TRENDS Academy
Learning | Evolving | Empowering

Full Stack Development Bootcamp

Duration: 5 Days

Course Description:

This course is perfect for anyone looking to learn fullstack web development in 2024. It covers all the latest technologies and frameworks that you'll need to know to build today's modern websites and web applications. We'll start by learning HTML, CSS, and JavaScript, the fundamental technologies of the web.

Target Audience:

- Have a computer with Internet
- No knowledge in programming is required
- Anyone interested to become a web developer

Course Outlines:

HTML & CSS
➢ Intro to HTML
➢ Basic Nesting Practices, Indentation
➢ The Head & Body
➢ Body Tags (lists, tables, etc.)
➢ Building Forms & Declaring Input Values
➢ Containers, Elements, Attributes, & Classes
➢ Intro to CSS
➢ CSS Selectors & Declarations
➢ Inspecting Element
➢ Inline, Block, Float, and Positioning
➢ Div Layout & Formatting
➢ Styling Text & How Fonts Work
➢ Using Properties & Backgrounds
➢ Replicating Complete User Interfaces
➢ Intro to CSS3 & More Styling
➢ Building Shapes
➢ Constructing Complex Tables
➢ Intro to Bootstrap
➢ CSS Preprocessors, LESS, & SASS

Git/Github
➢ Git & Version Control
➢ Using Terminal Commands
➢ How to Create & Utilize a Repository
➢ Making, Tracking, & Reverting Changes
➢ Git Workflow Overview & States
➢ Advanced Git Commands & Concepts
➢ Branching, Merging, & Conflicts
➢ Github
➢ How to Use a Github Repository
➢ Forking, Cloning, & Pulling
➢ Github Collaboration & Workflow

jQuery
➢ Intro to jQuery
➢ jQuery Functions & Debugging
➢ Parameters & Getters/Setters
➢ Essentials of the jQuery Library
➢ Advanced jQuery
➢ Implementing Dynamic Content
➢ Callbacks in jQuery
➢ Traversing DOM Elements
➢ Forms in jQuery
➢ jQuery UI Library & More Libraries

Responsive Web Design
➢ Intro to Responsive Web Design (RWD)
➢ Breakpoints, Units, & Media Queries
➢ Basics to Typesetting & Scaling
➢ Cross-device RWD
➢ Grid System, Fluid Grids, & Adaptive Layouts
➢ CSS Frameworks
➢ Responsive Typography
➢ Using CSS Reset & Boiler point

Java Programming - OOPS, Data structures
➢ Intro to Object-Oriented Programming
➢ Creating Objects & Classes
➢ Methods, Member Variables & Constructors
➢ Overloading & this
➢ Inheritance & Packages
➢ Advanced Java OOP
➢ Use of Static
➢ Interfaces & Abstract Classes
➢ Annotations
➢ Java Beans
➢ Data Structures
➢ Doubly Linked Lists
➢ Tries

Java Web Development & Java Spring
➢ Java on the Web
➢ Servlets & Web Containers
➢ Query Parameters
➢ Java Servlet Pages
➢ Light MVC Patterns
➢ Session & POST Patterns
➢ Java Spring
➢ Spring Fundamentals
➢ Spring Overview
➢ Spring Tool Suite
➢ Intro to Spring Boot
➢ Spring MVC Apps
➢ Spring Data I & II
➢ MySQL Connections
➢ Repositories & Spring Data – JPA

- ➢ Persistent Model Annotations
- ➢ Relationships
- ➢ Advanced Queries
- ➢ Spring Security
- ➢ Spring Security Overview
- ➢ Authentication & Authorization
- ➢ Servlet API Integration
- ➢ Spring MVC Integration

JavaScript
- ➢ Fundamentals
- ➢ Declaring & Referencing Variables
- ➢ Variable Hoisting in JavaScript
- ➢ Conditionals, Operators, & Nested Loops
- ➢ Using Arrays & Loops in JavaScript
- ➢ Objects, Functions, & Function Scoping
- ➢ Variable Hoisting with Scoping
- ➢ Return Statements in JavaScript
- ➢ Function Hoisting
- ➢ JavaScript OOP
- ➢ How to Use Object Constructors
- ➢ Common Constructors: 'This' & 'New'
- ➢ Private Methods & Variables
- ➢ Creating Prototype Objects in JavaScript
- ➢ Best Practices for JavaScript OOP
- ➢ Advanced JavaScript
- ➢ How to Use Callbacks
- ➢ Delegating Functionality & Event Handling

NodeJS
- ➢ Installation and configuration of Node.js
- ➢ Using npm to install and manage modules
- ➢ Working with the V8 Engine
- ➢ Building HTTP servers and HTTP clients
- ➢ Synchronous and asynchronous design patterns
- ➢ Building Node.js applications
- ➢ Storing application data in NoSQL databases
- ➢ Working with Web application frameworks such as Express
- ➢ Testing and Debugging Node.js applications
- ➢ Using Node.js core modules
- ➢ Using the Node.js event system and event emitters
- ➢ Interacting with the file system using buffers and streams
- ➢ Using Node.js networking API's to build internetworked applications
- ➢ Creating and consuming RESTful Web services

ExpressJS
- ➢ Discuss Request Processing
- ➢ Defiine Response Rendering
- ➢ Render Templates with Express View Engines
- ➢ Explain Data Handling
- ➢ HTTP Methods: Forms, Data Transfers, & Routing
- ➢ Describe REST API

Angular JS (MEAN)
- ➢ Why Angular?
- ➢ Deep Dive into TypeScript
- ➢ Working with Angular CLI
- ➢ Nine Building blocks of Angular (Birds Eye View of Angular)
- ➢ Angular modules
- ➢ Components
- ➢ Templating
- ➢ Interpolation
- ➢ Directives
- ➢ Pipes
- ➢ Forms
- ➢ Dependency Injection
- ➢ Routing and Navigation
- ➢ RxJs Primer
- ➢ Interfacing with backend services and APIs using HttpClient
- ➢ Level up with Angular
- ➢ Testing
- ➢ Deployment

MySQL/MongoDB
- ➢ Intro to MySQL
- ➢ Database Design & Relationships
- ➢ Entity Relationship Diagrams (ERD)
- ➢ Database Normalization
- ➢ MySQL Workbench & Querying
- ➢ Conventions & Common Data Types
- ➢ How to Use ERDs
- ➢ Using a Database with Your UI
- ➢ Recreating ERDs
- ➢ MongoDB & Mongoose
- ➢ MongoDB Overview, CRUD Ops
- ➢ Intro to Mongoose
- ➢ Dependencies in Mongoose
- ➢ Mongoose Communication with MongoDB
- ➢ Mongoose Methods
- ➢ Data Validation with Mongoose
- ➢ Create Associations Between Mongo Objects
- ➢ RESTful Routing with Mongoose & Express