

Functional Programming with Java 8 in 2 Days

Developer to Developer Training Series





Course Outline

The 2 day Functional Programming with Java 8 course is aimed at developers who have been using Java but would like to get more out of the language given the new paradigms. They understand Java syntax, language constructs, distinctive objectoriented characteristics but would like to start thinking in a functional way.

This course is designed to help developers think of Java in a functional way. Mutable variables, exceptions, classical input/output, and all other traces of impurity are eliminated. Building up from first principles and extending all the way to incremental input and output, developers would be able to express every concept using only pure functions. This leads to beautiful code and deep insights into the nature of computation.

The course has a practical focus, mixing presentation with indepth handson labs and exercises.



Proposed Structure

Day 1	Day 2
◆ FP Introduction ▼	◆ Stream Internals ▼
◆ What is FP?	◆ Pipelining
◆ Why does Java need FP?	◆ Stateless & Stateful Operations
	◆ NonInterference Requirement
	◆ Ordering & Associativity
	◆ Sequential & Parallel Execution
	◆ Performance Model
	◆ User defined streams
◆ Lamdba ▼	◆ Concurrency Utilities ▼
◆ Lambda Expressions	◆ Completable Future
◆ Method/Constructor References	◆ Stamped Lock
◆ Functional Interfaces	◆ Accumulators
◆ Default and Static Interface methods	◆ @Contended

◆ Lambda Programming	
◆ Streams API ▼	◆ Others ▼
◆ Streams & Collections	◆ Testing Lambdas
◆ For Each-Filter-Map-Reduce	◆ Date/Time API
◆ Fluent Programming	◆ Type Annotations
◆ Intermediate & Terminal Operations	◆ Metaspace vs. PermGen
◆ Mappers & Collectors	



Course Prerequisites

A good knowledge of Java is expected for this class. No previous knowledge of functional programming expected.

◆ For more information on the course or a discussion on your custom need, send a mail to info@knoldus.com