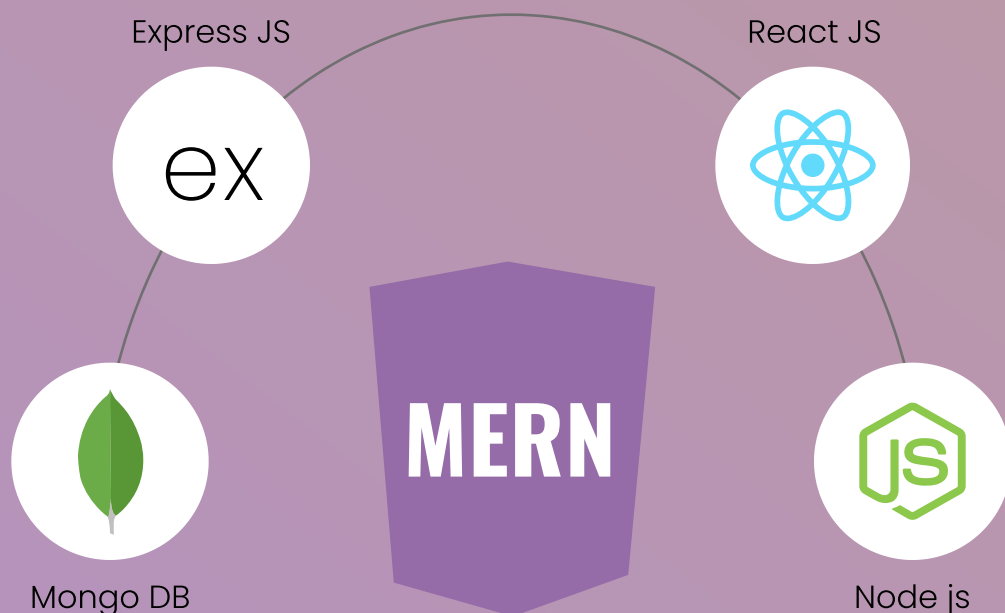




GeeksforGeeks

MERN

Full Stack Development



Detailed
Course Syllabus

CONTENTS

Week 01

Class : 1 **Introduction to HTML & CSS**

- Understanding the basics of web development
- Introduction to HTML tags and attributes
- Styling HTML pages with CSS

Class : 2 **GIT & Responsive Design**

- Introduction to GIT and version control
- Setting up a GIT repository and committing changes
- Creating responsive web pages with media queries
- Introduction to CSS frameworks like Bootstrap

Week 02

Class : 1 **Advanced CSS Techniques & Best Practices**

- Advanced CSS techniques like flexbox and grid
- Best practices for HTML and CSS development
- Overview of JavaScript language and its features

Class : 2 **JavaScript & ES6 Essentials**

- Variables, datatypes, and operators
- Control flow statements (if-else, for, while, switch)
- Introduction to ES6 features like let, const, arrow functions

Week 03

Class : 1 **JavaScript Fundamentals & DOM Manipulation**

- JavaScript fundamentals: functions, objects, arrays
- Manipulating the DOM with JavaScript
- Handling events and user interactions with JavaScript
- Debugging and troubleshooting JavaScript code

Class : 2 **Introduction to React & JSX**

- Introduction to React and its features
- Setting up a React development environment
- JSX syntax and its benefits
- Creating React components

CONTENTS

Week 04

Class : 1 **React Components, Props & Conditional Rendering**

- Creating reusable React components
- Using props to pass data between components
- Creating conditional rendering and handling events in React
- Best practices for React component development

Class : 2 **React States & Hooks**

- Introduction to React Hooks
- Understanding state and its importance in React
- Understanding useState and useEffect Hook
- Implementing custom hooks in React

Week 05

Class : 1 **React Routing and Types of Routers**

- Understanding React Routing
- Understanding client side routing & server side routing
- Introduction to different types of React routers

Class : 2 **Class-Based Components, React Lifecycle & Context**

- Introduction to class based components
- Understanding React Lifecycle and its phases
- Introduction to react context
- Use of lazy and suspense

Week 06

Class : 1 **Introduction to Node.js & Express.js**

- Introduction to Node.js and its features
- Understanding the basics of web servers and HTTP requests
- Setting up an Express.js development environment
- Building a simple Express.js server

CONTENTS

Class : 2 **Building RESTful APIs with Node & Express.js**

- Understanding the principles of RESTful APIs
- Building CRUD operations with Express.js
- Implementing middleware in Express.js
- Best practices for building scalable and maintainable APIs

Week 07

Class : 1 **Introduction to MongoDB & Mongoose**

- Understanding NoSQL databases and MongoDB
- Setting up a MongoDB development environment
- Building MongoDB schema and models with Mongoose
- Using Mongoose to perform CRUD operations in MongoDB

Class : 2 **MongoDB Indexing, Aggregation & Security**

- Understanding MongoDB indexing and aggregation
- Implementing authentication and authorization with MongoDB
- Best practices for securing MongoDB applications
- Implementing data migrations and backups in MongoDB

Week 08

Class : 1 **Node.js Advanced Concepts & Authentication**

- Understanding the Node.js event loop and asynchronous programming
- Using callbacks, promises, and async/await in Node.js
- Handling errors and debugging Node.js applications
- Implementing security best practices in Node.js

Class : 2 **Major Project**

- Complete the development of FlavorFleet: A Food Delivery App - Major Project (Built throughout the course)
- Deployment of the project using hosting services
- Code review and feedback session