BOID10
SAP BusinessObjects Information Design Tool

COURSE OUTLINE

Course Version: 16
Course Duration: 5 Day(s)
Typographic Conventions

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

<table>
<thead>
<tr>
<th>This information is displayed in the instructor’s presentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstration</td>
</tr>
<tr>
<td>Procedure</td>
</tr>
<tr>
<td>Warning or Caution</td>
</tr>
<tr>
<td>Hint</td>
</tr>
<tr>
<td>Related or Additional Information</td>
</tr>
<tr>
<td>Facilitated Discussion</td>
</tr>
<tr>
<td>User interface control</td>
</tr>
<tr>
<td>Window title</td>
</tr>
</tbody>
</table>

Example text

© Copyright. All rights reserved.
## Course Overview

### Unit 1: Basic SAP BusinessObjects Universe Design
- Lesson: Describing Universes
- Lesson: Defining the Components of a Universe

### Unit 2: Data Connections
- Lesson: Defining Connections

### Unit 3: Data Foundations
- Lesson: Creating Data Foundations
- Lesson: Using Joins

### Unit 4: Business Layers
- Lesson: Accessing Data through the Business Layer
- Lesson: Integrating the Business Layer Components
- Lesson: Validating Objects
- Lesson: Creating Measure Objects

### Unit 5: Shared Projects
- Lesson: Using Shared Projects
- Lesson: Manipulating Other Designers’ Resources

### Unit 6: Universe Deployment
- Lesson: Deploying a Universe

### Unit 7: Loops in a Data Foundation
- Lesson: Resolving Loops with Joined Tables
- Lesson: Resolving Loops Using Aliases
- Lesson: Resolving Recursive Loops
- Lesson: Resolving Loops Using Contexts
- Lesson: Detecting Contexts
- Lesson: Editing Contexts
- Lesson: Testing Contexts

### Unit 8: Data Restrictions
- Lesson: Defining Data Restrictions
- Lesson: Applying Mandatory Data Restrictions
- Lesson: Applying Optional Data Restrictions
<table>
<thead>
<tr>
<th>Unit</th>
<th>Lesson</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Lists of Values (LOV)</td>
</tr>
<tr>
<td></td>
<td>Lesson: Providing a List of Values</td>
</tr>
<tr>
<td>10</td>
<td>Parameters</td>
</tr>
<tr>
<td></td>
<td>Lesson: Illustrating Runtime Parameters</td>
</tr>
<tr>
<td>11</td>
<td>Navigation Paths</td>
</tr>
<tr>
<td></td>
<td>Lesson: Defining Drill Down Navigation Paths</td>
</tr>
<tr>
<td>12</td>
<td>SQL Clause Processing Problems</td>
</tr>
<tr>
<td></td>
<td>Lesson: Determining How the Order of SQL Clauses Affects Data Returned</td>
</tr>
<tr>
<td></td>
<td>Lesson: Detecting Chasm Traps</td>
</tr>
<tr>
<td></td>
<td>Lesson: Resolving Chasm Traps</td>
</tr>
<tr>
<td></td>
<td>Lesson: Identifying Fan Traps</td>
</tr>
<tr>
<td></td>
<td>Lesson: Resolving Fan Traps</td>
</tr>
<tr>
<td>13</td>
<td>Object @functions</td>
</tr>
<tr>
<td></td>
<td>Lesson: Using Object @functions in Queries</td>
</tr>
<tr>
<td></td>
<td>Lesson: Using @functions</td>
</tr>
<tr>
<td></td>
<td>Lesson: Applying the Aggregate Awareness Optimization Method</td>
</tr>
<tr>
<td>14</td>
<td>Extending the Data Foundation with Derived Tables and Calculated Columns</td>
</tr>
<tr>
<td></td>
<td>Lesson: Creating Derived Tables</td>
</tr>
<tr>
<td></td>
<td>Lesson: Creating Calculated Columns</td>
</tr>
<tr>
<td>15</td>
<td>Query and Script Optimization</td>
</tr>
<tr>
<td></td>
<td>Lesson: Optimizing Universes</td>
</tr>
<tr>
<td>16</td>
<td>Universe Management with Data Foundation and Business Layer Views</td>
</tr>
<tr>
<td></td>
<td>Lesson: Managing a Universe using the Data Foundation View</td>
</tr>
<tr>
<td></td>
<td>Lesson: Managing a Universe using the Business Layer View</td>
</tr>
<tr>
<td>17</td>
<td>Universe Security</td>
</tr>
<tr>
<td></td>
<td>Lesson: Securing a Published Universe</td>
</tr>
<tr>
<td></td>
<td>Lesson: Creating Data Security Profiles</td>
</tr>
<tr>
<td></td>
<td>Lesson: Creating Business Security Profiles</td>
</tr>
<tr>
<td></td>
<td>Lesson: Assigning Security Profiles to Users</td>
</tr>
<tr>
<td></td>
<td>Lesson: Identifying the Priority of Security Settings</td>
</tr>
<tr>
<td></td>
<td>Lesson: Updating a Published Universe</td>
</tr>
<tr>
<td>Unit</td>
<td>Page</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>18</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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: Defining the Components of a Universe

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

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 column filters to restrict data
UNIT 4
Business Layers

Lesson 1: Accessing Data through the Business Layer
Lesson Objectives
After completing this lesson, you will be able to:

- Access business layer data
- Create a business layer
- Populate the business layer

Lesson 2: Integrating the Business Layer Components
Lesson Objectives
After completing this lesson, you will be able to:

- Add 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:

- Verify business object accuracy and integrity

Lesson 4: Creating Measure Objects
Lesson Objectives
After completing this lesson, you will be able to:

- Create a measure object
- Create a delegated measure object
Lesson 1: Using Shared Projects

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

• Explain the role of shared projects

Lesson 2: Manipulating Other Designers' Resources

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

• Describe the purpose of project synchronization
• Update shared projects
Lesson 1: Deploying a Universe

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

- Document universes
- Deploy a universe
Lesson 1: Resolving Loops with Joined Tables

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

- Identify loops

Lesson 2: Resolving Loops Using Aliases

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

- Resolve loops using aliases

Lesson 3: Resolving Recursive Loops

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

- Resolve recursive loops

Lesson 4: Resolving Loops Using Contexts

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

- Resolve loops using contexts

Lesson 5: Detecting Contexts

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

- Detect contexts

Lesson 6: Editing Contexts

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

- Edit contexts

**Lesson 7: Testing Contexts**

**Lesson Objectives**

After completing this lesson, you will be able to:

- Test contexts
UNIT 8
Data Restrictions

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:

- Apply restrictions to objects
- Apply restrictions using an alternative method
- Restrict by inferring matching data between tables

Lesson 3: Applying Optional Data Restrictions
Lesson Objectives
After completing this lesson, you will be able to:

- Restrict data using a filter object
 Lesson 1: Providing a List of Values

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

- Define a list of values
- Use the list of values editor
- Create static lists of values
- Create lists of values based on business layer objects
Lesson 1: Illustrating Runtime Parameters

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

- Use parameters to restrict data
Lesson 1: Defining Drill Down Navigation Paths

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

• Define a navigation path
Lesson 1: Determining How the Order of SQL Clauses Affects Data Returned

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

• Analyze SQL traps

Lesson 2: Detecting Chasm Traps

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

• Identify chasm traps

Lesson 3: Resolving Chasm Traps

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

• Resolve chasm traps

Lesson 4: Identifying Fan Traps

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

• Identify fan traps

Lesson 5: Resolving Fan Traps

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

• Resolve fan traps
Lesson 1: Using Object @functions in Queries

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

- Identify object @functions

Lesson 2: Using @functions

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

- Use the select function
- Use the where function
- Use the variable function
- Use the execute function

Lesson 3: Applying the Aggregate Awareness Optimization Method

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

- Set up aggregate awareness
- Use aggregate aware with a fan trap

© Copyright. All rights reserved.
Lesson 1: Creating Derived Tables

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

- Use derived tables

Lesson 2: Creating Calculated Columns

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

- Use calculated columns
Lesson 1: Optimizing Universes

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

- Use connection configuration parameters
- Create shortcut joins
- Apply key awareness
- Use query script parameters
- Explain best practices for universe design
Lesson 1: Managing a Universe using the Data Foundation View

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

- Manage a universe using the data foundation view

Lesson 2: Managing a Universe using the Business Layer View

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

- Manage a universe using the business layer view
Lesson 1: Securing a Published Universe

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

• Secure a published universe

Lesson 2: Creating Data Security Profiles

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

• Define data security profiles

Lesson 3: Creating Business Security Profiles

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

• Define business security profiles

Lesson 4: Assigning Security Profiles to Users

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

• Assign security profiles to users

Lesson 5: Identifying the Priority of Security Settings

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

• Describe security setting priorities

Lesson 6: Updating a Published Universe

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

- Update a published 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 the Different Data Sources

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

• Identify data sources for universes

Lesson 2: Creating an OLAP Universe

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

• Create an OLAP universe

Lesson 3: Creating a Multi-Source Universe

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

• Create a multisource universe
• Use federated tables
Lesson 1: Defining and Creating a Linked Universe

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

- Define a linked universe
- Create a linked universe

Lesson 2: Special Considerations Concerning Linked Universes

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

- Linked universe considerations

Lesson 3: Core Universe Management

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

- Manage a core universe

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

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

- Prioritize common tables

Lesson 5: Including a Core Universe

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

- Include a core universe
Lesson 1: Converting Existing .unv Universes

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

- Convert published .unv universes
Lesson 1: Deploying Universes in Different Languages

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

• Deploy a translated universe
Lesson 1: Advanced Data Manipulation in the Business Layer

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

- Use Tool Functionality and SQL to Create Advanced Objects