MarkLogic UNIVERSITY

Developing MarkLogic Applications with Java

This hands-on course provides a Java developer with the information needed to build applications using the MarkLogic Java API against content in a MarkLogic database. This course is built for Java developers, but it is not designed to make a Java developer into a MarkLogic product expert. Rather it is designed to provide them with the knowledge necessary to build applications using the Java API. Some high level background of MarkLogic product architecture and capabilities will be provided, however the core focus is to teach the Java API with minimal MarkLogic product expertise required.

High Level Course Learning Objectives:

- Provide a Java developer who is new to MarkLogic with a high level understanding of the product, use cases, basic terminology, and architecture.
- Provide a detailed understanding of the technology stack needed to build applications using the Java API and MarkLogic.
- Use the Java API to load binary, full text, XML and JSON content into a MarkLogic database while managing document metadata, collections, quality, permissions and document repair.
- Build applications using the Java API.
- Implement string and structured search capabilities using the Java API.
- Perform database transactions using the Java API and understand the foundation of MVCC concepts in MarkLogic server.
- Implement a role based security model, manage authentication to your applications, and users to perform transactions appropriate to their role.

Class Details

Format: Instructor-led course

Length: 2 days

Refundable Booking Fee: $200 (USD)

Availability: Classroom, Live Online

Other: Due to the more complex technology stack required for the hands on labs, this course will only be taught using pre-configured Virtual Machines in order to provide a consistent environment.

Terms and Conditions

Participants are entitled to a full booking fee refund or to request a substitution candidate if MarkLogic is notified in writing at least one working day prior to the start of the course. Recipients who cancel less than the 1- business day period and recipients who register and fail to fully attend a Public Course are not eligible for a refund of any kind. MarkLogic Corp. reserves the right to cancel courses up to 10 working days prior to the published start date. Please consider this when making your travel plans as MarkLogic's liability is limited to a full refund of the booking fee only. **Dates are subject to change.**

You can find the full terms & conditions at: http://www.marklogic.com/services/training/terms-and-conditions/

Please check our website for a current class schedule at: http://www.marklogic.com/services/training/

Questions? Contact us! training@marklogic.com

Topic	Learning Objectives
Understanding MarkLogic Server	• List the three core components of MarkLogic Server • Explore example use cases and applications • Describe the high level architecture of a MarkLogic cluster

Understanding the Technology Stack for the Course Labs	• Describe the following components and their role in our technology stack:
	  • MarkLogic Server
	  • Tomcat
	  • Java Servlets
	  • JSP (Java Server Pages)
	  • Eclipse

Introduction to the REST API	• Describe the MarkLogic API stack and the REST API. • Setup a MarkLogic REST API instance. • Perform CRUD operations using the REST API and cURL. • Perform a command line query using the REST API and cURL.
Security – Users and Roles	• Describe and implement the rest-reader, rest-writer, and rest-admin users and roles.
Intro to the Java API: Building Your First Application	• Describe database clients, managers, and handles. • Read documents from a database. • Create a custom object. • Access document data using DOM.

Loading Content	• Use the Java API to ingest a variety of document types, such as:
	  • XML
	  • JSON
	  • Full Text
	  • Binary
	• Manage document permissions, collections, quality and repair.
	• Invoke document transformations during load operations.

Topic	Learning Objectives
Building a Search Application – Using the Search API	• Provide users functionality taking advantage of MarkLogic's search API. • Implement a standard search grammar to allow users to query content in the database. • Using the Java API, reference a customized query options document to control search behavior. • Read documents back from the database and into Java classes and POJOs. (top songs)

Indexing	• Describe the following indexing concepts:
	  • Term List Index
	  • Range Index
	  • Path Range Index
	  • Word Query
	  • Field
	• Build a Range Index
	• Automate index deployment with Configuration Manager

Building a Search Application – Snippets, Highlights, Sorting and Pagination	• Enhance your application by implementing snippets, highlights, sorting and pagination using the Java API and a customized query options document. • Describe the role of a constraint as defined in a query options document. (top songs)
Building a Search Application – Facets	• Enhance your application by implementing faceted search using the Java API and a customized query options document. • Describe the role of a range index and collation as it relates to faceted search. (top songs)
Database Transactions	• Describe MVCC • Develop multi-statement transactions

MarkLogic Corporation
www.marklogic.com
sales@marklogic.com
+1 877 992 8885

Headquarters
999 Skyway Road, Suite 200
San Carlos, CA 94070
+1 650 655 2300