MERN Stack Roadmap (Beginner to Advanced)

# Phase 1: Prerequisite (Basic Foundation)

1. HTML – Structure of web pages  
2. CSS – Design, layout, responsiveness  
3. JavaScript (Pure) – Logic, functions, DOM, events  
4. Git + GitHub – Version control, pushing code

# Phase 2: Backend Development (Node.js + Express.js)

1. Node.js Basics – Modules, FS, HTTP, etc.  
2. Express.js – Routing, middleware, API creation  
3. REST APIs – GET, POST, PUT, DELETE  
4. MongoDB – NoSQL database (with Compass first, then code)  
5. Mongoose – MongoDB coding made easier  
6. CRUD Operations with MongoDB + Express  
7. Authentication – JWT, bcrypt, login/register systems  
8. Deploy Backend – Render/Vercel or Railway

# Phase 3: Frontend Development (React.js)

1. React.js Basics – JSX, components, props, state  
2. Hooks – useState, useEffect, useContext  
3. React Router – Page navigation  
4. Form Handling – Input, validation  
5. API Integration – Fetch/Post backend data  
6. Conditional Rendering, mapping, lists  
7. React Project Structure – Real-life folders  
8. Testing & Debugging React Code

# Phase 4: MERN Integration (Full Stack)

1. React se Express API ko data bhejna  
2. MongoDB se data React me show karna  
3. Auth system frontend + backend  
4. Build dashboard, CRUD apps (to-do, e-commerce, etc.)

# Phase 5: Final Skills

1. Deployment – Full MERN app on Vercel/Render/Netlify  
2. Advanced Git Workflow – Branching, team collaboration  
3. Tailwind CSS / Bootstrap – UI frameworks  
4. Real Projects – Portfolio, Blog, CMS, Admin Panel

# Summary Learning Flow

HTML → CSS → JavaScript → Git → Node.js → Express → MongoDB → React → Merge → Projects