Week 4 – React Basics

🎯 Learning Objectives

By the end of Week 4, students will be able to:

- Understand the fundamentals of **React**.

- Build reusable UI components with JSX.

- Use **props** to pass data and **state** to manage component data.

- Handle events in React components.

- Understand React's rendering cycle and the Virtual DOM.

- Structure a small React project effectively.

📌 Weekly To-Do

- **Introduction to React**

  Learn about components, JSX syntax, and the React rendering model.

- **Props & State**

  Understand how to pass data between components using props and manage component data with `useState`.

- **Event Handling**

  Work with click events, input handling, and form submissions.

- **Component Composition**

  Learn how to break down the UI into smaller, reusable components.

- **Basic Project Structure**

  Learn best practices for organizing React files and folders.

- **Progress Sharing**

  Share project learnings, GitHub repo link, and deployed app with a LinkedIn post.

🛠️ Tools & Technologies

- **Library:** React
- **Language:** JavaScript (ES6+) / TypeScript (optional)
- **Editor:** VS Code
- **Version Control:** Git, GitHub
- **Deployment:** Vercel / GitHub Pages

📌 Week 4 Project – *Movie Search App*

- Build a **Movie Search Application** that allows users to:
  - Search for movies using a public API (e.g., OMDB API).
  - Display a list of results with poster, title, and year.
  - Click on a movie to view details (basic info).
- Style using simple CSS or Tailwind.

Deliverables:

- GitHub repo link
- Live deployment link
- LinkedIn post showcasing project demo

📚 Suggested Resources

- React Official Docs
- React Course
- FreeCodeCamp – React Tutorial