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Groovy and Grails Development

(5 days)

Course overview

Groovy is a popular open-source dynamic language targeting the JVM. Groovy uses a familiar Java-like syntax that will be comfortable for existing Java developers, and provides many features found in other dynamic languages such as Ruby and Python.

Grails is an open-source Web application platform, based on Groovy and built on top of Spring. Grails enables developers to embrace agile methodologies, to deliver high-quality Web applications in rapid time.

This course introduces students to both the Groovy language and the Grails Web development platform, with plenty of hands-on labs to reinforce best practices via a problem-solving approach.

What you'll learn

- Understanding the role of Groovy and Grails
- Writing clean code in Groovy
- Defining a user interface in Grails
- Building domains and services in Grails
- Implementing security
- Working with web services
- Reporting and batch processing

Prerequisites

- Solid Java language experience
- Familiarity with Spring Web would be advantageous but is not a requirement

Course details

- **Introduction to Groovy:** Groovy language features; Setting up a Groovy environment; Simple Groovy examples; Key differences between Java and Groovy
- **Groovy Essential Syntax:** Scripts; Assertions; Strings; Methods and closures; Operators; Arrays; Collections; Regular expressions
- **Going Further with Groovy Syntax:** Domain-Specific Languages; Unit testing; XML support
- **Getting Started with Grails:** Overview of Grails; Grails architecture; Setting up a Grails environment; Scaffolding; Controllers and domain classes
- **Defining a User Interface with Grails:** Defining the overall look-and-feel; Defining actions and views; Integration testing; Validating user input; Defining filters and action interceptors

- [Building Domains and Services](#): Overview of GORM; Creating domain objects; Performing validation; Database queries; Creating and calling a service; Injecting services; Supporting transactions
- [Implementing Security in Grails](#): Getting started with authentication and authorization; Understanding Grails security concepts; JSecurity; CAS; Spring Security
- [Using Ajax with Grails](#): Ajax frameworks; Uses of Ajax; Tag libraries; RSS support
- [Using Web Services](#): Overview of RESTful Web services; Implementing RESTful services in Grails; Invoking RESTful services from the UI
- [Reporting](#): Overview of reporting; Installing JasperReports and iReports; Creating a report; Using the Report tag; Using ReportController and ReportService
- [Batch Processing](#): Overview of batch processing; Creating a job; Building a batch-reporting solution