

# Task One: Personal Profile Website

## SDLC Phases

### 1- Planning Phase

Objective: Define the purpose, goals, and scope of the portfolio website.

- **Purpose:** The website is used to show my projects, skills, blog posts, contact form and provide a way for visitors to contact me
- **Feature Planning**
  - **Home Page:** Overview of skills and a summary of recent projects
  - **Portfolio Section:** Description of projects
  - **Blog Section:** Posts with technical topics
  - **Contact Form:** Allow visitors to contact me

### 2- Design Phase

Objective: Create the blueprint for the website's structure and visuals.

- **Wireframes:** Developed low-fidelity sketches of the website
- **User Experience (UX)**
  - Make it friendly
  - Optimize for mobile and desktop devices
- **Visual Design**
  - Define the color pallet and fonts
- **Database Design**
- **Diagrams**
  - **Class Diagram:** Represent the components (users, blog posts, contact forms, etc.) and their relationships.
  - **Sequence Diagram:** Outline user interactions, like browsing projects and submitting the contact form.

### 3- Development Phase

Objective: build the functional components of the website

- **Frontend development**
  - Implement the visual design using HTML, CSS
- **Backend Development**
  - Set up a server using Node.js or Django
  - Connect to database (MySQL) to store and retrieve content dynamically
- **Integration**
  - Connect the frontend and backend.
  - Implement APIs to fetch blog posts or submit contact form data.

#### 4- Testing Phase

Objective: Identify and fix any issues before launching the website.

- **Functional Testing:**
  - Verify that all features, such as project viewing and contact form submission, work as intended.
- **Usability Testing:**
  - Test the website with real users to ensure its intuitive and user-friendly.
- **Performance Testing:**
  - Measure load times and optimize code for speed.
  - Use tools like Lighthouse to evaluate performance and accessibility.
- **Bug Fixing:** Resolve issues found during testing to ensure a smooth user experience.

#### 5- Maintenance Phase

Objective: Keep the website updated and functional after launch.

- **Regular Updates:** Regularly update the portfolio with new projects and blog posts.
- **Bug Fixes:** Address any bugs or issues reported by users.
- **Performance Monitoring:**
  - Use tools like Google Analytics to track user behavior.
  - Monitor server uptime and page loading speeds.
- **Security Updates:** Regularly update dependencies and ensure the website is secure from vulnerabilities.