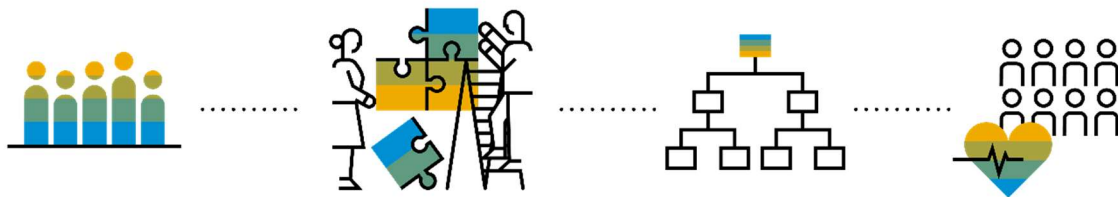# RESTFUL APPLICATION PROGRAMMING

Duration: 30+ Hours

Target Audience: Developers, Architects, ABAP Consultants, Solution Architect, Cloud Developers, BTP D

Pre-requisite: CDS views, ABAP on HANA

S/4HANA ABAP Consultant: You are working as a ABAP CDS View Developer in a company, your current expertise is into S/4HANA Application development with BOPF and CDS for custom apps. You want to learn latest concepts related to tooling and best practices in New Restful Application Programming with latest features of draft, augment, custom entities, compositions, Behavior definition, Behavior implementation and Service binding. We will develop end to end Fiori Elements applications.

Unit 1: SAP BTP Introduction

- Difference between On-premise and Cloud
- Type of offerings
- What is Cloud Foundry
- Architecture of SAP Cloud Foundry
- Why Cloud Foundry
- History of Cloud Foundry
- What is Business Technology Platform (BTP)?
- SAP BTP learning Track
- BTP Customer View
- Setup SAP BTP Trial Account – Developer on-boarding
- Create your ABAP on Cloud Instance

Unit 2: Create DDIC

- Introduction to Data Dictionary
- Creating Structure
- Understand How to Build Tables.
- Creating Database tables – Business Partner, product, Sales Order, Sales Order Items
- Creating Class for Load Data in Table's

Unit 3: Create Services Using CDS

- Limitations of ABAP on Cloud
- Introduction to CDS View/Entity

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Latest concepts on RAP (RESTful Application Programming)

- **Why we Use CDS View**

- **Implementing CDS View's**

- **Creating Service using CDS**

Unit 4: RAP Introduction

- **History of ABAP on Cloud**

- **Motivation for ABAP on Cloud – Scenario**

- **Common Challenges in ABAP Development**

- **Evolution of ABAP Programming Model**

- **What is RAP (Restful Application Programming)**

- **Flow of Restful Application Programming**

- **Types of Scenarios**

  - ➢ **Managed Scenario**

  - ➢ **Unmanaged Scenario**

- **Explanation of Flight Data Model**

- **Defining Unmanaged Scenario**

- **Flow of Development (Unmanaged Scenario)**

- **Defining CDS Views**

Unit 5: Create Fiori Element App

- **Creating OData Service (Business Service)**

- **Introduction to Fiori Elements**

- **Free style v/s Fiori Elements App**

- **Developer persona – Fiori Elements**

- **What is Business Application Studio**

- **Creating List Report Object Page App Using BAS**

- **Developing Read-Only List Reporting Apps**

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➢ **UI Annotation**

➢ **Adding Search Capabilities**

- **Adding Metadata Extension**

Unit 6: Behavior Definition Concept

- **Introduction to Classes**

- **Local Types/Classes in ABAP with Global Classes**

- **Implementing Class Pool Concept**

- **Behavior Definition Introduction**

- **Create Behavior Definition**

Unit 7: Behavior Implementation

- **Create Behavior implementation for Unmanaged Scenario**

- **Implementing Create, Update and Delete**

- **Make field read only**

- **Making field Mandatory**

- **Add validation to the code**

- **Implement Actions - set_status_booked**

Unit 8: Entity Manipulation Language

- **Introduction to EML**

- **Understanding Why we need EML**

- **Uses of EML**

- **Syntax for EML**

- **Implementing EML in Class**

Unit 9: Managed Processor App

- **Defining Managed Scenario**
- **Use Case for Managed Scenario**
- **Describing Functionality of Scenario**
- **Creating Data Model**
- **Building Behavior Definition**
- **Implementing Processor CDS**
- **Building Service definition**
- **Creating Service Binding**

Unit 10: Actions Determination

- **Implementing the Action createTravelByTemplate**
- **Implementing the Action approveTravel**
- **Implementing the Action rejectTravel**
- **Modeling Static and Dynamic Feature Control**
- **Implementing Validations**
- **Implementing the Determination**

Unit 11: Introduce Draft Augment

- **Defining Draft**
- **Enable Draft Handling**
- **Expose Draft handling to projection Layer**
- **Enable Early Numbering for Travel and Booking**
- **Understanding Augmentation**
- **Integrating augment in Managed Object**

Unit 12: Approver Scenario

- **Understand the persona for Approver**
- **Implementing Approver projection**
- **Annotations for Approver Scenario**
- **Behavior Definition for Approver**
- **Service Binding for Approver Scenario**
- **Fiori App for Approver**
- **Deploy Fiori App to SAP CF**

Unit 13: Custom Entity

- **Fiori App with Launchpad in BTP**
- **Service Consumption Model**
- **Describing the Concept of Custom Entity**
- **Why we use Custom Entity**
- **Implement Custom Entity**
- **Create Class for Custom Entity**
- **Test Custom Entity**

Unit 14: ABAP Git

- **What is ABAP Git**
- **Why we use ABAP Git**
- **ABAP Git Integration**
- **Understand How to Use ABAP Git**

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