DAY-2 Hands-On Activities

Problem 1: Simple Website Navigation System (Level-1)

Scenario

A small coaching institute wants a basic static website with multiple pages so students can easily navigate between sections like Home, Courses, and Contact.

📌 **Requirements**

- Create 3 HTML pages:
    - index.html (Home)
    - courses.html
    - contact.html
- Use:
    - <nav> element to create a navigation menu
    - <a> anchor tags for navigation
- Navigation menu should appear on all pages
- Use relative paths to link pages
- Include at least:
    - One internal anchor link (#section)
    - One external link (e.g., institute's social media)

🛠️ **Technical Constraints**

- Only HTML5
- No CSS or JavaScript
- Navigation must be semantic (<nav>)

🎯 **Learning Outcome**

You should be able to:

- Use <nav> and <a> elements
- Understand relative paths
- Build a simple multi-page navigation structure
- Users should move seamlessly between pages
- Code should be readable and well-indented
- Navigation links should work correctly

Problem 2: Student Registration Form with Input Types (Level-1)

Scenario

An institute wants a basic student registration form with built-in validation to reduce incorrect submissions.

📌 **Requirements**

Create an HTML webpage that includes:

Create a form with following input types:

- text (Name)

- email

- tel

- number (Age)

- date

Use **HTML5 built-in validation**:

- required

- min, max

- pattern (for phone number)

Add submit button

🛠️ **Technical Constraints**

- HTML5 only

- No JavaScript validation

- Use proper <label> tags

🎯 **Learning Outcome**

You will be able to:

- Use advanced input types

- Apply built-in HTML5 validation

- Improve form usability without JavaScript

- Browser should show validation errors automatically

- Inputs should restrict invalid values

- Form should be user-friendly

Problem 3: Multi-Page Website with Breadcrumb Navigation (Level-2)

Scenario

A training portal website has multiple levels of pages and users often get confused about where they are. The company wants breadcrumbs for better navigation.

📌 **Requirements**

Pages:

- Home
- Courses
- Web Development
- HTML Course

Implement:

- <nav> for main menu
- Breadcrumb navigation using anchor tags
  Example:
  Home > Courses > Web Development > HTML

Use:

- **Hierarchical linking**
- **Relative paths**

Breadcrumb should update based on page hierarchy

🛠️ **Technical Constraints**

- HTML5 only
- No CSS frameworks
- Semantic elements preferred

🎯 **Learning Outcome**

Learners should be able to:

- Breadcrumbs must reflect correct page structure
- Navigation must work without broken links
- Clear hierarchy in folder structure
- Design hierarchical navigation
- Implement breadcrumbs
- Understand real-world website structure

Problem 4: Course Enrollment Form with Advanced HTML Elements

Scenario

An online learning platform wants to enhance user experience by showing course progress, skill levels, and suggested inputs while filling the form.

📌 **Requirements**

Create an enrollment form using:

- <datalist> for course suggestions
- <progress> to show enrollment completion
- <meter> to indicate skill level (Beginner–Advanced)

Include modern input types:

- email
- range
- number

Use built-in validation

🛠️ **Technical Constraints**

- HTML5 only
- No JavaScript or CSS
- Must use semantic elements

🎯 **Learning Outcome**

You will be able to:

- Use advanced HTML5 elements
- Enhance form UX without JavaScript
- Understand real-time data representation in HTML

Browser should display:

- Dropdown suggestions via <datalist>
- Progress bar updates (static value)
- Meter shows skill level visually

Clean and structured form layout