Full-Stack Development Course Plan (React + Python + Docker + Git)

Course Duration: 3 Months
Schedule: 3 Days per Week | 1 Hour per Session
Total Sessions: ~36 Classes

⬜ Month 1: Frontend Basics (HTML, CSS, JavaScript)

✅ **Goal:** Build a strong foundation in frontend development and create a portfolio website.

Week	Topics Covered	Key Learnings	Practice Task
Week 1	Introduction to Web Development HTML Basics	Structure of a webpage, Elements, Forms, Tables, Semantic HTML	Build a personal bio page
Week 2	CSS Basics & Flexbox CSS Grid & Responsive Design	Styling, Box Model, Positioning, Media Queries	Style your bio page using Flexbox/Grid
Week 3	JavaScript Basics DOM Manipulation	Variables, Functions, Loops, Events, Arrays, Objects	Interactive To-Do List
Week 4	JavaScript Advanced (ES6+) API Calls using Fetch/Axios	Arrow functions, Async/Await, Promises	Fetch GitHub API and display user profile

📌 **Portfolio Project (End of Month 1):**
🔥 **Responsive Portfolio Website** – A personal website using HTML, CSS, and JavaScript. Add sections for bio, projects, and contact details.

⬜ Month 2: React & Python (Full-Stack Development)

✅ **Goal:** Learn React.js for frontend, Python & Flask for backend.

Week	Topics Covered	Key Learnings	Practice Task
Week 5	Introduction to React.js JSX, Components, Props	Component-based UI, Functional vs Class Components	Build a simple Counter App

Week	Topics Covered	Key Learnings	Practice Task
Week 6	State Management (useState, useEffect) React Forms & Events	Controlled components, Form handling	Create a Login Form with validation
Week 7	React Router API Calls with Axios	Navigation, Dynamic Routes, Fetching Data	Movie Search App (consume an API)
Week 8	Introduction to Python & Flask REST API with Flask	Python basics, Flask routes, CRUD operations	Build a small API for users

📅 Month 3: Full-Stack Integration & LinkedIn Project

☑️ **Goal:** Connect React frontend with Python backend & deploy with Docker.

Week	Topics Covered	Key Learnings	Practice Task
Week 9	Connecting React with Flask API CORS, Fetching Data from Backend	API integration, Fetch data in React	Display data from Flask API
Week 10	Introduction to Docker Dockerizing a React & Flask App	Containers, Docker Compose	Deploy full-stack app with Docker
Week 11	GitHub	Git workflow, Branching	Push project to GitHub
Week 12	LinkedIn Portfolio Project (Final Project)	Build a complete LinkedIn-style project	Deploy

📌 **Final Project (End of Month 3):**
🔥 **LinkedIn Clone (Mini Version)** – A full-stack LinkedIn-style project with user profiles, posts, and a backend API.

💡 **Portfolio Website (Month 1 Project Idea)**

📌 **Hosting:** GitHub Pages or Netlify

🚀 **Next Steps:**

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1 Start with **Month 1 topics** and build a **portfolio website**
2 Move to **React & Flask for full-stack development**
3 End with **Docker, GitHub & a final LinkedIn-style project**