Groovy Programming

Duration: 3 days Price: € 1850

Open Schedule

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Audience Course Groovy Programming

The course Groovy Programming is intended for Java developers who want to learn programming using the scripting language Groovy.

Prerequisites Course Groovy Programming

To participate in this course knowledge of and experience with programming in Java is required.

Realization Training Groovy Programming

The theory is discussed on the basis of presentation slides and is interspersed with exercises. Illustrative demos provide further clarification of the discussed concepts. The course material is in English.

Certification Groovy Programming

Participants receive an official certificate Groovy Programming after successful completion of the course.

Content Course Groovy Programming

In the course Groovy Programming participants learn to program in the dynamic scripting language Groovy, which is also considered Java++. Groovy is a JVM language which means that Groovy scripts are interoperable with Java code and can therefore easily be used together with Java in the same application. Groovy is a natural extension to the Java syntax and offers, among other things, a simpler syntax for lists, ranges, maps and regular expressions.

Groovy Intro

The course starts with an introduction to the basic features of Groovy and covers dynamic typing and type inference in Groovy. It is discussed how Groovy differs from Java with much less boilerplate code and support for scripting.

Language Syntax and Data Structures

Next the Groovy language syntax with variables, data types, conditionals, operators and loops is covered. Groovy data structures like lists, maps and sets are also treated and also how Groovy uses the Java Collection Framework.

Methods and Closures

Groovy methods, parameters passing and closures are also part of the course program. Groovy closures are anonymous code blocks that, as function objects with the scope in which they are created, are stored to be executed at a later time, with or without additional parameters.

Classes and Traits

And just like Java, Groovy is an object-oriented language and attention is paid to how you use classes, constructors, fields, interfaces and traits in Groovy.

XML and JSON

File I/O is on the program of the course as well and in that context the commonly used data formats XML and JSON are treated and how Groovy deals with them.

Meta Programming

Finally the course concludes with a discussion of meta programming in Groovy, which makes it possible to call methods dynamically and to create classes and methods on the fly.

Modules Course Groovy Programming

Module 1 : Groovy Intro	Module 2 : Language Syntax	Module 3 : Data Structures
What is Groovy?	Groovy Variables and Data Types	Groovy Lists
Groovy Features	Wrapper Types	List Methods
HelloWorld in Java	Number Methods	List Manipulation
HelloWorld in Groovy	Groovy Strings	Groovy Maps
Removing Noise	Groovy Conditionals	Map Methods
Removing Boilerplate	Switch Statement	Map Manipulation
Dynamic Types	Groovy Operators	Java Collection Interface
Variable Interpolation	Other Operators	Concrete Collections
POJOs on Steroids	Elvis Operator	List Interface
Script Support	Range Operator	ArrayList Class
Differences with Java	Groovy Loops	LinkedList Class
Running Groovy Scripts	For in Loop	Set and SortedSet
Groovy Development Kit	Each Loop	Map Interface
Module 4 : Methods and Closures	**Module 5 : File I/O**	**Module 6 : Classes and Traits**
Groovy Methods	IO Basics	Groovy Classes
Method Parameters	Java Stream Classes	Normal Class
Return Values	Stream Types	Duck Typing
Locals versus Globals	Nested Streams	Property Support
What are Closures?	Groovy IO	Inner Classes
Benefits of Closures	Reading Files	Inner Class Usage
Groovy Closures	Writing Text	Anonymous Inner Class
Closure Parameters	Data Conversion Streams	Abstract Classes
Closure Variables	DataStreams Java	Interfaces
Closures in Methods	DataStreams Groovy	Constructors
Closures and Collections	Copy and Delete	Fields
Find and FindAll	Directory Methods	Comparator
Any and Every	Traversing File Trees	Traits
Collect	Executing External Processes	Meaning of this
Module 7 : XML and JSON Handling	**Module 8 : Meta Programming**	
XML Processing Options	Groovy is Dynamic	
DOM Tree	Dynamic Methods	
SAX Callbacks	Adding Properties	
XML Support in Groovy	Meta Object Protocol	
MarkupBuilder	Invoker Operation	
JSON Object Representation	invokeMethod	
JSON Array Representation	GroovyObject interface	
JSON with Array and Objects	Groovy Interceptable	
Groovy Json Classes	Metaclass	
Producing JSON from Map	Intercepting Methods	
Produce JSON From Pogo	Expando	
JSON with JSONSlurper	GPath	

SpiralTrain BV
Standerdmolen 10, 2e verdieping
3995 AA Houten

info@spiraltrain.nl
www.spiraltrain.nl
Tel.: +31 (0) 30 – 737 0661

Locations
Houten, Amsterdam, Rotterdam, Eindhoven, Zwolle, Online