Unit II: <u>Advanced HTML</u>

❖ HTML Lists

HTML provides a simple way to show unordered lists (bullet lists) or ordered lists (numbered lists).

➢ Unordered Lists

An unordered list is a list of items marked with bullets (typically small black circles). An unordered list starts with the <ul> tag. Each list item starts with the <li> tag.

EXAMPLE:

```
<html>
<title> Unorder List </title>
</head>
<body>
    <h3 align="center"> To illustrate unorder list tags </h3>
    <hr color="red">
    <h4>Disc bullets list:</h4>
    <ul type="disc">
          <li>Apples</li>
          <li>Bananas</li>
          <li>Lemons</li>
          <li>Oranges</li>
    </ul>
    <h4>Circle bullets list:</h4>
    <ul type="circle">
          <li>Apples</li>
          <li>Bananas</li>
          <li>Lemons</li>
          <li>Oranges</li>
    </ul>
    <h4>Square bullets list:</h4>
    <ul type="square">
          <li>Apples</li>
          <li>Bananas</li>
          <li>Lemons</li>
          <li>Oranges</li>
    </ul>
```

</body></html>

OUTPUT:

Unorder List

To illustrate unorder list tags

Disc bullets list:

- Apples
- Bananas
- Lemons
- Oranges

Circle bullets list:

- Apples
- Bananas
- Lemons
- Oranges

Square bullets list:

- Apples
- Bananas
- Lemons
- Oranges

➢ Ordered Lists

An ordered list is also a list of items. The list items are marked with numbers. An ordered list starts with the <ol> tag. Each list item starts with the <li> tag.

EXAMPLE:

```
<html>
<head>
<title> Order List tag </title>
</head>
<body>
    <h3 align="center" style="color:red">To illustrate ORDER list tags</h3>
    <hr COLOR="RED">
    <h4>Numbered list:</h4>
    <ol>
```

```
        <li>Apples</li>
        <li>Bananas</li>
        <li>Lemons</li>
        <li>Oranges</li>
</ol>
<h4>Uppercase Letters list:</h4>
<ol type="A">
        <li>Apples</li>
        <li>Bananas</li>
        <li>Lemons</li>
        <li>Oranges</li>
</ol>
<h4>Lowercase letters list:</h4>
<ol type="a">
        <li>Apples</li>
        <li>Bananas</li>
        <li>Lemons</li>
        <li>Oranges</li>
</ol>
<h4>Roman numbers list:</h4>
<ol type="I">
        <li>Apples</li>
        <li>Bananas</li>
        <li>Lemons</li>
        <li>Oranges</li>

</ol>
<h4>Lowercase Roman numbers list:</h4>
<ol type="i">
        <li>Apples</li>
        <li>Bananas</li>
        <li>Lemons</li>
        <li>Oranges</li>
</ol></body></html>
```

OUTPUT:

Order List tag

To illustrate ORDER list tags

Numbered list:

1. Apples
2. Bananas
3. Lemons
4. Oranges

Uppercase Letters list:

A. Apples
B. Bananas
C. Lemons
D. Oranges

Lowercase letters list:

a. Apples
b. Bananas
c. Lemons
d. Oranges

Roman numbers list:

I. Apples
II. Bananas
III. Lemons
IV. Oranges

Lowercase Roman numbers list:
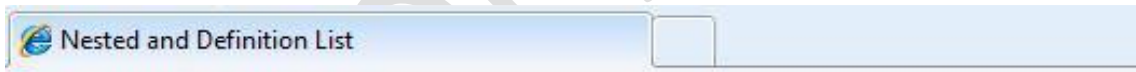
i. Apples
ii. Bananas
iii. Lemons
iv. Oranges

➢ Definition Lists

Definition lists consist of two parts: a **term** and a **description**. To mark up a definition list, you need three HTML elements; a container <dl>, a definition term <dt>, and a definition description <dd>.

EXAMPLE:

```
<html>
<head>
<title> Nested and Definition List <title>
</head>
<body>
    <h3 align="center"> To illustrate Nested and Definition List Tags </h3>
    <hr color="red">
    <h4> An ordered nested List: </h4>
    <ol>
          <li> Coffee </li>
          <li> Tea
    <ol type= "a">
          <li> Black tea </li>
          <li> Green tea </li>
```

```
            <ol type= "i" >
                    <li> China </li>
                    <li> Africa </li>
            </ol>
    <ol>
            <li> Milk </li>
    </ol>
    <h4> A Definition List: </h4>
    <dl>
            <dt> Bangalore </dt>
            <dd> -Capital City of Karnataka </dd>
            <dt> Mumbai</dt>
            <dd> -Capital city of Maharashtra </dd>
    </dl>
</body>
</html>
```

OUTPUT:

❖ **HTML Semantic Elements**

➢ In any language, it is essential to understand the meaning of words during communication. And if this is a computer communication then it becomes more critical. So HTML5 provides more semantic elements which make easy understanding of the code.

➢ Hence Semantics defines the meaning of words and phrases, i.e.

➢ Semantic elements= elements with a meaning. Semantic elements have a simple and clear meaning for both, the browser and the developer.

For example:

➢ In HTML4 we have seen <div>, <span> etc. are which are non-semantic elements. They don't tell anything about its content.

➢ On the other hand, <form>, <table>, and <article> etc. are semantic elements because they clearly define their content.

➢ HTML5 semantic elements are supported by all major browsers.

Why to use semantic elements?

➢ In HTML4, developers have to use their own id/class names to style elements: header, top, bottom, footer, menu, navigation, main, container, content, article, sidebar, topnav, etc.

➢ This is so difficult for search engines to identify the correct web page content. Now in HTML5 elements (<header> <footer> <nav> <section> <article>), this will become easier. It now allows data to be shared and reused across applications, enterprises, and communities."

➢ Semantic elements can increase the accessibility of your website, and also helps to create a better website structure.

Semantic Elements in HTML5

Index	Semantic Tag	Description
1.	<article>	Defines an article
2.	<aside>	Defines content aside from the page content
3.	<details>	Defines additional details that the user can view or hide
4.	<figcaption>	Defines a caption for a <figure> element
5.	<figure>	Specifies self-contained content, like illustrations, diagrams, photos, code listings, etc.
6.	<footer>	Defines a footer for a document or section

7.	\<header\>	Specifies a header for a document or section
8.	\<main\>	Specifies the main content of a document
9.	\<mark\>	Defines marked/highlighted text
10.	\<nav\>	Defines navigation links
11.	\<section\>	Defines a section in a document
12.	\<summary\>	Defines a visible heading for a \<details\> element
13.	\<time\>	Defines a date/time

❖ **Media Tags - Audio & Video**

➢ HTML5 features include native audio and video support without the need for Flash.

➢ The HTML5 \<audio\> and \<video\> tags make it simple to add media to a website. You need to set src attribute to identify the media source and include a controls attribute so the user can play and pause the media.

Embedding Video

➢ Here is the simplest form of embedding a video file in your webpage −

```
<video src = "foo.mp4"  width = "300" height = "200" controls>
   Your browser does not support the <video> element.
</video>
```

Example:

```
<html>
  <body>

    <video  width = "300" height = "200" controls autoplay>
      <source src = "/html5/foo.ogg" type ="video/ogg" />
      <source src = "/html5/foo.mp4" type = "video/mp4" />
     Your browser does not support the <video> element.
    </video>

  </body>
</html>
```

Embedding Audio

- HTML5 supports <audio> tag which is used to embed sound content in an HTML or XHTML document as follows.

  <audio src = "foo.wav" controls autoplay>

       Your browser does not support the <audio> element.

  </audio>

- The current HTML5 draft specification does not specify which audio formats browsers should support in the audio tag. But most commonly used audio formats are ogg, mp3 and wav.

- You can use <source&ggt; tag to specify media along with media type and many other attributes. An audio element allows multiple source elements and browser will use the first recognized format –

Example:

```
<html>
  <body>


    <audio controls autoplay>
      <source src = "/html5/audio.ogg" type = "audio/ogg" />
      <source src = "/html5/audio.wav" type = "audio/wav" />
      Your browser does not support the <audio> element.
    </audio>


  </body>
</html>
```

❖ HTML Forms

1. The Input Element

The input element is used to select user information.

An input element can vary in many ways, depending on the type attribute. An input element can be of type text field, checkbox, password, radio button, submit button, and more.

The most used input types are given below.

Text Fields

<input type="text">

- defines a one-line input field that a user can enter text into:

```
<form>
First name: <input type="text" name="firstname"><br>
Last name: <input type="text" name="lastname">
</form>
```

Output in a browser:

First name: [   ]

Last name: [   ]

Note: the default width of a text field is 20 characters.

2.   Password Field

<input type="password"> - defines a password field:

```
<form>

    Password: <input type="password" name="pwd">

</form>
```

Output in a browser:

Password: [   ]

Note: The characters in a password field are masked (shown as asterisks or circles).

3.   Radio Buttons

<input type="radio">

- defines a radio button. Radio buttons let a user select ONLY ONE of a limited number of choices:

```
<form>
<input type="radio" name="sex" value="male">Male<br>
<input type="radio" name="sex" value="female">Female
</form>
```

Output in a browser:

○ Male

○ Female

4.   Checkboxes

<input type="checkbox">

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

```
<form>
<input type="checkbox" name="vehicle" value="Bike">I have a bike<br>
<input type="checkbox" name="vehicle" value="Car">I have a car
</form>
```

Output looks in a browser:

☐ I have a bike

☐ I have a car

5.   Submit Button

<input type="submit"> - defines a submit button.

A submit button is used to send form data to a server. The data is sent to the page specified in the form's action attribute. The file defined in the action attribute usually does something with the received input:

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