Full-Stack Career Path

Explore the power of coding with our cutting-edge Full Stack Web Development Program! You'll gain proficiency in database management using MongoDB, server-side development using Node.js and Express.js, and client-side development using React.js. Through this comprehensive program, you will learn to leverage each stack component to build dynamic and scalable web applications. Join us & become a web wizard!

Skill Level:

- Beginner

Time to Complete:

- 180 hours

Professional Certification:

- Yes

Prerequisites:

- None

Benefits:

1. Structured Lesson plans for all the modules helpful for revision and Preparation.
2. Updated program as per current and future trends.
3. The industry-relevant projects and mentorship provide valuable insights across various domains.
4. Gain practical insights, and solve real-world challenges in real-time

Learning Outcomes :

Upon completing this course, you will be able to:

1. **Understand the fundamentals of web development** including internet basics, client-server architecture, and the differences between static and dynamic websites.
2. **Build and structure websites** using HTML, employing tags, elements, media, forms, and SEO techniques.
3. **Apply styles to websites** using CSS, mastering basic and advanced selectors, positioning, flexbox, grid layouts, and responsive design with media queries.
4. **Utilize Tailwind CSS** to create modern, utility-first CSS projects efficiently.
5. **Implement version control** with Git and GitHub, managing repositories and version histories effectively.
6. **Develop interactive web applications** using JavaScript, covering fundamental concepts, advanced topics, DOM manipulation, asynchronous programming, and error handling.
7. **Create dynamic user interfaces** with React, understanding components, JSX, hooks, state management, routing, and form handling.
8. **Understand networking concepts** related to web development, including DNS, domain management, HTTP/HTTPS protocols, and web application security.
9. **Develop server-side applications** using Node.js, learning module creation, and working with built-in modules for file system operations.
10. **Build and manage web servers** using Express.js, handling HTTP requests, middleware, CORS, and input validation.
11. **Design and manage databases** with a strong understanding of database schemas, normalization, SQL queries, indexing, and database security.
12. **Work with MongoDB** to manage NoSQL databases, including schema design, query operators, and data manipulation techniques.
13. **Handle file uploads and storage** efficiently, including validating, processing, and uploading files to cloud storage.
14. **Complete a comprehensive capstone project** that integrates front-end and back-end development skills to build a full-stack web application.

Modules

Module 1: Fundamentals

- Fundamentals Basic Of Internet
- Browser Client and Server Architecture
- Static and Dynamic Website Text editor, IDE

Module 2: HTML

- HTML Introduction To Web development
- Web Development Tools
- Element and Tag In HTML
- Core HTML Media and
- Forms Modern
- HTML Emmet
- SEO

Module 3: CSS

- Introduction To CSS
- Basics CSS
- Position in CSS
- Flexbox In CSS
- Grid
- Media
- Query
- CSS Selector Advance CSS

Module 4: Tailwind CSS

- Understanding Tailwind CSS With Projects

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Module 5: GIT and Github

- Version Control System
- General Commands on GIT
- Github

Module 6: Javascript

- Operators In javascript
- Type Conversion Condition and Loops Function in javascript
- Array and Object
- Advance Javascript Class In javascript
- Error Handling Async Js,
- Browser API & Window DOM

Module 7: React

- Walkthrough with React
- React Components
- JSX HOC
- Component Style
- React Router
- Form Handling and
- API Calls Redux Toolkit

Module 8: Networking

- Introduction to Networking
- DNS and Domain Management
- HTTP and HTTPS Protocols
- Web Application Security

Module 9: Node JS

- Intro To NodeJs
- Modules, creation and loading of modules
- Path Module
- OS Module
- File System Module

Module 10: Express

- Introduction to Express
- Handling HTTP GET & POST Requests
- Environment Variables
- Input Validation
- Handling HTTP PUT/PATCH
- DELETE Requests
- Express Middleware
- Creating Custom Middleware
- Built-in Middleware
- Third-party Middleware
- CORS

Module 11: Database

- File Based Storage System
- What is Schema including ER diagrams
- Intro to DBMS
- Intro to Data Models
- DBMS Classification: Relational
- & Non relational
- Relational Database Management
- System(RDBMS)
- Types of Relationships.
- Keys in RDBMS. Primary, Candidate,
- Super & Foreign
- ACID
- Introduction to Normalization. Why
- Normalization?
- Join(Inner, Left, Right and Full Joins)
- Dependency (Functional, Inclusion,

- Multivalued, Join) & Decomposition
- Indexing and Performance Optimization
- Transactions and Concurrency Control
- Database Security

Module 12: MongoDB

- Schemas
- Models
- Comparison Query Operators
- Logical Query Operators
- Regular Expressions
- Counting
- Pagination

Module 14: Working with files

- Handling file uploads
- Validating files
- Single file and multiple file uploads
- Uploading files to cloud
- Multer, formidable for file processing

Module 15: Capstone Project

This comprehensive course is designed to take you from a beginner to a professional full-stack engineer, equipped with the skills and knowledge needed to excel in the field. Join us and become a web wizard!