

# HA450

## SAP HANA 2.0 SPS04 - Application Development for SAP HANA

### COURSE OUTLINE

Course Version: 16

Course Duration:

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# 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>



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# Course Overview

## TARGET AUDIENCE

This course is intended for the following audiences:

- Developer





## Lesson 1: Describing Prerequisite Skills for SAP HANA Application Development

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe prerequisite skills for SAP HANA application development

## Lesson 2: Introducing the Application Architecture in SAP HANA

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe the basic concepts of application architecture in SAP HANA

## Lesson 3: Describing the Application Development Tools in SAP HANA

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe the tools used by the application developer in SAP HANA

## Lesson 4: Introducing the SAP HANA Express Edition

### Lesson Objectives

After completing this lesson, you will be able to:

- Introduce SAP HANA express edition

## Lesson 5: Describing the Information Sources for SAP HANA Developers

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe the information sources for SAP HANA developers



## Lesson 1: Introducing the Multi-Target Application

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe the basic concepts about the MTA development project

## Lesson 2: Describing the MTA Development Descriptor File mta.yaml

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe the information contained in the MTA Development Descriptor mta.yaml file

## Lesson 3: Introducing the Node.js Module

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe introductory concepts required to use the Node.js module in the SAP Web IDE for SAP HANA

## Lesson 4: Creating and Deploying a Basic Node.js Module

### Lesson Objectives

After completing this lesson, you will be able to:

- Create, run, export, and deploy a Node.js module saying Hello World

## Lesson 5: Debugging the Node.js Code

### Lesson Objectives

After completing this lesson, you will be able to:

- Debugging Node.js code using the SAP Web IDE debugger



## Lesson 1: Introducing the SAP HANA Database Module

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe the main features of the SAP HANA Database module

## Lesson 2: Introducing Core Data Services

### Lesson Objectives

After completing this lesson, you will be able to:

- Explain the basic concepts of Core Data Services

## Lesson 3: Using the Core Data Services Entity

### Lesson Objectives

After completing this lesson, you will be able to:

- Create a Core Data Services Entity, converted at runtime into a database table

## Lesson 4: Using the CDS Context, Association, and View

### Lesson Objectives

After completing this lesson, you will be able to:

- Use context, association, and view in Core Data Services



## Lesson 1: Introducing Calculation Views

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe the basic features of Calculation Views





## Lesson 1: Introducing SQLScript

### Lesson Objectives

After completing this lesson, you will be able to:

- Explain the basic concepts of SQLScript

## Lesson 2: Creating an SQLScript procedure

### Lesson Objectives

After completing this lesson, you will be able to:

- Create an SQLScript procedure

## Lesson 3: Debugging SQLScript

### Lesson Objectives

After completing this lesson, you will be able to:

- Debug SQLScript using the SAP Web IDE for SAP HANA



## Lesson 1: Introducing Authorization in SAP HANA

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe basic concepts about authorizations in the SAP HANA database

## Lesson 2: HDI Container Security Concepts

### Lesson Objectives

After completing this lesson, you will be able to:

- Understand the HDI Security Concepts



## Lesson 1: Accessing a Remote SAP HANA Schema

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe how to access a remote SAP HANA schema



## Lesson 1: Running SQL in the Database with Node.js

### Lesson Objectives

After completing this lesson, you will be able to:

- Run SQL in the Database with Node.js





## Lesson 1: Introducing OData Services

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe basic concepts about OData services

## Lesson 2: Exposing an OData Entity Set with XSODATA

### Lesson Objectives

After completing this lesson, you will be able to:

- Create a simple OData service, using XSODATA to expose a single Entity Set

## Lesson 3: Using OData Key and Association in XSODATA

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe the use of keys and associations in OData services, created with XSODATA



## Lesson 1: Creating a Basic HTML5 Module

### Lesson Objectives

After completing this lesson, you will be able to:

- Create and run an HTML5 module saying Hello World

## Lesson 2: Configuring the Router for HTTP Message Forwarding

### Lesson Objectives

After completing this lesson, you will be able to:

- Configure the Router to forward HTTP messages to the Node.js back end module

## Lesson 3: Configuring the Router for Placeholders Replacement

### Lesson Objectives

After completing this lesson, you will be able to:

- Configure the Router to replace at runtime a placeholder within an html file



## **Lesson 1: Introducing Application Security in XS Advanced**

### **Lesson Objectives**

After completing this lesson, you will be able to:

- Describe basic concepts of application security in XS Advanced

## **Lesson 2: Creating the User with Authorization for Development in SAP Web IDE for SAP HANA**

### **Lesson Objectives**

After completing this lesson, you will be able to:

- Create the user with authorization for development in the SAP Web IDE for SAP HANA

## **Lesson 3: Creating the Security Concept Within an HTML5 Module**

### **Lesson Objectives**

After completing this lesson, you will be able to:

- Create the security concept within an HTML5 module



## Lesson 1: Introducing UI5

### Lesson Objectives

After completing this lesson, you will be able to:

- Explain what UI5 is

## Lesson 2: Describing the Structure of an Elementary UI5 Application

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe the structure of an elementary UI5 application

## Lesson 3: Creating the UI Using the SAP Fiori Master-Detail Template

### Lesson Objectives

After completing this lesson, you will be able to:

- Create the UI using the SAP Fiori Master-Detail template





## Lesson 1: Using the SAP Cloud Application Programming Model

### Lesson Objectives

After completing this lesson, you will be able to:

- Use the SAP Cloud Application Programming model



## Lesson 1: Working with GIT Within SAP Web IDE for SAP HANA

### Lesson Objectives

After completing this lesson, you will be able to:

- Use the Native Git Integration of the SAP Web IDE for SAP HANA