

Java Fullstack — Course Curriculum

Become a job-ready Java Full Stack Developer with Spring Boot & React JS

Total: 63 Hours

Free Foundation: 15 Hours

Paid Job-Ready: 48 Hours

100% Online · Live Instructor-Led

About this program: A 63-hour, fully online, job-ready course that takes you from fundamentals to a deployed full-stack application. You start with 15 free foundation hours (Java, HTML/CSS/JavaScript, SQL & databases, Git) and continue into a 48-hour paid program covering Advanced Java & OOP, Hibernate/JPA, the Spring Framework & Spring Boot, REST APIs, Spring Security with JWT, a React JS frontend, full-stack integration, testing with Maven, and Docker, CI/CD & cloud deployment — finishing with an end-to-end capstone, a portfolio, and full interview preparation.

Free Foundation — 15 Hours

Start learning for free. Build your core Java, web, SQL, and Git foundations before advancing to the job-ready program.

Module 1: Programming Foundations with Java

Estimated Time: 5 Hours

Learning Objectives

- Write and run Java programs confidently
- Use core programming logic as the base for backend development

Topics

- JDK setup, syntax, variables, and data types
- Operators, conditionals, loops, and methods
- Arrays, strings, and basic input/output

Hands-on

- Build small Java console programs that solve real problems

Module 2: Web Fundamentals (HTML, CSS & JavaScript)

Estimated Time: 4 Hours

Learning Objectives

- Build and style web pages from scratch
- Add interactivity with JavaScript before learning React

Topics

- HTML structure, semantic tags, and forms
- CSS layout, Flexbox, and responsive design
- JavaScript basics, the DOM, and events

Hands-on

- Build a responsive web page with interactive elements

Module 3: SQL & Relational Database Fundamentals

Estimated Time: 4 Hours

Learning Objectives

- Query relational databases with confidence
- Understand how application data is stored and related

Topics

- SELECT, WHERE, GROUP BY, and ORDER BY
- Joins, primary and foreign keys, and relationships
- Aggregations, subqueries, and table design basics

Hands-on

- Write SQL queries against a real MySQL/PostgreSQL database

Module 4: Version Control with Git & GitHub

Estimated Time: 2 Hours

Learning Objectives

- Track your code and projects with Git
- Collaborate and showcase your work on GitHub

Topics

- Repositories, commits, and branches
- Merging, pull requests, and conflict resolution
- Building a professional developer GitHub profile

Hands-on

- Push your first Java and web projects to GitHub

Paid Job-Ready Program — 45–50 Hours (48 Hours)

Go from foundations to fully employable across the backend (Java, Spring Boot) and the React JS frontend, then ship and deploy a complete application.

Module 5: Advanced Java & Object-Oriented Programming

Estimated Time: 5 Hours

Learning Objectives

- Write clean, reusable object-oriented Java
- Use modern Java features used in real projects

Topics

- Classes, inheritance, interfaces, and polymorphism
- Collections, Generics, and exception handling
- Lambdas, the Streams API, and functional style

Hands-on

- Build an object-oriented Java application using Collections and Streams

Module 6: Databases with Hibernate & JPA

Estimated Time: 4 Hours

Learning Objectives

- Persist Java objects to relational databases
- Map entities and relationships with JPA

Topics

- JDBC basics and the ORM concept
- Hibernate and JPA entities, annotations, and mappings
- Relationships, repositories, and JPQL queries

Hands-on

- Model and persist a domain with Hibernate/JPA

Module 7: Spring Framework & Spring Boot Fundamentals

Estimated Time: 6 Hours

Learning Objectives

- Build applications with the Spring ecosystem
- Use Spring Boot to ship production-ready backends fast

Topics

- Inversion of Control, dependency injection, and beans
- Spring Boot auto-configuration and starters
- Spring Data JPA and application configuration

Hands-on

- Bootstrap a Spring Boot application connected to a database

Module 8: Building RESTful APIs with Spring Boot

Estimated Time: 5 Hours

Learning Objectives

- Design and build professional REST APIs
- Handle errors, validation, and documentation

Topics

- REST principles, controllers, and request mapping
- DTOs, validation, and global exception handling
- API documentation with Swagger / OpenAPI

Hands-on

- Build a full CRUD REST API with Spring Boot

Module 9: Spring Security & JWT Authentication

Estimated Time: 4 Hours

Learning Objectives

- Secure REST APIs and applications
- Implement authentication and authorization

Topics

- Spring Security architecture and filters
- JWT-based authentication and token validation
- Role-based access control and password hashing

Hands-on

- Add JWT login and role-based security to your API

Module 10: Frontend Development with React JS

Estimated Time: 6 Hours

Learning Objectives

- Build modern, responsive user interfaces with React JS
- Manage state and navigation in single-page apps

Topics

- Components, JSX, props, and state
- React Hooks (useState, useEffect) and forms
- React Router and component styling

Hands-on

- Build a React JS single-page application

Module 11: Full-Stack Integration (React + Spring Boot)

Estimated Time: 5 Hours

Learning Objectives

- Connect a React frontend to a Spring Boot backend
- Build a complete, working full-stack application

Topics

- Consuming REST APIs from React with Axios/Fetch
- CORS, JWT auth flow, and protected routes
- Handling loading, errors, and application state

Hands-on

- Wire a React UI to a secured Spring Boot API end to end

Module 12: Testing, Maven & Best Practices

Estimated Time: 3 Hours

Learning Objectives

- Test Java applications and APIs
- Manage builds and dependencies professionally

Topics

- Unit testing with JUnit and Mockito
- Build and dependency management with Maven
- Clean code, project structure, and best practices

Hands-on

- Write unit tests and build your project with Maven

Module 13: Docker, CI/CD & Cloud Deployment

Estimated Time: 5 Hours

Learning Objectives

- Containerize and deploy full-stack applications
- Automate testing and delivery with CI/CD

Topics

- Docker images, containers, and Docker Compose
- CI/CD pipelines with GitHub Actions
- Deploying to the cloud and environment configuration

Hands-on

- Containerize and deploy your full-stack app to the cloud

Module 14: Capstone Full-Stack Project, Portfolio & Job Readiness

Estimated Time: 5 Hours

Learning Objectives

- Ship a complete, portfolio-ready full-stack application
- Prepare for the Java developer job search

Topics

- End-to-end capstone: React UI, Spring Boot API, database, auth
- Portfolio, GitHub, and resume optimization
- Java, Spring, and full-stack interview and coding prep

Hands-on

- Build and present an end-to-end full-stack web application; mock interviews and resume review

Free Foundation: 15 Hours | **Paid Job-Ready Program:** 48 Hours | **Total Course:** 63 Hours (60–65)

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