

## Task 5: Develop an Advanced Responsive Navigation Menu with Dynamic Features

### Objective:

Create an advanced responsive navigation menu for a website that includes dynamic features, transitions, and accessibility enhancements.

### Requirements:

#### 1. HTML Structure:

- Develop a semantic HTML structure for the navigation menu, using `<nav>`, `<ul>`, `<li>`, and `<a>` tags.
- Include a dropdown feature for at least two submenus.

#### 2. Styling:

- Use CSS to style the navigation menu:
  - Horizontal layout for desktop view, with a fixed position at the top.
  - Vertical dropdown menus for mobile view.
  - Implement smooth transitions for dropdowns and hover effects.
  - Ensure the menu design matches the existing website theme while being visually appealing.

#### 3. Responsiveness:

- Implement media queries to adjust the layout:
  - At widths less than 768px, the menu should collapse into a hamburger icon.
  - Upon clicking the hamburger icon, the menu should slide in from the side, covering part of the content.

#### 4. JavaScript Functionality:

- Write a JavaScript function to handle the following:
  - Toggle the visibility of the menu on mobile devices.
  - Expand and collapse dropdown menus within the main navigation.
  - Ensure the menu closes when a menu item is clicked or when the user clicks outside of the menu.

#### 5. Accessibility:

- Ensure that the navigation is accessible:
  - Use appropriate ARIA roles and attributes.
  - Implement keyboard navigation for dropdowns.
  - Ensure that all interactive elements are focusable and can be accessed via the keyboard.

#### 6. Performance:

- Optimize the JavaScript and CSS for performance, ensuring minimal load times.
- Use CSS transitions for smooth effects and avoid excessive DOM manipulation.

#### 7. Testing:

- Test the menu on various browsers and devices (desktop, tablet, mobile) for compatibility and responsiveness.
- Conduct usability testing to gather feedback on the user experience.

## Deliverables:

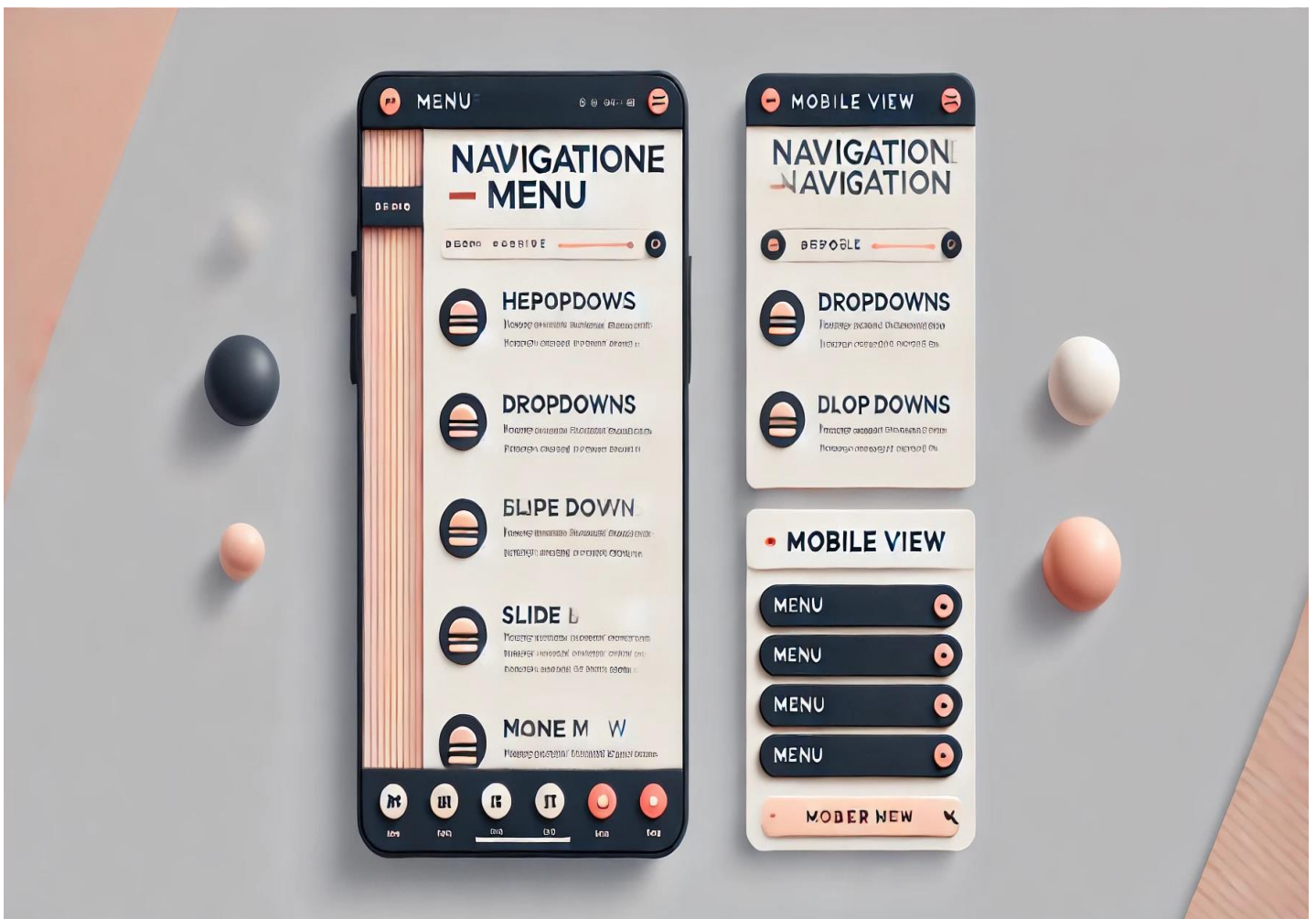
- HTML file containing the navigation menu.
- CSS file for styling.
- JavaScript file for functionality.
- A short write-up explaining design choices, implementation details, and any challenges faced.

## Deadline:

- **October 16, 2024**

## Notes:

- Collaboration is encouraged; team members can divide tasks (e.g., HTML structure, CSS styling, JavaScript functionality).
- Documentation is essential—ensure to provide comments in your code and document any third-party libraries or resources used.



**Sample Design**