merative™

COURSE ABSTRACT

Merative Cúram – Developing REST APIs

9D68G

Course Description

This course provides students with a technical understanding of developing REST APIs for Cúram Social Program Management (SPM).

Cúram provides REST APIs to enable mobile applications for citizens and care workers to access Cúram services remotely. In addition, REST APIs are used by Merative Cúram Child Welfare. SPM provides REST APIs and an infrastructure to create custom REST APIs to allow mobile and other applications access Cúram resources. This course describes how to develop REST APIs for Cúram by using recommended practices.

During the course, students will design and implement a simple REST API.

General Information

Delivery Method: Self-paced with lab.

Audience: This course is intended primarily for developers and technical architects who will work on Cúram implementation projects.

Topics: The course covers the following topics:
- The support for REST APIs in Cúram
- How to access REST APIs
- How to develop REST APIs

Learning Objectives: After completing the course, learners should be able to:
- Describe where REST APIs are used in Cúram.

- Access out-of-the-box REST APIs
- Design, model, implement, and test a REST API
- Add error handling to a REST API
- List references and resources for developing REST APIs.

Prerequisites: Before taking this course, you must have completed the following course:
- *Merative SPM for Developers (ADE)*

Duration: 8 – 10 hours

Skill Level: Intermediate

Version: This course was last updated for Cúram V7. However, the process for developing REST APIs in Cúram has not changed since V7.

Notes

The course duration gives learners an estimate of how much time they need to allocate to the course. The course duration does not specify the actual time required to complete the course, which varies by learner.

Course Agenda

Unit 1 – Cúram REST API Overview

Lesson 1. Course Introduction
Duration: 5 minutes
Learning objectives: After completing this lesson, students should be able to:
- Describe the course objectives

Lesson 2. Use of REST APIs in Cúram
Duration: 20 minutes
Learning objectives: After completing this lesson, students should be able to:
- Outline where REST APIs can be used in Cúram.
- Outline the approach for developing mobile applications in Cúram.
- Describe how Citizen Engagement uses REST APIs.
- Run an application that uses a REST API.

Exercise 1. Use REST APIs
Duration: 45 minutes
Learning objectives: After completing this exercise, students should be able to:
- See how Universal Access uses REST APIs.

Lesson 3. Accessing REST APIs
Duration: 25 minutes
Learning objectives: After completing this lesson, students should be able to:
- Define REST and explain how it is used.
- Describe how REST APIs operate.
- Interpret JSON payloads.
- State the purpose of Swagger.

Exercise 2. Test Provided REST APIs
Duration: 50 minutes
Learning objectives: After completing this exercise, students should be able to:
- Test provided REST APIs by using Swagger UI.
- Interpret JSON messages.

Unit 2 – Developing REST APIs for Cúram

Lesson 4. Designing REST APIs
Duration: 30 minutes
Learning objectives: After completing this lesson, students should be able to:
- Outline the process for developing REST APIs.
- Describe the steps for designing REST APIs.
- List REST API design principles.

Exercise 3. Design a Simple REST API
Duration: 60 minutes
Learning objectives: After completing this exercise, students should be able to:
- Determine the resources and methods for the API.
- Specify the representation of the resource in JSON format.

Lesson 5. Modeling REST APIs
Duration: 20 minutes
Learning objectives: After completing this lesson, students should be able to:
- List the steps for modeling REST APIs in RSAD.
- Model structs to represent JSON resources.
- Model the REST façade to implement the API.
- Model mandatory fields.
- Document the API.

Exercise 4. Model a REST API
Duration: 60 minutes
Learning objectives: After completing this exercise, students should be able to:
- Model and document a REST API in RSAD

Lesson 6. Implementing and Testing REST APIs
Duration: 25 minutes
Learning objectives: After completing this lesson, students should be able to:
- List the steps for implementing REST APIs.
- Explain how to configure REST APIs.
- Describe test approaches and tracing.

Exercise 5. Implement and Test a REST API
Duration: 75 minutes
Learning objectives: After completing this exercise, students should be able to:
- Configure and test the REST API by using Swagger UI.
- Trace a REST API request.

Lesson 7. Adding Error Handling
Duration: 15 minutes
Learning objectives: After completing this lesson, students should be able to:
- List the types of errors that are handled by REST APIs.
- Describe where errors are detected and reported.
- List the HTTP error status codes for REST operations.

Exercise 6. Add Error Handling
Duration: 50 minutes
Learning objectives: After completing this exercise, students should be able to:
- Add error handling to your REST façade class.