**Logo, company name

Description automatically generatedCOMSATS University Islamabad, Department of Computer Science**

**Web Technologies**

**Fall 2023**

**Lab 4**

**1. Navigation Menu Adjustment**

**Objective:** Adjust the navigation menu layout for smaller screens.

**Challenge:** When the screen width falls below 600 pixels, the navigation menu should change from a horizontal layout to a vertical layout. Each menu item should be displayed as a list item.

**2. Font Size and Line Spacing**

**Objective:** Change font sizes and line spacing for different screen widths.

**Challenge:** Implement media queries that adjust font sizes and line spacing:

For screens wider than 800 pixels, increase font size and line spacing for better readability.

For screens narrower than 600 pixels, decrease font size to save space.

**3. Content Rearrangement**

**Objective:** Rearrange content elements for specific orientations.

**Challenge:** Use media queries to rearrange content elements:

In landscape orientation, display the sidebar on the right side of the main content.

In portrait orientation, move the sidebar below the main content.

**4. Multiple Media Queries**

**Objective:** Practice using multiple media queries for complex responsiveness.

**Challenge:** Create a responsive layout with the following requirements:

For screens wider than 1200 pixels, use a three-column layout with the sidebar on the left, main content in the center, and additional content on the right.

For screens between 800 and 1200 pixels wide, switch to a two-column layout with the sidebar on the left and main content on the right.

For screens narrower than 800 pixels, stack the sidebar on top of the main content, and place additional content below both.

**5. Custom Responsive Elements**

**Objective:** Encourage creative use of media queries for custom responsiveness.

**Challenge:** Allow students to create a custom responsive design. For example:

Change the background color or image based on screen width.

Add animations or transitions that trigger at specific breakpoints.

Implement unique styling changes for different orientations (e.g., border styles, shadows).

**HOME Task**

**Objective:** Create a fully responsive and visually appealing portfolio website that adapts to various screen sizes, orientations, and devices.

**Requirements:**

HTML Structure: Create an HTML structure for your portfolio website. Include sections for your introduction, projects, skills, contact information, and any additional content you'd like to showcase.

**CSS Stylesheet:** Write a CSS stylesheet that defines the default styles for your website. Ensure that your design looks polished on a standard desktop screen (minimum width of 1200 pixels).

**Media Queries:** Implement media queries to make your website responsive. Your responsive design should adhere to the following guidelines:

**Mobile-First:** Start with a mobile-first approach. Design your website for mobile devices (e.g., smartphones) with a maximum screen width of 767 pixels.

**Tablet Optimization:** Create tablet-friendly layouts for screen widths between 768 and 1199 pixels. Consider adjusting font sizes, margins, and padding for better readability.

**Desktop Enhancement:** Enhance your design for desktop screens (1200 pixels and wider). Implement features like multi-column layouts or additional content.

**Navigation:** Implement a navigation menu that is user-friendly and intuitive on all screen sizes. Consider using a responsive menu (e.g., "hamburger" menu) for small screens.

**Images and Media:** Ensure that images and media elements (e.g., videos) resize appropriately for different screen sizes and orientations. Use CSS to control image dimensions and positioning.

**Font Sizes:** Adjust font sizes and line spacing to maintain readability on various devices. Test and fine-tune font sizes using media queries.

**Orientation Handling:** Address the layout and content arrangement for both portrait and landscape orientations on devices like tablets.