Streams, Functional & Reactive Programming with Java & Spring WebFlux Workshop

Course 90904 – 8 Hours

Overview

Latest Java releases supports 2 modern programming methodologies: Functional programming and reactive programming.
Functional programming allows Java programmers execute methods without being bounded to class and by that getting rid of class loading and object instantiating for a single method invocation.
Reactive programming provides easy to use platform for forking request handling and programming asynchronously to reduce back-pressure.
The first part of this workshop will allow you to experience basic and advanced functional programming with Java 8 LAMBDA expressions and method references. The second part is all about reactive programming. We will get to know Java 9 Flow API and Spring 5 WebFlux and then we'll build reactive REST web services using HTTP2 data streaming capabilities.

On Completion, Delegates will be able to

- Describe the reactive Programming model and its benefits
- Understand the Reactor DP in relation to MVC
- Create and work with reactive streams and reactive applications
- Create reactive REST controllers
- Work with NoSQL with a reactive manner

Who Should Attend

- Java developers that want to use Stream API
- Java developers that want to use Functional programming
- Java developers that want to use Reactive programming
- Java developers that want to construct reactive REST web-services

Prerequisites

- Experience in Java programming

Course Contents

- Java 8 Functional programming
  - Understanding Java dynamic invoker
  - Lambdas and Functional Interfaces
  - Functional programming with the new Functional Interfaces
  - Method References
  - Interface Default and Static Methods
  - Optional
  - Streams
  - Parallel Streams

- Java 9 Reactive programming
  - Java 9 Flow
    - What is reactive programming?
    - The need
    - Publisher
    - Subscriber
    - Processors
    - Dedicated executors
- Spring 5
  - Introduction to Web Flux
  - Mono
  - Flux
  - Creating reactive REST Web-Services