Master in Scala with Spark

About
DevOpsSchool

DevOpsSchool is a unit of "Cotocus PVT ltd" and a leading platform which helps IT organizations and professionals to learn all the emerging technologies and trend which helps them to learn and embrace all the skills, intelligence, innovation and transformation which requires to achieve the end result, quickly and efficiently. We provide over 40 specialized programs on DevOps, Cloud, Containers, Security, AI, ML and on Big data that are focused on industry requirement and each curriculum is developed and delivered by leading experts in each domain and aligned with the industry standards.

About Course

Scala is one of the most popular language and enterprises that runs on a Java virtual machine. It has been successfully deployed to production at companies like Samsung, Verizon, Walmart, Twitter, and many more. Learning new concepts and working with Scala, which will make you a better and a productive programmer. Learning Scala opens doors to programming methodologies such as functional programming and doing concurrency the right way. It also encourages you to write clean and testable code while writing less code at the same time.

This course has been prepared for beginners to help them understand the basics of Scala in simple and easy steps. After completing this course, you will find yourself at a moderate level of expertise in using Scala from where you can take yourself to next levels.

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Duration	80 Hours
Mode	Online (Instructor-led, live & Interactive)
Projects (Real time scenario based)	1

FEATURES	DEVOPSSCHOOL	OTHERS
Faculty Profile Check	✔	✖
Lifetime Technical Support	✔	✖
Lifetime LMS access	✔	✖
Top 25 Tools	✔	✖
Interviews Kit	✔	✖
Training Notes	✔	✖
Step by Step Web Based Tutorials	✔	✖
Training Slides	✔	✖
Training + Additional Videos	✔	✖

AGENDA OF THE MASTER IN SCALA WITH SPARK

Introduction - Scala

- Overview
- Why Learn Scala?
- What You Will Learn
- Installation
- Scala REPL
- Scala IntelliJ IDEA
- Summary

Functional Programming Concepts

- Overview
- Immutability
- Expressions vs. Statements
- Functions
- Pure and Impure Functions
- Referential Transparency
- Higher-Order Functions
- Summary

First Interaction with Scala

- Overview
- REPL
- Variables and Values
- Conditionals
- Loops
- Summary

Functions

- Overview
- Structure of a Function
- Anonymous Functions
- Higher-Order Functions
- Summary

Classes

- Overview
- Structure of Classes
- Companion Objects
- Creating Objects Using Apply
- Case Classes
- Launching Standalone Programs Extending App
- Summary

Null Checks and Error Handling

- Overview
- Why Null Checks Are Bad
- Option as a Better Alternative
- Error Handling in Imperative Languages
- Error Handling with Try
- Error Handling with Either
- Summary

Pattern Matching

- Overview
- What Is It?
- Match on Constants
- Match on Case Classes
- Match on Sequences
- Match on Type Only
- Guarding Your Match
- Summary

Collections

- Overview
- Benefits of Scala Collections Library
- Mutable and Immutable
- Class Hierarchy Diagram
- List with Examples
- Set with Examples
- Map with Examples
- Methods on Numeric Collections
- Filtering, Size, and Conversion Operations on Collections
- Transforming a Collection Using Map
- Transforming a Collection Using FlatMap
- Working with Option and FlatMap
- Summary

Concurrency

- Overview
- Concurrency and Parallelism
- Future and ExecutionContext
- Futures Transformation
- Filtering and Collecting Futures
- Other Ways to Model Asynchronous Operation
- Dealing with Future Failures
- Summary

Understanding Object-oriented Scala

- Overview
- Understanding Classes and Objects
- Creating Classes and Objects
- Making Objects Immutable
- Understanding Singleton Objects
- Understanding Functional Objects
- Understanding Abstract Classes, Inheritance, and Composition
- session_start()
- Project Demo

Working with Basic Types

- Overview
- Introduction to Scala Types
- Embedding Scala Expressions in String Literals
- Using Methods as Operators
- Understanding Scala Class Hierarchy
- Project Demo
- Summary

Working with Functions and Closures

- Overview
- Understanding Local Functions
- Understanding Function Literals and Function Values
- Understanding Partially Applied Functions
- Understanding Closures
- Applying Repeated Arguments to Functions
- Understanding Named Arguments and Default Parameter Values
- Understanding Tail Recursion
- Project Demo
- Summary

Creating Your Own Control Structures

- Overview
- Using Function Value to Remove Code Duplication
- Understanding Currying
- Creating Control Abstraction
- Understanding by Named Parameters
- Project Demo
- Summary

Working with Traits

- Overview
- Understading Traits
- Developing Rich Interfaces with Traits
- Developing Stackable Modifications with Traits
- Understanding When to Use Traits or Not
- Project Demo
- Summary

Understanding Collections

- Overview
- Understanding How Reduce Works
- Understanding How Fold Operations Work
- Project Demo
- Summary

Working with Implicits

- Overview
- Understanding How Implicit Conversion Works
- Understanding the Rules for Implicits
- Working with Application of Implicits
- Project Demo
- Summary

Introduction - Spark

- Why Spark?
- Hadoop Explosion to Spark Unification
- Spark's Background
- Installation
- Spark Programming Languages
- Hello Big Data!
- Logistics
- Resources

Spark Core: Part 1

- Intro
- Spark Appification
- What Is an RDD?
- Loading Data
- Lambdas
- Transforming Data
- More Transformations
- Actions and the Associative Property
- Acting on Data
- Persistence
- Resources
- Summary

Spark Core: Part 2

- Intro
- Implicit Conversions
- Key-Value Methods
- Caching Data
- Accumulating Data
- Java in Spark
- Resources
- Summary

Distribution and Instrumentation

- Intro
- Spark Submit
- Cluster Management
- Standalone Cluster Scripts
- AWS Setup
- Spark on Yarn in EMR
- Spark UI
- Resources
- Summary

Spark Libraries

- Intro
- Spark SQL
- Spark SQL Demo
- Spark SQL Demo - The SQL Side
- Streaming
- Streaming Demo
- Machine Learning
- Machine Learning Demo
- GraphX
- GraphX Demo
- Resources
- Summary

Optimizations and the Future

- Intro
- Closures
- Broadcasting
- Optimizing Partitioning
- Spark's Future
- Resources
- Summary

Thank you!

Connect with us for more info

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