.htm">*  *<area shape="circle" coords="337,300,44" alt="Cup of coffee" href="coffee.htm">*  *</map>*  *</body>*  *</html>* |

**Background Image on a HTML element**

To add a background image on an HTML element, use the HTML style attribute and the CSS background-image property.

*Example:*

*<p style="background-image: url('img\_girl.jpg');">*

You can also specify the background image in the <**style**> element, in the <**head**> section.

|  |
| --- |
| *<head>*  *<style>*  *p { background-image: url('img\_girl.jpg'); }*  *</style>*  *</head>* |

**The HTML <picture> Element**

The <**picture**> element gives web developers more flexibility in specifying image resources this contains one or more <**source**> elements, each referring to different images through the **srcset** attribute.

This way the browser can choose the image that best fits the current view and/or device.

Each <**source**> element has a media attribute that defines when the image is the most suitable.

*Example:*

|  |
| --- |
| *<picture>*  *<source media="(min-width: 650px)" srcset="img\_food.jpg">*  *<source media="(min-width: 465px)" srcset="img\_car.jpg">*  *<img src="img\_beatles.gif" alt="Beatles" style="width:auto;">*  *</picture>* |

**HTML Favicon**

A favicon is a small image displayed to the left of the page title in the browser tab.

You can use any image you like as your favicon. You can also create your own favicon on sites like <https://www.favicon.cc>.

|  |
| --- |
| <head>  <title>My Page Title</title>  <link rel="icon" type="image/x-icon" href="/images/favicon.ico">  </head> |

**HTML Tables**

HTML tables allow web developers to arrange data into rows and columns. A table in HTML consists of table cells inside rows and columns.

* Each table cell is defined by a <**td**> and a </**td**> tag where td stands for table data.
* Each row starts with a <**tr**> and ends with a </**tr**> tag where **tr** stands for table row.
* Table header starts with <**th**> and ends with a </**th**> tag **th** stands for table header.

By default, the text in <**th**> elements are bold and centered, but you can change that with CSS.

*Example:*

|  |  |
| --- | --- |
| *HTML Code* | *Output* |
| *<html>*  *<style>*  *table, th, td {*  *border:1px solid black;*  *border-collapse: collapse;*  *}*  *</style>*  *<body>*  *<table style="width:30%">*  *<tr>*  *<th>Student Name</th>*  *<th>Mark</th>*  *</tr>*  *<tr>*  *<td>Emil</td>*  *<td>50</td>*  *</tr>*  *<tr>*  *<td>Linus</td>*  *<td>48</td>*  *</tr>*  *</table>*  *</body>*  *</html>* | |  |  | | --- | --- | | **Student Name** | **Mark** | | Emil | 50 | | Linus | 48 |  |  |  | | --- | --- | | **Student Name** | **Mark** | | Emil | 50 | | Linus | 48 | |

**Table Borders**

HTML tables can have borders of different styles and shapes. When you add a border to a table, you also add borders around each table cell.

To add a border, use the CSS border property on table, th, and td elements.

*table, th, td { border: 1px solid black; }*

Various table border styles are dotted, dashed, solid, double, groove, ridge, inset, outset, none, hidden.

**Table Sizes**

HTML tables can have different sizes for each column, row or the entire table. Use the style attribute with the width or height properties to specify the size of a table, row or column.

*Example:*

*<table style="width: 100%; Height: 100 %">*

**Table Padding & Spacing**

Cell padding is the space between the cell edges and the cell content. By default the padding is set to 0. To add padding on table cells, use the CSS padding property.

*Example:*

|  |
| --- |
| *th, td {*  *padding: 15px;*  *}* |

Cell spacing is the space between each cell. By default the space is set to 2 pixels. To change the space between table cells, use the CSS border-spacing property on the table element.

*Example:*

|  |
| --- |
| *table {*  *border-spacing: 30px;*  *}* |

**Table Colspan & Rowspan**

To make a cell span over multiple columns, use the **colspan** attribute. The value of the **colspan** attribute represents the number of columns to span.

To make a cell span over multiple rows, use the **rowspan** attribute. The value of the **rowspan** attribute represents the number of rows to span.

*Syntax:*

|  |
| --- |
| *<tr>*  *<th colspan="2">Name</th>*  *<th rowspan="2">Age</th>*  *</tr>*  *<tr>*  *<th>First Name</th>*  *<th>Last Name</th>*  *</tr>* |

*Example:*

|  |  |
| --- | --- |
| *HTML Code* | *Output* |
| <html>  <head>  <style>  table, th, td {  border: 1px solid black;  border-collapse: collapse;  }  </style>  </head>  <body>  <table style="width:40%">  <tr>  <th colspan="2">Name</th>  <th rowspan="2">Age</th>  </tr>  <tr>  <th>First Name</th>  <th>Last Name</th>  </tr>  <tr>  <td>Jill</td>  <td>Smith</td>  <td>43</td>  </tr>  <tr>  <td>Eve</td>  <td>Jackson</td>  <td>57</td>  </tr>  </table>  </body>  </html> | |  |  |  | | --- | --- | --- | | **Name** | | **Age** | | **First Name** | **Last Name** | | Jill | Smith | 43 | | Eve | Jackson | 57 | |

**Table Colgroup**

The <**colgroup**> element is used to style specific columns of a table. Each group is specified with a <**col**> element. The **span** attribute specifies how many columns that get the style.

*Example:*

|  |
| --- |
| *<colgroup>*  *<col span="2" style="background-color: #D6EEEE">*  *</colgroup>* |

**HTML Lists**

HTML lists allow web developers to group a set of related items in lists. There are three types of list available.

* Unordered List
* Ordered List
* Description Lists

**Unordered List**

An unordered list starts with the <**ul**> tag. Each list item starts with the <**li**> tag. The list items will be marked with bullets by default.

*Example:*

|  |  |
| --- | --- |
| *HTML Code* | *Output* |
| *<html>*  *<body>*  *<ul>*  *<li>Coffee</li>*  *<li>Tea</li>*  *<li>Milk</li>*  *</ul>*  *</body>*  *</html>* | * Coffee * Tea * Milk |

**Ordered List**

An ordered list starts with the <**ol**> tag. Each list item starts with the <**li**> tag. The list items will be marked with numbers by default.

*Example:*

|  |  |
| --- | --- |
| *HTML Code* | *Output* |
| *<html>*  *<body>*  *<ol>*  *<li>Coffee</li>*  *<li>Tea</li>*  *<li>Milk</li>*  *</ol>*  *</body>*  *</html>* | 1. Coffee 2. Tea 3. Milk |

**Description Lists**

A description list is a list of terms, with a description of each term. The <dl> tag defines the description list, the <dt> tag defines the term (name), and the <dd> tag describes each term.