

# SPRING BOOT & MICRO SERVICES COURSE

This course starts with an introduction to the fundamentals of microservices architecture and the role of Spring Boot in simplifying the development of microservices. Participants will learn how to create microservices using Spring Boot, implement service discovery, and manage communication between microservices.

## SPRING BOOT

- 1) What is Spring Framework
- 2) What is Spring Boot
- 3) Differences between Spring & Spring Boot
- 4) Spring Boot Overview
- 5) Pros & Cons of Spring Boot
- 6) Approaches to create Spring Boot Application
  - a) Spring Initializer (start.spring.io)
  - b) Spring Starter Wizard in STS IDE
- 7) Introduction to Spring Boot Starters
  - a) Spring Boot Parent Starter
  - b) Spring-boot-starter
  - c) Spring-boot-starter-web
  - d) Spring-boot-starter-webflux
  - e) Spring-boot-starter-data-jpa
  - f) Spring-boot-devtools
  - g) Spring-boot-starter-mail
  - h) Spring-boot-actuator
  - i) Spring-boot-starter-test etc.
- 8) What is Start Class in Spring Boot
- 9) @SpringBootApplication annotation internals
- 10) SpringApplication.run(..) method internals
- 11) Spring Boot Application Boot strapping
- 12) AutoConfiguration in Spring Boot
- 13) IOC container
- 14) Dependency Injection
  - a) Setter Injection
  - b) Constructor Injection
  - c) Field Injection
- 15) Stereotype Annotations
  - a) @Component
  - b) @Service
  - c) @Repository
  - d) @Controller
- 16) Base Package Naming convention
- 17) Component Scanning
- 18) Auto wiring
  - a) byType

b) byname

c) constructor

d) none

19) @Qualifier annotation

20) @Primary annotation

21) Introduction to @Configuration

annotation

22) Details of @Bean annotation

23) Bean Life Cycle

24) Bean Scopes

25) Banner in Spring Boot

26) Standalone application

development

27) Standalone application with layered

architecture

28) Runner in Spring Boot

a) Application Runner

b) CommandLine Runner

\* SPRING DATA JPA

\* SPRING WEB MVC

\* SPRING REST