**8Learnig Institute.**

**Assignment 1.**

**Practical HTML Challenges:**

**Instructions.**

1. Answer all questions
2. Zip your questions and submit to google classroom assignment.

**QUESTIONS.**

**1. Responsive Landing Page:**

* **Challenge:** Design a landing page for a fictional product or service using HTML. The page should be responsive and adapt to different screen sizes (desktop, tablet, mobile).
* **Requirements:**
  + Use semantic HTML tags to structure the page.
  + Include media queries to adjust layout for different devices.
  + Implement navigation using hyperlinks.
  + Add basic styling (e.g., fonts, colors, spacing) to enhance readability.

**2. Interactive Form Integration:**

* **Challenge:** Create a registration form with various input fields (text, email, password, checkbox). Integrate basic validation using HTML attributes (e.g., required, pattern).
* **Requirements:**
  + Use appropriate input types for different data.
  + Implement validation to check for empty fields, email format, and password strength.
  + Provide clear error messages for invalid inputs.
  + Optionally, style the form for improved user experience.

**3. Dynamic Navigation Menu:**

* **Challenge:** Develop a website navigation menu that changes styles (e.g., underline, background color) on hover using HTML and CSS.
* **Requirements:**
  + Create an unordered list for the menu items.
  + Apply CSS pseudo-classes (:hover, :active) to define hover styles.
  + Optionally, add dropdown menus using nested lists and CSS positioning.

**4. Accessibility Optimization:**

* **Challenge:** Choose an existing website and analyze its accessibility for users with disabilities. Suggest improvements using HTML best practices and semantic meaning.
* **Requirements:**
  + Identify issues like missing alt text for images, lack of keyboard navigation, and unclear headings.
  + Propose changes to HTML structure and attributes to enhance accessibility.
  + Research and recommend additional tools or techniques for accessibility testing.

**5. Collaborative Project (Pair or Group):**

* **Challenge:** Work together to build a simple static website with multiple pages (e.g., home, about, contact) using HTML and CSS. Define roles and responsibilities within the team.
* **Requirements:**
  + Plan and design the website structure and content collaboratively.
  + Divide tasks like layout, navigation, content creation, and styling among team members.
  + Utilize version control for efficient code management and tracking changes.
  + Present and review the completed website, identifying areas for improvement.

These challenges encourage students to apply their HTML knowledge in practical scenarios, pushing them beyond basic syntax and tags. Adapt the complexity based on your students' experience and course objectives.