Module 5) HTML-5

THEORY ASSIGNMENT

QUESTION-1 : Difference Between HTML & HTML5.

- HTML (HyperText Markup Language) and HTML5 are both markup languages used for creating and structuring content on the web. However, HTML5 is the latest version of HTML and comes with several enhancements and new features. Here are the key differences between HTML and HTML5:

  1. Doctype Declaration:
  HTML: The doctype declaration is longer and more complex. For example, HTML 4.01 uses **<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">**.
  HTML5: The doctype is simplified to **<!DOCTYPE html>**.

  2. New Semantic Elements:
  HTML: Lacks semantic elements that clearly define the structure of the document.
  HTML5: Introduces new semantic elements such as **<header>**, **<footer>**, **<article>**, **<section>**, **<nav>**, and **<aside>**, which improve the readability and accessibility of the content.

3. Multimedia Support:
HTML: Limited support for multimedia; typically relies on plugins like Flash for audio and video.
HTML5: Provides native support for audio and video with the **<audio>** and **<video>** tags, allowing for easier embedding and control of multimedia content.

4. Form Enhancements:
HTML: Basic form elements without advanced input types.
HTML5: Introduces new input types
(e.g., **email**, **date**, **url**, **range**, **color**) and attributes
(e.g., **placeholder**, **autofocus**, **required**) that enhance form functionality and user experience.

5. Graphics and Animation:
HTML: Limited to static images and requires external libraries for graphics and animations.
HTML5: Introduces the **<canvas>** element for drawing graphics on the fly and supports SVG (Scalable Vector Graphics) for vector-based graphics.

6. APIs and Storage:
HTML: Lacks built-in support for modern web applications.
HTML5: Introduces several APIs, such as the Geolocation API, Web Storage API (localStorage and sessionStorage), and the Web Workers API, which enhance the capabilities of web applications.

7. Deprecated Elements and Attributes:
HTML: Contains many deprecated elements and attributes
(e.g., **<font>**, ** **, **<marquee>**).
HTML5: Removes many of these deprecated elements and encourages the use of CSS for styling and layout.

8. Accessibility and Mobile Support:

HTML: Less focus on mobile responsiveness and accessibility.

HTML5: Designed with mobile devices in mind, promoting responsive design and better accessibility features.

QUESTION-2 : What are the additional tags in HTML5 ?

- HTML5 introduced several new tags that enhance the structure, semantics, and functionality of web documents. Here are some of the key additional tags in HTML5:

1. Semantic Elements

These elements provide meaning to the content and improve accessibility and SEO.

<header>: Represents introductory content or a group of navigational links.

<footer>: Represents the footer for a section or page, typically containing information about the author, copyright, or links to related documents.

<article>: Represents a self-contained piece of content that could be distributed independently (e.g., a news article, blog post).

<section>: Represents a thematic grouping of content, typically with a heading.

<nav>: Represents a section of navigation links.

<aside>: Represents content that is tangentially related to the content around it (e.g., sidebars, pull quotes).

<main>: Represents the main content of the document, excluding headers, footers, and sidebars.

2. Multimedia Elements

These elements allow for the embedding of audio and video content without the need for external plugins.
<audio>: Used to embed sound content in documents.
<video>: Used to embed video content in documents.
<track>: Used to specify text tracks
for **<video>** and **<audio>** elements (e.g., subtitles, captions).

3. Graphics and Animation

These elements enable drawing and graphics on the web.
<canvas>: A drawable region in HTML that can be used for rendering graphics on the fly via JavaScript.
<svg>: Used to define vector-based graphics directly in the HTML document.

4. Form Elements

HTML5 introduced new input types and attributes to enhance forms.
New Input Types:
email: For email addresses.
url: For URLs.
tel: For telephone numbers.
date: For date input.
time: For time input.
datetime-local: For local date and time input.
number: For numeric input.
range: For selecting a value from a range.

color: For selecting a color.
New Attributes:
placeholder: Provides a hint to the user of what can be entered in the input field.
autofocus: Automatically focuses the input field when the page loads.
required: Specifies that an input field must be filled out before submitting the form.

5. Other Elements

<progress>: Represents the progress of a task (e.g., a download or upload).
<meter>: Represents a scalar measurement within a known range (e.g., disk usage).
<details>: Represents a disclosure widget from which the user can obtain additional information or controls.
<summary>: Represents a summary or heading for the **<details>** element.
<dialog>: Represents a dialog box or other interactive component.