

# BOW320

## SAP BusinessObjects Web Intelligence: Report Design II

### COURSE OUTLINE

Course Version: 15

Course Duration: 2 Day(s)

# SAP Copyrights and Trademarks

© 2014 SAP AG. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP AG. The information contained herein may be changed without prior notice.

Some software products marketed by SAP AG and its distributors contain proprietary software components of other software vendors.

- Microsoft, Windows, Excel, Outlook, and PowerPoint are registered trademarks of Microsoft Corporation.
- IBM, DB2, DB2 Universal Database, System i, System i5, System p, System p5, System x, System z, System z10, System z9, z10, z9, iSeries, pSeries, xSeries, zSeries, eServer, z/VM, z/OS, i5/OS, S/390, OS/390, OS/400, AS/400, S/390 Parallel Enterprise Server, PowerVM, Power Architecture, POWER6+, POWER6, POWER5+, POWER5, POWER, OpenPower, PowerPC, BatchPipes, BladeCenter, System Storage, GPFS, HACMP, RETAIN, DB2 Connect, RACF, Redbooks, OS/2, Parallel Sysplex, MVS/ESA, AIX, Intelligent Miner, WebSphere, Netfinity, Tivoli and Informix are trademarks or registered trademarks of IBM Corporation.
- Linux is the registered trademark of Linus Torvalds in the U.S. and other countries.
- Adobe, the Adobe logo, Acrobat, PostScript, and Reader are either trademarks or registered trademarks of Adobe Systems Incorporated in the United States and/or other countries.
- Oracle is a registered trademark of Oracle Corporation
- UNIX, X/Open, OSF/1, and Motif are registered trademarks of the Open Group.
- Citrix, ICA, Program Neighborhood, MetaFrame, WinFrame, VideoFrame, and MultiWin are trademarks or registered trademarks of Citrix Systems, Inc.
- HTML, XML, XHTML and W3C are trademarks or registered trademarks of W3C®, World Wide Web Consortium, Massachusetts Institute of Technology.
- Java is a registered trademark of Sun Microsystems, Inc.
- JavaScript is a registered trademark of Sun Microsystems, Inc., used under license for technology invented and implemented by Netscape.
- SAP, R/3, SAP NetWeaver, Duet, PartnerEdge, ByDesign, SAP BusinessObjects Explorer, StreamWork, and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP AG in Germany and other countries.
- Business Objects and the Business Objects logo, BusinessObjects, Crystal Reports, Crystal Decisions, Web Intelligence, Xcelsius, and other Business Objects products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of Business Objects Software Ltd. Business Objects is an SAP company.
- Sybase and Adaptive Server, iAnywhere, Sybase 365, SQL Anywhere, and other Sybase products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of Sybase, Inc. Sybase is an SAP company.

All other product and service names mentioned are the trademarks of their respective companies. Data contained in this document serves informational purposes only. National product specifications may vary.








These materials are subject to change without notice. These materials are provided by SAP AG and its affiliated companies ("SAP Group") for informational purposes only, without representation or warranty of any kind, and SAP Group shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP Group products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.



# Typographic Conventions

American English is the standard used in this handbook.

The following typographic conventions are also used.

This information is displayed in the instructor's presentation	
Demonstration	
Procedure	
Warning or Caution	
Hint	
Related or Additional Information	
Facilitated Discussion	
User interface control	<i>Example text</i>
Window title	<i>Example text</i>

# VLC About This Handbook

## About This Handbook

This handbook provides you with basic information for attending your virtual live classroom session.

## Adobe Connect Support Information

Web and audio support is available by:

- Pressing \*0 from within the audio-conferencing
- Calling the support hotline numbers listed below
- Emailing the PGI support hotline below

Global PGI Support Hotline for SAP Education (24/7)

Tel: +1 800-368-1945

Tel: +1 719-234-7915

Note: After dialing in, press option 2 for technical support. You will then be presented with two options – press 1 for Audio support, or press 2 for Web support.

Email: [sapedsupport@premierglobal.com](mailto:sapedsupport@premierglobal.com)

## Setting up your Learning Environment

Ideally you want to be in a private room when participating in a synchronous (live) event. In reality, you may not be able to arrange that. Here are some tips for maximizing your learning environment:

- Create an inspirational office/studio to work in
- Use a comfortable chair
- Use well designed and functional computer peripherals
- Keep a log or journal of notes and ideas you can use for future sessions

### Before your online class:

- Tell co-workers you will be in class (send e-mail)
- Post a sign indicating when you will be free again (when class is over)
- Use a headset instead of your computer speakers to minimize disruption of others
- Ignore people who try to get your attention
- Turn off the ringers / alerts on telephone, pager, and cell phone
- Turn off e-mail and instant message alerts
- Remove other distractions lying on your desktop
- Keep a glass of water at your desk

### Teleconferencing ground rules:

- Use the mute button or press \*6
- Do not place call on hold

- Use the "Raise hand" icon in the Attendee List: My Status to indicate you want to ask a question
- Identify yourself before speaking, when not called on
- Charge the batteries for your cordless handset
- If possible use a land line instead of your cell phone

### **Minimum Hardware Requirements**

- PC with 1.4 GHz processor or higher (Windows) or 1.83 GHz process or higher (Mac OS). Minimum processor required for screen sharing. You may be asked to share your screen during hands-on exercise portions of the class.
- 17 inch or larger monitor is recommended, set at 1024 X 768. Larger monitor and 1024 X 768 setting will make presentation and system screens easier to read.
- Phone with Headset/Microphone or Speakerphone feature – to maximize student listening and comfort during presentation and demonstration portions of the course.

### **Software Requirement**

A complete list of supported Operating Systems, browsers and additional requirements for Adobe® Acrobat® Connect™ can be found at: [www.adobe.com/products/acrobatconnectpro/systemreqs](http://www.adobe.com/products/acrobatconnectpro/systemreqs)

### **Sample Email to Notify Others You Are in a Virtual Class**

This is a sample of an email you can send to your colleagues and manager when you are taking an online course.

Dear colleagues,

Today I will be participating in an online class from my desk. I will be online from approximately 9:30 a.m. to 5:30 a.m. EST. I would appreciate it if you would not disturb me during this time. If you have an immediate question, please contact Joe Smith at extension 123. If it can wait until after 11:00 a.m., please send me an email and I will follow up with you before the end of the business day. I appreciate your consideration.

Best regards,

### **Getting the Most Out of Your Session**

#### **Session Guidelines**

- Turn off email, phones, instant messaging tools, and clear other distractions away from your training area.
- Participate and prepare to be called on by name.
- Use the "Raise Hand" icon if you have an immediate question or comment.
- Be patient waiting for a response to your chat messages.
- If you leave the program, please use the "Step Away" status icon in the Attendee List pod to let your instructor know when you leave and remember to clear it when you return.





# Contents

xi **Course Overview**

**1 Unit 1: Web Intelligence Core Report Design**

- 1 Lesson: Reviewing Core Report Design Concepts
- 1 Lesson: Comparing the Differences between Java Report Panel (JRP) and WebI Rich Client (WRC)

**3 Unit 2: Multiple Data Sources**

- 3 Lesson: Synchronizing Data from Multiple Data Sources
- 3 Lesson: Creating Multiple Queries in a Document
- 3 Lesson: Synchronizing Data with Merged Dimensions
- 3 Lesson: Interacting with Other Data Providers

**5 Unit 3: Advanced Query Techniques**

- 5 Lesson: Implementing Combined Queries
- 5 Lesson: Implementing Subqueries
- 5 Lesson: Creating a Query Based on Another Query
- 5 Lesson: Changing Data Sources

**7 Unit 4: Calculation Contexts**

- 7 Lesson: Describing Calculation Contexts
- 7 Lesson: Redefining Calculation Contexts
- 7 Lesson: Implementing Extended Syntax Operators
- 7 Lesson: Implementing Extended Syntax Keywords
- 7 Lesson: Defining Calculation Context

**9 Unit 5: Formulas with Character and Date String Functions**

- 9 Lesson: Creating Formulas with Character and Date String Functions
- 9 Lesson: Implementing the Right() Function
- 9 Lesson: Implementing the Replace() Function
- 9 Lesson: Implementing the SubStr() Function
- 9 Lesson: Implementing the Pos() Function
- 9 Lesson: Concatenating Character Strings
- 10 Lesson: Implementing Date Functions

**11 Unit 6: If Logic**

- 11 Lesson: Executing If() to Group Data
- 11 Lesson: Executing the If() Function to Modify Calculation Behavior

**13      Unit 7:      Hyperlinks in Web Intelligence Documents**

- 13      Lesson: Managing Hyperlinks in Web Intelligence Documents
- 13      Lesson: Managing Hyperlinks in Web Intelligence Desktop and the Rich Internet Application Panel
- 13      Lesson: Managing Hyperlinks in the Web Intelligence Interactive Panel

**15      Unit 8:      Additional Reporting Techniques**

- 15      Lesson: Implementing Data Tracking
- 15      Lesson: Implementing Additional Report Functions

# Course Overview

## **TARGET AUDIENCE**

This course is intended for the following audiences:

- Application Consultant
- Project Stakeholder
- Business User
- End User
- Super / Key / Power User



## Lesson 1: Reviewing Core Report Design Concepts

### Lesson Objectives

After completing this lesson, you will be able to:

- Identify the requirements for an advanced report designer

## Lesson 2: Comparing the Differences between Java Report Panel (JRP) and Web Rich Client (WRC)

### Lesson Objectives

After completing this lesson, you will be able to:

- Identify the difference between JRP and WRC



## Lesson 1: Synchronizing Data from Multiple Data Sources

### Lesson Objectives

After completing this lesson, you will be able to:

- Examine the concept of data synchronization

## Lesson 2: Creating Multiple Queries in a Document

### Lesson Objectives

After completing this lesson, you will be able to:

- Display data from a single query in different report blocks
- Display data from multiple queries with a single universe
- Set options to automatically merge dimensions with the same name
- Display data from queries with multiple universes and personal data sources

## Lesson 3: Synchronizing Data with Merged Dimensions

### Lesson Objectives

After completing this lesson, you will be able to:

- Identify the importance of merging dimensions that retrieve related data
- Synchronize data by manually merging dimensions
- Recognize the rules relevant to merging dimensions

## Lesson 4: Interacting with Other Data Providers

### Lesson Objectives

After completing this lesson, you will be able to:

- Upload personal data to a document
- Link personal data to universe data
- Interact with other corporate data providers





## Lesson 1: Implementing Combined Queries

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe combined queries
- Implement combined queries

## Lesson 2: Implementing Subqueries

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe subqueries
- Create a subquery

## Lesson 3: Creating a Query Based on Another Query

### Lesson Objectives

After completing this lesson, you will be able to:

- Create a query in a document using duplication

## Lesson 4: Changing Data Sources

### Lesson Objectives

After completing this lesson, you will be able to:

- Map objects to a new data source



## Lesson 1: Describing Calculation Contexts

### Lesson Objectives

After completing this lesson, you will be able to:

- Explain how Web Intelligence calculates data dynamically

## Lesson 2: Redefining Calculation Contexts

### Lesson Objectives

After completing this lesson, you will be able to:

- Explain how input and output contexts affect measure calculation

## Lesson 3: Implementing Extended Syntax Operators

### Lesson Objectives

After completing this lesson, you will be able to:

- Explain how to implement extended syntax operators

## Lesson 4: Implementing Extended Syntax Keywords

### Lesson Objectives

After completing this lesson, you will be able to:

- Explain how to implement extended syntax keywords

## Lesson 5: Defining Calculation Context

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe how to perform context-related calculations



## Lesson 1: Creating Formulas with Character and Date String Functions

### Lesson Objectives

After completing this lesson, you will be able to:

- Manage character strings

## Lesson 2: Implementing the Right() Function

### Lesson Objectives

After completing this lesson, you will be able to:

- Implement the Right() function to display selected characters from a string

## Lesson 3: Implementing the Replace() Function

### Lesson Objectives

After completing this lesson, you will be able to:

- Implement the Replace() function to replace a letter with a specified word.

## Lesson 4: Implementing the SubStr() Function

### Lesson Objectives

After completing this lesson, you will be able to:

- Implement the SubStr() function to extract a character string from within a string

## Lesson 5: Implementing the Pos() Function

### Lesson Objectives

After completing this lesson, you will be able to:

- Implement the Pos() function to return the position of a specific character in a string

## Lesson 6: Concatenating Character Strings

### **Lesson Objectives**

After completing this lesson, you will be able to:

- Implement the concatenate function to combine two strings in a formula.
- Format a date that is concatenated with a string

## **Lesson 7: Implementing Date Functions**

### **Lesson Objectives**

After completing this lesson, you will be able to:

- Convert a character string to a date value
- Use date string functions to create a variable

## Lesson 1: Executing If() to Group Data

### Lesson Objectives

After completing this lesson, you will be able to:

- Implement the If() function to group values

## Lesson 2: Executing the If() Function to Modify Calculation Behavior

### Lesson Objectives

After completing this lesson, you will be able to:

- Implement the If() function to modify how data is calculated.





## Lesson 1: Managing Hyperlinks in Web Intelligence Documents

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe the different options for creating hyperlinks in Web Intelligence

## Lesson 2: Managing Hyperlinks in Web Intelligence Desktop and the Rich Internet Application Panel

### Lesson Objectives

After completing this lesson, you will be able to:

- Create a hyperlink to a URL using the Hyperlinks dialog box
- Filter dynamically using element linking

## Lesson 3: Managing Hyperlinks in the Web Intelligence Interactive Panel

### Lesson Objectives

After completing this lesson, you will be able to:

- Create a link to another document from a Web Intelligence document



## Lesson 1: Implementing Data Tracking

### Lesson Objectives

After completing this lesson, you will be able to:

- Examine aspects of data tracking
- Use formulas to display and perform calculations on the reference data set.

## Lesson 2: Implementing Additional Report Functions

### Lesson Objectives

After completing this lesson, you will be able to:

- Implement the NoFilter() function to override a report filter or ranking
- Implement the RunningSum() function to return the running sum of a set of numbers
- Describe filter functions
- Publish Web Intelligence content to mobile devices