

Web Terminologies

- **Website:** Collection of information stored in internet in different files is known as website.
- **Web Page:** Single page of a website that contains information in specific topic or subject is called a webpage.
- **URL (Uniform Resource Locator)**
 - Naming convention for addressing documents accessible over the internet
 - address of a given unique resource on the Web
 - URL is a form of URI (Uniform Resource Identifier)

Web Terminologies

- **CMS**
 - Stands for Content Management System, is a software platform used to manage digital content
 - In another word, an application enable users to create, edit, collaborate on, publish and store digital contents.
 - In terms of web page designing, CMS is graphical user interface that provides tools to create, edit and publish web content without the need to write code again.

HTML

- HTML stands for Hyper Text Mark-up Language. It is the language used for creating webpages. To write the HTML codes we can use any text editor program. E.g. Notepad

Programs used for webpage designing

- **FrontPage:** Microsoft product to design webpage
- **Flash:** Program used for creating animation effects on webpage
- **Dreamweaver:** Web page designing program with more advanced options

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Basic HTML Tags

HTML tags are pieces of Markup language used to define starting and ending of HTML element in webpage. It defines how web browser will format and display the content. The most required tag for building webpage are called basic html tags. Basic html tags needed to create a webpage are:

- **<HTML>:** Html document or webpage is surrounded by <html> </html> tag.
- **<HEAD>:** This tag includes information about webpage and also keywords.
- **<TITLE>:** used for displaying title of webpage in title bar.
- **<BODY> :** all the contents of a webpage are included in body part of html document enclosed in <body> </body>

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Types of tags

- **Paired tag:** The tag which consists of both starting and ending tag is called paired tag. It is also called container tag. E.g. , <html></html> .
- **Singular Tag:** The tag which does not have ending tag is called singular tag. It is also called empty tag or standalone tag. E.g. , <input>,
 , <hr>

Basic structure of HTML document

```
<HTML>
  <HEAD>
    <TITLE> Title for the webpage </TITLE>
  </HEAD>
  <BODY>
    text and other tags
  </BODY>
</HTML>
```

[type the code in any text editor and save with extension .htm or .html]

HTML attributes

HTML attributes are special words used inside the opening tag to control the element's behaviors.

Attributes of <BODY> tag

- **BGCOLOR:** To give color on background
- **BACKGROUND:** to use picture on background
- **TEXT:** to give text color on page
- **LEFTMARGIN:** to set the left margin on page
- **RIGHTMARGIN:** to set the right margin on page

HTML attributes

Example:

```
<BODY bgcolor="green" text="white">  
    text  
</BODY>
```

Code for some colors:

- White: FFFFFF
- Black: 000000
- Red: FF0000
- Green: 00FF00
- Blue: 0000FF

<P> tag and attributes

- <P> tag is used to define paragraph. Automatic spacing is added before and after a paragraph in HTML.

```
<p align="left/right/center/justify"> paragraph ... </p>
<HTML>
<HEAD>
    <TITLE> text for title </TITLE>
</HEAD>
    <BODY bgcolor="green" text="red">
<P align="center">
    paragraph to display on page
</P>
    </BODY>
</HTML>
```

Character formatting tags

- tag: used for making text bold
 - text
- <I> tag: used for making text italic
 - <I> text </I>
- <U> tag: used for underlining text
 - <U> text </U>
- <Sup> tag: used to give superscript (power) effect on text
 - a² + b²
- <Sub> tag: used to give subscript (base) effect on text
 - H₂ O

 tag

- Used to define and set font styles with different character options

 tag attributes

- Face: font name
- Size: font size (1 to 7): smallest-> 1, largest->7, default->3
- Color=font color

e.g.

```
<FONT face="verdana" size=5 color="red"> text </FONT>
```

 tag

- Used to define and set font styles with different character options

 tag attributes

- Face: font name, Size: font size (1 to 7): smallest-> 1, largest->7, default->3, Color=font color

e.g. text

Heading in HTML

- Heading is represented by <h1> to <h6> <h1> is the largest heading. <h6> is the smallest.

e.g. <H1> heading text </H1>

Line Break

-
 tag is used to start new line. It is singular tag.

Comment in HTML

- Comments are the text which are ignored by browser.
- Comment is enclosed within <!----> tag.
- Comment is used to explain code which helps to understand and make easier to edit the code later.

E.g.

```
<!-- This is a comment -->
```

List in HTML

- Ordered List
 - List with numeric order
 - Numbered list

E.g.

```
<OL type=..>
<LI> Item 1 </LI>
<LI> Item 2 </LI>
<LI> Item 3 </LI>
</OL>
```

[values for 'type' can be 1, A, a, I, i]

List in HTML

- Unordered List
 - List without numeric order
 - Bullet list

E.g.

```
<UL type=..>
<LI> Item 1 </LI>
<LI> Item 2 </LI>
<LI> Item 3 </LI>
</UL>
```

[values for 'type' can be disc, circle, square. Default=disc]

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HTML Character Entities

- Special characters or symbol can be displayed in browser with certain code

Result	Description	Name	Number
space	non-breaking space	 	
<	less than	<	<
>	greater than	>	>
&	Ampersand	&	&
"	quotation mark	"	"
'	apostrophe	' (does not work in IE)	'
¢	Cent	¢	¢
£	Pound	£	£
¥	Yen	¥	¥
€	Euro	€	€
§	Section	§	§
©	Copyright	©	©
®	registered trademark	®	®
×	multiplication	×	×
÷	Division	÷	÷

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Inline Image

- Inline image is the image within text
- tag is used to insert image on webpage

Attribute of tag

- Src: gives source and name of image file
- Alt: alternate text to be displayed if image is not loaded
- Height: height of image
- Width: width of image
- Align: sets the alignment of image

E.g.

```

```

HTML Link

- Anchor tag is used to link in HTML and is represented by <a> tag

e.g.

```
<a href="target file or URL"> link text </a>
```

- target attribute in <a> tag
 - Specifies how destination document or page is displayed
target="_blank" is used to open the link in new tab
- name attribute in <a> tag
 - Used to jump to specified location in same HTML document.

..

```
<a href="#top"> go to top </a>
```

Types of HTML Link

- **External Link**

- To link to existing document or webpage
` link text `

- **Internal Link**

- To link to specific location in same document
` `
...
` link text `

- **Email Link**

- To link to email address
`link text `

Scrolling Text

- `<marquee>` tag is used to scroll text in webpage
`<marquee> text </marquee>`

Attributes of `<marquee>` tag

- Behavior: specifies how text scroll: scroll, slide, alternate
- Direction: direction of movement of text: left, right, up, down
- Bgcolor: background color
- Height/Width: specifies the height and width of marquee
- Scrollamount: amount of scrolling in each pixel. Default=6
- Scrolldelay: interval between each scroll movement in millisecond. Default=85
- Loop: specifies how many times to scroll the text

Table in HTML

- <table> tag is used to create table in webpage
- <caption> tag defines the caption of table
- <tr> tag defines table row
- <th> tag defines table heading
- <td> tag defines table data

e.g.

```
<table border> <caption>Table: Student Info </caption>
<tr> <th> name </th> <th> address </th> </tr>
<tr> <td> Ram </td> <td> Ktm </td> </tr>
</table>
```

Attributes in table

- Border: defines thickness of table border, used with <table> tag
- Height: defines height of table, can be used with <table> <tr> and <td> tag
- Width: defines width of table, can be used with <table> and <td> tag
- Align: specifies horizontal position (left, center, right) of table or content, can be used with <table> <tr> and <td> tag
- Valign: specifies vertical position of content (top, center, bottom), can be used with <table> <tr> and <td> tag
- Bgcolor: specifies background color, can be used with <table> <tr> and <td> tag
- Frame: specifies border style (void, above, below, lhs, rhs etc.)

Example of rowspan and colspan

Computer	
Basic	2000
Advance	2500

Computer	Basic	2000
	Advance	2500

```
<Table Border>
<Tr>
<Th Colspan=2>Computer </Th>
</Tr>
<Tr> <Td>Basic</Td>
<Td>2000</Td> </Tr>
<Tr> <Td>Advance</Td>
<Td>2500</Td> </Tr>
</Table>
```

```
<Table Border>
<Tr>
<Th Rowspan=2>Computer </Th>
<Td>Basic </Td> <Td>2000 </Td>
</Tr>
<Tr>
<Td>Advance </Td> <Td>2500 </Td>
</Tr>
</Table>
```

HTML Form

- HTML form is front end interface that is used to grab record from users.

<Form>

Name: <input type = "text" size=25 maxlength=25>

Address: <textarea cols=20 rows=2></textarea>

Course: <input type="checkbox" > Basic

 <input type="checkbox" Graphic

Sex: <input type="radio" name="sex" checked> Male
 <input type="radio" name="sex">female

HTML Form contd..

Qualification: <Select>

<Option> SEE

<Option> +2

<OPTION> Other

</Select>

Password: <input type = "password" size=15>

<Input type="Submit" Value="Register">

<Input type="Reset" Value="Clear">

</Form>

Frame in HTML

- <Frameset> tag is used to combine multiple webpage into single webpage
- Each webpage in frameset is a frame

e.g.

<Frameset rows="n, n">

<frame src=...>

<Frameset cols="n,n">

<frame src=...> <frame src=...>

</frameset> </Frameset>

Here "n" means area covered by particular frame.

Frame in HTML cntd.

File: Banner.html

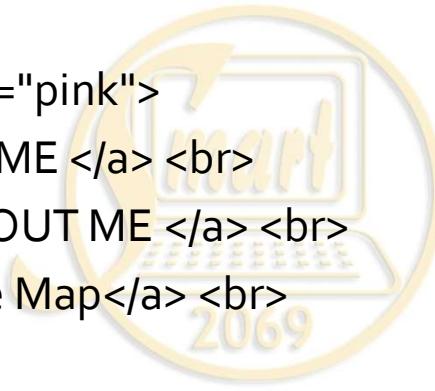
```
<html>  
<body background="banner.jpg">  
</body>  
</html>
```



Frame in HTML cntd.

File: Side.html

```
<html>  
<body bgcolor="pink">  
<a href="#">HOME </a> <br>  
<a href="#">ABOUT ME </a> <br>  
<a href="#">Site Map</a> <br>  
</body>  
</html>
```



Frame in HTML cntd.

File: Main.html

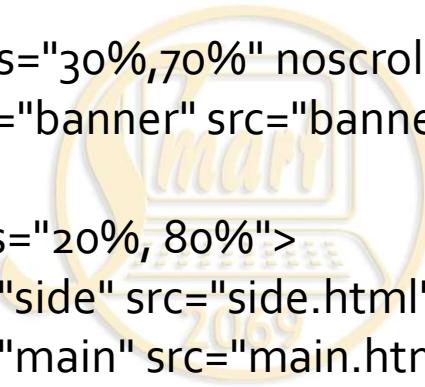
```
<html>
<head> <title> </title> </head>
<body >
<h1> This is Main Page </h1>
</body>
</html>
```



Frame in HTML cntd.

File: Index.html

```
<html>
<frameset rows="30%,70%" noscrolling >
<frame name="banner" src="banner.html"
align="right">
<frameset cols="20%, 80%">
<frame name="side" src="side.html" noresize>
<frame name="main" src="main.html">
</frameset> </html>
```



CSS

- Stands for Cascading Style Sheets
- Provides a way to control the look and feel of your HTML documents in an organized and efficient manner.
- Adds new looks to old HTML and completely restyle a web site with only a few changes to your CSS code.

Types:

- Inline - by using the style attribute inside HTML elements
- Internal - by using a <style> element in the <head> section
- External - by using a <link> element to link to an external CSS file

CSS

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Inline CSS

```
<h1 style="color:blue;">A Blue Heading</h1>
<p style="color:red;">A red paragraph.</p>
```

Internal CSS

```
<html> <head> <title> CSS </title>
<style>
body {background-color: yellow;}
h1 {color: blue;}
p {color: red;}
</style> </head> <body>
<h1>This is a heading</h1>
<p>This is a paragraph.</p> </body> </html>
```

Internal CSS syntax

tag { css properties: values; }

External CSS

```
<html>
<head> <title> CSS </title>
<link rel="stylesheet" type="text/css" href="styles.css">
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

CSS Properties

- **CSS Font Properties**
 - Font
 - Name of font
 - font-family
 - Group of fonts
 - font-size -> numeric
 - font-style
 - Oblique, Italic
 - font-weight
 - Bold
 - font-variant
 - Small-caps

- **CSS Text Properties**

- letter-spacing -> numeric
- word-spacing -> numeric
- text-decoration Underline, overline, line-through, none
- vertical-align
 - Top, bottom, middle
- text-transform
 - Uppercase, lowercase, capitalize
- text-align
 - Left, center, right, justify
- text-indent -> numeric
- line-height -> numeric

CSS Properties

- **CSS Box Properties**

- Margin, margin-top, margin-bottom, margin-left, margin-right -> numeric
- Padding, padding-top, padding-bottom, padding-left, padding-right -> numeric
- Border, border-top, border-bottom, border-left, border-right
 - Thick, thin, medium, dashed, dotted, double, solid, none
- Border-width: thick, thin, medium
- Border-color
- Border-style: dashed, dotted, double, solid, none
- Width, Height -> numeric
- Float: left, right, none -> e.g. img {float:right;}
- Clear: left, right, both, none

CSS Properties

- **CSS Background Properties**
 - Background
 - Color name/value, url (image source)
 - Background-color
 - Background-image->url (image source)
 - Background-position
 - Top, bottom, left, right, center
 - Background-repeat
 - Repeat, repeat-x, repeat-y, no-repeat
 - Background Attachment
 - Fixed, scroll

CSS Properties

- **CSS Color Properties**
 - Color
- **CSS Classification Properties**
 - Display: inline, block, none
e.g. li {display:block;}
 - White-space: nowrap, normal, pre
 - List-Style: circle, disc, square, american, lower-alpha, upper-alpha, lower-roman, upper-roman, none
 - List-Style-Type: circle, disc, square, american, lower-alpha, upper-alpha, lower-roman, upper-roman, none
 - List-Style-Image
 - List-Style-Position: inside, outside

CSS Properties

- **CSS Link Properties**

link has four different states.

- link - this is a link that has not been used, nor is a mouse pointer hovering over it
- visited - this is a link that has been used before, but has no mouse on it
- hover - this is a link currently has a mouse pointer hovering over it/on it
- active - this is a link that is in the process of being clicked

Syntax

a:(STATE'S NAME) { attribute: value; }

CSS Properties

- **CSS Link Properties**

- **CSS Code**

- a:link { color: red; }
- a:active{color:yellow;}
- a:visited { color: red; }
- a:hover { color: blue; }
- Removing Default Underline
- a {text-decoration:none;}
- a:link { color: red; text-decoration: none; }
- a:visited { color: red; text-decoration: none; }
- a:hover { color: blue; }

CSS Properties

- Mouse Cursor

Mouse cursor can be customized using CSS

- default - Display the normal mouse cursor icon
- wait - The mouse icon to represent the computer "thinking"
- crosshair - A cross hair reticle
- text - An "I" shaped icon that is displayed when selecting text
- pointer - A hand icon that you see when you hover over an HTML link
- help - A question mark (usually)

Cursor Code

- p { cursor: wait }
- h4 { cursor: help }
- h5 { cursor: crosshair }

CSS Position

- With the knowledge of CSS Positioning we will be able to manipulate the exact position of your HTML elements.

Absolute Position

- With absolute positioning, you define the exact pixel value where the specified HTML element will appear.
- P{
 position: absolute;
 top: 10px;
 left: 30px;
}

CSS Position

Relative Position

- Relative positioning changes the position of the HTML element relative to where it normally appears

CSS Code:

- ```
h3 { position: relative;
 top: 15px;
 left: 150px; }
```
- ```
p { position: relative;
      left: -10px; }
```
- Move Left - Use a negative value for left.
- Move Right - Use a positive value for left.
- Move Up - Use a negative value for top.
- Move Down - Use a positive value for top.

CSS Selector

- CSS selector are used to select HTML elements based on element name to desired style.

E.g.

```
p {
  text-align: center;
  color: red;
}
```

Here, all `<p>` elements on the page will be center-aligned, with a red text color

CSS ID selector

- The id selector uses the id attribute of an HTML element to select a specific element.
- The id selector is used to select one unique element!
- A hash (#) character, followed by the id of the element

E.g.

```
#para1 {  
    text-align: center;  
    color: red;  
}
```

CSS Class selector

- The class selector uses the class attribute of an HTML element to select specific elements.
- A period (.) character, followed by the class of the element

E.g.

```
.center {  
    text-align: center;  
    color: red;  
}
```

```
p.center {  
    text-align: center;  
    color: red;  
}
```

CSS Class vs ID

Basis of difference	ID	Class
Definition	A selector in CSS that styles the element with a specific id	A selector in CSS that styles the selected elements with a specific class
Syntax	#id {css declaration;}	.class {css declaration;}
Use	Used to apply styling to one specific element	Used to apply style to multiple elements
E.g.	CSS: <pre>#demo { background-color: red; } HTML: <p id="demo"> ... </p></pre>	CSS: <pre>.main { background-color: red; } HTML: <p class="main"> ... </p></pre>

RSS (Rich Site Summary)

- Also known as Really Simple Syndication
- Format used to provide subscribers with new content from frequently updated websites
- Enables users to access multiple websites from one place
- Process that makes content on one website available to another website
- Enables websites to share newly added content, major headlines and even summaries
- RSS document is called feed and it consists of summarized text and meta data

Social Networking

- Use of internet-based social media sites to stay connected with friends, family, colleagues, customers, or clients
- Online platform which people use to build social networks or social relationships with other people

Social Media

- Interactive digital channels for sharing information, ideas, interests and other forms of expression
- Computer-based technology that facilitates the sharing of ideas, thoughts and information through virtual networks and communities
- Websites and applications that focus on communication, community-based input, interaction, content-sharing and collaboration

Social Media Platform

- **Instagram:** for sharing photographs and video content.
- **Youtube:** for online video watching
- **Facebook:** connecting with people around the world and sharing information
- **Twitter:** for sharing thoughts
- **Tiktok:** sharing personal videos
- **LinkedIn:** most popular social media site for professional networking

Social Media Platform

- **Pinterest:** Social media site+ search engine. It consists of digital bulletin boards where a user can save products, project ideas, and inspirational images.
- **Flickr:** Popular platform for sharing photos and videos
- **Snapchat:** Mobile messaging social media platform
- **WhatsApp:** Popular mobile messaging app
- **Viber:** A VoIP and instant messaging mobile app
- **WeChat:** Multi-purpose mobile messaging app. People can send text messages, voice calls, video content, and even make payments.

Social Media Benefits

- Gives information about what's happening in the world in real-time
- stay in touch with long-distance friends
- have access to endless amounts of information at our fingertips
- Online discussion
- Knowledge sharing: share knowledge and gain credibility, also acquire information
- Entertainment: Playing game with online friend
- Advertisement and Marketing

Social Media in Government Organization

- Can share critical information in crisis
- Can use experts to share health, science, and expert information
- Create an open channel for citizen interaction and engagement.
- Can be in touch with day to day problem of citizen
- Provides quick message to target audience.