

# Microservices Training Course

## About Course

This course guides you on the path on becoming a web developer on Java (J2EE) with the knowledge of Microservices.

## Target Audience

The Microservices Training Course has been designed for people having prior knowledge of SpringBoot. This course benefits experienced personnel willing to achieve careers as a Software Developer, Web Application Developer on Java, Java Backend Developer, Full Stack Developer.

## Pre-Requisite

The candidate should have prior experience in Spring Boot shall be counted beneficial.

## Good-to-have Skills

Hands-on experience on any programming language

Idea on Object Oriented Programming concept (OOPs)

# Course Curriculum

## 1. Introduction to Microservices

Introduction To MicroServices

Microservices in nutshell

### Hands On:

Creating an account with Oracle

Downloading and Installation of Oracle Java™ JDK

Creating environmental variable JAVA\_HOME and setting classpath

## 2. Types of Architectures in Microservices

REST Architecture principles

Microservice Characteristics

Inter-Process Communications

Microservice Transaction Management

### Hands On:

Writing Hello World program

Compilation through Command Line (CLI)

### **3. Design in Microservices**

- Domain Driven Design
- Big Mud Ball to Sweet Gems
- Untangling the Ball of MUD
- Kill the MUD Ball growth
- Repackaging/Refactoring
- Decouple the User interface and Backend Business Logic
- MUD Ball to Services
- Microservice Design Patterns
- Microservice Architecture Decisions

#### **Hands On:**

- Spring Data Rest and HATEOAS
- Connecting to an Elasticsearch Server
- Searching our Elasticsearch Server

### **4. Security in Microservices**

- Importance of Security in real world Applications
- Principles of Microservice Security
- Techniques of Microservice Security
- Introduction to Access Tokens
- Implementing OAuth 2.0
- How to secure a Microservice using OAuth 2.0

#### **Hands On:**

- Securing a real time application Microservices security

### **5. Testing in Microservices**

- Different Testing scenarios and strategy
- Testing at Different Levels

#### **Hands On:**

## Implementing testing techniques on a Real Application