UNIT-II

What is HTML?

- HTML stands for Hyper Text Markup Language
- HTML is the standard markup language for creating Web pages
- HTML describes the structure of a Web page
- HTML consists of a series of elements
- HTML elements tell the browser how to display the content
- HTML elements label pieces of content such as "this is a heading", "this is a paragraph", "this is a link", etc.

Objectives

If you do well in this unit, you should be able to:

- Insert a graphic within a web page.
- Create a link within a web page.
- Create a table within a web page.
- Insert heading levels within a web page.
- Insert ordered and unordered lists within a web page.
- Use cascading style sheets.
- Create a web page.
- Validate a web page.
- Publish a web page.

Windows switching

The switch window displays whenever a user presses ALT+TAB to switch to a different application. The switch window contains an icon for each application currently running.

Want to let another user quickly access their content or software data on your Windows 11 PC without slowing down your work? You can utilize the Fast User Switching feature of the Windows 11 operating system. If you don't know how to enable it, use the feature, or disable the functionality, keep reading.

The Fast User Switching feature in Microsoft Windows 11 allows users to log in to a PC while keeping other users logged in and their applications running. This allows multiple users to use the computer without interrupting what other users are working on. You can enable or disable fast user switching using the methods mentioned below in this article.

HTML Command Tags

Basic steps: using tags

HTML uses tags to communicate to the client (browser) how to display text and images. Tags are contained in < > symbols. In most cases you start with the beginning tag, put in the word or words that will be affected by this tag, and at the end of the string of word(s), you place a closing tag.

For example, to create a title for a document you would do the following:

 <title>My First HTML Document</title>

The closing tag normally contains a "/" before the directive to indicate the termination of the action.

HTML tags are not case-sensitive, although URLs generally are. In most cases (with the exception of preformatted text) HTML collapses many spaces to one space and does not read blank lines. However, when you write your text you should leave several blank lines between paragraphs to make editing your HTML source document easier.

Format of HTML

```html
<html>
    <head>
        <title>

        </title>
    </head>
    <body>

    </body>
</html>
```

Heading in HTML

HTML headings are titles or subtitles that you want to display on a webpage.

Heading 1

Heading 2

Heading 3

Heading 4

Heading 5

Heading 6

<p align="center" style="color:red">HTML Formatting Elements</p>

Formatting elements were designed to display special types of text:

- `<b>` - Bold text
- `<strong>` - Important text
- `<i>` - Italic text
- `<em>` - Emphasized text
- `<mark>` - Marked text
- `<small>` - Smaller text
- `<del>` - Deleted text
- `<ins>` - Inserted text
- `<sub>` - Subscript text
- `<sup>` - Superscript text

<p align="center" style="color:red">Font mechanisms</p>

In metal typesetting, a **font** is a particular size, weight and style of a typeface. Each font is a matched set of type, with a piece (a "sort") for each glyph. A typeface consists of various fonts that share an overall design.

In the 21st century, with the advent of computer fonts, the terms "font" and "typeface" are often used interchangeably, although the term "typeface" refers to the design of typographical lettering, whereas the term "font" refers to the specific style of a typeface, such as its size and weight. For instance, the typeface "Bauer Bodoni" (sample shown here) includes fonts "Roman" (or "Regular"), **"Bold"** and *"Italic"*; each of these exists in a variety of sizes. The term "font" is correctly applied to any one of

these alone but may be seen used loosely to refer to the whole typeface. When used in computers, each style is in a separate digital "font file".

In both traditional typesetting and computing, the word "font" refers to the delivery mechanism of the typeface. In traditional typesetting, the font would be made from metal or wood type: to compose a page may require multiple fonts or even multiple typefaces.

Adding paragraph and HTML font

```html
<html>
<head>
    <title>
Web page
    </title>

</head>

<body>
    <p>
    <h1><u>Categories of search engines</u></h1>
    <h3>Crawler databases.</h3><mark> The search engine</mark>
    sends out many <b>'crawlers'</b> which trawl the Web randomly, following
links and indexing page content as they go.
    Some common crawlers are the GoogleBot and MSNBot which power Google and
Bing.
    <h3>Human-edited directories.</h3> Directories are <i>human-maintained</i>
indexes of websites organized into a
    comprehensive hierarchy. To add your site to a directory you must submit it
to an editor who reviews it first. Many
    directories charge a fee for inclusion, but the Open Directory Project is a
popular free service.
    <h3>Sponsored links.</h3> Sponsored links give you a way to pay to have your
site included in search results. When a
    user searches for one of your chosen keywords, your site will appear usually
in a separate section from the main
    results. On Google these sites appear at the top of the list separated from
the main results.
    </p>
</body>
</html>
```

HTML colors

Colors are very important to give a good look and feel to your website. You can specify colors on page level using <body> tag or you can set colors for individual tags using **bgcolor** attribute.

The <body> tag has following attributes which can be used to set different colors −

- **bgcolor** − sets a color for the background of the page.
- **text** − sets a color for the body text.
- **alink** − sets a color for active links or selected links.
- **link** − sets a color for linked text.
- **vlink** − sets a color for *visited links* − that is, for linked text that you have already clicked on.

Eg:

```
  <p style="color: white; background-color: tomato;  font-size: 40px;">Colors
are very important to give a good look and
    feel to your website.</p>
<p style="font-family: cursive; font-size: 30px; background-color:
lightgray;">Colors are very important to give a good look and
    feel to your website.</p>
```

Superscript And Subscript

Subscript: The <sub> tag is used to add a subscript text to the HTML document. The <sub> tag defines the subscript text. Subscript text appears half a character below the normal line and is sometimes rendered in a smaller font. Subscript text can be used for chemical formulas, like H2O to be written as H_2O.
Superscript: The <sup> tag is used to add a superscript text to the HTML document. The <sup> tag defines the superscript text. Superscript text appears half a character above the normal line and is sometimes rendered in a smaller font. Superscript text can be used for footnotes.

Eg:

```
<h1>a<sup>2</sup>-b<sup>2</sup></h1>
    <h1>H<sub>2</sub>O</h1>
```

Using Directory and Manu list

1. Directory List.

HTML <dir> tag was used as a container for the list of files/folders or content of the directory. The <dir> element is used with the <li> tags, and list of directories renders in bullets by default.

Note: Do not use HTML <dir> tag as it is deprecated now and not supported in HTML5. You can use <ul> tag and CSS property instead.

Syntax

1. <dir>Directory list... </dir>

```
 2. <html>
 3.     <head>
 4.         <title>DirectoryList</title>
 5.     </head>
 6.     <body>
 7.         <dir>
 8.             <li>record 1</li>
 9.             <li>record 2</li>
10.             <li>record 3</li>
11.             <li>record 4</li>
12.         </dir>
13.     </body>
14. </html>
```

2. Manu List.

HTML <menu> tag specifies a list or menu of commands that a user can perform or activate. It is used for creating context menu as well as lists menu.

A <menu> element can contain one or more <li> or <menuitem> elements within it.

Note: The <menu> tag was deprecated in HTML 4.01 and again included in HTML 5.1 specification. But it will better to ignore it as it is experimental and not supported by many browsers.

Syntax

1. **<menu>**........**<menu>**

```
2. <html>
3.
4. <head>
5.     <title>ManuList</title>
6. </head>
```

```
7.
8.  <body>
9.      <menu>
10.         <li>home</li>
11.         <li>services</li>
12.         <li>about</li>
13.         <li>contact</li>
14.     </menu>
15. </body>
16.
17. </html>
```

Creation of Links

Links are found in nearly all web pages. Links allow users to click their way from page to page.

HTML Links - Hyperlinks

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.

HTML Links - Syntax

The HTML `<a>` tag defines a hyperlink. It has the following 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.

By default, links will appear as follows in all browsers:

- 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

By default, the linked page will be displayed in the current browser window. To change this, you must specify another target for the link.

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

```
<html>
<head>
    <title>HyperLinks</title>
</head>

<body>
        <a href="http://www.google.com" target="_top">Google website</a>
</body>
</html>
```

Inserting Graphics.
Using Image.

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.

The <img> tag has two required attributes:

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

The src Attribute

The required `src` attribute specifies the path (URL) to the image.

Note: When a web page loads, it is the browser, at that moment, that gets the image from a web server and inserts it into the page. Therefore, make sure that the image actually stays in the same spot in relation to the web page, otherwise your visitors will get a broken link icon. The broken link icon and the `alt` text are shown if the browser cannot find the image.

Example

```
<img src="img_logo.jpg" alt="website logo">
```

The alt Attribute

The required `alt` attribute provides an alternate text for an image, if the user for some reason cannot view it (because of slow connection, an error in the src attribute, or if the user uses a screen reader).

The value of the `alt` attribute should describe the image:

Example

```
<img src="img_logo.jpg" alt="company ">
```

HTML Table

HTML table tag is used to display data in tabular form (row * column). There can be many columns in a row.

We can create a table to display data in tabular form, using <table> element, with the help of <tr> , <td>, and <th> elements.

In Each table, table row is defined by <tr> tag, table header is defined by <th>, and table data is defined by <td> tags.

HTML tables are used to manage the layout of the page e.g. header section, navigation bar, body content, footer section etc. But it is recommended to use div tag over table to manage the layout of the page.

<h1 style="color:red; text-align:center">HTML Table Tags</h1>

Tag	Description
<table>	It defines a table.
<tr>	It defines a row in a table.
<th>	It defines a header cell in a table.
<td>	It defines a cell in a table.

Eg:

```
<html>
<head>
    <title>
        Table
    </title>
</head>
<body>
    <table border="1" style="font-size: 20px; width: 30%;">
        <tr>
            <th>First name</th>
            <th>Last Name</th>
        </tr>
        <tr>
            <td>Ahmad</td>
            <td>Ali</td>
        </tr>
        <tr>
            <td>Darpan</td>
            <td>Madhvi</td>
        </tr>
        <tr>
```

```
            <td>Akshta</td>
            <td>Dadkhile</td>
        </tr>
    </table>
</body>
</html>
```

2nd Eg:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <table
        style="border: 1px solid black; background-color: skyblue; text-align:
center; margin-left: auto; margin-right: auto;">
        <tr>
            <th>Name</th>
            <th>Age</th>
            <th>Company</th>
            <th>Salary</th>
        </tr>
        <tr>
            <td>ahmad</td>
            <td>25</td>
            <td>sahyog</td>
            <td>250000</td>
        </tr>
        <tr>
            <td>ali</td>
            <td>25</td>
            <td>sahyog</td>
            <td>25000</td>
        </tr>
        <tr>
            <td>darpan</td>
            <td>25</td>
            <td>HDFC</td>
            <td>2500000</td>
        </tr>
        <tr>
```

```
        <td>Deepak </td>
        <td>30</td>
        <td>star industries</td>
        <td>20000</td>
    </tr>
  </table>
</body>
</html>
```

HTML FORMS

An HTML form is used to collect user input. The user input is most often sent to a server for processing.

The <form> Element

The HTML `<form>` element is used to create an HTML form for user input:

```
<form>
.
form elements
.
</form>
```

The `<form>` element is a container for different types of input elements, such as: text fields, checkboxes, radio buttons, submit buttons, etc.

The <input> Element

The HTML `<input>` element is the most used form element.

An `<input>` element can be displayed in many ways, depending on the `type` attribute.

Here are some examples:

Type	Description

<input type="text">	Displays a single-line text input field
<input type="radio">	Displays a radio button (for selecting one of many choices
<input type="checkbox">	Displays a checkbox (for selecting zero or more of many c
<input type="submit">	Displays a submit button (for submitting the form)
<input type="button">	Displays a clickable button

Text Fields

The `<input type="text">` defines a single-line input field for text input.

Example

A form with input fields for text:

```
<form>
  <label for="fname">First name:</label><br>
  <input type="text" id="fname" name="fname"><br>
  <label for="lname">Last name:</label><br>
  <input type="text" id="lname" name="lname">
</form>
```

The <label> Element

Notice the use of the `<label>` element in the example above.

The `<label>` tag defines a label for many form elements.

The `<label>` element is useful for screen-reader users, because the screen-reader will read out loud the label when the user focuses on the input element.

The `<label>` element also helps users who have difficulty clicking on very small regions (such as radio buttons or checkboxes) - because when the user clicks the text within the `<label>` element, it toggles the radio button/checkbox.

The `for` attribute of the `<label>` tag should be equal to the `id` attribute of the `<input>` element to bind them together.

Radio Buttons

The `<input type="radio">` defines a radio button.

Radio buttons let a user select ONE of a limited number of choices.

Example

A form with radio buttons:

```
<p>Choose your favorite Web language:</p>

<form>
  <input type="radio" id="html" name="fav_language" value="HTML">
  <label for="html">HTML</label><br>
  <input type="radio" id="css" name="fav_language" value="CSS">
  <label for="css">CSS</label><br>
<input type="radio" id="javascript" name="fav_language" value="Javascript">
  <label for="javascript">JavaScript</label>
</form>
```

This is how the HTML code above will be displayed in a browser:

Choose your favorite Web language:

- ○ HTML
- ○ CSS
- ○ JavaScript

Checkboxes

The `<input type="checkbox">` defines a **checkbox**.

Checkboxes let a user select ZERO or MORE options of a limited number of choices.

Example

A form with checkboxes:

```
<form>
  <input type="checkbox" id="vehicle1" name="vehicle1" value="Bike">
  <label for="vehicle1"> I have a bike</label><br>
  <input type="checkbox" id="vehicle2" name="vehicle2" value="Car">
  <label for="vehicle2"> I have a car</label><br>
  <input type="checkbox" id="vehicle3" name="vehicle3" value="Boat">
  <label for="vehicle3"> I have a boat</label>
</form>
```

This is how the HTML code above will be displayed in a browser:

☐ I have a bike

☐ I have a car

☐ I have a boat

The Submit Button

The `<input type="submit">` defines a button for submitting the form data to a form-handler.

The form-handler is typically a file on the server with a script for processing input data.

The form-handler is specified in the form's `action` attribute.

Example

A form with a submit button:

```
<form action="/action_page.php">
  <label for="fname">First name:</label><br>
  <input type="text" id="fname" name="fname" value="John"><br>
  <label for="lname">Last name:</label><br>
  <input type="text" id="lname" name="lname" value="Doe"><br><br>
```

```
    <input type="submit" value="Submit">
</form>
```

This is how the HTML code above will be displayed in a browser:

First name:

| John |

Last name:

| Doe |

| Submit |

The Name Attribute for <input>

Notice that each input field must have a name attribute to be submitted.

If the name attribute is omitted, the value of the input field will not be sent at all.

Example

This example will not submit the value of the "First name" input field:

Create a web page to display a form which contain name, email,contact,address,uploading file, gender and a submit button.

```html
<html>
<head>
    <title>htmlForm</title>
    <style>
        body {
            margin: 0;
            padding: 0;
            background-color: aliceblue;
            margin-top: 5%;
        }
        form {
            height: 90%;
            width: 50%;
            margin-left: 20%;
            border: 1px solid gray;
            border-radius: 20px 0 20px 0;
            background: #0F2027;
            /* fallback for old browsers */
```

```css
        background: -webkit-linear-gradient(to right, #2C5364, #203A43,
#0F2027);
        /* Chrome 10-25, Safari 5.1-6 */
        background: linear-gradient(to right, #2C5364, #203A43, #0F2027);
        /* W3C, IE 10+/ Edge, Firefox 16+, Chrome 26+, Opera 12+, Safari 7+
*/
        color: white;
    }
    div {
        padding-left: 200px;
    }
    p {
        text-align: center;
        font-size: 18px;
        font-family: cursive;
    }
    input[type="text"],
    input[type="email"],
    input[type="tel"] {
        border: none;
        background: none;
        outline: none;
        border-bottom: 2px solid grey;
        width: 200px;
        padding: 5px;
        font-size: 18px;
        color: white;
    }
    input[type="submit"] {
        height: 30px;
        width: 260px;
        background-color: orangered;
        color: white;
        border-radius: 5px;
    }
    textarea {
        outline: none;
        font-size: 18px;
    }
</style>
</head>
<body>
    <form action="">
        <p>Registration Form</p>
        <hr>
```

```
        <div>
            <label for="">Enetr Your Name</label><br>
            <input type="text"><br>
            <label for="">Enetr Your Email</label><br>
            <input type="text"><br>
            <label for="">Enetr Your Contact</label><br>
            <input type="text"><br>
            <label for="">Enetr Your Address</label><br>
            <textarea name="" id="" cols="30" rows="7"></textarea><br>
            <label for="">Gender :</label><br>
            <input type="radio" name="abc">
            <input type="radio" name="abc"><br>
            <label for="">Add Photo</label><br>
            <input type="file"><br>
            <input type="submit" name="submit" value="Register Now">
        </div>
    </form>
</body>
</html>
```

HTML Active Image

Here's an image. Its name is sally.gif. I will use it as a link to the HTML Goodies page.

To replace the text above with the sally.gif image, you simply replace the text that would appear on the page with an image command calling for the sally.gif image. Like so:

<A HREF="index.html"><IMG SRC="sally.gif"></A>

```
<body>
    <a href="form1.html" target="_blank">
        <img height="200px" width="300px" src="image/bgimg.jpg" alt="">
    </a>
    </body>
```

HTML frames

HTML <frame> tag (Not supported in HTML5)

HTML <frame> tag define the particular area within an HTML file where another HTML web page can be displayed.

A <frame> tag is used with <frameset>, and it divides a webpage into multiple sections or frames, and each frame can contain different web pages.

Syntax

1. < frame src = "URL" >

Following are some specifications about the HTML <frame> tag

Display	Block
Start tag/End tag	Start tag(required), End tag(forbidden)
Usage	Frames

Eg:

```
<frameset rows="50%,50%" cols="50%,50%">
    <frame src="form.html" scrolling="yes">
      <frame src="form1.html" scrolling="no">
        <frame src="form1.html" scrolling="yes">
          <frame src="format.html" scrolling="no">
</frameset>
<body>
    <noframes>
        <p>frame is not working !!</p>
    </noframes>
</body>
```

Create a webpage which contain three frames file1,file2 and file3

Use link to redirect one frame to another frame.

Main file.

```
<html>
    <head>
        <title>framset</title>
        <frameset cols="*,*,*" border="5px" bordercolor="blue" >
```

```
            <frame src="file1.html" scrolling ="yes" name="first">
            <frame src="file2.html"  name="second">
                <frame src="file3.html" scrolling="no" name="third">
            </frameset>
    </head>
    <body>
<noframe>It is not supported by HTML5 !!</noframe>
    </body>
</html>
```

File1

```
<html>
    <head>
        <title></title>
    </head>
    <body>
        <h3>file1</h3>
        <a href="file1.html" target="third">click here to open on third frame</a>
    </body>
</html>
```

File2

```
<html>
    <head>
        <title></title>
    </head>
    <body>
        <h3>file2</h3>
        <a href="file2.html" target="third">click here to open on third frame</a>
    </body>
</html>
```

File3

```
<html>
    <head>
        <title></title>
    </head>
    <body>
        <h3>file3</h3>
        <a href="file3.html" target="second">click here to open on second
frame</a>
```

```
    </body>
</html>
```

Alternative of frames.

Html <iframe>...</iframe> tag

Use `<iFrame>` instead of `<frame>`

The `<frame>` element is now obsolete, which means it has been entirely deleted and should not be used in your codebase. Support for the `<frame>` element was stopped due to performance issues and lack of accessibility for people who used screen readers.

Although you can no longer use the `<frame>` element to embed pages and other media items, we can achieve the same using the `<iFrame>` element. `<iFrame>` performs the same function as the `<frame>` element and does not need to be nested in the `<frameset>` tag.

The `<iFrame>` tag is used to display webpages and media on a page:

```
<!-- Using the frame element -->
<frameset cols="50%, 50%">
    <frame src="https://google.com"/>
    <frame src="https://logrocket.com"/>
</frameset>

<!-- using iframe -->
<iframe
    title="iframe demo"
    src="https://logrocket.com"
></iframe>
```

HTML Div Tag

The **HTML <div> tag** is used *to group the large section of HTML elements together*.

We know that every tag has a specific purpose e.g. p tag is used to specify paragraph, <h1> to <h6> tag are used to specify headings but the <div> tag is just like a container unit which is used to encapsulate other page elements and divides the HTML documents into sections.

The div tag is generally used by web developers to group HTML elements together and apply CSS styles to many elements at once. For example: If you wrap a set of paragraph elements into a div element so you can take the advantage of CSS styles and apply font style to all paragraphs at once instead of coding the same style for each paragraph element.

1. **`<div`** `style`=`"border:1px solid pink;padding:20px;font-size:20px">`
2. **`<p>`**Welcome to Javatpoint.com, Here you get tutorials on latest technologies.**`</p>`**
3. **`<p>`**This is second paragraph**`</p>`**
4. **`</div>`**