WARRIORS WAY
UNLEASH THE WARRIOR IN YOU

FULL STACK WEB DEVELOPMENT Curriculum

HTML | CSS | JavaScript | Git | GitHub | SASS/LESS | Flexbox | CSS Grid | React | Context API | Redux | Node.js | Express | MongoDB | PostgreSQL | Jest | Mocha | Docker | Heroku | Vercel | Vue | Angular | Flask | Django

Week 1: Introduction to Web Development & Front-end Basics

Day 1: Introduction to Web Development
Overview of web development.
Understanding the internet, browsers, and how websites work, Git and GitHub, Setting up the development environment.

Day 2: HTML Basics
Structure of an HTML page.
Common tags and their usage.
Project: Build a simple personal profile page.

Day 3: CSS Basics
Styling with CSS: Selectors, properties, and values.
Box model and layout basics.
Project: Style your personal profile page.

Day 4: Responsive Design
Introduction to responsive design and media queries.
Flexbox and Grid systems.
Challenge: Make your profile page responsive.

Day 5: JavaScript Basics
Variables, data types, operators, data structures
Control structures: if/else, loops, functions.
Mini-project: Interactive quiz on your profile page.

Day 6: DOM Manipulation
Introduction to the Document Object Model (DOM).
Selecting and modifying elements.
Project: Create a dynamic to-do list application.

Day 7: Review & Project Day
Recap of the week.
Complete any unfinished projects.
Bonus challenge: Add a feature to your to-do list app (e.g., deadlines, priorities).

Week 2: Advanced Front-end Development & Introduction to Back-end

Day 8: Advanced CSS and Preprocessors
Animations and transitions.
Introduction to CSS preprocessors (SASS or LESS).
Project: Animate your profile page.

Day 9: JavaScript ES6+ Features
Let, const, arrow functions, template literals.
Promises, async/await.
Mini-project: Fetch and display user data from a public API.

Day 10: Front-end Frameworks - React
Introduction to React and its ecosystem.
Components, props, and state.
Project: Build a single-page application (SPA) with React.

Day 11: State Management
Introduction to state management.
Using Context API and Redux.
Challenge: Integrate state management into your SPA.

Day 12: Introduction to Back-end Development
Overview of back-end technologies.
Setting up Node.js and Express.
Project: Build a simple REST API.

Day 13: Database Integration
Introduction to databases (SQL vs. NoSQL).
Connecting your API to a database (MongoDB or PostgreSQL).
Project: Add database CRUD operations to your API.

Day 14: Review & Project Day
Recap of the week.
Complete any unfinished projects.
Bonus challenge: Add authentication to your SPA and API.

Week 3: Full Stack Integration & DevOps Basics

Day 15: Connecting Front-end to Back-end
Overview of full-stack architecture.
Fetching data from your back-end in your SPA.
Project: Full-stack application development.

Day 16: Advanced Back-end Techniques
Building middleware for authentication.
File uploads and handling.

Project: Enhance your API with advanced features.

Day 17: Introduction to Testing
Unit testing, integration testing.
Testing in front-end and back-end (Jest, Mocha).
Mini-project: Write tests for your application.

Day 18: DevOps and Deployment
Introduction to Docker.
Continuous Integration/Continuous Deployment (CI/CD) basics.
Deploying your application (Heroku, Vercel).

Day 19: Performance Optimization
Front-end performance tips.
Back-end optimization techniques.
Challenge: Optimize your full-stack application.

Day 20: Review & Project Day
Recap of the week.
Complete any unfinished projects.
Bonus challenge: Add a new feature to your application using a tech/tool not covered in the course.

Week 4: Real-world Projects & Advanced Topics

Day 21: Planning and Design
Conceptualization of the web application idea.
Requirement analysis for functionality, features, and user interactions.
Technology selection for front-end and back-end.
Designing wireframes or mockups for the application's UI.

Day 22: Project Setup and Initial Development
Project setup with version control (Git).
Starting front-end development based on UI designs.
Initiating back-end development (server, APIs, database models).

Day 23: Advanced Development
Integrating front-end and back-end through APIs.
Continuing development with feature implementation.

Day 24: Testing and Debugging
Conducting unit tests for front-end and back-end.
Performing integration testing across the application.
Debugging based on test feedback.

Day 25: Deployment and Presentation
Deploying the application to a cloud platform or hosting service.
Making final adjustments post-deployment.
Preparing and delivering a project presentation.

Day 26: Introduction to Other Frameworks and Libraries

Overview of other popular tools (Vue, Angular, Flask, Django).
Mini-projects: Small tasks using new tools.

Day 27: Security Best Practices

Web application security fundamentals.
Securing your application (OWASP Top 10).

Day 28: Scalable Architectures

Introduction to microservices and serverless architectures.
Case study: Scaling a web application.

Day 29: Career Skills in Web Development

Building your portfolio.
Resume writing and interview preparation.
Freelancing and remote work opportunities.

Day 30: Final Review & Graduation

Final project presentations.
Feedback session.
Graduation and next steps.