

# Java Full Stack Spring Boot and Angular Course

**Course Duration: 80 Hours**

**Course Code : JFSBA-301**

## 1. Course Overview

The *Java Full Stack Spring Boot and Angular Course* provides comprehensive training for building modern web applications using **Java, Spring Boot, Angular, REST APIs, and databases**. This course equips learners with both **backend and frontend development skills**, enabling them to become proficient **full-stack developers** capable of handling end-to-end application development.

## 2. What You'll Learn?

- Fundamentals of **Java programming** and OOP principles.
- Building **REST APIs** using Spring Boot.
- Integration of **Angular** for dynamic front-end development.
- Working with **databases (MySQL/PostgreSQL)** for data management.
- Implementing **authentication and security** with Spring Security & JWT.
- Using **Maven/Gradle** for project management.
- Deploying full-stack applications on **Docker, Kubernetes, or cloud platforms**.
- Best practices for **debugging, testing, and performance optimization**.

### 3. Target Audience

- Beginners and intermediate learners aspiring to become **Java Full Stack Developers**.
- Java developers looking to **expand into frontend development** with Angular.
- Software engineers aiming to **build scalable enterprise applications**.
- Students and professionals seeking **career opportunities in full-stack development**.

### 4. Pre-Requisites

- Basic knowledge of **Core Java**.
- Understanding of **HTML, CSS, and JavaScript** (recommended).
- Familiarity with **database concepts** is helpful but not mandatory.

### 5. Course Content

#### **Module 1: Core Java Refresher**

- OOP concepts, collections, exception handling
- Java Streams and Lambda expressions

#### **Module 2: Introduction to Spring Framework**

- Spring architecture
- Dependency Injection and Beans

#### **Module 3: Spring Boot Development**

- Building REST APIs
- Data persistence with Spring Data JPA & Hibernate

#### **Module 4: Angular Fundamentals**

- TypeScript basics
- Angular components, directives, and services
- Data binding and forms

#### **Module 5: Integrating Angular with Spring Boot**

- Consuming REST APIs in Angular
- Handling authentication with JWT

#### **Module 6: Database Management**

- Working with relational databases (MySQL/PostgreSQL)
- ORM with Hibernate

#### **Module 7: Security and Authentication**

- Spring Security basics
- JWT and OAuth2 implementation

#### **Module 8: Testing and Debugging**

- Unit testing with JUnit and Mockito
- Angular testing with Jasmine and Karma

#### **Module 9: Deployment & DevOps Basics**

- Containerization with Docker
- CI/CD and deployment to cloud platforms

#### **Module 10: Capstone Project**

- End-to-end full-stack application development
- Presentation and evaluation