

Advanced Full Stack Web Development with Microservices, MFE and Spring Framework Training

Course Duration: 48 Hours

Course Code: AFSW-MS-MFE-SF-01

1. Course Overview

This advanced training program is designed to help learners master full stack web development using modern architectures like Microservices and Micro Frontend (MFE). It covers frontend, backend, API development, and deployment using the Spring Framework. The course focuses on building scalable, enterprise-level applications with real-world use cases.

2. What You'll Learn

- End-to-end full stack development (Frontend + Backend)
- Building Microservices using Spring Boot
- Implementing Micro Frontend (MFE) architecture
- RESTful API development and integration
- Database design and management
- Authentication & authorization (JWT, OAuth)
- CI/CD pipelines and deployment strategies
- Working with Docker & cloud platforms
- Debugging, testing, and performance optimization

3. Target Audience

- Aspiring Full Stack Developers
- Java Developers looking to upgrade skills
- Software Engineers working on monolithic applications

- IT professionals interested in Microservices architecture
- Final-year students and fresh graduates

4. Pre-Requisites

- Basic knowledge of HTML, CSS, and JavaScript
- Understanding of core Java concepts
- Familiarity with databases (SQL basics)
- Basic understanding of web applications

5. Course Content

Module 1: Frontend Development

- HTML5, CSS3, JavaScript (ES6+)
- React.js / Angular fundamentals
- State management and component architecture

Module 2: Backend with Spring Framework

- Core Spring & Spring Boot
- Building REST APIs
- Exception handling and validation

Module 3: Microservices Architecture

- Introduction to Microservices
- Service discovery (Eureka)
- API Gateway (Spring Cloud Gateway)
- Inter-service communication (Feign Client)

Module 4: Micro Frontend (MFE)

- Concept of Micro Frontends

- Module Federation
- Integrating multiple frontend apps

Module 5: Database & Persistence

- SQL & NoSQL databases
- Spring Data JPA
- Hibernate ORM

Module 6: Security & Authentication

- Spring Security
- JWT Authentication
- OAuth2 basics

Module 7: DevOps & Deployment

- Docker & containerization
- CI/CD pipelines
- Cloud deployment (AWS/Azure basics)

Module 8: Testing & Optimization

- Unit & Integration testing
- Performance tuning
- Logging & monitoring