7-Day HTML, CSS & React Roadmap

Day 1 – HTML + Basic CSS

Topics Covered:

- HTML5 structure (doctype, meta, head, body)
- Tags: headings, links, lists, images, forms, tables
- CSS Basics: selectors, colors, spacing, fonts, borders
- Internal and External CSS

Practice Projects:

- Resume Page
- Registration Form (styled)
- Weekly Timetable using HTML tables

Day 2 – Material UI (MUI)

Topics Covered:

- Introduction to MUI and installation
- Theme provider and customization
- Common components: Button, Typography, Card, AppBar, Grid, Modal
- Icons and responsive layout using MUI Grid system

Practice Projects:

- MUI-based Login Page
- Dashboard layout with AppBar and Drawer
- Product Card using MUI Grid and custom theme

Day 3 – React: Setup & Fundamentals

Topics Covered:

- Setting up with create-react-app or Vite
- JSX syntax and rules
- Functional components and props
- useState hook and event handling

Practice Projects:

- Greeting component with props

- Counter App with increment/decrement

- Toggle visibility feature

Day 4 – Lists, Conditional Rendering & UI Components

Topics Covered:

- Rendering lists with .map()

- Proper usage of the key prop

- Conditional rendering (if, ternary, logical &&)

- Component structure and organization

Practice Projects:

- To-do App with delete functionality

- FAQ Accordion component

- Reusable Button and Card components

Day 5 – React Forms & Controlled Inputs

Topics Covered:

- Controlled components using value and onChange

- Basic form validation

- Handling form submissions

- useState with object-based form state

Practice Projects:

- Signup form with validation

- Search filter for a list of items

- Feedback form with success message

Day 6 – useEffect & Common React Hooks

Topics Covered:

- useEffect for data fetching and side effects

- Conditional triggers for useEffect

- useState + useEffect integration
- Additional hooks:
    - useRef for DOM access and persistent values
    - useMemo for optimizing expensive calculations
    - useCallback to memoize functions

Practice Projects:
- Fetch and display user list from API
- Handle loading and error states
- Real-time character counter with useEffect
- Scroll-to-top button using useRef
- Memoized calculator (e.g., factorial)

Day 7 – Component Composition & Mini Project

Topics Covered:
- Smart vs dumb components
- Prop drilling and state management
- Splitting UI into reusable components
- Lifting state up to parent components

Mini Project: E-Commerce UI
- Product List (API or hardcoded)
- Cart component (add/remove items)
- Filter system (by category or price)
- Header with total cart count