FAANG tech lab

The Coding School

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Java Developer Profession by FAANG tech lab : Full Course Program

Designed to last 3 months, with lessons, homework, and coding practice

MODULE 1. JAVA SYNTAX

- Introductory lesson
- Commands and your first Java program
- Working with variables type int and String
- Types and keyboard input
- Working with IntelliJ IDEA. Debugging
- The if statement
- Loops
- Arrays
- 2D arrays
- Methods
- Working with strings
- Data types
- Introduction to OOP
- Objects
- Classes and the static keyword
- Generics
- Collections
- Singleton, enum, switch
- Exceptions
- I/O streams
- Lambda functions
- Times and dates
- Git

MODULE 2. JAVA CORE

- OOP: encapsulation, polymorphism
- OOP: overloading, overriding, abstract classes
- OOP: composition, aggregation, inheritance
- OOP: interfaces
- Generics
- Lambda functions
- Type casting, instanceof. Big task for interfaces
- Method overloading, nuances of calling constructors
- Object class device
- Recursion
- Introduction to threads: Thread, Runnable, start(), join(), interrupt(), sleep()
- Introduction to threads: synchronized, volatile, yield()
- Introduction to streams: InputStream/ OutputStream, FileInputStream, FileOutputStream
- Executor
- thread pool
- Inner/Nested classes
- Serialization
- Reflection API
- Annotations in Java
- Sockets

MODULE 3. JAVA PROFESSIONAL

- Maven: phases, plugins, dependencies, and building
- Maven installation
- Maven: Advanced Maven Usage
- JUnit 5
- Mockito
- Logging
- HTML + CSS

- JavaScript + jQuery
- Network device
- HTTP protocol
- HttpClient
- Tomcat: installation, configuration, deployment, resources
- Servlets: doGet, doPost, session, request, response
- JSP, JSTL
- Software architecture, client-server architecture, MVC
- Development Methodologies
- Design patterns
- Working with memory in Java
- Concurrent
- Apache Commons

MODULE 4. WORKING WITH DATABASES. HIBERNATE

- SQL queries
- Complex SQL Queries
- MySQL installation, backups, permissions, data consistency, and integrity
- Changing data in a table: insert, update, delete, indexes
- JDBC
- ORM: Entity, HibernateConfig, transaction annotations
- HQL, Query Parameters
- Hibernate: object state, save, update, delete
- Advanced-Data Type Mapping
- Collection mapping: one-to-many, lazy loading
- Preserving class hierarchy
- Database design
- Transactions, ACID, CAP

MODULE 5. SPRING + SPRING BOOT

Spring Framework

Spring Application Configuration

Aspect-Oriented Programming (AOP)

Spring MVC

Spring MVC: working with data

Spring ORM, JPA

Spring application: controller, service, repository

Spring Test

Spring REST

Spring Security

Spring Boot

Spring Cloud

EXTRA: CAREER CENTER

As a bonus, you get access to the materials (videos, lectures) related to job searching: resume creation (LinkedIn profile, GitHub account, and portfolio), interview preparations (getting familiar with the different interviewing stages at IT companies), etc.

A Collaboration Of

KAANGtech ^{lab} **&** **{ CODEGYM**

CODEGYM is an EdTech platform based in the US that focuses on JAVA

Why Choose FaangTechlab?

- ✓ 100% in class training conducted by experienced industry experts.
- ✓ Hands on real-time training through live project reflecting industry standards.
- ✓ Internship certificate awarded upon successful program completion.
- ✓ Comprehensive placement assistance to help secure your dream job.
- ✓ Personalized 1:1 mentorship from experienced and dedicated mentors.
- ✓ First-of-its-kind state-of-the-art facility in Andhra Pradesh.