

BC404

ABAP Programming in Eclipse

COURSE OUTLINE

Course Version: 18

Course Duration:

SAP Copyrights, Trademarks and Disclaimers

© 2021 SAP SE or an SAP affiliate company. 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 SE or an SAP affiliate company.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. Please see <http://global12.sap.com/corporate-en/legal/copyright/index.epx> for additional trademark information and notices.

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

National product specifications may vary.

These materials may have been machine translated and may contain grammatical errors or inaccuracies.








These materials are provided by SAP SE or an SAP affiliate company for informational purposes only, without representation or warranty of any kind, and SAP SE or its affiliated companies shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP SE or SAP affiliate company 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.

In particular, SAP SE or its affiliated companies have no obligation to pursue any course of business outlined in this document or any related presentation, or to develop or release any functionality mentioned therein. This document, or any related presentation, and SAP SE's or its affiliated companies' strategy and possible future developments, products, and/or platform directions and functionality are all subject to change and may be changed by SAP SE or its affiliated companies at any time for any reason without notice. The information in this document is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates, and they should not be relied upon in making purchasing decisions.

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>

Contents

vii **Course Overview**

1 Unit 1: Introduction to Eclipse

- 1 Lesson: Understanding How SAP Uses Eclipse
- 1 Lesson: Installing Eclipse
- 1 Lesson: Defining an ABAP Project
- 1 Lesson: Organizing Work with the Eclipse Workbench

3 Unit 2: The ABAP Development Cycle in Eclipse

- 3 Lesson: Creating Repository Objects
- 3 Lesson: Editing a Repository Object
- 3 Lesson: Debugging ABAP in Eclipse

5 Unit 3: Function Groups and Function Modules

- 5 Lesson: Creating a Function Group and a Function Module

7 Unit 4: ABAP Dictionary Objects in Eclipse

- 7 Lesson: Working With Data Elements
- 7 Lesson: Working With Structures
- 7 Lesson: Modelling Views with ABAP Core Data Services

9 Unit 5: ABAP Objects and Eclipse

- 9 Lesson: Creating a Global Class
- 9 Lesson: Refactoring

11 Unit 6: Web Dynpro Development

- 11 Lesson: Creating Web Dynpro Components

13 Unit 7: Utilities in Eclipse

- 13 Lesson: Navigating in Eclipse
- 13 Lesson: Searching in Eclipse
- 13 Lesson: Managing Version Control
- 13 Lesson: Identifying Sources of Help and Information

15 Unit 8: Testing and Analysis

- 15 Lesson: Performing Static Testing with the Syntax Check
- 15 Lesson: Performing Static Testing with the ABAP Test Cockpit
- 15 Lesson: Performing ABAP Unit Tests
- 15 Lesson: Analyzing Performance with the ABAP Profiler

Course Overview

TARGET AUDIENCE

This course is intended for the following audiences:

- Developer

Lesson 1: Understanding How SAP Uses Eclipse

Lesson Objectives

After completing this lesson, you will be able to:

- Understand the Role of Eclipse-Based Tools at SAP

Lesson 2: Installing Eclipse

Lesson Objectives

After completing this lesson, you will be able to:

- Install Eclipse

Lesson 3: Defining an ABAP Project

Lesson Objectives

After completing this lesson, you will be able to:

- Log On To The SAP System
- Explain the online development model
- Explain how multiple projects can exist in a single workspace
- Modify Eclipse preferences and project-specific settings
- Add a favorite package to an ABAP project

Lesson 4: Organizing Work with the Eclipse Workbench

Lesson Objectives

After completing this lesson, you will be able to:

- Describe the Eclipse Workbench
- Organize editors and views into perspectives
- Arrange objects for editing
- Navigate information and resources using views
- Access interface elements using Quick Access

Lesson 1: Creating Repository Objects

Lesson Objectives

After completing this lesson, you will be able to:

- Create a repository object

Lesson 2: Editing a Repository Object

Lesson Objectives

After completing this lesson, you will be able to:

- Improve coding speed using the ABAP editor's code completion utilities

Lesson 3: Debugging ABAP in Eclipse

Lesson Objectives

After completing this lesson, you will be able to:

- Debug applications in Eclipse
- Use the Jump to the Next Raised Exception feature

Lesson 1: Creating a Function Group and a Function Module

Lesson Objectives

After completing this lesson, you will be able to:

- Create a Function Group and a Function Module

Lesson 1: Working With Data Elements

Lesson Objectives

After completing this lesson, you will be able to:

- Work With Data Elements in ADT

Lesson 2: Working With Structures

Lesson Objectives

After completing this lesson, you will be able to:

- Work With Structures in ADT

Lesson 3: Modelling Views with ABAP Core Data Services

Lesson Objectives

After completing this lesson, you will be able to:

- Model views with ABAP Core Data Services

Lesson 1: Creating a Global Class

Lesson Objectives

After completing this lesson, you will be able to:

- Create a global class

Lesson 2: Refactoring

Lesson Objectives

After completing this lesson, you will be able to:

- Use a refactoring Quick Fix
- Rename an element
- Extract a method
- Delete unused variables

Lesson 1: Creating Web Dynpro Components

Lesson Objectives

After completing this lesson, you will be able to:

- Create a Web Dynpro application

Lesson 1: Navigating in Eclipse

Lesson Objectives

After completing this lesson, you will be able to:

- Navigate within a source code editor
- Navigate using the outline view

Lesson 2: Searching in Eclipse

Lesson Objectives

After completing this lesson, you will be able to:

- Search for an object
- Navigate using the Where-used feature

Lesson 3: Managing Version Control

Lesson Objectives

After completing this lesson, you will be able to:

- Compare current and released versions of ABAP development objects

Lesson 4: Identifying Sources of Help and Information

Lesson Objectives

After completing this lesson, you will be able to:

- Display additional code information using ABAP keyword help
- Display information on running applications using feeds
- Document ABAP source code

Lesson 1: Performing Static Testing with the Syntax Check

Lesson Objectives

After completing this lesson, you will be able to:

- Check syntax

Lesson 2: Performing Static Testing with the ABAP Test Cockpit

Lesson Objectives

After completing this lesson, you will be able to:

- Run ABAP Test Cockpit (ATC) tests

Lesson 3: Performing ABAP Unit Tests

Lesson Objectives

After completing this lesson, you will be able to:

- Perform an ABAP unit test

Lesson 4: Analyzing Performance with the ABAP Profiler

Lesson Objectives

After completing this lesson, you will be able to:

- Create and interpret an ABAP profile

Lesson 1: Extending Eclipse Functionality with Other SAP Tools

Lesson Objectives

After completing this lesson, you will be able to:

- Explain Eclipse architecture
- Publish a HANA view