

ITLEO

Java Advanced Course

**Online
Advanced**

32 lessons, 2 lessons per week

We study the following technologies:



Jenkins



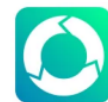
Selenium



Rest



Git



Continuous Integration



Java



GitHub



Postman



Spring Boot

More details about the course:

Java Advanced is the final stage of preparation for the level of a full-fledged Java Developer. The course will help you consolidate theoretical knowledge of Java and move on to creating real web applications using Spring Boot, REST API, databases and Maven. The training is built on practice - from the first REST requests to creating a finished product with authorization, database and deployment. This course is your last step to starting a career in IT and confidently preparing for technical interviews.

Course program

Block 1: Introduction to Java web development

- How the web works: client-server architecture

- HTTP protocol, requests and responses
- REST approach in web service development
- Overview of developer tools (Maven, Postman, GitHub)
- Creating the first REST application

Block 2: Maven and the structure of a Spring project

- What is Maven: dependency management, application assembly
- Spring Boot project structure
- Spring Core basics: containers, components, dependencies
- Spring annotations: `@Component`, `@Autowired`, `@Configuration`
- Working with `application.properties`
- Practical task: creating a mini REST service with configuration

Block 3: Working with databases

- Connecting MySQL/PostgreSQL
- JDBC and JPA: overview and comparison
- Spring Data JPA — creating repositories
- Creating CRUD operations (Create, Read, Update, Delete)
- Entity mapping: `@Entity`, `@OneToMany`, `@ManyToOne`
- Practice: creating a database for a web application

Block 4: REST API, DTO and integration

- Creating REST controllers (`@RestController`, `@RequestMapping`)
- Using DTO for data transfer
- MapStruct and Lombok - code simplification
- API testing via Postman
- JSON formats, request and response structure
- Practice: creating your own REST API

Block 5: Security and logging

- Error handling in Spring (`@ExceptionHandler`, `@ControllerAdvice`)
- Security basics: authentication and authorization
- Spring Security: connection and configuration
- Using JWT (JSON Web Token) for secure access
- Logging via SLF4J and Logback
- Practical work: adding an authorization system to the application

Block 6: Deployment and production environment

- Building the project via Maven
- Environment configuration: dev, test, prod
- Deployment basics: Heroku, Render, Railway
- Verification and testing after deployment
- Practice: deploying your own web application online

Block 7: Code optimization and interview preparation

- Optimizing database queries
- SOLID, DRY, KISS — principles of clean code
- Popular questions from technical Java Developer interviews
- Analysis of real cases and tasks
- Interview simulation with feedback

Block 8: Final project

- Development of a full-fledged web application on Spring Boot
- Integration with a database (JPA / MySQL / PostgreSQL)
- Creating a REST API and authorization system
- Logging, documentation, deployment
- Uploading the project to GitHub
- Protecting the project and obtaining an ITLEO ACADEMY certificate

Who is this course suitable for?

- Those who have completed Java Basic or have equivalent knowledge
- Beginner Java developers who want to move to the Middle level
- Those who want to learn how to create full-fledged web applications
- Students preparing for interviews or internships

What will be the outcome?

- Ready-made web application in the portfolio
- Understanding Spring Boot, REST API, JPA
- Experience with databases and deployment
- Team development skills and Git usage
- Readiness for a technical interview for Java Developer

Career prospects

After completing the course, you will be able to apply for the following positions:

- **Java Intern / Junior Java Developer / Middle Java Developer**

Average salary in Ukraine: \$800 – \$2500

Graduates receive internship or employment opportunities through ITLEO ACADEMY, as well as support in preparing for interviews.

Course bonuses

- Personal mentoring support
- Live classes with practice
- Homework and project review
- Individual consultations on interview preparation
- Assistance with employment after the course
- Access to the student and alumni community

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