S4D400

Basic ABAP Programming

COURSE OUTLINE

Course Version: 24
Course Duration:

SAP Copyrights, Trademarks and Disclaimers

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	*Example text*
Window title	*Example text*

Contents

Course Overview

TARGET AUDIENCE

This course is intended for the following audiences:

- Development Consultant
- Developer

UNIT 1 Getting Started

Lesson 1: Preparing the Development Environment

Lesson Objectives

After completing this lesson, you will be able to:

- Create an ABAP Cloud project

Lesson 2: Taking a First Look at ABAP

Lesson Objectives

After completing this lesson, you will be able to:

- Work with a development object

Lesson 3: Understanding Software Structure and Logistics

Lesson Objectives

After completing this lesson, you will be able to:

- Create an ABAP package

Lesson 4: Developing Your First ABAP Program

Lesson Objectives

After completing this lesson, you will be able to:

- Create a 'Hello World' application

UNIT 2 Applying Basic Techniques and Concepts

Lesson 1: Understanding the Basics of ABAP

Lesson Objectives

After completing this lesson, you will be able to:

- Describe the evolution of ABAP
- Describe the basics of ABAP syntax

Lesson 2: Working With Basic Data Objects and Data Types

Lesson Objectives

After completing this lesson, you will be able to:

- Declare data objects
- Assign values

Lesson 3: Processing Data

Lesson Objectives

After completing this lesson, you will be able to:

- Perform arithmetic calculations
- Apply string processing

Lesson 4: Using Control Structures in ABAP

Lesson Objectives

After completing this lesson, you will be able to:

- Implement conditional branching
- Handle Exceptions
- Implement Iterations

Lesson 5: Working with Simple Internal Tables

Lesson Objectives

After completing this lesson, you will be able to:

- Define simple internal tables
- Process data using simple internal tables

Lesson 6: Debugging an ABAP Program

Lesson Objectives

After completing this lesson, you will be able to:

- Enter debugging mode
- Control the execution of code
- Analyze the content of data objects

UNIT 3 Working with Local Classes

Lesson 1: Defining a Local Class

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

- Define a local class inside a global class

Lesson 2: Creating Instances of a Class

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

- Create Instances of an ABAP Class

Lesson 3: Defining and Calling Methods

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

- Define and call methods

Lesson 4: Using Encapsulation to Ensure Consistency

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

- Explain encapsulation
- Define and use constructors

UNIT 4 Reading Data from the Database

Lesson 1: Investigating a Table Definition

Lesson Objectives

After completing this lesson, you will be able to:

- Investigate a table definition

Lesson 2: Implementing Basic SELECT Statements

Lesson Objectives

After completing this lesson, you will be able to:

- Describe basic features of ABAP SQL
- Read single values from the database

Lesson 3: Working with CDS View

Lesson Objectives

After completing this lesson, you will be able to:

- Analyze a CDS view definition
- Read data using a CDS view

UNIT 5 Working with Structured Data Objects

Lesson 1: Declaring a Structured Data Object

Lesson Objectives

After completing this lesson, you will be able to:

- Declare a structured data object

Lesson 2: Working with Structured Data Objects

Lesson Objectives

After completing this lesson, you will be able to:

- Work with structured data objects
- Use structured data objects in ABAP SQL

UNIT 6 Working with Complex Internal Tables

Lesson 1: Declaring a Complex Internal Table

Lesson Objectives

After completing this lesson, you will be able to:

- Declare a complex internal table

Lesson 2: Working with Complex Internal Tables

Lesson Objectives

After completing this lesson, you will be able to:

- Fill complex internal tables with data
- Access the content of complex internal tables
- Use complex internal tables in ABAP SQL

UNIT 7

Implementing Database Updates Using Business Objects

Lesson 1: Analyzing a Business Object

Lesson Objectives

After completing this lesson, you will be able to:

- Analyze a business object

Lesson 2: Using the Entity Manipulation Language

Lesson Objectives

After completing this lesson, you will be able to:

- Implement an EML statement

UNIT 8 Describing the ABAP RESTful Application Programming Model

Lesson 1: Introducing the Programming Model

Lesson Objectives

After completing this lesson, you will be able to:

- Describe the process to develop an OData Service with the ABAP RESTful application programming model

Lesson 2: Exploring the Architecture

Lesson Objectives

After completing this lesson, you will be able to:

- Create a database table
- Generate the development objects for an OData UI service

Lesson 3: Adding ABAP logic

Lesson Objectives

After completing this lesson, you will be able to:

- Implement the behavior of a Business Object

Lesson 4: Improving the User Experience

Lesson Objectives

After completing this lesson, you will be able to:

- Arrange fields in the app
- Provide input help