Front-End Development

(React, UI/UX & Modern Frameworks)
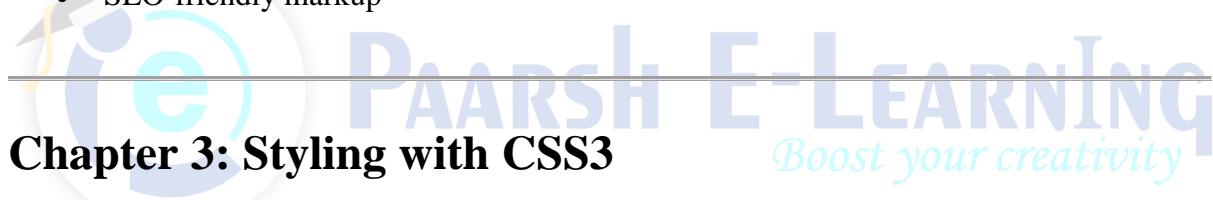
Chapter 1: Introduction to Front-End Development

- What is Front-End Development
- Role of a Front-End Developer
- Overview of modern front-end tools
- Web standards & browser basics
- Career opportunities

Chapter 2: Web Fundamentals – HTML5

- HTML structure & semantics
- Forms & input elements
- Media elements (audio, video)
- Accessibility basics
- SEO-friendly markup

Chapter 3: Styling with CSS3

- CSS syntax & selectors
- Box model & positioning
- Flexbox & Grid layouts
- Responsive design principles
- Media queries

Chapter 4: Advanced CSS & Modern UI Design

- CSS animations & transitions
- Pseudo-classes & pseudo-elements
- CSS variables
- Design systems
- Cross-browser compatibility

Chapter 5: UI/UX Design Fundamentals

- UI vs UX concepts
- Design thinking process
- User research & personas
- Wireframing basics
- Usability principles

Chapter 6: Design Tools & Prototyping

- Introduction to Figma
- Creating wireframes
- Interactive prototypes
- Design handoff to developers
- UI design best practices

Chapter 7: JavaScript Fundamentals

- JavaScript syntax
- Variables & data types
- Functions & events
- DOM manipulation
- ES6 basics

Chapter 8: Advanced JavaScript

- Asynchronous JavaScript
- Promises & async/await
- Fetch API
- Error handling
- Modular JavaScript

Chapter 9: React Fundamentals

- Introduction to React
- JSX & components
- Props & state
- Event handling
- Component lifecycle

Chapter 10: Advanced React & Modern Frameworks

- React Hooks
- React Router
- State management basics
- Performance optimization
- Overview of Next.js / Vite

Chapter 11: UI Libraries & Frameworks

- Bootstrap fundamentals
- Tailwind CSS
- Material UI
- Component-based styling
- Responsive UI development

Chapter 12: API Integration & Data Handling

- REST API basics
- Fetching data in React
- Handling forms & validation
- Error & loading states
- Data visualization basics

Chapter 13: Testing, Optimization & Accessibility

- Front-end testing basics
- Performance optimization
- Accessibility standards (WCAG)
- Cross-device testing
- Best coding practices

Chapter 14: Deployment & Portfolio Project

- Building a real-world UI project
- Version control with Git
- Deployment on hosting platforms
- Portfolio preparation
- Final project presentation