COURSE ABSTRACT

Merative SPM Workflow for Developers

9D52G

Course Description

This course provides students with a technical understanding of developing Merative Social Program Management (SPM) workflows.

SPM Workflow supports the automation of business processes and allows work to be routed among individuals, departments, and the automated parts of the system. SPM applications provide workflow process definitions to support a range of business processes that bring efficiency benefits to organizations. This course describes how to design and implement workflow process definitions.

At the end of the course, students will design and implement a workflow for a business process.

General Information

Delivery Method: Classroom (ILT) and self-paced with lab.

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

Topics: The course covers the following topics:

- Workflow concepts and benefits
- The role of the Process Definition Tool (PDT) when defining SPM workflows
- Creating workflow data
- The activity types supported by SPM Workflow and their respective purposes
- The role of allocation strategies in SPM-defined workflows
- The role played by tasks and notifications in SPM-defined workflows

- The approach for developing workflows.

Learning Objectives: After completing the course, learners should be able to:

- Use the PDT to create and manage process definitions
- Define Workflow Data Objects (WDO) and data mappings
- Configure flow control features
- Enact workflow process instances
- Configure manual activities
- Configure decision activities and notifications
- Implement a work allocation strategy to allocate tasks
- Troubleshoot workflow design and implementation issues
- Customize an SPM application workflow.

Prerequisites: It is recommended that learners complete the following courses before taking this course:

- *Merative SPM for Developers (ADE)*
- *Merative SPM for Developers (Customization)*

Duration: 40 Hours (5 days ILT)

Skill Level: Intermediate

Version: This course was developed for SPM V6. However, the process for developing SPM Workflows has not changed since this course was released.

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. The course agenda shows the schedule for a classroom (ILT) delivery. Learners taking this course in a self-paced environment should allow more time for exercises.

Course Agenda

Unit 1 – Introduction to Workflow in SPM

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

- Describe the course objectives.
- Outline the course agenda.
- Describe the course format.

Lesson 2. Overview of Workflow in SPM
Duration: 45 minutes
Learning objectives: After completing this lesson, students should be able to:

- Define what is meant by Workflow
- Outline the purpose of Workflow in SPM
- List the benefits of using a workflow-oriented system
- Describe the components in the SPM Workflow Management System (WMS)
- Describe the purpose of JMS for workflow execution
- Describe how the WMS components are used during workflow execution.

Exercise 1. Execute and View a Workflow
Duration: 50 minutes
Learning objectives: After completing this exercise, students should be able to:

- Execute an application workflow as a user
- View an existing workflow using the SPM Process Definition Tool (PDT).

Lesson 3. Developing Workflows
Duration: 35 minutes
Learning objectives: After completing this lesson, students should be able to:

- Outline the steps to analyze, design, implement, and test workflows
- Define the key elements of a process definition
- List the four ways to enact workflow processes
- Describe the tools that are used to define, test, and monitor process definitions.

Exercise 2. Design a Simple Workflow
Duration: 60 minutes
Learning objectives: After completing this exercise, students should be able to:

- Analyze the requirements for a simple product
- Identify the workflow steps and activities
- Identify the necessary data
- Identify supporting artifacts.

Unit 2 – Basic Workflow Features

Lesson 4. Creating your First Workflow

Duration: 35 minutes

Learning objectives: After completing this lesson, students should be able to:

- Describe how to use the Process Definition Tool (PDT) to create a simple process definition
- List the activity types that are used in process definitions
- Explain how to validate and release a process definition.

Exercise 3. Create a Process Definition

Duration: 45 minutes

Learning objectives: After completing this exercise, students should be able to:

- Identify the client and server artifacts that support the process definition
- Use the PDT to create a simple process definition
- Validate, release, and test the process definition.

Lesson 5. Accessing Data from Workflows

Duration: 35 minutes

Learning objectives: After completing this lesson, students should be able to:

- Describe how process instances use Workflow Data Objects (WDOs)
- Explain how to configure enactment mapping to map enactment data to a WDO
- State the purpose of generic WDOs
- Describe how to configure input and output mappings between WDOs and methods.

Exercise 4. Configure Data Mappings

Duration: 50 minutes

Learning objectives: After completing this exercise, students should be able to:

- Define a Workflow Data Object
- Define enactment mappings
- Define input and output mappings.

Lesson 6. Configuring Splits and Joins

Duration: 40 minutes

Learning objectives: After completing this lesson, students should be able to:

- Describe the mechanisms that control the flow of activities for complex, non-linear process definitions
- Describe the purpose of Splits and Joins
- Differentiate between XOR and AND transitions
- List design considerations when configuring Splits and Joins.

Exercise 5. Configure an XOR Split
Duration: 55 minutes
Learning objectives: After completing this exercise, students should be able to:

- Configure transitions for a Split and Join (XOR and AND)

Exercise 6. Configure an AND Split and a Route Activity
Duration: 40 minutes
Learning objectives: After completing this exercise, students should be able to:

- Add a route activity that contains an XOR Join and an AND Split.

Lesson 7. Configuring Loops and Subflows
Duration: 40 minutes
Learning objectives: After completing this lesson, students should be able to:

- Describe how to configure a loop
- Describe the purpose of subflows
- Explain how to configure exception handling for your workflow.

Exercise 7. Configure a Loop
Duration: 45 minutes
Learning objectives: After completing this exercise, students should be able to:

- Define a loop activity to process each child in the family.

Unit 3 – Additional Workflow Features

Lesson 8. Implementing Events and Event Handlers
Duration: 40 minutes
Learning objectives: After completing this lesson, students should be able to:

- Describe the characteristics of events and why they are used
- Outline the steps for processing an event
- Explain the steps for defining an event
- List the steps for defining events for Workflow.

Checkpoint Questions
Duration: 10 minutes
Learning objectives: After completing this exercise, students should be able to:

- Recall the key points from the lesson

Lesson 9. Enacting Processes
Duration: 40 minutes
Learning objectives: After completing this lesson, students should be able to:

- Describe how to enact a workflow process instance
  - From code
  - From events
  - As a subflow
  - Via Web Services
- Enact a process from an event.

Exercise 8. Enact a Process from an Event
Duration: 50 minutes
Learning objectives: After completing this exercise, students should be able to:

- Configure an event and extract it to the file system
- Raise the event from code to enact the process.

Lesson 10. Configuring Manual Activities
Duration: 45 minutes
Learning objectives: After completing this lesson, students should be able to:

- Explain the characteristics of manual activities
- Describe how to configure the following elements:
  - Manual Activities
  - Tasks
  - Business Object Associations
  - Event Waits
  - Deadline Handlers.

Exercise 9. Configure a Manual Activity
Duration: 70 minutes
Learning objectives: After completing this exercise, students should be able to:

- Create a manual activity
- Configure a task
- Configure an event wait and deadline handler.

Exercise 10. Check Expired Task Deadlines
Duration: 30 minutes
Learning objectives: After completing this exercise, students should be able to:

- Run the ProcessTaskDeadlines batch job to execute the deadline handler.

Lesson 11. Configuring Decision Activities and Notifications
Duration: 30 minutes
Learning objectives: After completing this lesson, students should be able to:

- Describe the purpose of a decision activity
- Explain how to configure a decision activity
- List the steps that are performed when a decision activity executes
- Explain the purpose of parallel activities
- State the purpose of Notifications.

Exercise 11. Configure a Decision Activity and Notification
Duration: 45 minutes
Learning objectives: After completing this exercise, students should be able to:

- Configure a decision activity to ask the user a question
- Configure a simple notification.

Unit 4 – Task Allocation and Management

Lesson 12. Organization Structure and Allocation Targets
Duration: 30 minutes
Learning objectives: After completing this lesson, students should be able to:

- State the purpose of the organization structure
- Describe the targets in the organization structure
- Explain how to administer the organization structure
- Outline how tasks are allocated to targets in the organization structure.

Exercise 12. Interpret an Organization Structure
Duration: 35 minutes
Learning objectives: After completing this exercise, students should be able to:

- Navigate the default organization structure
- Add a user to the organization.

Lesson 13. Configuring Allocation Strategies
Duration: 40 minutes
Learning objectives: After completing this lesson, students should be able to:

- Describe how to allocate tasks and notifications by using the following allocation strategies
    - Target
    - Functions
    - Cúram Express Rules (CER)
    - Classic Rules.

Exercise 13. Allocate a Task
Duration: 35 minutes
Learning objectives: After completing this exercise, students should be able to:

- Add a target to a work queue and allocate tasks to the target.

Lesson 14. Inbox and Task Management
Duration: 35 minutes
Learning objectives: After completing this lesson, students should be able to:

- Outline the features of the Inbox to manage tasks
- List the features to handle Work Queues
- List configuration properties for the Inbox for tasks and notifications.

Exercise 14. Use Inbox Features to Manage a Task
Duration: 45 minutes
Learning objectives: After completing this exercise, students should be able to:

- Select a task from a queue and manage the task.

Unit 5 – Development Approach

Lesson 15. Design Considerations
Duration: 45 minutes
Learning objectives: After completing this lesson, students should be able to:

- List the steps to design workflows
- Identify poor designs that violate structural validation rules
- Describe how to avoid deadlock in your workflows
- List the implementation tasks.

Exercise 15. Correct a Poorly Designed Workflow
Duration: 45 minutes
Learning objectives: After completing this exercise, students should be able to:

- Identify the errors in a workflow and restructure the workflow to correct the errors.

Lesson 16. Testing and Troubleshooting
Duration: 25 minutes
Learning objectives: After completing this lesson, students should be able to:

- Outline the approach to test workflows
- Describe the purpose of the Processing Monitoring tool for debugging workflows
- List the typical causes of failure in workflows.

Exercise 16. Monitor and Trace a Workflow
Duration: 55 minutes
Learning objectives: After completing this exercise, students should be able to:

- Monitor and trace a process definition
- View a process instance error.

Lesson 17. Customizing Workflows
Duration: 35 minutes
Learning objectives: After completing this lesson, students should be able to:

- Describe the documentation that is provided for application workflows
- List the steps to customize workflows and their supporting artifacts
- Outline how to customize Inbox functionality
- State the location of the workflow API documentation
- List workflow references.

Exercise 17. Customize a Workflow
Duration: 75 minutes
Learning objectives: After completing this exercise, students should be able to:

- Perform gap analysis for an application workflow
- Customize the workflow compliantly.

Lesson 18. Case Study: Implement a Workflow
Duration: 5 minutes
Learning objectives: After completing this lesson, students should be able to:

- Outline the approach for designing and implementing a workflow.

Exercise 18. Case Study
Duration: 355 minutes
Learning objectives: After completing this exercise, students should be able to:

- Perform detailed design to identify workflow components and supporting artifacts
- Implement the supporting artifacts
- Implement the workflow
- Test and debug the workflow.