Fullstack Java Development

Course Overview

A Fullstack Java Development course equips you with the skills to build end-to-end web applications. It covers Core Java, front-end technologies like HTML/CSS/JavaScript, backend frameworks like Spring Boot, and cloud/database integrations

Course Description

This comprehensive program transforms beginners and intermediate programmers into production-ready Fullstack Java Developers. Students will master the complete ecosystem of modern web application development, bridging the gap between front-end user experiences and robust back-end server architectures.What You Will Learn Architect End-to-End Systems: Build responsive front-ends and connect them seamlessly to scalable Java back-ends.Master the Java Ecosystem: Write clean, efficient code using Core Java, Advanced Java, and the Spring Boot framework.Design Databases: Create, optimize, and manage relational database systems using SQL, JPA, and Hibernate.Build Microservices: Develop decoupled, cloud-ready architectures equipped with secure RESTful APIs.Deploy and Automate: Use Git, Docker, and CI/CD pipelines to launch applications to the cloud.

Learning Curriculum

Module 1

Front-End Web Technologies (UI Layer)

HTML5 & CSS3: Semantics, responsive layouts, and frameworks like Bootstrap.JavaScript (ES6+): Variables, DOM manipulation, asynchronous programming (promises, async/await).Frontend Frameworks: Deep dive into React (components, hooks, state management) or Angular

Module 2

Core Java (Foundation)

Master the fundamentals of the Java programming language.OOPs concepts (Inheritance, Encapsulation, Polymorphism).Collections framework and Generics (List, Set, Map).Exception handling and Multithreading.Java Streams API and Lambda expressions

Module 3

Advanced Java & Database (Data Layer)

SQL & Database Management: Relational database concepts, normalization, joins, and indexing (MySQL or PostgreSQL).JDBC (Java Database Connectivity): Connecting Java to databases, executing queries.Hibernate & JPA: Object-Relational Mapping (ORM) and simplified database operations

Module 4

Back-End Frameworks (Service Layer)

Spring Framework: Inversion of Control (IoC) and Dependency Injection (DI).Spring MVC: Building Model-View-Controller web architectures.Spring Boot: Rapid application setup and auto-configuration.RESTful APIs: Designing and consuming secure REST services.

Module 5

Microservices & Security

Microservice Architecture: Designing decoupled services, service discovery (Eureka), and API Gateway.Spring Security & JWT: Authentication, authorization, and stateless API protection

Module 6

DevOps, Testing, and Deployment

Deliver cloud-ready and production-grade software.Version Control: Code collaboration and repository management using Git and GitHub.Build Tools & Testing: Dependency management with Maven and unit testing with JUnit/Mockito.Cloud Deployment: Containerization with Docker and basic continuous integration/deployment (CI/CD) pipelines

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