



# PROGMASTERS

*reboot your life!*

## A JAVA FULL-STACK SZOFTVERFEJLESZTŐ KÉPZÉSÉN ELSAJÁTÍTOTT TECHNOLOGIÁK

### JAVA SE

- variables, operators, datatypes
- code blocks, methods
- control flow statements
- classes, objects
- interfaces
- collection framework
- packages, access modifiers
- exception handling, basic I/O
- concurrency, multithreading

### METHODOLOGY

- clean code, test-driven development, pair prog.
- focusing on software product
- agile team work, SCRUM
- brief, planning, standup, demo, retrospective
- estimation, sprint, Kanban board
- JIRA Agile

### WEB / FRONTEND

- HTTP protocol
- HTML/CSS
- Bootstrap
- servlets, filters, forward/include/redirect
- MVC pattern
- Javascript/ES6
- ReactJS, React Router, Axios

### REST CONCEPT

- designing and using a REST API
- using REST for CRUD operations

### SPRING

- Dependency injection, Inversion of control
- Spring MVC
- Spring Data JPA
- Spring Data REST
- Spring Boot
- Spring Security

### OOP

- UML modeling
- encapsulation
- abstract classes
- composition, inheritance
- polymorphism
- coupling, cohesion
- design patterns (strategy, proxy, factory, singleton)

### ALGORITHMS

- sorting algorithms
- searching algorithms
- recursion
- binary trees, graphs

### DATABASES

- basic DDL and DML commands
- database design basics (E-R diagrams)
- transactions, isolation levels
- JDBC
- DAO pattern
- Hibernate/JPA
- MySQL, PostgreSQL

### TESTING

- TDD using JUnit
- using Mockito
- unit testing vs integration testing
- testing with Selenium

### DEVOPS

- Using logging frameworks (Logback, Log4J)
- Using Maven and Gradle as build tools
- Using Jenkins as Continuous Integration tool
- Linux basics