WEB development - Workshop outline

**Workshop Topics for Web Development Course**

Here is a detailed plan for workshop topics, including exercise structures:

**1. HTML Basics**

* **Objective**: Understand the basic structure of an HTML document and essential tags.
* **Topics**:
  + Structure of an HTML document (<!DOCTYPE>, <html>, <head>, <body>)
  + Essential tags (<h1>-<h6>, <p>, <a>, <img>, <ul>/<ol>/<li>, <div>, <span>)
  + Semantic elements (<header>, <footer>, <article>, <section>)
  + Basic attributes (e.g., src, alt, href, target)
* **Exercise**:
  + Create a basic webpage for a personal profile:
    - Add a heading for your name.
    - Include a paragraph describing yourself.
    - Insert an image with appropriate alt text.
    - Add a list (ordered or unordered) of your hobbies.
    - Add a hyperlink to your favorite website.

**2. CSS Basics**

* **Objective**: Learn to style HTML elements using CSS.
* **Topics**:
  + Inline, internal, and external styles.
  + Selectors (element, class, ID, group).
  + Basic properties (e.g., color, background-color, font-size, margin, padding, border).
  + CSS box model.
* **Exercise**:
  + Style the personal profile page:
    - Set a background color for the page.
    - Change the text color and font style of the heading and paragraphs.
    - Add padding and margin to list items.
    - Add a border to the image.

**3. Web Page Layout**

* **Objective**: Structure a webpage using modern layout techniques.
* **Topics**:
  + Block vs. inline elements.
  + Layout techniques (using <div> for structure, flexbox basics).
  + Responsive design principles (viewport meta tag).
* **Exercise**:
  + Create a simple webpage layout with three sections:
    - A header section containing a site title and navigation links.
    - A main content area with a two-column layout using flexbox.
    - A footer section with contact information.

**4. Using Bootstrap Framework**

* **Objective**: Use Bootstrap to quickly build responsive webpages.
* **Topics**:
  + Linking Bootstrap (via CDN).
  + Bootstrap grid system (rows, columns, containers).
  + Common components (navbar, buttons, cards, modals).
* **Exercise**:
  + Build a product landing page using Bootstrap:
    - Use a navbar for navigation.
    - Display a hero section with a button.
    - Create a card-based layout for product details.
    - Add a responsive footer.

**5. HTML Advanced**

* **Objective**: Master advanced HTML concepts and elements.
* **Topics**:
  + Forms (<form>, <input>, <textarea>, <button>, <select>, <option>)
  + Tables (<table>, <thead>, <tbody>, <tfoot>, <tr>, <td>, <th>)
  + Multimedia elements (<audio>, <video>)
  + Accessibility basics (alt, aria-label, aria-hidden)
* **Exercise**:
  + Create a registration form:
    - Include fields for name, email, password, and a dropdown for selecting a country.
    - Add a submit button and reset button.
    - Include labels for accessibility.

**6. CSS Advanced**

* **Objective**: Deepen understanding of CSS for advanced styling.
* **Topics**:
  + Advanced selectors (nth-child, nth-of-type, attribute selectors).
  + Pseudo-classes and pseudo-elements (:hover, :before, :after).
  + Transitions and animations.
  + Media queries for responsive design.
* **Exercise**:
  + Enhance the registration form:
    - Add hover effects to buttons.
    - Use a pseudo-element to display a "required" label next to mandatory fields.
    - Use media queries to adjust the form layout for different screen sizes.

These workshops can be delivered sequentially, building skills progressively from basic to advanced. Each session can conclude with a brief Q&A and a discussion of best practices.