

**Practical No. 1**

**Study of Web and its basics**

**Problem Statement 1:**

Study and describe the following concepts in your words:

1. Evolution of Web including web 3.0
2. Which ports and protocols are used by web? Describe those in detail
3. Difference Between HTTP & HTTPS
4. What is web developer tools and why it is needed?
5. Elaborate with diagram client server architecture and MVC architecture. When to use which architecture?
6. What is HTML and HTML5?
7. Which are the currently used versions of HTML and CSS for web development?
8. Which tools are available for front end development and back end development?
9. What MERN stack includes? Why and when it is preferred for web development?
10. List out newly introduced input types, APIs, form elements, and elements that support media content in HTML5.
11. Explain HTML5 Web storage.

**Problem Statement 2:**

**Create a Student Portfolio Website:** create a personal portfolio website that showcases your skills, achievements, and projects using HTML, CSS, and JavaScript. This website will serve as a digital resume and an introduction to your work.

**Requirements:**

**1. Basic Structure (HTML):**

- A homepage with:
  - A brief introduction (name, photo, and a tagline).
  - Navigation menu linking to other sections (About Me, Projects, Contact, etc.).
- Sections:
  - About Me: Include a short bio, education, and skills.
  - Projects: Showcase at least 3 projects with:
    - Title
    - Description
    - Technology stack used

- Live demo link or GitHub repository link
  - Contact: Include:
    - A contact form with fields for Name, Email, Subject, and Message.
    - A footer with social media links.
  - Include semantic HTML elements.
- 2. Styling (CSS):**
- Create a responsive design:
    - Use a grid or flexbox for layout.
    - Ensure proper styling for different screen sizes (desktop, tablet, mobile).
  - Use a consistent color scheme and typography.
  - Add hover effects to buttons, links, and project cards.
  - Include at least one CSS animation (e.g., smooth scroll, fade-in effect).
- 3. Interactivity (JavaScript):**
- Form validation for the contact form:
    - Ensure fields are not empty.
    - Validate the email format.
  - Add interactivity to the navigation menu (e.g., smooth scrolling or active link highlighting).
  - Display a dynamic skill level (e.g., skill bars or percentage progress).
  - Optionally, include a theme toggle (light mode/dark mode).

Note:

1. Create a **document** of the above website with screenshots.
2. Scan the document and **create a pdf file** with "**ExamSeatNum\_P#PS#**" as its **name**.
3. Upload the file on the **WCE Moodle** before the given deadline.