COURSE OUTLINE

Course Version: 17
Course Duration: 5 Day(s)
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Typographic Conventions

American English is the standard used in this handbook. The following typographic conventions are also used.

<table>
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Course Overview

TARGET AUDIENCE
This course is intended for the following audiences:

- Application Consultant
- Data Consultant
- Developer
- Project Manager
- System Administrator
Lesson 1: Describing Universes

Lesson Objectives
After completing this lesson, you will be able to:

• Discuss Universes

Lesson 2: Working with Local Projects

Lesson Objectives
After completing this lesson, you will be able to:

• Identify local projects
Lesson 1: Defining Connections

Lesson Objectives
After completing this lesson, you will be able to:

• Define Data Connections
Lesson 1: Creating Data Foundations

Lesson Objectives
After completing this lesson, you will be able to:

- Create data foundations
- Define Data Foundations
- Explore the Data Foundation Editor
- Navigate the Data Foundation View
- Define and Use Data Foundation Families

Lesson 2: Using Joins

Lesson Objectives
After completing this lesson, you will be able to:

- Use Joins
- Create an Equi-Join
- Create an Outer Join
- Create a Theta Join
- Create a Column Filter
Lesson 1: Accessing Data through the Business Layer

Lesson Objectives
After completing this lesson, you will be able to:

• Create a Business Layer

Lesson 2: Integrating the Business Layer Components

Lesson Objectives
After completing this lesson, you will be able to:

• Create Business Layer Folders
• Create Business Layer Dimension Objects
• Create Time Dimension Objects
• Create Attribute Objects

Lesson 3: Validating Objects

Lesson Objectives
After completing this lesson, you will be able to:

• Check Integrity
• Test Business Layer Objects

Lesson 4: Creating Measure Objects

Lesson Objectives
After completing this lesson, you will be able to:

• Create Measure Objects
• Create a Delegated Measure Object
Lesson 1: Using Shared Projects

Lesson Objectives
After completing this lesson, you will be able to:

- Describe a Shared Project

Lesson 2: Manipulating Other Designers' Resources

Lesson Objectives
After completing this lesson, you will be able to:

- Synchronize a Shared Project
- Update Shared Projects
Lesson 1: Deploying a Universe

Lesson Objectives
After completing this lesson, you will be able to:

- Document Universe Resources
- Deploy a Universe
UNIT 7
Loops in a Data Foundation

Lesson 1: Creating Loops on the Data Foundation

Lesson Objectives
After completing this lesson, you will be able to:

- Identify loops
- Explain the problem of loops
- Detect Loops

Lesson 2: Resolving Loops Using Aliases

Lesson Objectives
After completing this lesson, you will be able to:

- Use alias tables to resolve loops

Lesson 3: Resolving Recursive Loops

Lesson Objectives
After completing this lesson, you will be able to:

- Identify and resolve a recursive loop

Lesson 4: Resolving Loops Using Contexts

Lesson Objectives
After completing this lesson, you will be able to:

- Define Context
Lesson 1: Defining Data Restrictions

Lesson Objectives
After completing this lesson, you will be able to:

- Define data restrictions

Lesson 2: Applying Mandatory Data Restrictions

Lesson Objectives
After completing this lesson, you will be able to:

- Explain different methods of creating mandatory data restrictions

Lesson 3: Applying Optional Data Restrictions

Lesson Objectives
After completing this lesson, you will be able to:

- Explain the Predefined Query Filter object
Lesson 1: Defining a List of Values

Lesson Objectives
After completing this lesson, you will be able to:

• Discuss the Purpose of a List of Values

Lesson 2: Associating a List of Values to a Business Layer object

Lesson Objectives
After completing this lesson, you will be able to:

• Associate a List of Values to a business layer.
Lesson 1: Creating and Using Parameters

Lesson Objectives
After completing this lesson, you will be able to:

- Use Parameters in Data Restrictions
Lesson 1: Defining and Creating Navigation Paths

Lesson Objectives
After completing this lesson, you will be able to:

- Define and Create a Navigation Path
Lesson 1: Defining SQL Traps
Lesson Objectives
After completing this lesson, you will be able to:
• Analyze SQL traps

Lesson 2: Identifying a Chasm Trap
Lesson Objectives
After completing this lesson, you will be able to:
• Identify a Chasm Trap

Lesson 3: Resolving a Chasm Trap
Lesson Objectives
After completing this lesson, you will be able to:
• Resolve a Chasm Trap

Lesson 4: Identifying a Fan Trap
Lesson Objectives
After completing this lesson, you will be able to:
• Identify a Fan Trap

Lesson 5: Resolving a Fan Trap
Lesson Objectives
After completing this lesson, you will be able to:
• Resolve a Fan Trap
Lesson 1: Using @Functions in SQL

Lesson Objectives
After completing this lesson, you will be able to:

● Define @Functions

Lesson 2: Using the @Aggregate_Aware Function

Lesson Objectives
After completing this lesson, you will be able to:

● Use the @Aggregate_Aware Function
● Use the @Aggregate_Aware Function in a Fan Trap

Lesson 3: Using the @Select Function

Lesson Objectives
After completing this lesson, you will be able to:

● Use the @Select Function

Lesson 4: Using the @Where Function

Lesson Objectives
After completing this lesson, you will be able to:

● Use the @Where Function

Lesson 5: Using the @Execute Function

Lesson Objectives
After completing this lesson, you will be able to:

● Use the @Execute Function

Lesson 6: Using the @Variable Function
Lesson Objectives
After completing this lesson, you will be able to:

- Use the @Variable Function
Lesson 1: Creating and Using Derived Tables

Lesson Objectives
After completing this lesson, you will be able to:

• Create and Use Derived Tables

Lesson 2: Creating and Using Calculated Columns

Lesson Objectives
After completing this lesson, you will be able to:

• Create and Use Calculated Columns
Lesson 1: Optimizing Universes

Lesson Objectives
After completing this lesson, you will be able to:

- Optimize Via Connection Parameters
- Optimize Via Shortcut Joins
- Optimize Via Key Awareness
- Optimize Via Query Script Parameters
- Explore Best Practices for Universe Design
Lesson 1: Introducing Sets

Lesson Objectives
After completing this lesson, you will be able to:

- Explain Sets
- Create a Static Set
- Create a Temporal Set
Lesson 1: Managing the Data Foundation Using Views

Lesson Objectives
After completing this lesson, you will be able to:

• Explain Data Foundation Views

Lesson 2: Managing the Business Layer Using Views

Lesson Objectives
After completing this lesson, you will be able to:

• Explain Business Layer Views
Lesson 1: Securing a Deployed Universe with Security Profiles

Lesson Objectives
After completing this lesson, you will be able to:

- Discuss Universe Security Options

Lesson 2: Creating and Assigning Universe Security Profiles

Lesson Objectives
After completing this lesson, you will be able to:

- Create a Data Security Profile
- Create a Business Security Profile
- Assign and Test Security Profiles

Lesson 3: Identifying the Priority of Security Settings

Lesson Objectives
After completing this lesson, you will be able to:

- Describe Security Setting Priorities

Lesson 4: Updating a Deployed Universe

Lesson Objectives
After completing this lesson, you will be able to:

- Update a Deployed Universe
Lesson 1: Resolving an Ambiguous Outer Join Using @AggregateAware

Lesson Objectives
After completing this lesson, you will be able to:

- Resolve an Ambiguous Outer Join
Lesson 1: Identifying Different Data Sources

Lesson Objectives
After completing this lesson, you will be able to:

● Discuss Different Data Sources for Universes

Lesson 2: Creating an OLAP Universe

Lesson Objectives
After completing this lesson, you will be able to:

● Create a Universe Using an OLAP Data Source

Lesson 3: Creating a Universe from a BEx Query

Lesson Objectives
After completing this lesson, you will be able to:

● Create a Universe from a BEx Query

Lesson 4: Creating a Multisource Universe

Lesson Objectives
After completing this lesson, you will be able to:

● Create a Multisource Universe

Lesson 5: Creating and Using Federated Tables

Lesson Objectives
After completing this lesson, you will be able to:

● Create and Use a Federated Table
Lesson 1: Defining and Creating a Linked Universe

Lesson Objectives
After completing this lesson, you will be able to:

● Define and Create a Linked Universe

Lesson 2: Special Considerations Concerning Linked Universes

Lesson Objectives
After completing this lesson, you will be able to:

● Discuss Considerations Unique to Linked Universes

Lesson 3: Managing Core Universes

Lesson Objectives
After completing this lesson, you will be able to:

● Manage Core Universes

Lesson 4: Prioritizing the Display of Tables Common to Multiple Core Data Foundations

Lesson Objectives
After completing this lesson, you will be able to:

● Discuss Common Table Priority

Lesson 5: Including a Core Universe

Lesson Objectives
After completing this lesson, you will be able to:

● Discuss Including A Core Universe
Lesson 1: Converting Existing .unv Universes

Lesson Objectives
After completing this lesson, you will be able to:

• Convert Existing .unv Universes
Lesson 1: Deploying Universes in Different Languages

Lesson Objectives
After completing this lesson, you will be able to:

- Translate a Universe to a Different Language
Lesson 1: Using SQL to Manipulate Data

Lesson Objectives
After completing this lesson, you will be able to:

- Use SQL to Manipulate Data