Module 5 – Frontend – HTML5

Theory Assignment

- **Question 1**: Difference b/w HTML & HTML5?

  Here's a clear and concise comparison between **HTML** and **HTML5**:

Feature	HTML	HTML5
Version	Older versions (HTML 4.01, XHTML)	Latest version of HTML (introduced in 2008, finalized 2014)
Doctype Declaration	Long and complex: <!DOCTYPE HTML PUBLIC ...>	Simplified: <!DOCTYPE html>
Structure Tags	Used non-semantic tags like <div>, <span>	Introduces semantic tags like <header>, <footer>, <article>, <section>
Audio/Video Support	Not supported natively; required Flash or plugins	Built-in support with <audio> and <video> tags
Form Controls	Limited input types like text, password, checkbox	New input types: email, date, range, search, etc.
Graphics Support	No native support for graphics	Includes <canvas> and <svg> for drawing/graphics
Storage Options	Relied on cookies	Supports Web Storage: local Storage and session Storage
Mobile Support	Not optimized for mobile	Designed with mobile devices in mind (responsive design)
Browser Compatibility	May need hacks/polyfills	Modern browsers support HTML5 natively
JavaScript APIs	Limited	Rich APIs like Geolocation, Drag-and-Drop, Web Sockets

- **Question 2**: What are the additional tags used in HTML5?

  HTML5 introduced many **new semantic, multimedia, and structural tags** to improve the clarity and functionality of web pages. Here's a list of the **most important additional tags used in HTML5**, grouped by purpose:

⬗ Semantic Structural Tags

These tags give meaning to the structure of your web page:

Tag	Purpose
<header>	Defines the header section of a page or section
<footer>	Defines the footer section of a page or section
<article>	Represents a self-contained piece of content
<section>	Represents a section of a document
<nav>	Defines navigation links
<aside>	Content related to the main content, like a sidebar
<main>	Main content of the document
<figure>	Wraps media like images with a caption
<figcaption>	Caption for the <figure> element
<mark>	Highlights text
<time>	Represents a date or time
<summary>	Summary or heading for a <details> element
<details>	Used for expandable content (hide/show details)

⬗ Form Input Enhancements

New types and attributes for better forms:

Tag/Type	Description
<input type="email">	Validates email format
<input type="date">	Date picker
<input type="range">	Slider for numeric values
<input type="search">	Input for search fields
<input type="tel">	Telephone number
<input type="url">	URL input with validation
<datalist>	Provides auto-complete options
<output>	Displays output from calculations
<progress>	Displays a progress bar
<meter>	Represents a scalar measurement (like disk usage)

◆ Multimedia Tags

HTML5 adds native support for multimedia content:

Tag	Purpose
<audio>	Embeds audio files
<video>	Embeds video files
<source>	Specifies multiple media sources
<track>	Adds captions/subtitles to video/audio

⬍ Graphics and Scripting

For drawing and animations:

Tag	Purpose
<canvas>	Used for drawing graphics via JavaScript
<svg>	Scalable Vector Graphics (for shapes, lines, etc.)