Module : Full Web Development

Objective: Master full-stack development by building advanced, high-performance web applications with professional design and psychological user experience strategies.

1. Core Stack Recap (from Dev Starter)

- Advanced Python, JavaScript, HTML, CSS
- React.js & Next.js fundamentals
- Node.js & Express.js basics
- API creation & integration
- Database connectivity

2. Advanced Front-End Development

- State management with Redux / Zustand
- Advanced React hooks & custom hooks
- Next.js server actions & edge functions
- Performance optimization (code splitting, lazy loading)
- Progressive Web Apps (PWAs)
- Web accessibility best practices

3. Advanced Back-End Development

- Authentication & authorization (JWT, OAuth)
- Role-based access control
- Advanced database design (PostgreSQL / MongoDB)
- ORM usage (Prisma, Sequelize, Mongoose)
- File uploads & media handling
- Real-time communication with WebSockets / Socket.IO

4. Advanced Design Frameworks & Tools

- Tailwind CSS advanced theming
- Material UI / Chakra UI for component libraries
- Framer Motion & GSAP for animations
- Figma to code workflow
- Color theory & typography for branding

5. Psychological Frameworks for Web Apps

- UX psychology principles (Hick's Law, Fitts' Law, Gestalt Principles)
- Persuasive design techniques (Cialdini's principles)
- Cognitive load reduction strategies
- Call-to-action placement for conversions
- Emotional design for user retention

6. Capstone Project: Full-Stack Web Application

- Plan, design, and develop a fully functional, production-ready app
- Implement version control with Git & GitHub
- Deployment (Vercel, Netlify, or custom server)
- Final review & performance testing