

Practice Assignment

Module 4	
Sr. No.	Questions
1	In the context of web development, what is responsive design, and how can JavaScript be employed to make websites responsive? Provide real-world examples of situations where responsive JavaScript techniques are crucial for delivering a seamless user experience.
2	Compare and contrast local storage, session storage, and cookies as different data storage techniques in web development. Explain scenarios where you would choose one over the others and justify your choice.
3	Give an overview of popular JavaScript libraries/frameworks that facilitate advanced data storage and manipulation. How do these libraries enhance the development process, and what are some drawbacks to consider when integrating them into projects?
4	Describe the process of dynamically creating new DOM elements using JavaScript. Provide a step-by-step example of creating a button element and appending it to an existing HTML element.
5	Explain event propagation in the DOM. How does event bubbling differ from event capturing? Provide a case study where understanding event propagation is essential for

	building an interactive web application.
6	Detail the role of AJAX (Asynchronous JavaScript and XML) in modern web development. How does it facilitate seamless data retrieval and update without requiring a full page reload? Illustrate the concept with an application-based scenario.
7	Explore the concept of promises and asynchronous programming in JavaScript. How do promises improve the readability and manageability of asynchronous code? Provide an example of using promises for fetching data from a remote server.
8	Discuss the concept of closures in JavaScript. Provide an example of how closures can be used to create private variables and encapsulate functionality within a module.
9	Walk through the process of handling form validation using JavaScript. How can you ensure that user inputs are accurate and meet specific criteria before submission? Give an example of implementing form validation for a user registration form.
10	Investigate the role of regular expressions (regex) in JavaScript. How can regex be used for pattern matching and manipulation of strings? Present a real-world use case where regex is applied for data validation.