

# Practice Assignment

Module 5	
Sr. No.	Questions
1	Describe the purpose of JSX and how it facilitates the creation of virtual DOM elements in React. Give an example of JSX code and the corresponding virtual DOM representation.
2	Walk through the steps involved in setting up a React environment from scratch. Include the installation process and configuration of essential tools and libraries.
3	What is Node.js, and how does it enable server-side JavaScript development? Explain the core features of Node.js that make it suitable for building scalable applications.
4	Compare and contrast class components and functional components in React.js. Discuss the advantages and disadvantages of each approach in component-based development.
5	Illustrate the process of passing data from a parent component to a child component using props in React. Provide an example scenario where props are used to communicate between components.
6	Explain the concept of reconciliation in the context of React's virtual DOM. How does React efficiently update the actual

	DOM based on changes in the virtual DOM?
<b>7</b>	Create a step-by-step guide to set up an Express.js server using Node.js. Include the installation of required packages, handling routes, and sending responses to client requests.
<b>8</b>	Describe the role of middleware in Express.js. Provide practical examples of middleware functions and explain how they contribute to request processing and enhancing server functionality.
<b>9</b>	Explore the concept of "props drilling" in React.js. How does this pattern emerge, and what are the potential issues it can lead to? Suggest solutions to mitigate props drilling.
<b>10</b>	Detail the significance of using key props when rendering lists in React. Discuss the impact of keys on component reusability and performance optimisation.