Java Developer

TEL-RAN
by Starta Institute

Developer - profession or lifestyle

Декан направления

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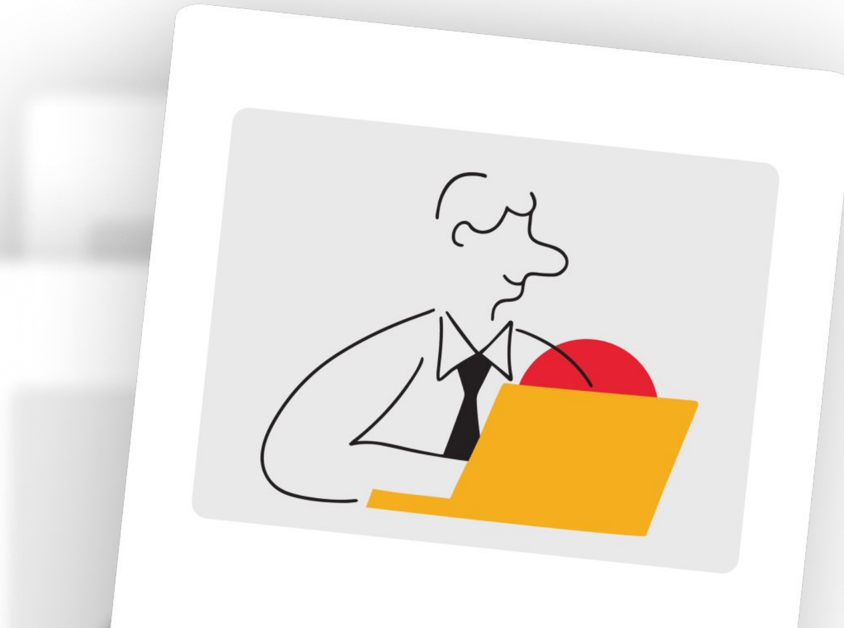
Aleks Reingand

Senior Software Engineer

- 14 years in IT projects
- 7 years of Java Backend development
- Java 8+, Spring Boot, MySQL, AWS

[Aleks Reingand | LinkedIn]



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Typical developer day

10:00

11:00

12:00

13:00

14:00

14:00

15:00

16:00

17:00

18:00

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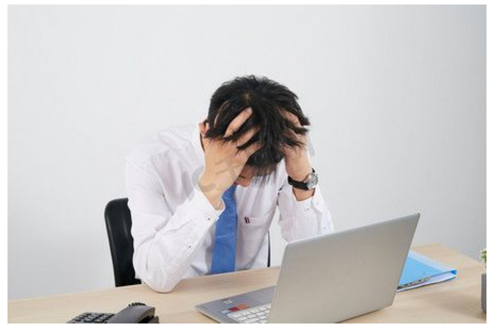
Release date

10:00

11:00

12:00

13:00



14:00

14:00

15:00

16:00

17:00

18:00

19:00

20:00

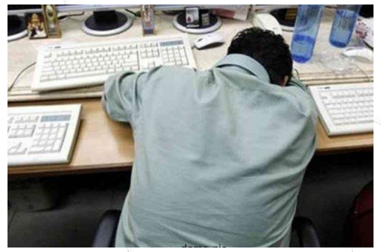
21:00

done

22:00

...

Oh no!



02:00

...

Java developer career path

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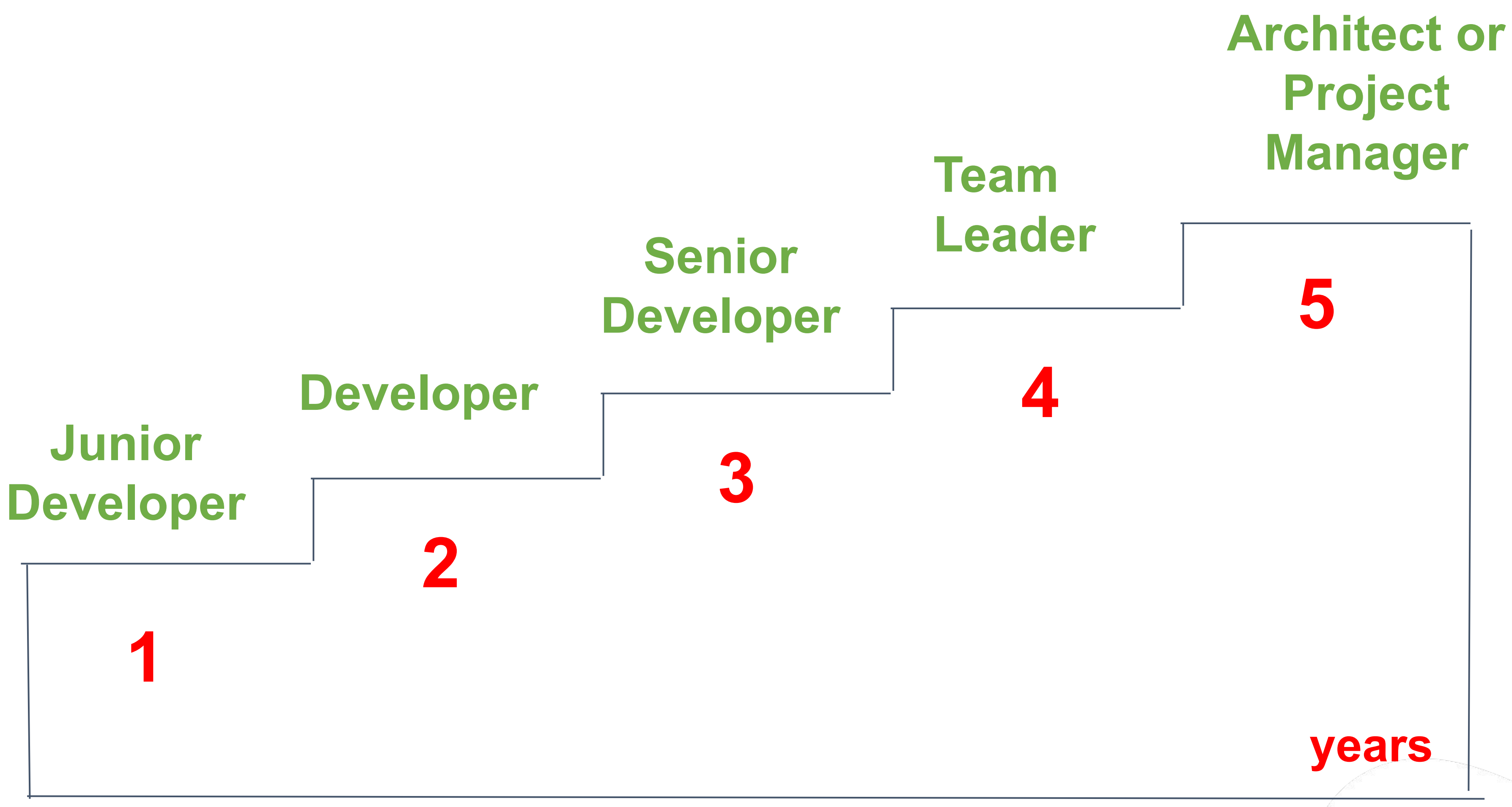
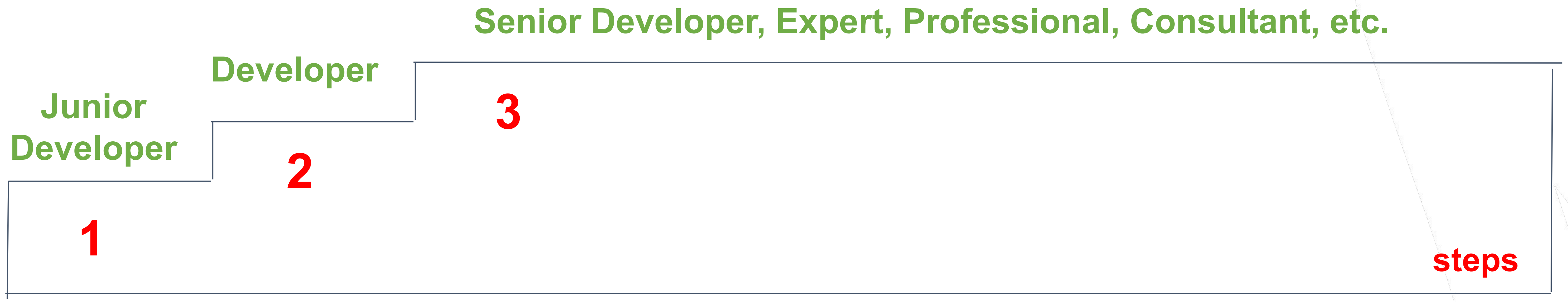
vertical growth



Java developer career path

horizontal growth



Senior Developer, Expert, Professional, Consultant, etc.

Developer

Junior Developer

1

2

3

steps

Tel Ran Prof Course

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1. **OOP (Object-Oriented Programming)**
    1. Classes, objects, fields and methods of an object. Fields and methods of a Class
    2. Encapsulation. Modifier 'static' and 'final.’
    3. Inheritance. Abstract classes.
    4. Polymorphism. Reference Data Types in Java
    5. Enums in Java. Practice
2. **JCF. Java Collections Framework**
    1. Working with Arrays in Java. Binary search. Sort.
    2. Data structures definition. Interfaces. Data structure 'List'. ArraysList implementation, beginning.
    3. Iterators and Iterable. Foreach syntax.
    4. Lists implementations. LinkedList.
    5. Java Set implementation. HashSet. Exercises.
    6. Comparing objects in Java. Comparator, Comparable. Method sort.
    7. Data structures 'Queue', 'Stack'. Custom ArrayDeque implementation.
    8. Data structure 'Map'. Object.hashCode, HashMap implementation.
    9. Trees, Binary Trees, Tree Map.
    10. Graphs. Practice.

    test
3. **Lambdas & Stream API**
    1. Lambdas, Functional Interfaces, Method references.
    2. Practice. Functions and Supplier interfaces.
    3. Stream API: Stream, primitive streams. Intermediate and Terminal operations.
    4. Java Streams. Practice. Flat map. Collectors.
4. **Input and Output in Java.**
    1. Introduction to Input and Output in Java
    2. Try-catch, Reading/Writing streams of bytes, streams of strings.
5. **General and repetition**
    1. Java Regular expressions. Basics.
    2. Generics, PECS.
    3. Exceptions.
    4. Unit testing. JUnit. Mockito tests.
    5. LocalDate, LocalDateTime, ZonedDateTime, exercises.

    test
6. **Multithreading**
    1. General introduction to Java multithreading, main problems.
    2. Thread, Runnable, Daemon threads, Interrupted Exception
    3. Synchronization. Mutex, Monitor. Atomic types.
    4. Object.wait, Object.join. One-element blocking queue (Messenger).
    5. JavaUtilConcurrent. Concurrent Collections.
    6. Threads Executors.
7. **Spring & Spring Boot**
    1. Apache Maven, сборка проектов.
    2. Принципы программирования: DRY, YAGNI, KISS, SOLID.
    3. Reflections. Annotations..
    4. Spring Framework: Introduction, Context and Beans
    5. Spring Framework: Beans configuration
    6. Spring Boot: Onion (Hexagonal) architecture
    7. Spring Boot: Implementing Rest Controllers
    8. Java JDBC API, работа с базами данных
    9. Spring Boot: JPA and databases
    10. Spring Boot: validation
    11. Spring Boot: logging and AOP basics
    12. Spring Boot: scheduled jobs

    project

Final project and a string in CV

1.

# Bank application

Simple bank application with ability to manage accounts, transfer money between accounts and manage related transactions.

## Environment:

- Java version: 11+
- Maven version: 3.8.*
- Spring Boot version: 2.7.*.RELEASE

## General requirements:

- SQL database should be used for storing accounts and transactions. Please use in-memory solution and add database as dependency.
- Application should be able to work in multithreading environment.
- All responses with errors should have the same format.
- New transaction should be created every time when amount of money is changed in account.
- All layers of the application should be covered by unit tests.

Final project and a string in CV

2.

# Administration and monitoring of the telegram bot

Subscribe to new articles in groups and receive notifications about the release of new ones. Administration functionality, viewing statistics.

## Environment:

- Java version: 11+
- Maven version: 3.8.*
- GitHub
- MySql
- Liquibase
- Spring Boot version: 2.7.*.RELEASE
- Lombok
- TelegramBot API
- Bach scripts
- Spring Scheduling
- Docker

## General requirements:

- Creation of a complete description of the functionality that should be.
- Creation of Spring Boot application.
- Working with Lombok.
- Implementing the Command pattern and working with creating your own annotation for admin commands.
- Testing. Cover all functionality with unit tests
- Setting up a system for checking code quality and automatically building on GitHub.
- Database connection along with database versioning.
- Use Git as version control
- We use Maven to build the project
- To deploy the application in the environment, we use Docker
- Describe the deployment in Docker-compose

Final project and a string in CV

3.
# Pizza Service
Pizza delivery service with authentication and the ability to log in as a customer and administrator, as well as a fully functional shopping cart and data protection.

## Environment:
- Java version: 11+
- Maven version: 3.8.*
- Spring Boot version: 2.7.*.RELEASE
- GitHub
- H2 in-memory database
- JPA
- Postman

## General requirements:
- Implementing the RESTful API.
- We use Maven to build the project.
- Working with Postman.
- Use Spring Security for authentication and authorization.
- Implementing multithreading environment.
- Conducting JUnit-tests.

Summary

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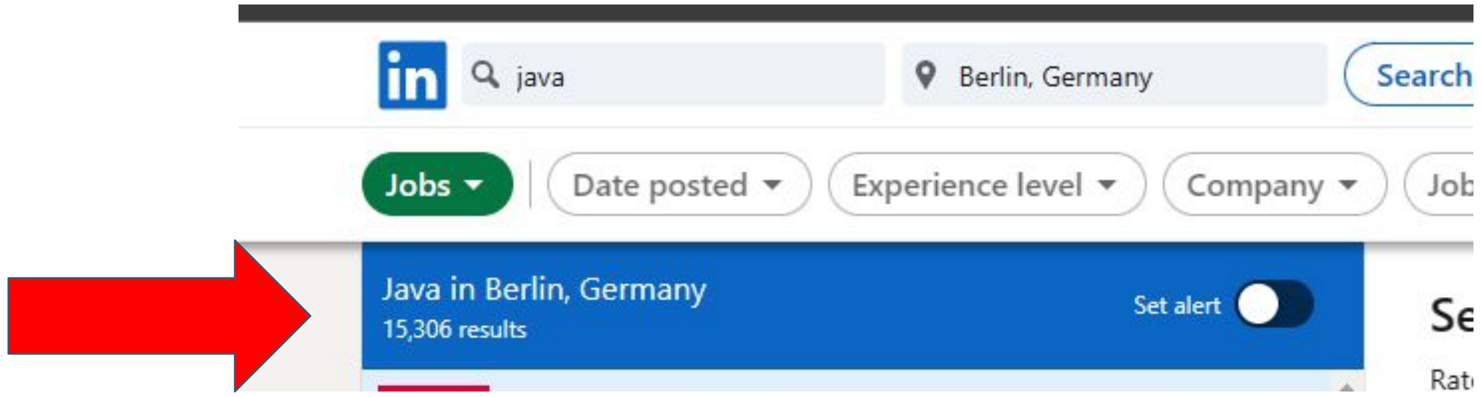
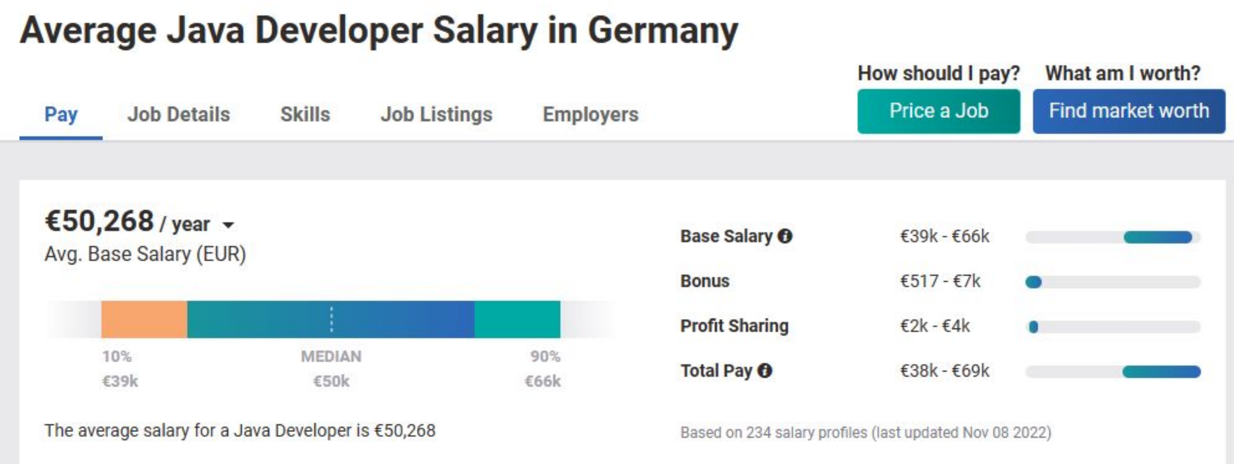
Your stack and tools:

Java 8+,
JavaDoc,
Spring Boot,
Spring Data,
Maven,
Liquibase,
MySQL,
MySql Workbench,
ERD scheme,
REST protocol,
Jnit 5,
JDBC
GitHub,
Word Office,
Docker,
IntelliJ Idea.

https://www.linkedin.com/



Java in Berlin, Germany
15,306 results



Average Java Developer Salary in Germany

€50,268 / year
Avg. Base Salary (EUR)

The average salary for a Java Developer is €50,268

Base Salary	€39k - €66k
Bonus	€517 - €7k
Profit Sharing	€2k - €4k
Total Pay	€38k - €69k

Based on 234 salary profiles (last updated Nov 08 2022)