Module:1(HTML)

1. **Are the HTML tags and elements the same thing?**

Ans:-

HTML Tags	HTML Elements
1. HTML tags are used to hold the HTML elements	• HTML elements holds the content.
2. HTML tags start with <. And ends with >.	• What ever written within HTML tags are HTML elements.
3. HTML tags are almost like keywords where every tags has its own particular meanings.	• HTML elements specifies the general content. Written between two tags are HTML elements.
4. For e.g:-	• For e.g:- This is HTML elements

1. **What are tags and attributes in HTML?**

Ans:- Tags :-

- HTML tags are like Keywords which defines that how web browser will format and display the content.
- HTML tags contains three main parts :
  1. Opening tags
  2. Content tags
  3. Closing tags
- HTML tags are used to create HTML document and render their properties
- Each HTML tags have different properties.
- Every HTML tags start with < and closed by > .
- **Opening tags** needs to close with</> for its function.
  <td></td> , <tr></tr>.
- **Content tags** specifies the main content of document
  <html></html> , <body></body> , <head></head>.
- **Closing tags** are self closing tags we don't need to close this tags
  **
 ,<link> ,<image>**

Attributes:-

- HTML attributes are special words used inside the opening tag to control the elements behavior .
- Attributes are the modifiers of the Elements tags .

- HTML attributes generally appear as value= pairs separated by =, and are written within the start tag of an element, after the element's name.
- Common attributes are **<class> , <id> , <style> , <title>**.
- Centered text
- Here, " style " is the attributes of div.

3. **What are void elements in HTML?**

Ans:- There is a special group of elements that only have start tags and does not contain any content within it, these elements are called void elements

Void elements doesn't have ending tags and can only have attributes but do not contain any kind of content.

Example
**
, <hr>, <img>, <input>, <link>, <base>, <meta>, <param>, <area>, <embed>, <col>, <track>, <source> etc.**

4. What are HTML Entities?

Ans:- An HTML entity is **a piece of text ("string") that begins with an ampersand (&) and ends with a semicolon (;)**

&entity_name; OR &#entity_number;

Character entities are used to display reserved characters in HTML.

	non-breaking space		
<	less than	<	<
>	greater than	>	>
&	ampersand	&	&
"	double quotation mark	"	"
'	single quotation mark (apostrophe)	'	'
¢	cent	¢	¢
£	pound	£	£
¥	yen	¥	¥
€	euro	€	€
©	copyright	©	©
®	registered trademark	®	®

5.What are different types of lists in HTML?

Ans:- A list is any information displayed or organized in a logical or linear formation.

There are three list types in HTML:

- **unordered list** — used to group a set of related items in no particular order.
- **ordered list** — used to group a set of related items in a specific order.
- **description list** — used to display name/value pairs such as terms and definitions.

1. 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 (small black circles) by default:

Example:-

```
<ul>
        <li>Coffee</li>
        <li>Tea</li>
         <li>Milk</li>
</ul>
```

Output:-

An unordered HTML list

- Coffee
- Tea
- Milk

2. 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:-

```
<ol>
      <li>Coffee</li>
      <li>Tea</li>
      <li>Milk</li>
</ol>
```

Output:-

An ordered HTML list.

1. Coffee.
2. Tea.
3. Milk.

3. Description List:-

HTML also supports **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:

Example:-

```
<dl>
      <dt>Coffee</dt>
      <dd>- black hot drink</dd>
      <dt>Milk</dt>
      <dd>- white cold drink</dd>
</dl>
```

Output:-

A **Description** List

Coffee

- black hot drink

Milk

- white cold drink

Letters:-

Lowercase ascii letters (a, b, c…)

Uppercase ascii letters (A, B, C…).

Lowercase classical Greek: (έ, ή, ί…)

Numbers:-

Decimal numbers (1, 2, 3…)

Decimal numbers with leading zeros (01, 02, 03…)

Lowercase Roman numerals (i, ii, iii…)

Uppercase Roman numerals (I, II, III…)

Traditional Georgian numbering (an, ban, gan…)

Traditional Armenian numbering (mek, yerku, yerek…)

Tag	Description
	Defines an unordered list
	Defines an ordered list
	Defines a list item
<dl>	Defines a description list
<dt>	Defines a term in a description list
<dd>	Describes the term in a description list

6.What is the 'class' attribute in HTML?

Ans- The **class** attribute specifies one or more classnames for an element.

The **class** attribute is mostly used to point to a class in a style sheet.

However, it can also be used by a JavaScript (via the HTML DOM) to make changes to HTML elements with a specified class.

Example:-

```
<html>
<head>
<style>
	h1.intro
	{
		color: blue;
	}
</style>
</head>
<body>
	<h1 class="intro">Header 1</h1>
</body>
</html>
```

Output:-

Header 1

7. What is the difference between the ‘id’ attribute and the ‘class’ attribute of HTML elements?

Ans-:

Sr. No.	Key	Id	Class
1	Syntax	In Html for an element ID name starts with the **“#”** symbol followed by a unique name assigned to it.	On the other hand class assigned to an element has its name starts with **“.”** followed by class name.
2	Selector	Only one ID selector can be attached to an element.	Multiple class selectors can be attached to an element.
3	Uniqueness	Id is unique in a page and can only apply to at most one element	The class can be applied to multiple elements so it could be multiple times on a single page.

id.HTML:-

```
<!DOCTYPE html>
<html>
<head>
<title>
Id demo
</title>
<style>
  #idDemo{
    color:green;
    font-size:25px;
  }
</style>
</head>
<body style="text-align:center">
<h1>Get element by Id</h1>
<p id="idDemo">Demo for Id selector</p>
</body>
</html>
```

Class.HTML

```
<!DOCTYPE html>
<html>
<head>
<title>
Class demo
</title>
<style>
  .classDemo{
    color:orange;
    font-size:25px;
  }
</style>
</head>
<body style="text-align:center">
<h1>Get element by class</h1>
<p class="classDemo">Demo for class selector</p>
</body>
</html>
```

8. What are the various formatting tags in HTML?

Ans:- The formatting can be used to set the text styles (like – bold, italic, or emphasized, etc.), highlighting the text, making text superscript and subscript, etc.

In this , we will discuss different formatting tags in HTML.

Tag	Description
<b>	Defines bold text
	Defines emphasized text
<i>	Defines a part of text in an alternate voice or mood
<small>	Defines smaller text
	Defines important text
<sub>	Defines subscripted text
<sup>	Defines superscripted text
<ins>	Defines inserted text
<del>	Defines deleted text
<mark>	Defines marked/highlighted text

9. How is Cell Padding different from Cell Spacing?

Ans:-

Difference between cellpadding and cellspacing:

Cell padding	Cellspacing
1. It specifies the space between the border of a table cell and its contents.	**1**. It specifies the space between adjacent cells.
2. It is created by using HTML <table> tag but type attribute is set to cellpadding.	**2.** It is also created by using HTML <table> tag but type attribute is set to cellspacing.
3. It is mainly meant for a single cell.	3. Cellspacing can get subjected to more than one cell.
4. The default cellpadding value is 1	4. Whereas, the default cellspacing value is 2
5. Cellpadding is widely used and considered to be an effective mean	5. Cellspacing is less effective than Cellpadding.
6. Cellpadding is an attribute	6. Cellspacing is also an attribute.

10. How can we club two or more rows or columns into a single row or column in an HTML table?

Ans:- To merge cells in HTML, use the colspan and rowspan attribute.

The rowspan attribute is for the number of rows a cell should span,

The colspan attribute is for a number of columns a cell should span.

Example:-

```
<table>
 <tr>
  <td colspan="2"> </td>
  <td> </td>
 </tr>
 <tr>
  <td> </td>
  <td> </td>
  <td> </td>
 </tr>
 <tr>
  <td> </td>
  <td> </td>
  <td> </td>
 </tr>
</table>
```

Output:-

<table>
<tr><td colspan="2"></td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
</table>

11. What is the difference between a block-level element and an inline element?
Ans:-

Block-level Elements:-

- A block-level element always starts on a new line, and the browsers automatically add some space (a margin) before and after the element.
- A block-level element always takes up the full width available (stretches out to the left and right as far as it can).
- Two commonly used block elements are: <p> and .
- The <p> element defines a paragraph in an HTML document.
- The element defines a division or a section in an HTML document.

Here are the block-level elements in HTML:

<address>	<article>	<aside>	<blockquote>	<canvas>	<dd>		<dl>
<dt>	<fieldset>	<figcaption>	<figure>	<footer>	<form>	<h1>-<h6>	<header>
<hr>		<main>	<nav>	<noscript>		<p>	<pre>
<section>	<table>	<tfoot>		<video>			

Inline Elements:-

- An inline element does not start on a new line.
- An inline element only takes up as much width as necessary.
- This is a element inside a paragraph.

Here are the inline elements in HTML:

<a>	<abbr>	<acronym>	<b>	<bdo>	<big>	 	<button>
<cite>	<code>	<dfn>		<i>	<img>	<input>	<kbd>
<label>	<map>	<object>	<output>	<q>	<samp>	<script>	<select>
<small>			<sub>	<sup>	<textarea>	<time>	<tt>
<var>							

12. How to create a Hyperlink in HTML?

Ans:-

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.
- 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.

Tag	Description
<a>	Defines a hyperlink

13. What is the use of an iframe tag?

Ans:- The **<iframe>** tag specifies an inline frame.

An inline frame is used to embed another document within the current HTML document.

Example:-

```
<iframe src="https:// google.com/maps" title="googlemaps
"></iframe>
```

14. What is the use of a span tag? Explain with example?

Ans:-

- The tag is an inline container used to mark up a part of a text, or a part of a document.
- The tag is easily styled by CSS or manipulated with JavaScript using the class or id attribute.
- The tag is much like the element, but is a block-level element and is an inline element.
- `<p>Hello <span style="color:blue"> Good </span> morning.</p>`
- The <**span**> HTML element is a generic inline container for phrasing content, which does not inherently represent anything.

15. How to insert a picture into a background image of a web page?

Ans:-

- There are various ways in which images can be added to a web page to make it look captivating & appealing. One of such ways is adding background image.
- **The background attribute which we specified in the <body> tag is not supported in HTML5.** Using CSS properties, we can also add background image in a webpage.

```
<!DOCTYPE html>
<html>
<head>
<style>
        {
                background-image: url("bg1.jpg");
                background-color: #cccccc;
        }
</style>
</head>
<body>
                <p>Document Body</p>
</body>
</html>
```

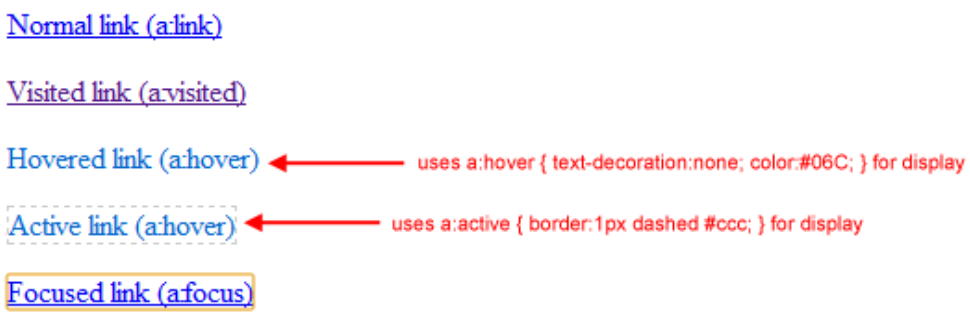
16. How are active links different from normal links?

Ans:-

- Some browsers recognize an active link when the mouse cursor is placed over that link; others recognize active links when the link has the focus.
- Those that don't have a mouse cursor over that link is considered a normal link.
- Some browser recognize active links when the mouse cursor is placed over that link.

Normal Links	Active Links
1. This is just a line of code containing a pointer to another resource.	2. This is also a line of code pointing to another resource, but, it is in the action of opening the resource being pointed.

- An active text or graphic link on a Web page.
- Clicking the link redirects the user to another Web page or a document or image.
- Live links are also placed into email, allowing recipients of the message to immediately go to a website or open an attached document or image.



17. What are the different tags to separate sections of text?

Ans:-

- **Three tags are used to separate the texts.**

- **
 tag -** Usually **
** tag is used to separate the line of text. It breaks the current line and conveys the flow to the next line

- **<p> tag -** The <p> tag contains the text in the form of a new paragraph.

- **<blockquote> tag** - It is used to define a large quoted section. If you have a large quotation, then put the entire text within <blockquote>.....</blockquote> tag.

18. What is SVG?

Ans:-

- SVG stands for Scalable Vector Graphics.
- SVG is used to define graphics for the Web.
- SVG is a W3C recommendation.
- The HTML <svg> element is a container for SVG graphics.
- SVG has several methods for drawing paths, boxes, circles, text, and graphic images.

Example:-

```
<!DOCTYPE html>
<html>
<body>

<svg width="100" height="100">
<circle cx="50" cy="50" r="40"stroke="green" stroke
width="4" fill="yellow" />
</svg>

</body>
</html>
```

OutPut:-

19. What is differene between HTML an d XHTML?

Ans:-

	HTML	XHTML
1. Introduction	HTML or HyperText Markup Language is the main markup language for creating web pages and other information that can be displayed in a web browser.	XHTML (Extensible HyperText Markup Language) is a family of XML markup languages that mirror or extend versions of the widely used Hypertext Markup Language (HTML), the language in which web pages are written.
2. Filename extension	.html, .htm	.xhtml, .xht, .xml, .html, .htm
3. Internet media type	text/html	application/xhtml+xml
4. Developed by	W3C & WHATWG	World Wide Web Consortium
5. Type of format	Document file format	Markup language
6. Extended from	SGML	XML, HTML
7. Stands for	HyperText Markup Language	Extensible HyperText Markup Language
8.Function	Web pages are written in HTML.	Extended version of HTML that is stricter and XML-based.
9. Nature	Flexible framework requiring lenient HTML-specific parser.	Restrictive subset of XML and needs to be parsed with standard XML parsers.
10. Origin	Proposed by Tim Berners-Lee in 1987.	World Wide Web Consortium Recommendation in 2000.
11. Versions	HTML 2, HTML 3.2, HTML 4.0, HTML 5.	XHTML 1, XHTML 1.1, XHTML 2, XHTML 5.

20. What are logical and physical tags in HTML?

Ans:-

Sr.No.	Logical Tags	Physical Tags
1.	Logical tags describe the behaviour, nature of content for the text enclosed inside the tag. They represent the function of text on the page.	Physical tags are used to decide the appearance of the text and do not provide any information about the text.
2.	It carries certain obligations.	It is extremely straightforward.
3.	It is used to mention visually impaired texts.	It is used to indicate the specific characters which need formation.
4.	Here, the pages are more accessible.	Page accessibility is comparatively low.
5.	It supports the latest technology.	This concept is dependent upon weak tools.
6.	Logical tags are used to provide information by giving the special importance to the text. For instance, tag is used to emphasize the text by representing it in italic format.	Physical tags are used to style the content only. For instance, <i> is used to display the text in italic format.

- **Logical Tags:-**

Tag	Description
<abbr>	Defines an abbreviation
<acronym>	Defines an acronym
<address>	Defines an address element
<cite>	Defines citation
<code>	Defines computer code text
<blockquote>	Defines a long quotation
<del>	Defines text
<dfn>	Defines a definition term
<ins>	Defines inserted text
<kbd>	Defines keyboard text
<pre>	Defines preformatted text
<q>	Defines short quotation
<samp>	Defines sample computer code
****	Defines strong text
<var>	Defines a variable

- **Physical Tags**:-

Tag	Description
<b>	Defines **bold** text
<big>	Defines big text
<i>	Defines *italic* text
<small>	Defines small text
<sup>	Defines superscripted text
<sub>	Defines subscripted text
<tt>	Defines teletype text
<u>	Deprecated. Use styles instead

Module:3 (HTML5)

1. What are the new tags added in HTML5?

Ans:-

<article>	It defines the independent or self-contained content of a webpage.
<aside>	It defines the content which provide information about the main content.
<bdi>	It is used to isolate the part of text which might be formatted in another direction.
<details>	It defines additional information which only visible as per user demand.
<dialog>	It represents a dialog box or other interactive components.
<figcaption>	It defines caption for the <figure> element.
<figure>	It defines a self-contained content, and referenced as a single unit.
<footer>	It represents the footer section of the webpage.
<header>	It defines the introductory or navigational content of the webpage.
<main>	It specifies the main content of the HTML document.
<mark>	It represent the text which is highlighted or marked for reference or notation purposes.
<meter>	It represents a scalar value within a known range.
<nav>	It represents the section which contains navigation links.
<progress>	It defines a progress bar which shows completions progress of a task.
<rp>	It defines alternative content for the browser which do not support ruby annotations.
<rt>	It defines explanations and pronunciations of characters in ruby annotations.
<ruby>	It defines ruby annotations (Specifically for Asian language).
<section>	It defines a generic section within an HTML document.
<summary>	It defines summary or caption for a <details> element which can be clicked to change the state of <details> element.
<time>	It defines data/time within an HTML document.
<wbr>	It specifies a line break opportunity. (Where line break possible)

HTML5 Form Tags

<datalist>	It represent predefined list for input <option> element.
<output>	It is used a container element to represent the output of a calculation or outcome of user action.

Graphics Tags

<canvas>	It allows drawing graphics and animations via scripting.
<svg>	It is used to draw scalable vector graphics.

HTML5 Media Tags

<audio>	It defines sound content.
<embed>	It defines a container for external files/application/media.
<source>	It defines multiple media resources for the media elements.
<track>	It defines text tracks for <audio> and <video> files
<video>	It defines video content within HTML document.

HTML5 New <input> types

Type	Description
color	It represents an input field which defines a color selector.
date	It represents an input field to define a date selector.
datetime	It defines full date and time display with time zone information.
datetime-local	It defines date and time without time zone information.
email	It defines an input field with email pattern Validation.
month	It defines the input field to enter month for the particular year
number	It defines field which selects a numeric value only.
range	It defines a numeric value selector with a given range of 1 to 100.
search	It is used to define a search field.
tel	It represents a control to enter a telephone number.
time	It represents a control to enter time value with no time zone.
url	It represents an input field to enter a URL
week	It defines a selector for week value for the particular year.

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2. How to embed audio and video in a webpage?

Ans:- <u>Video Tags.</u>

- To embed video in HTML, we use the **<video>** tag. It contains one or more video sources at a time using **<source>** tag. It supports MP4, WebM, and Ogg in all modern browsers.

Syntax

```
<video>
    <source src="file_name" type="video_file_type">
</video>
```

Attributes of <video> tag

Attribute	Value	Description
autoplay	autoplay	When the page is loaded. It specifies to play video as soon as possible.
controls	controls	It displays video control such as play, pause, and stop.
loop	loop	It will start the video again when it is finished.
muted	muted	When the page is loaded video will be automatically muted.
poster	URL	It specifies an image will be shown until video play.
preload	auto metadata none	It specifies how the author thinks the video will be loaded when the page is ready.
src	URL	It specifies the URL of the audio file.
width	pixels	It specifies the width of the video area. The default value of width is 'auto'.
height	pixels	It specifies the height of the video area. The default value of height is 'auto'.

Audio Tag:

- To embed audio in HTML, we use the <audio> tag. Before HTML5, audio cannot be added to web pages in the Internet Explorer era.
- To play audio, we used web plugins like Flash. After the release of HTML5, it is possible.
- This tag supports Chrome, Firefox, Safari, Opera, and Edge in three audio formats – MP3, WAV, OGG.
- Only Safari browser doesn't support OGG audio format.

Attributes of <audio> tag

Attribute	Value	Description
autoplay	autoplay	When the page is loaded. It specifies to play audio as soon as possible.
controls	controls	It displays audio control.
loop	loop	It will start the audio again when it is finished.
muted	muted	When the page is loaded audio will be automatically muted.
preload	auto metadata	It specifies how the author thinks the audio will be loaded when the page is ready.

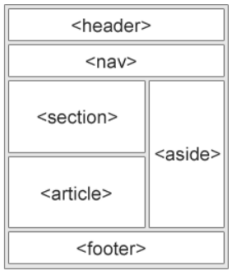
3. **Semantic element in HTML5?**
   Ans:-

- A semantic element clearly describes its meaning to both the browser and the developer.
- Examples of **non-semantic** elements: ** ** and **** - Tells nothing about its content.
- Examples of **semantic** elements: **<form>, <table>,** and **<article>** - Clearly defines its content.

Semantic Elements in HTML

- Many web sites contain HTML code like: to indicate navigation, header, and footer.
- In HTML there are some semantic elements that can be used to define different parts of a web page.

- <article>
- <aside>
- <details>
- <figcaption>
- <figure>
- <footer>
- <header>
- <main>
- <mark>
- <nav>
- <section>
- <summary>
- <time>



4. **Canvas and SVG tags?**

Ans:-

SVG:

- The Scalable Vector Graphics (SVG) is an XML-based image format that is used to define two-dimensional vector-based graphics for the web.
- Unlike raster image (Ex .jpg, .gif, .png, etc.), a vector image can be scaled up or down to any extent without losing the image quality.
- An SVG image is drawn out using a series of statements that follow the XML schema that means SVG images can be created and edited with any text editor, such as Notepad.
- There are several other advantages of using SVG over other image formats like JPEG, GIF, PNG, etc.

Canvas:

- The HTML element is used to draw graphics on the fly, via scripting (usually JavaScript).
- The element is only a container for graphics.
- You must use a script to actually draw the graphics.
- Canvas has several methods for drawing paths, boxes, circles, text, and adding images.

SVG	Canvas
Vector based (composed of shapes)	Raster based (composed of pixel)
SVG has better scalability. So it can be printed with high quality at any resolution.	Canvas has poor scalability. Hence it is not suitable for printing on higher resolution.
SVG gives better performance with smaller number of objects or larger surface.	Canvas gives better performance with smaller surface or larger number of objects.
SVG can be modified through script and CSS.	Canvas can be modified through script only.
Multiple graphical elements, which become the part of the page's DOM tree.	Single element similar to <img> in behavior. Canvas diagram can be saved to PNG or JPG format.