

# Hands-on Lab: Fusion Development with ABAP Cloud in SAP Build

**asUG** Tech Connect

In partnership with **SAP TechEd**

# Agenda

## Exercise 1

- Start your development by creating an ABAP project in the SAP Build Lobby

## Exercise 2

- Create a Shopping Cart business object, projection and service with the Graphical Modeler in SAP Build Code

## Exercise 3

- Implement transactional behavior in ADT, create validations and determinations

## Exercise 4

- Create, preview and adapt a SAP Fiori elements application

# Get started

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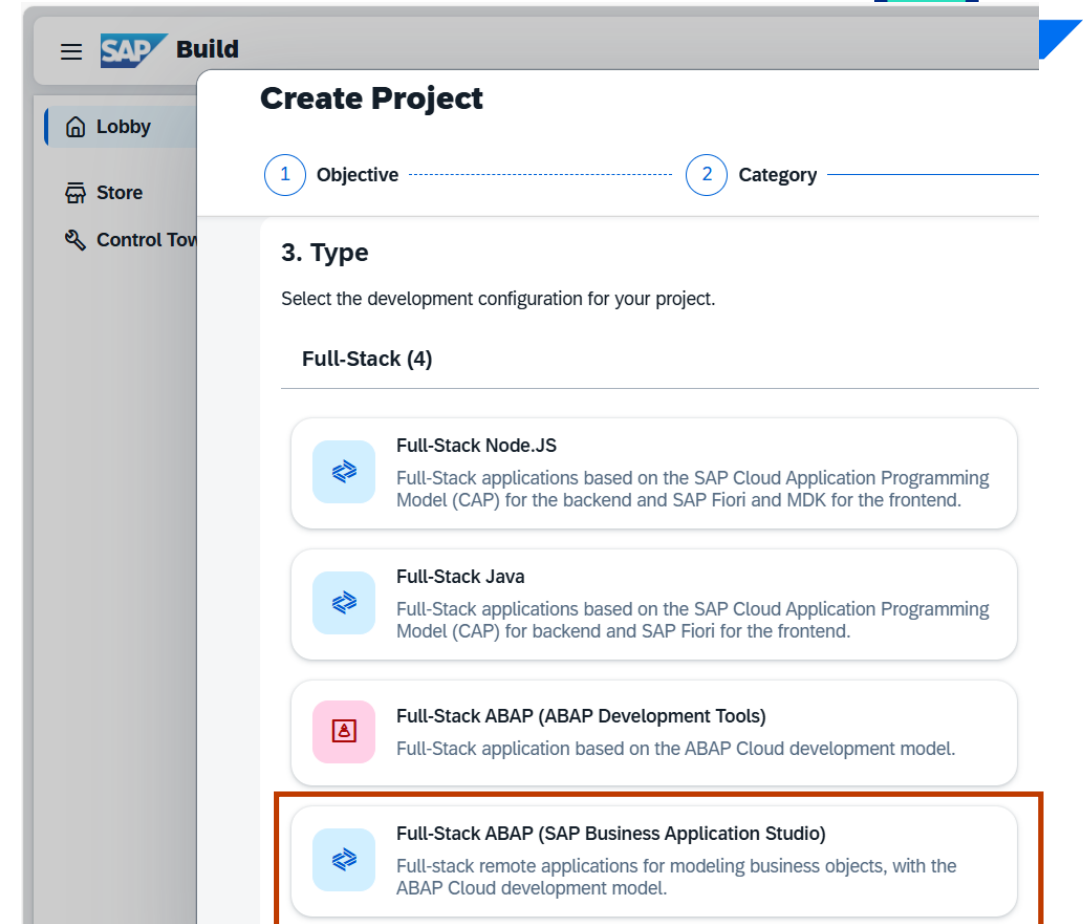
# Introduction

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# What you will do in this hands-on workshop – Practice fusion development of ABAP Cloud

1. SAP Build Lobby - Create a Full-Stack ABAP project (SAP Business Application Studio)



# What you will do in this hands-on workshop – Practice fusion development of ABAP Cloud

1. SAP Build Lobby - Create a Full-Stack ABAP project (SAP Business Application Studio)
2. SAP Business Application Studio - Graphical Modeler



Cart Business Object		
OrderUid		abap.raw(16)
Ab Currency		abap.cuky
Ab Notes		abap.char(100)
Ab OrderID		abap.numc(8)
RequestDeliveryDate		abap.datin
12 TotalPrice		abap.curr(11,2)

Item Entity		
ItemUid		abap.raw(16)
ParentUid		abap.raw(16)
Ab ItemID		abap.numc(8)
Ab OrderedItem		abap.char(40)
Ab Quantity		abap.numc(4)
12 ItemPrice		abap.curr(11,2)
Ab Currency		abap.cuky
12 ItemUnitPrice		abap.curr(11,2)

# What you will do in this hands-on workshop – Practice fusion development of ABAP Cloud

1. SAP Build Lobby - Create a Full-Stack ABAP project (SAP Business Application Studio)
2. SAP Business Application Studio – Graphical Modeler
3. ABAP Development Tools - Implementation of Business Logic



```
35  
36 validation validateRequestDeliveryDate on save { create; field RequestDeliveryDate; }  
37  
38 draft action Activate optimized;  
39 draft action Discard;  
40 draft action Edit;  
41 draft action Resume;  
42 //draft determine action Prepare;  
43 draft determine action Prepare  
44 {  
45 validation validateRequestDeliveryDate;  
46 }  
47  
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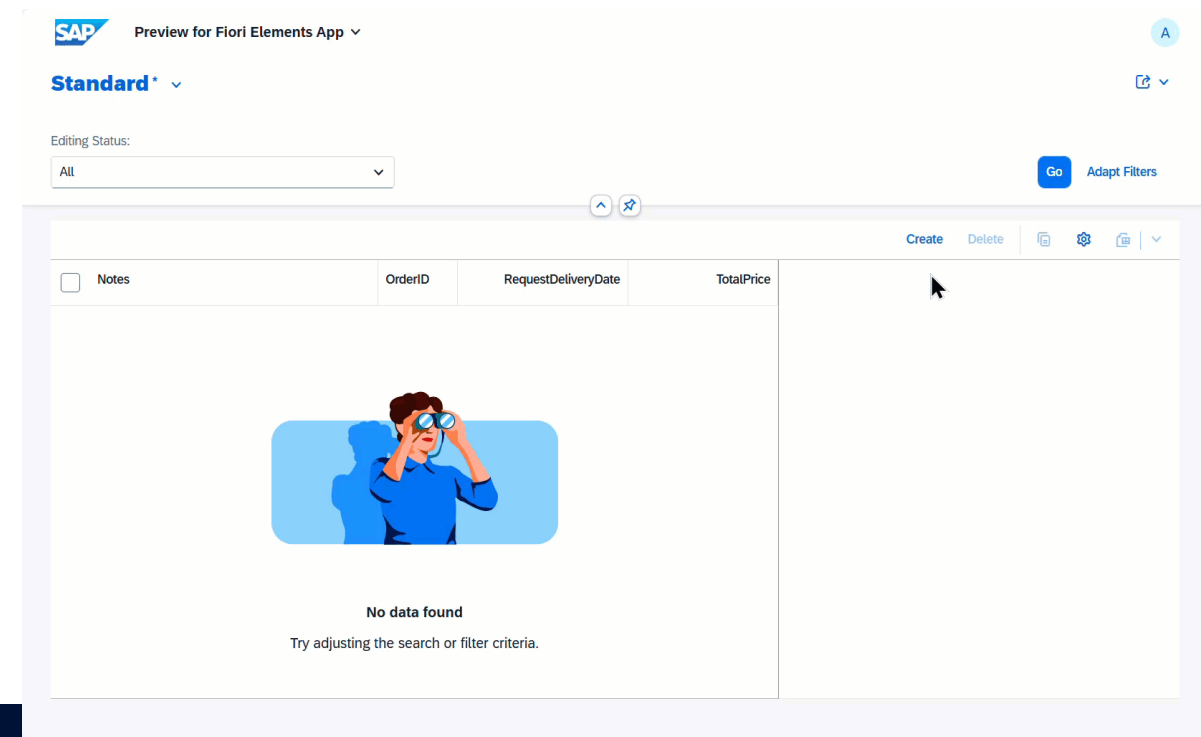
```
64  
65 association _Items { create; with draft; }  
66  
67 }  
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99  
100
```

```
METHOD validateRequestDeliveryDate.  
  
ENDMETHOD.
```

Predict RAP Business Logic

# What you will do in this hands-on workshop – Practice fusion development of ABAP Cloud

1. SAP Build Lobby - Create a Full-Stack ABAP project (SAP Business Application Studio)
2. SAP Business Application Studio – Graphical Modeler
3. ABAP Development Tools - Implementation of Business Logic
4. SAP Business Application Studio - Create, preview and adapt a SAP Fiori elements application





# Exercise 1: Start your development by creating an ABAP project in the SAP Build Lobby

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# Exercise 1: Create a Full-Stack ABAP (SAP Business Application Studio) Project

Create a Full-Stack ABAP (SAP Business Application Studio) Project

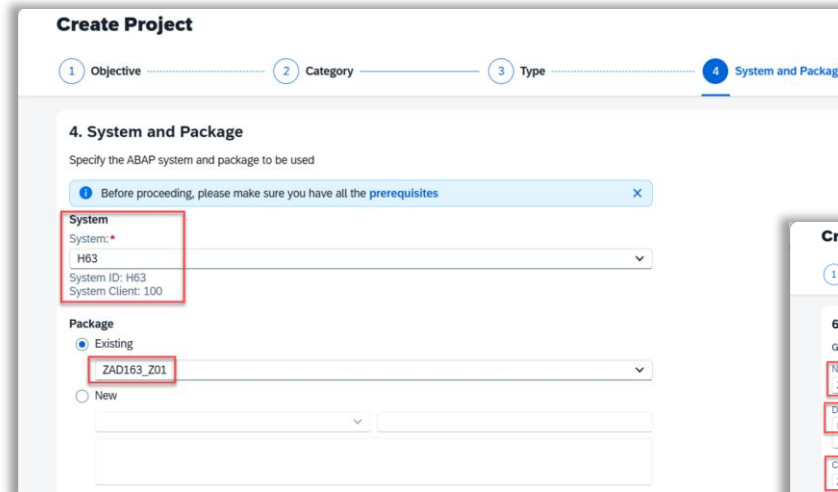
Connect to backend system  
**H63**

Use a pre-created package  
**ZAD163-A##**

Create and start Dev Space  
in SAP Business Application Studio



**Full-Stack ABAP (SAP Business Application Studio)**  
Full-stack remote applications for modeling business objects, with the ABAP Cloud development model.



**Create Project**

1 Objective 2 Category 3 Type 4 System and Package

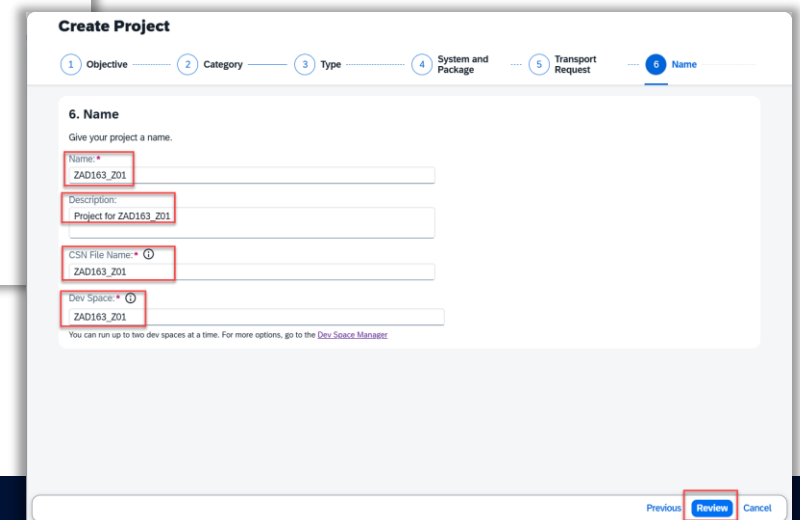
**4. System and Package**

Specify the ABAP system and package to be used

Before proceeding, please make sure you have all the prerequisites

System:  
System: \*  
H63  
System ID: H63  
System Client: 100

Package:  
☒ Existing  
ZAD163\_Z01  
☐ New



**Create Project**

1 Objective 2 Category 3 Type 4 System and Package 5 Transport Request 6 Name

**6. Name**

Give your project a name.

Name: \*  
ZAD163\_Z01

Description:  
Project for ZAD163\_Z01

CSN File Name: \* ⓘ  
ZAD163\_Z01

Dev Space: \* ⓘ  
ZAD163\_Z01

You can run up to two dev spaces at a time. For more options, go to the [Dev Space Manager](#)

Previous Review Cancel

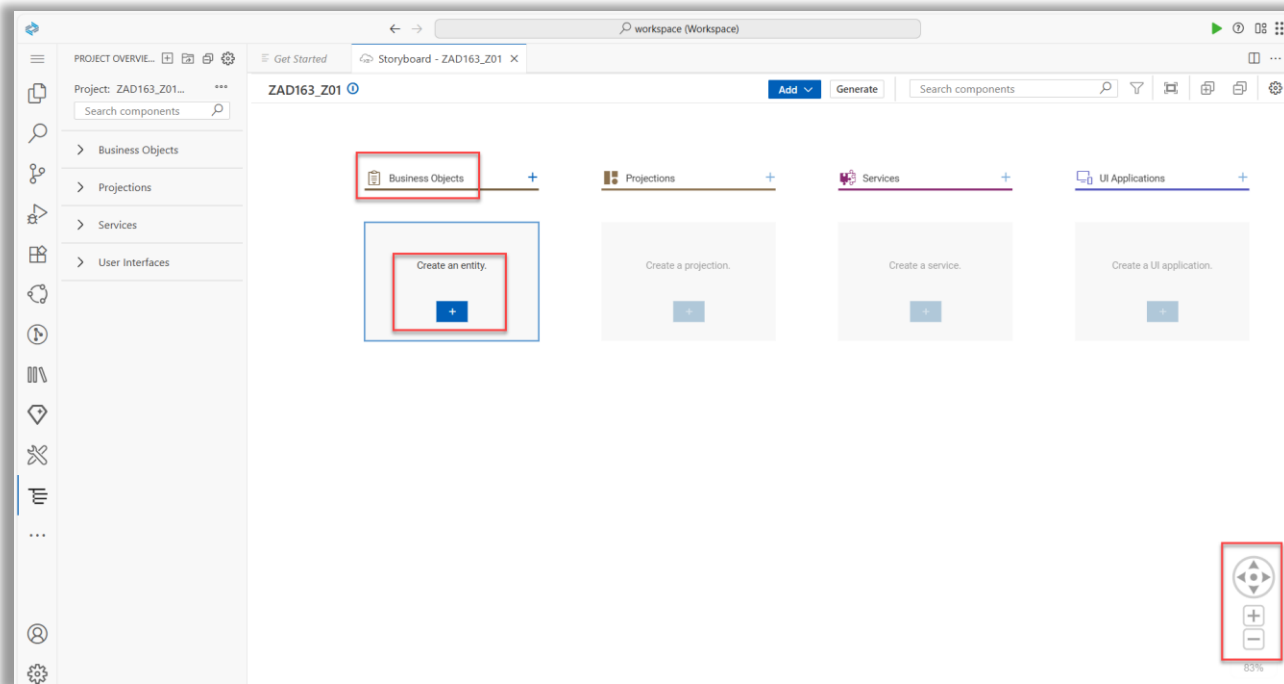
# **Exercise 2 : Create a Shopping Cart business object, projection and service with the Graphical Modeler in SAP Build Code**

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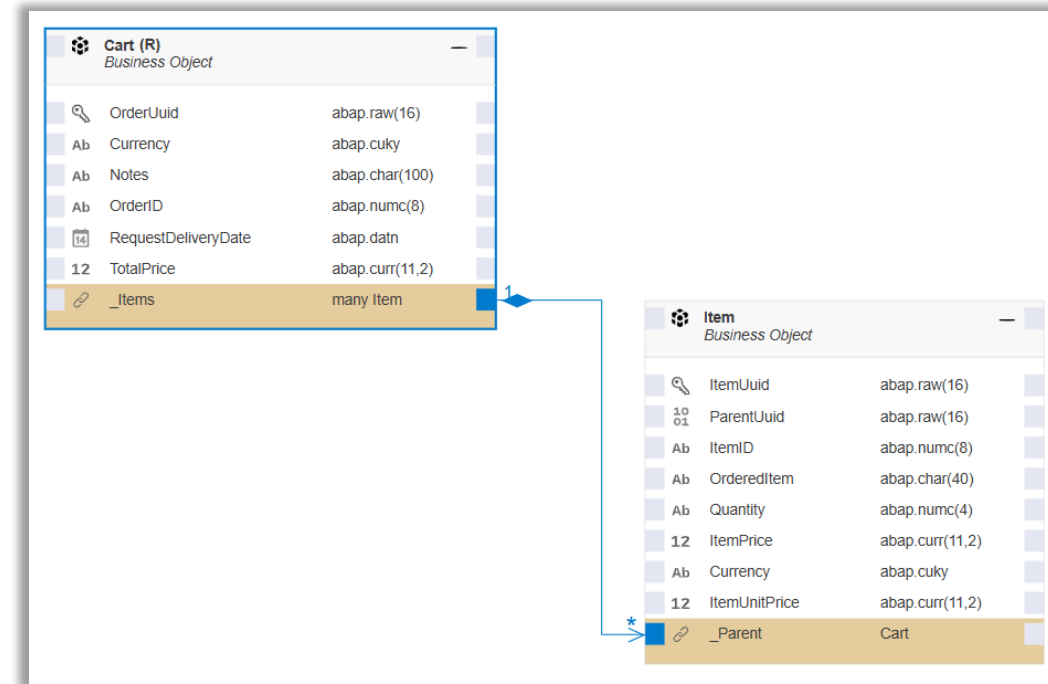
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# Exercise 2: Model the ShoppingCart Business Object

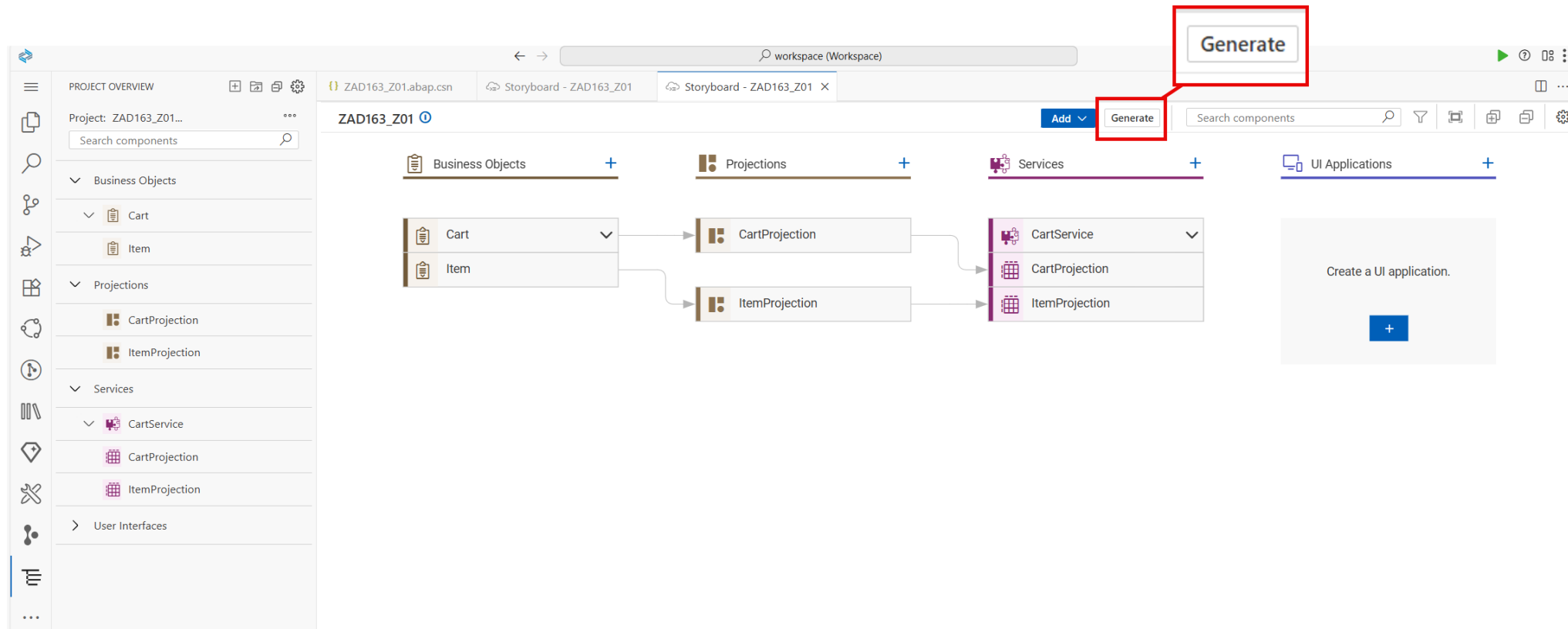
Storyboard



Graphical Modeller



# Exercise 2: Add Projection and Service Layer, Generate ABAP artefacts



# Exercise 3: Implement transactional behavior in ADT, create validations and determinations

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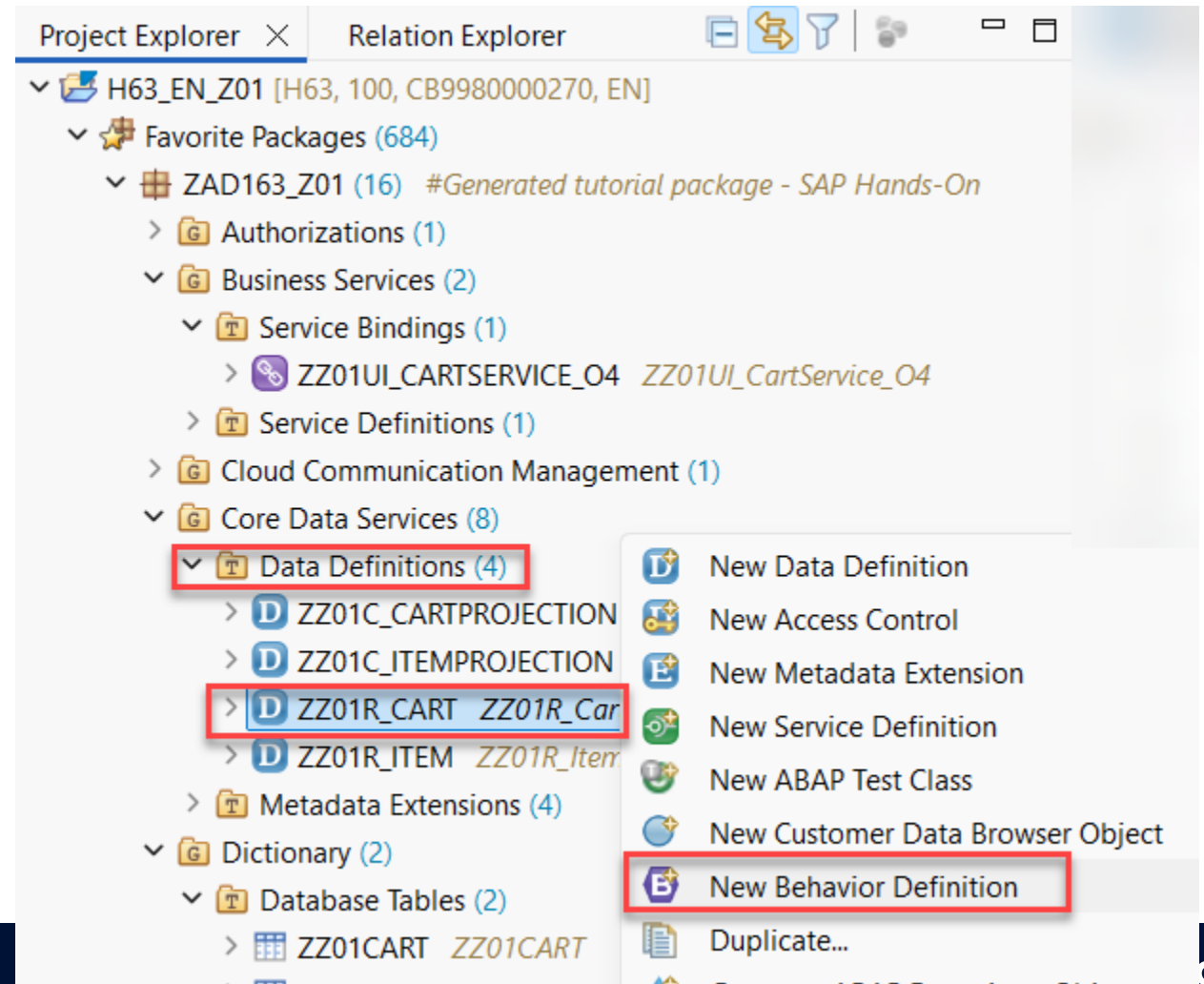
# Exercise 3: Create ABAP cloud project in ADT

The screenshot shows the SAP ADT workspace interface. In the Explorer pane on the left, the project structure for 'ZAD163\_Z01' is visible, including 'Database Tables', 'Metadata Extensions', and 'Service Bindings'. The file 'ZZ01UI\_CARTSERVICE\_O4.abap.srvb' under 'Service Bindings' is highlighted with a red box. The main workspace area displays an error message: 'Unable to open the "/H63/ZAD163\_Z01/Service Bindings/ZZ01UI\_CARTSERVICE\_O4.abap.srvb" file.' Below the message is a link 'Open this object in ADT' also highlighted with a red box. Two dialog boxes are overlaid on the workspace. The 'Open ADT Link' dialog box has a 'Choose a Project:' field and a 'New...' button highlighted with a red box. The 'New Project' dialog box shows the 'Select a wizard' step with the option 'Create an ABAP cloud project'. Under the 'Wizards:' section, 'ABAP Cloud Project' is selected and highlighted with a red box. The 'Next >' button at the bottom of the 'New Project' dialog is also highlighted with a red box.

1 – Create ABAP cloud project in ADT

# Exercise 3: Add transactional behavior

```
1 @EndUserText.label : 'ZZ01CART'
2 @AbapCatalog.enhancement.category : #NOT_EXTENSIBLE
3 @AbapCatalog.tableCategory : #TRANSPARENT
4 @AbapCatalog.deliveryClass : #A
5 @AbapCatalog.dataMaintenance : #ALLOWED
6 define table zz01cart {
7
8   key client      : abap.clnt not null;
9   key order_uuid  : abap.raw(16) not null;
10  currency        : abap.cuky;
11  notes           : abap.char(100);
12  order_id        : abap.numc(8);
13  request_delivery_date : abap.datn;
14  @Semantics.amount.currencyCode : 'zz01cart.currency'
15  total_price      : abap.curr(11,2);
16  local_created_by : abp_creation_user;
17  local_created_at  : abp_creation_tstmpl;
18  local_last_changed_by : abp_locinst_lastchange_user;
19  local_last_changed_at : abp_locinst_lastchange_tstmpl;
20  last_changed_at    : abp_lastchange_tstmpl;
21
22 }
```






# Exercise 3: Implement determinations and validations using Joule

```
35  
36 validation validateRequestDeliveryDate on save { create; field RequestDeliveryDate; }  
37  
38 draft action Activate optimized;  
39 draft action Discard;  
40 draft action Edit;  
41 draft action Resume;  
42 //draft determine action Prepare;  
43 draft determine action Prepare  
44 {  
45     validation validateRequestDeliveryDate;  
46 }
```

```
64  
65 association _Items { create; with draft; }  
66  
67 }
```

**METHOD** validateRequestDeliveryDate.

**ENDMETHOD.**

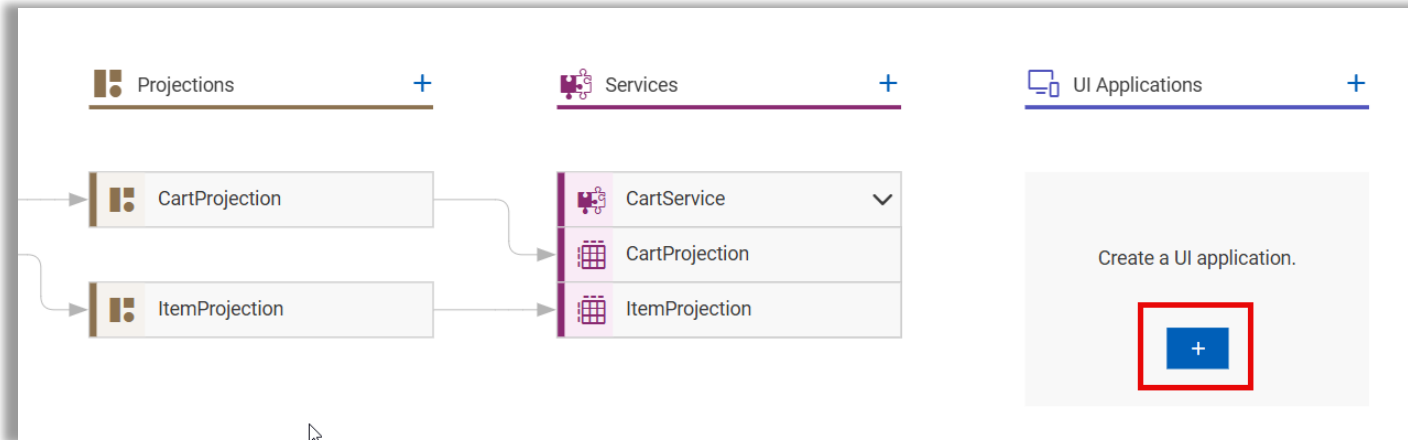
 Predict RAP Business Logic

# Exercise 4: Create, preview and adapt a SAP Fiori elements application

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# Exercise 4: Create, preview and adapt a SAP Fiori elements application



SAP Fiori generator ⓘ

**Template Selection**  
Template: List Report Page

**Data Source and Service Selection**  
Data Source: Connect to a System  
System: H63 (BTP)  
Service: ZZ00UI\_CARTSERVICE\_O4 > ZZ00UI\_CARTSERVICE\_O4 (001) - OData V4

**Entity Selection**  
Main Entity: CartProjection  
Navigation Entity: None  
Generate Annotations: Yes  
Table Type: Responsive

**Project Attributes**  
Configure the main project attributes.

Module Name ⓘ \*  
ad163uz00

Application Title ⓘ  
Shopping Cart App AD163UZ00

Application Namespace ⓘ

Description ⓘ  
A Fiori application.

Project Folder Path \*  
/home/user/projects

Minimum SAPUI5 Version ⓘ \*  
1.136.8 (Source system version)

Enable TypeScript  
☐ Yes ☒ No

Add Deployment Configuration  
☐ Yes ☒ No

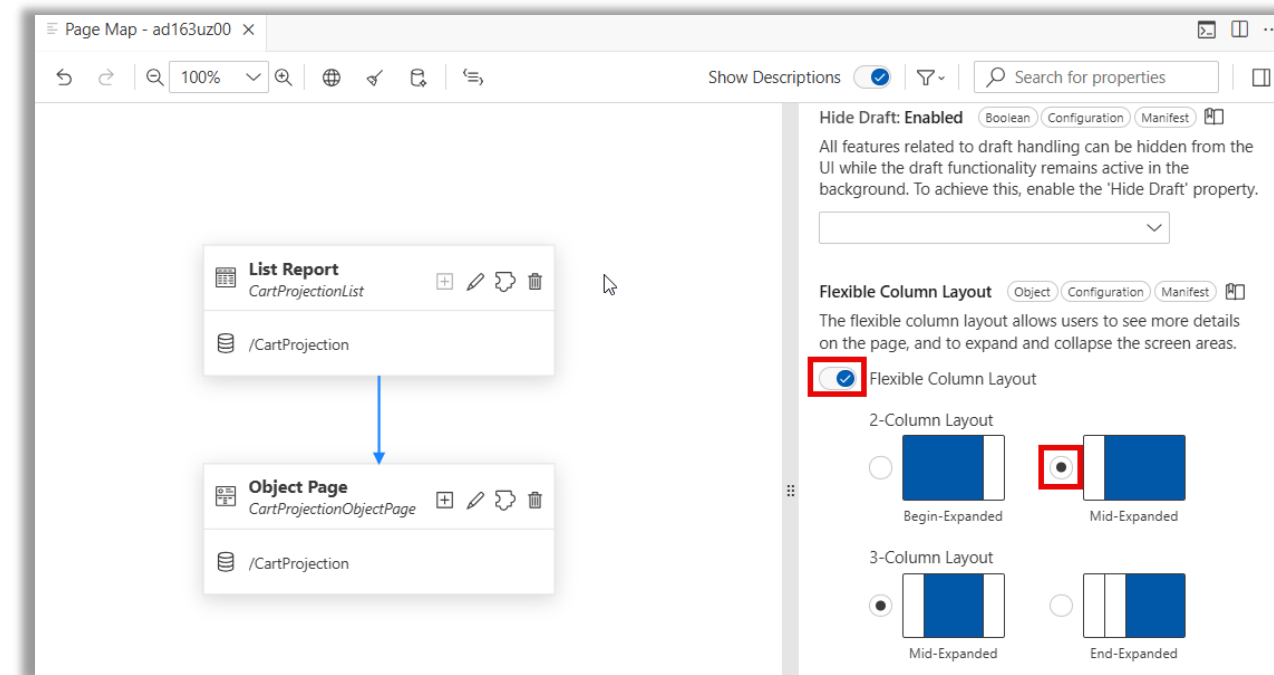
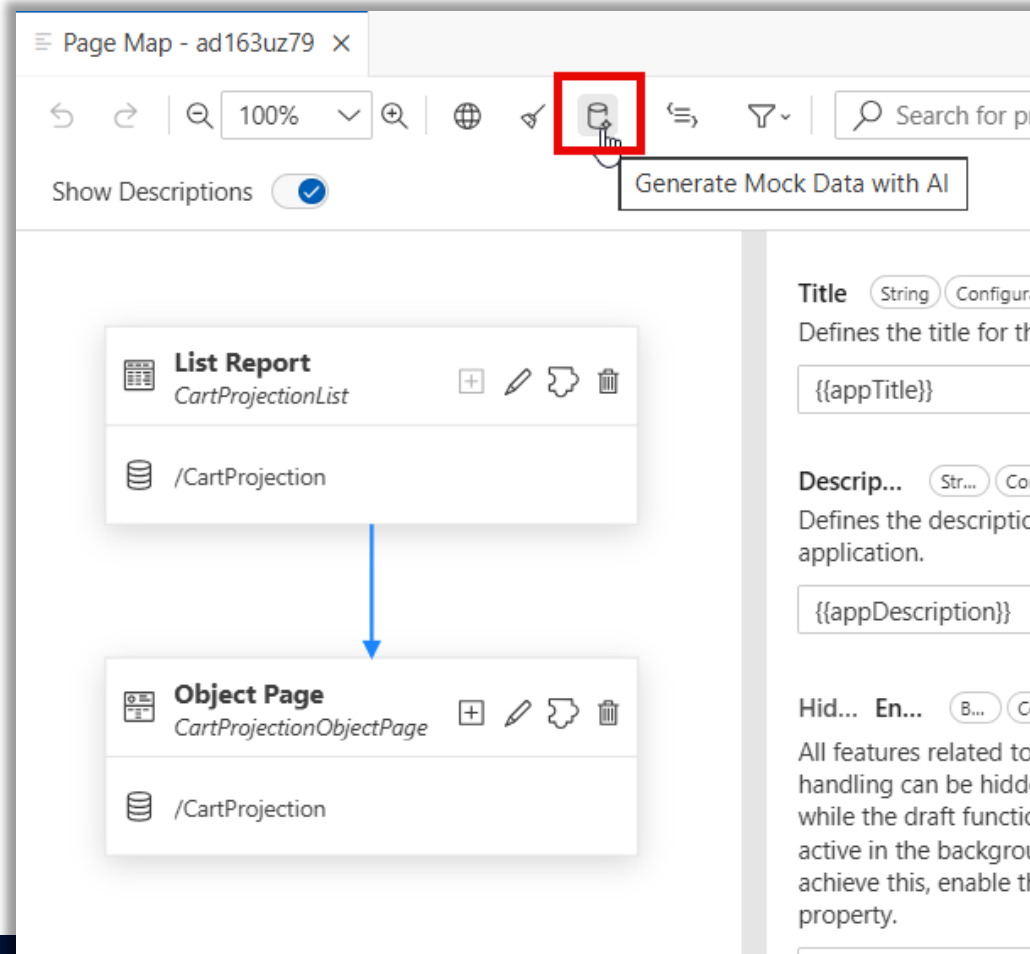
Add SAP Fiori Launchpad Configuration  
☐ Yes ☒ No

Use Virtual Endpoints for Local Preview ⓘ  
☒ Yes ☐ No

Configure Advanced Options ⓘ  
☐ Yes ☒ No

< Back Finish

# Exercise 4: Create, preview and adapt a SAP Fiori elements application



# Let's start with the **asUG Tech Connect** **Hands-on Lab**

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# Thank you!

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