15-Day React.js and Node.js Course

Day 1-2: Introduction to JavaScript and Node.js

- JavaScript fundamentals (ES6+ features)
- Node.js installation and setup
- Understanding the Node.js runtime and event-driven architecture
- Basic server creation with Node.js and Express.js
- Handling HTTP requests (GET, POST, PUT, DELETE)

Day 3-4: Node.js and Express.js Basics

- Setting up Express.js to handle routes and requests
- Middleware in Express.js
- Handling JSON and form data in Express
- Introduction to RESTful API design

Day 5-7: Introduction to React.js

- Setting up a React environment (Create React App)
- Understanding components, props, and state
- Functional components and React hooks (useState, useEffect)
- Handling events and form submissions in React

Day 8-10: Connecting React with Node.js Backend

- Setting up Axios to make HTTP requests from React
- Fetching data from Node.js backend and displaying it in React
- Managing state in React with hooks
- Building dynamic forms in React

Day 11-13: Authentication and Authorization

- Implementing user authentication with JWT (JSON Web Tokens)
- Storing and managing tokens in localStorage or cookies
- Protecting routes and ensuring only authorized users can access certain pages
- Basic session management with JWT

Day 14-15: Final Project and Review

- Build a simple full-stack application with React and Node.js
- Testing, debugging, and deployment on platforms like Heroku

- Final project review and presentation

30-Day React.js and Node.js Course

Week 1: JavaScript, Node.js, and Express.js Basics

- JavaScript fundamentals (ES6 features, asynchronous programming)
- Node.js fundamentals and Express.js setup
- Building RESTful APIs with Node.js and Express.js
- Handling HTTP requests (GET, POST, PUT, DELETE)
- Introduction to MongoDB and Mongoose for data storage

Week 2: Advanced Node.js and Express.js

- Middleware functions in Express.js
- Handling form data and JSON in Node.js
- Integrating MongoDB and Express using Mongoose
- Error handling in Express applications
- Validating and sanitizing user input

Week 3: Introduction to React.js and Frontend Development

- React component architecture (function components, class components)
- React hooks (useState, useEffect)
- React Router for routing and navigation
- State management in React (props, useState, useContext)

Week 4: MERN Stack Integration and Authentication

- Connecting React with Node.js and MongoDB using Axios
- Implementing JWT-based authentication and user login/registration
- Creating secure routes and protecting sensitive data
- Testing and debugging full-stack applications
- Deployment (Heroku, Netlify, or DigitalOcean)

Day 29-30: Final Project and Review

- Build a full-stack application with React.js and Node.js
- Handling authentication, routing, and form submissions
- Final project testing, debugging, and deployment
- Project review and feedback