**LAB EXERCISE**:HTML

Create Github account & make repository.

**Part 1: Create a GitHub Account**

1. **Go to GitHub:**

* Visit <https://github.com>

1. **Sign Up:**

* Click **"Sign up"** (top right).
* Enter your **email address** and click **"Continue"**.
* Choose a **username**.
* Create a **password**.
* Verify your email (check inbox for a GitHub verification email).
* Complete CAPTCHA and continue.
* Choose free plan (or paid if you want).
* You now have a GitHub account!

**Part 2: Create a New Repository**

1. **Log in to GitHub** (if not already logged in).
2. On the top right, click the **+ icon** → **"New repository"**  
   Or directly go to: <https://github.com/new>
3. **Repository Details:**
   * **Repository name**: e.g., my-first-repo
   * **Description** (optional): e.g., “My first HTML project”
   * Choose **Public** (visible to everyone) or **Private**
   * Check **“Add a README file”** (optional, but useful)
   * Click **"Create repository"**

Explain phases of SDLC life cycle.

The **Software Development Life Cycle (SDLC)** is a structured process used by developers and project managers to design, develop, test, and maintain software efficiently. It helps ensure high-quality software is delivered on time and within budget.

**Phases of the SDLC Life Cycle**

Here are the **main 7 phases** of SDLC:

**1. Requirement Gathering and Analysis**

* **Purpose**: Understand what the client or end-user needs.
* **Activities**:
  + Stakeholder meetings
  + Requirement documentation (SRS – Software Requirements Specification)
  + Feasibility study
* **Output**: Finalized requirement document

**2. System Design**

* **Purpose**: Convert requirements into a blueprint for development.
* **Activities**:
  + High-Level Design (HLD): Architecture, modules
  + Low-Level Design (LLD): Database design, UI design
* **Output**: Design documents

**3. Implementation / Coding**

* **Purpose**: Developers write code based on the design.
* **Activities**:
  + Frontend and backend development
  + Database integration
* **Output**: Working software/code

**4. Testing**

* **Purpose**: Ensure the software is bug-free and meets requirements.
* **Activities**:
  + Unit Testing
  + Integration Testing
  + System Testing
  + User Acceptance Testing (UAT)
* **Output**: Tested and validated software

**5. Deployment**

* **Purpose**: Deliver the product to users or clients.
* **Activities**:
  + Hosting on servers
  + Cloud deployment
  + App store release (for mobile)
* **Output**: Live working application

**6. Maintenance**

* **Purpose**: Keep the software updated and bug-free after launch.
* **Activities**:
  + Fixing issues
  + Adding new features
  + Updating security patches
* **Output**: Updated and improved software

**7. Evaluation (optional phase)**

* **Purpose**: Review the project's success and learn from mistakes.
* **Activities**:
  + Feedback collection
  + Documentation for future projects

## **SDLC Models**

There are several SDLC models:

* Waterfall Model (linear)
* Agile Model (iterative)
* Spiral Model
* V-Model
* Iterative Model

**Create a simple HTML webpage that includes:**

*  A header (<header>), footer (<footer>), main section (<main>), and aside section (<aside>).
*  A paragraph with some basic text.
*  A list (both ordered and unordered).
*  A link that opens in a new tab.
* <!DOCTYPE html>
* <html lang="en">
* <head>
* <meta charset="UTF-8">
* <title>My Personal Webpage</title>
* <style>
* header, footer {
* background-color: #333;
* color: white;
* text-align: center;
* }
* </style>
* </head>
* <body>
* <!-- Header Section -->
* <header>
* <h1>Welcome to My Webpage</h1>
* <p>Learning HTML the right way!</p>
* </header>
* <!-- Main Content Section -->
* <main>
* <h2>About Me</h2>
* <p>Hello! I'm a beginner web developer learning how to create beautiful and functional websites using HTML and CSS.</p>
* <h3>My Goals (Ordered List)</h3>
* <ol>
* <li>Learn HTML</li>
* <li>Understand CSS</li>
* <li>Explore JavaScript</li>
* </ol>
* <h3>My Hobbies (Unordered List)</h3>
* <ul>
* <li>Reading</li>
* <li>Coding</li>
* <li>Photography</li>
* </ul>
* <p>
* Visit my favorite website for web tutorials:
* <a href="https://www.w3schools.com" target="\_blank">W3Schools</a>
* </p>
* </main>
* </body>
* </html>

**Create a contact form with the following fields:**

 Full name (text input)

 Email (email input)

 Phone number (tel input)

 Subject (dropdown menu)

 Message (textarea)

 Submit button

#### Additional Requirements**:**

 Use appropriate form validation using required, minlength, maxlength, and pattern.

 Link form labels with their corresponding inputs using the for attribute.

<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <title>Contact Form</title>

</head>

<body>

  <h1>Contact Us</h1>

  <form action="#" method="post">

    <!-- Full Name -->

    <label for="fullname">Full Name:</label><br>

    <input type="text" id="fullname" name="fullname" required minlength="3" maxlength="50"><br><br>

    <!-- Email -->

    <label for="email">Email Address:</label><br>

    <input type="email" id="email" name="email" required><br><br>

    <!-- Phone -->

    <label for="phone">Phone Number:</label><br>

    <input type="tel" id="phone" name="phone" required pattern="[6-9][0-9]{9}" title="Enter a 10-digit phone number"><br><br>

    <!-- Subject Dropdown -->

    <label for="subject">Subject:</label><br>

    <select id="subject" name="subject" required>

      <option value="">-- Please select --</option>

      <option value="general">General Inquiry</option>

      <option value="support">Support</option>

      <option value="feedback">Feedback</option>

      <option value="other">Other</option>

    </select><br><br>

    <!-- Message -->

    <label for="message">Your Message:</label><br>

    <textarea id="message" name="message" rows="5" required minlength="10" maxlength="500"></textarea><br><br>

    <!-- Submit Button -->

    <button type="submit">Submit</button>

  </form>

</body>

</html>

**Create a product catalog table that includes the following columns:**

 Product Name

 Product Image (use placeholder image URLs)

 Price

 Description

 Availability (in stock, out of stock)

#### Additional Requirements**:**

 Use thead for the table header.

 Add a border and some basic styling using inline CSS.

 Use colspan or rowspan to merge cells where applicable.

<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <title>Product Catalog</title>

</head>

<body>

  <h2>Product Catalog</h2>

  <table style="width: 100%; border-collapse: collapse; border: 2px solid #444;">

    <thead>

      <tr style="background-color: #f2f2f2;">

        <th style="border: 1px solid #444; padding: 8px;">Product Name</th>

        <th style="border: 1px solid #444; padding: 8px;">Product Image</th>

        <th style="border: 1px solid #444; padding: 8px;">Price</th>

        <th style="border: 1px solid #444; padding: 8px;">Description</th>

        <th style="border: 1px solid #444; padding: 8px;">Availability</th>

      </tr>

    </thead>

    <tbody>

      <tr>

        <td style="border: 1px solid #444; padding: 8px;">Wireless Mouse</td>

        <td style="border: 1px solid #444; padding: 8px; text-align: center;">

          <img src="https://via.placeholder.com/80" alt="Mouse">

        </td>

        <td style="border: 1px solid #444; padding: 8px;">$15.99</td>

        <td style="border: 1px solid #444; padding: 8px;">Ergonomic wireless mouse with USB receiver.</td>

        <td style="border: 1px solid #444; padding: 8px;">In Stock</td>

      </tr>

      <tr>

        <td style="border: 1px solid #444; padding: 8px;">Bluetooth Headphones</td>

        <td style="border: 1px solid #444; padding: 8px; text-align: center;" rowspan="2">

          <img src="https://via.placeholder.com/80" alt="Headphones">

        </td>

        <td style="border: 1px solid #444; padding: 8px;">$29.99</td>

        <td style="border: 1px solid #444; padding: 8px;">Over-ear headphones with noise cancellation.</td>

        <td style="border: 1px solid #444; padding: 8px;">Out of Stock</td>

      </tr>

      <tr>

        <td style="border: 1px solid #444; padding: 8px;">Bluetooth Earbuds</td>

        <td style="border: 1px solid #444; padding: 8px;">$19.99</td>

        <td style="border: 1px solid #444; padding: 8px;">Compact wireless earbuds with mic.</td>

        <td style="border: 1px solid #444; padding: 8px;">In Stock</td>

      </tr>

      <tr>

        <td colspan="5" style="border: 1px solid #444; padding: 8px; text-align: center; background-color: #e6ffe6;">

          Special Offer: Free shipping on orders over $50!

        </td>

      </tr>

    </tbody>

  </table>

</body>

</html>