

## Java Full Stack Development (3 Months)

**Duration:** 3 Months (~120 Hours)

**Mode:** Live Online / Classroom

**Designation after completion:** Full Stack Java Developer / Java Web Developer / Application Developer

**Tools & Technologies:** Java SE 11+, Spring Boot, Hibernate, MySQL/PostgreSQL, React.js/Angular, REST APIs, Axios/HttpClient, JWT Security, Docker, GitHub, Jenkins (intro), AWS/Azure (deployment basics)

**Certifications prepared:** Full Stack Java Developer (academy/vendor), Oracle Certified Java Developer

### Detailed Syllabus (12 Weeks)

#### Week 1

- Overview of frontend + backend + DB
- Tools setup: IntelliJ/Eclipse, VS Code, Node.js, Git
- Assignment

#### Week 2

- Core Java 8+ refresher
- Spring Boot REST APIs setup
- Assignment

#### Week 3

- Database basics (MySQL/PostgreSQL)
- JPA/Hibernate integration with Spring Boot
- Assignment

#### Week 4

- Frontend Basics: HTML, CSS, JS ES6
- DOM manipulation, responsive design
- Assignment
- Mock Interview 1

#### Week 5

- Angular/React setup
- Components, routing, state basics
- Assignment

**Week 6**

- Frontend & Backend integration
- REST API calls using Axios/HttpClient
- Error handling
- Assignment

**Week 7**

- Authentication: JWT login flow (Spring Boot backend + frontend)
- Session management
- Secure routes in Angular/React
- Assignment

**Week 8**

- State Management: Redux Toolkit (React) / NgRx (Angular)
- Global state patterns
- Assignment
- Mock Interview 2

**Week 9**

- Microservices backend with Spring Boot
- Connecting multiple APIs to frontend
- Assignment

**Week 10**

- DevOps for Full Stack: Git branching, Docker basics
- CI/CD pipeline overview with Jenkins
- Assignment

**Week 11**

- Testing Full Stack Apps
- Backend: JUnit & Mockito
- Frontend: Jest (React) / Jasmine-Karma (Angular)
- Assignment

**Week 12**

- Deployment: AWS Elastic Beanstalk + S3 hosting
- Environment configs & CI/CD integration
- Assignment
- Mock Interview 3

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**Mini Projects**

- Online Banking App
- Job Portal / Social Media App