

# MASTER MICROSERVICE WITH SPRING BOOT AND SPRING CLOUD



This course will cover all the topics which are most important for technical interviews. At the end of every topic questions based on the topic will be shared and solved.

by D'CODE Innovation Lab

## 1 WEB SERVICE

- Introduction to Webservice
- Key Terminologies
- RESTful web service
- REST Resource Design
- HTTP Fundamentals
- HATEOS
- Bestpractices and Implementation with Spring Boot



## 2 SPRING BOOT

- Spring Basics
- Spring Core concepts
- REST API Development
- Spring Boot + JPA/Hibernate
- Spring Boot Configuration and Externalization
- Spring Boot Security
- Exception Handling
- Spring Boot Testing
- Spring Boot Actuator & Monitoring
- Spring Boot Performance and Best Practices
- Reactive Programming
- Messaging Integration - Kafka/RabbitMQ
- Deployment and DevOps



## 3 DATA STRUCTURES

- Introduction to Data Structure
- Big O Notation
- Essential Concept
- Memory and Logarithm
- Array
- Recursion
- Linked List
- Stack
- Queue
- Hash tables
- Trees
- Heaps
- Tries
- Graphs
- Searching Algorithm
- Sorting Algorithm
- Dynamic Programming



# JAVA - SPRING BOOT



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## 4 SPRING CLOUD

- Introduction to the course
- Introduction to Microservices
- Microservice Design Patterns
- Service Discovery (Eureka Server & Client)
- Centralized Configuration (Config Server & Client)
- Client Side load balancing (Open Feign)
- API Gateway (Spring Cloud Gateway)
- Fault Tolerance & Resilience (Resilience4j)
- Distributed Tracing and Monitoring
- Messaging & Event-Driven Architecture
- Security in Spring Cloud



## 5 DEPLOYMENT AND DEVOPS

- Docker
- Docker Compose
- Deployment
- Cloud ready configuration
- Kubernetes

