HTML

Basic HTML Structure

<!DOCTYPE html> declaration

<html>, <head>, <body> tags

Understanding Metadata (e.g., <meta charset="UTF-8">)

Adding titles using the <title> tag

Comments in HTML (<!-- comment -->)

HTML Elements and Tags

Basic Tags

Paragraphs: <p>

Headings: <h1> to <h6>

Line breaks: <br>, horizontal rule: <hr>

Strong (bold): <strong>, emphasis (italic): <em>

Text Formatting

<b>, <i>, <u>, <sup>, <sub>, <small>, <mark>, <abbr>

Lists

Unordered lists: <ul>, Ordered lists: <ol>, List items:

Nested lists

Links and Navigation

Hyperlinks

Anchor tag: <a href="">

Target attribute for opening links in new tabs (_blank)

Relative vs Absolute paths

Links to sections within the same page (anchor links)

Navigation

Building a basic navigation bar using <nav> and <a>

Linking internal/external pages

Images and Media

Images

Adding images using <img src="" alt="">

Attributes: alt, width, height

Image file formats: .jpg, .png, .gif, .svg

Audio and Video

Embedding audio: <audio src="" controls>

Embedding video: <video src="" controls>

Attributes for media: autoplay, loop, muted

Using media from external sources (YouTube embeds)

IMPORTANT

HTML Forms

Form Elements

Form structure: <form action="" method="">

Input types: <input type="text">, <input type="email">, <input type="password">, <input type="submit">

Radio buttons, checkboxes, dropdown menus (select): <input type="radio">, <input type="checkbox">, <select>

Form Validation

Built-in HTML5 validation (required, pattern, etc.)

Labels and accessibility: <label for="">

Advanced Forms

File upload: <input type="file">

Range and number inputs

Date and time inputs

Hidden inputs, text areas

Tables in HTML

Table Structure

Basic table tags: <table>, <tr>, <td>, <th>

Adding headers: <thead>, footers: <tfoot>, and body: <tbody>

Rowspan and colspan for spanning rows/columns

Advanced Table Features

Styling tables (border, padding, alignment)

Sorting and filtering using JavaScript or libraries (e.g., DataTables)   (important but optional in HTML)

Semantic HTML

Introduction to Semantic Tags

Definition and importance of semantic HTML

Using semantic tags: <header>, <footer>, <main>, <article>, <section>, <aside>, <figure>, <figcaption>

Why Use Semantic HTML?

Accessibility and SEO benefits

Screen readers and search engines interpreting the content better

HTML5 New Features

HTML5 New Elements

Multimedia (video and audio support)

Canvas: <canvas> for drawing graphics

Geolocation API

Drag and drop functionality

Web Storage API (localStorage, sessionStorage)

HTML5 Forms

Input types: date, number, range, email, url

Placeholder attribute

Form validation with HTML5

Meta Tags and SEO

Using Meta Tags

Meta tags for setting charset (<meta charset="UTF-8">)

Meta description (<meta name="description" content="...">)

Viewport meta tag for responsive design (<meta name="viewport" content="width=device-width, initial-scale=1">)