

Base Data Maintenance 开发流程

基于BTP平台, BAS工具(SAP Business Application Studio),

DB: Hana DB

UI: sap ui5

本流程不包含HANA DB的创建以及OData Service的发布, 本流程主要用于实现对一个存在的OData Service实现CRUDQ的基本操作

Table Contents

[**Part1: BAS环境创建**](#)

[**Part2: Project创建**](#)

[**Part3: Project部署**](#)

[**Part4: launchpad环境搭建**](#)

[**Part5: Project添加到launchpad**](#)

[**Part6: UI5代码编写**](#)

[**Part7: Base Data CRUD**](#)

[**Part8: Base Data CRUD-2**](#)

Part1: BAS环境创建

Step1: 启动BAS

1. 在BTP Cockpit中启动BAS

在welcome页面启动BAS

https://account.hanatrial.ondemand.com/trial#/home/trial

SAP BTP Cockpit

Welcome to SAP BTP Trial

Learn how to create and deploy cloud apps and gain access to a comprehensive set of platform services.

Go To Your Trial Account

Quick Tool Access

- SAP Business Application Studio** (Icon: hands holding a smartphone)
- CLI for BTP** (Icon: double arrows)
- APIs for SAP BTP** (Icon: gear and cloud)

Manage your trial account using the command-line interface

Manage, build, and extend the core capabilities of SAP BTP

Start with Tutorials

 <p>Build a Business Application Using CAP for Node.js Extension Suite - Development Efficiency</p> <p>Develop a business application using SAP Cloud Application Programming Model (CAP)</p> <p>Beginner 1h 20m Open Tutorial</p>	 <p>Get Started with SAP Mobile Cards Extension Suite - Digital Experience</p> <p>Get started with SAP Mobile Cards and create a manager's approval app with the help of a Welcome card, automatically generated cards based on data, and cards with user actions built in</p> <p>Beginner 30m Open Tutorial</p>	 <p>Request Product Details with an Integration Scenario Integration Suite</p> <p>Set up your own SAP Integration Suite tenant and deploy an integration scenario where you can request product details from an online webshop</p> <p>Beginner 1h 20m Open Tutorial</p>
---	---	--

或者在Subaccount - Instances and Subscriptions点击BAS

SAP BTP Cockpit

Overview

Services

Service Marketplace

Instances and Subscriptions

Cloud Foundry

Spaces

Quota Plans

Org Members

HTML5 Applications

Connectivity

Destinations

Cloud Connectors

Security

Users

Role Collections

Roles

Trust Configuration

Help and Support

Useful Links

Legal Information

Trial Home / 3eb34006trial / trial

Subaccount: trial - Instances and Subscriptions

All: 7

To manage the Cloud Foundry user-provided service instances, navigate to Cloud Foundry - Spaces, select your space, and then from Services select Service Instances.

Search All Services All Plans All Statuses

Subscriptions (1) Instances (5) Environments (1)

Applications to which your subaccount is currently subscribed

Application	Plan	Created On	Changed On	Status
SAP Business Application Studio	trial	5 Sep 2022	5 Sep 2022	Subscribed

Instances (5)

Service instances created in: Cloud Foundry | Kyma/Kubernetes | Other environments

Instance	Service	Plan	Runtime Environment	Scope	Credentials	Status
cap03-db	SAP HANA Schemas &...	hdi-shared	Cloud Foundry	dev	2 bindings	Created
hanaDB	SAP HANA Cloud	hana	Cloud Foundry	dev		Created
pg-beershop-database	PostgreSQL, hyperscal...	trial	Cloud Foundry	dev	3 bindings	Created
pg-beershop-destination-service	Destination Service	lite	Cloud Foundry	dev	1 binding	Created
pg-beershop-uua	Authorization and Trust...	application	Cloud Foundry	dev	2 bindings	Created

Step2: 创建Dev space

1. 初始启动BAS,需要创建Dev space

Dev Spaces

Create and manage your development environment according to the type of applications you want to develop. You can add extensions and tools to further enhance your development options.

You're using a trial version. Any dev space that hasn't been running for 30 days will be deleted. See the full list of [restrictions](#).

Create Dev Space

Step3:

基于不同开发内容,选择不同的application及扩展插件. 如下图:

1. 创建Demo1的Dev space, 用于开发CAP,Fiori以及java/node相关project
2. 选择SAP Business Application Studio Extension Development

Create a New Dev Space

Demo1 ✓ ①

What kind of application do you want to create?

- SAP Fiori
- Low-Code-Based Full-Stack Cloud Application
- ② Full Stack Cloud Application
- SAP HANA Native Application

Full Stack Cloud Application Dev Space
Build business services and business applications and extend SAP S/4HANA using SAP Cloud Application Programming Model (CAP), SAP Fiori and Java or Node.js.

SAP Predefined Extensions
The following extensions are enabled by default.

- Startup Server Allows you to leverage a trigger and perform an action.
- SAPUI5 Layout Editor Allows you to visually develop your XML view

Additional SAP Extensions
Select additional extensions to enhance your space.

- Basic UI5 Template Allows you to create a basic SAPUI5 application, using the Yeoman generator.
- Development Tools for SAP Work Zone The development tools allows you to build UI Integration cards, which are user interface...
- ③ SAP Business Application Studio Extension Development Allows you to use create, deploy, and manage your own SAP Business Application Studio...
- Workflow Management Allows you to create workflow applications and process templates with SAP Workflow service.

Create Dev Space ④

Step4:

1. dev space处于running状态后, 点击对应的 dev space进入. 如果dev space处于stopped状态,点击2号位置图标



Dev Spaces

Create and manage your development environment according to the type of applications you want to develop. You can add extensions and tools to further enhance your development options.

You're using a trial version. Any dev space that hasn't been running for 30 days will be deleted. See the full list of [restrictions](#).

You are allowed a total of 2 dev spaces, with only 1 running at a time.

[Create Dev Space](#)

Demo1 Full Stack Cloud Application	RUNNING	Created On 26/09/2022 11:45	ID ws-s4x7r	Disk Usage 596 KB / 3.8 GB	
dev SAP Fiori	STOPPED	Created On 06/09/2022 13:47	ID ws-5q6db	Disk Usage 756.9 MB / 3.8 GB	

Step5: BAS启动后初始界面

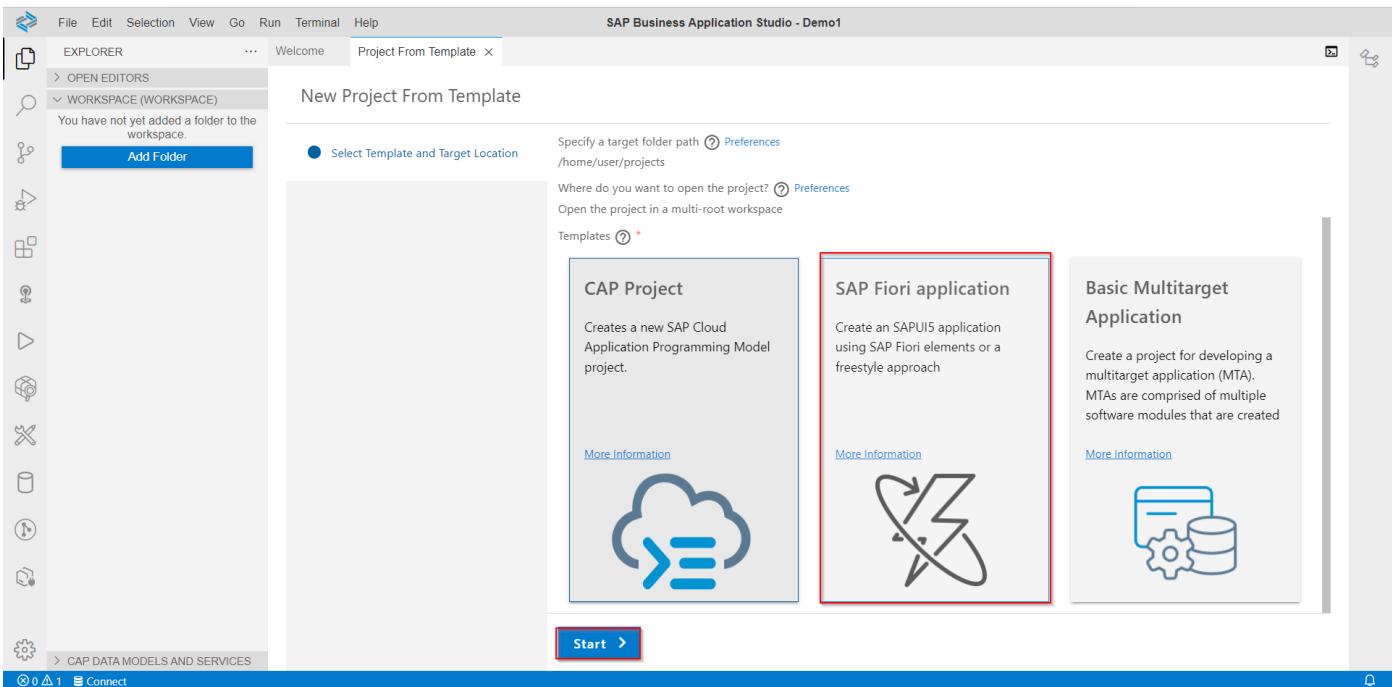
1. BAS初始页面

Part2: Project创建

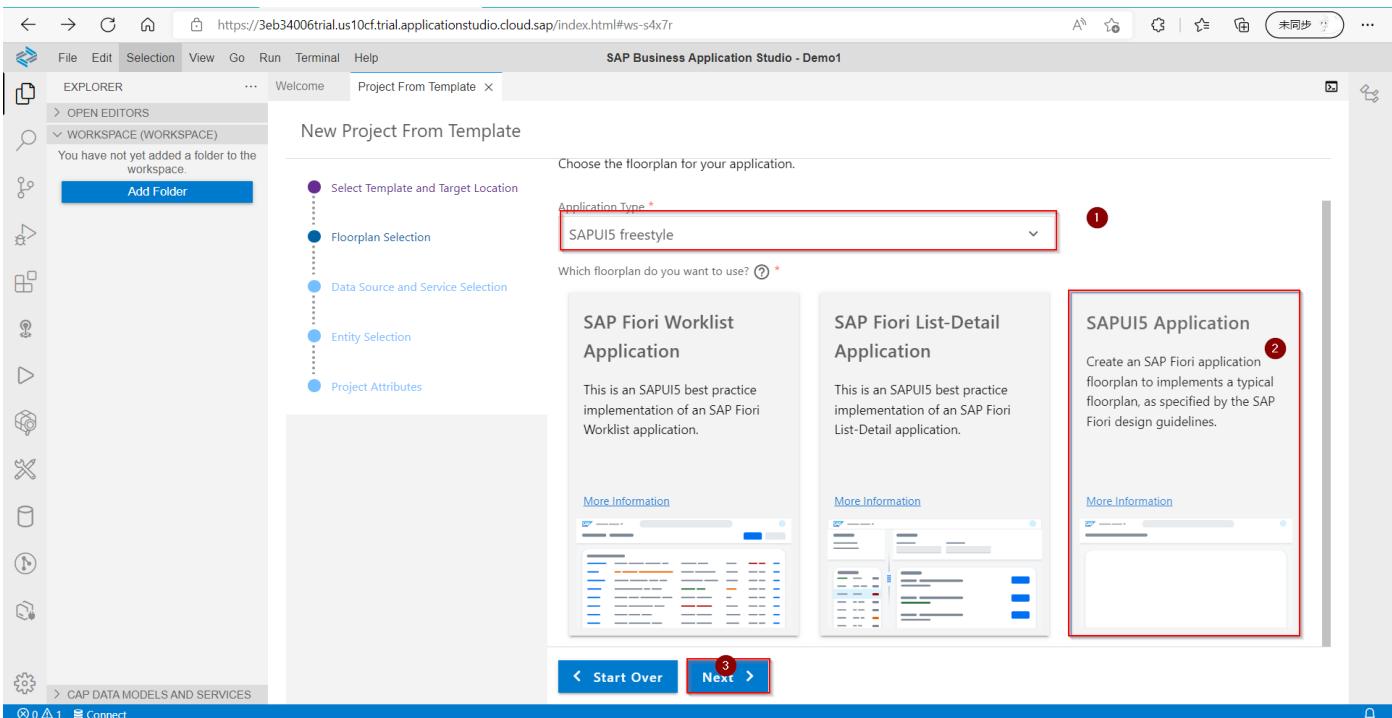
创建并开发一个UI5 project, 以ccs middle_class_sorting为例

Step1: 基于模板创建ui5project

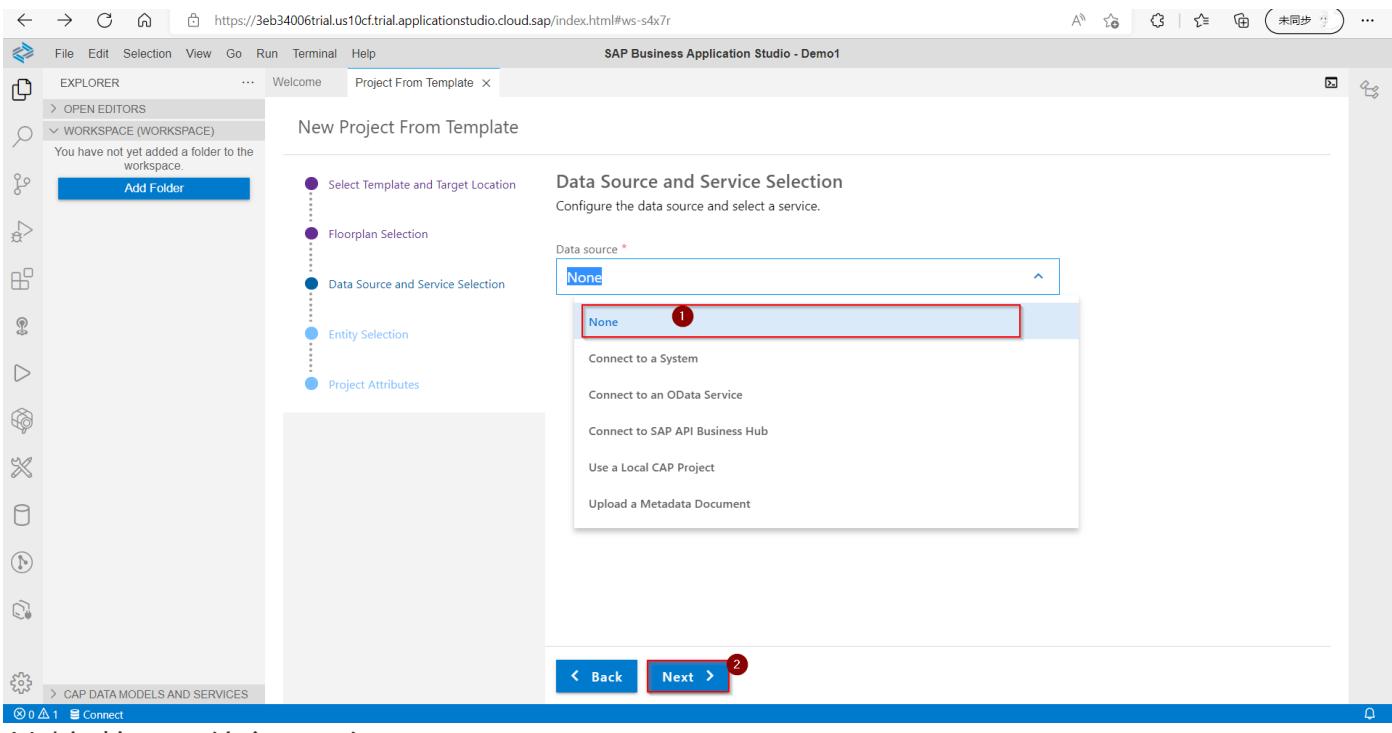
1. 点击welcome页面的Start from template
2. 点击选择SAP fiori Application, 点击start



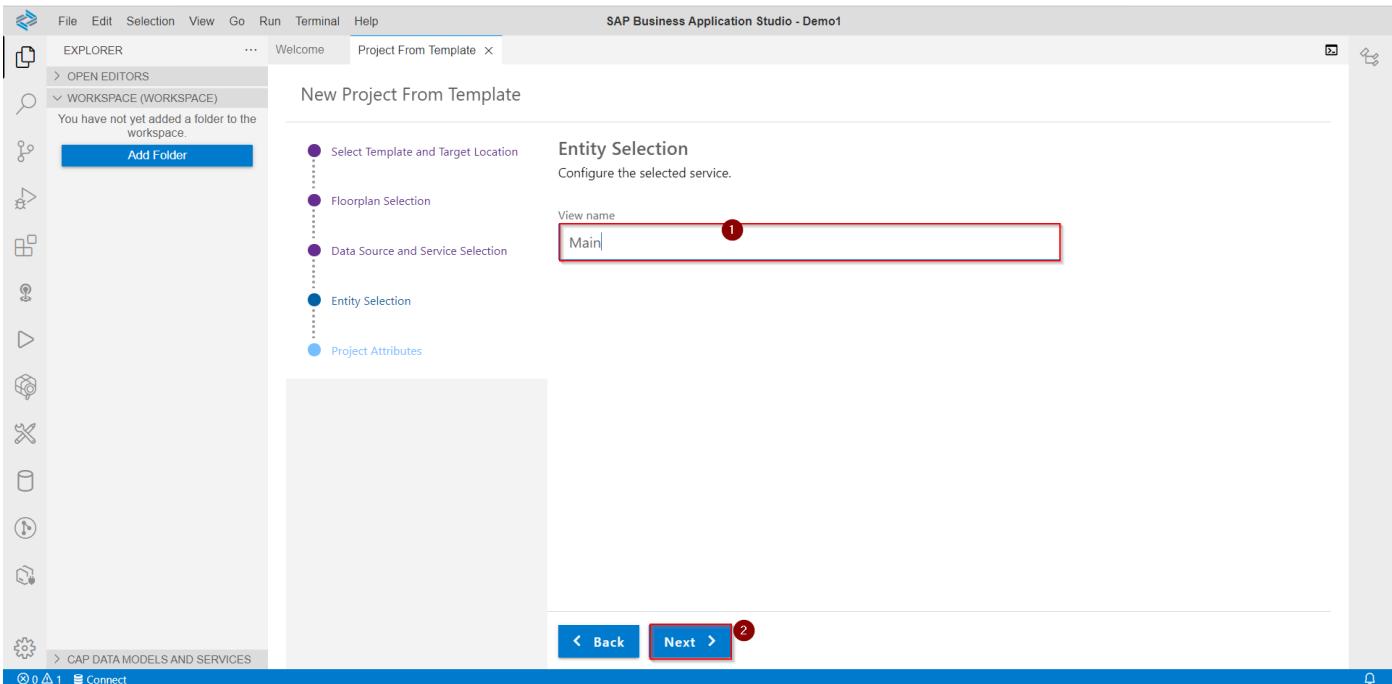
3. Application type->SAP UI5 freestyle->Choose SAPUI5 Application->Next



4. Choose Data Source

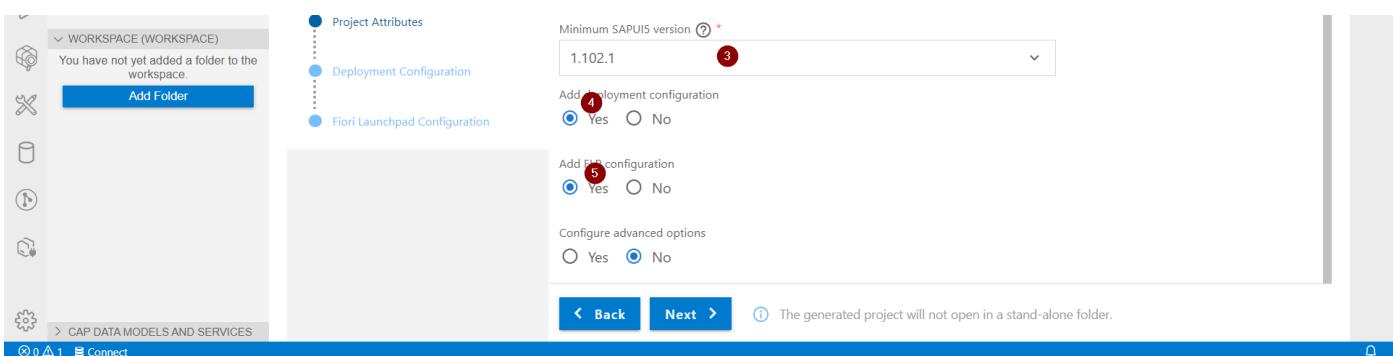
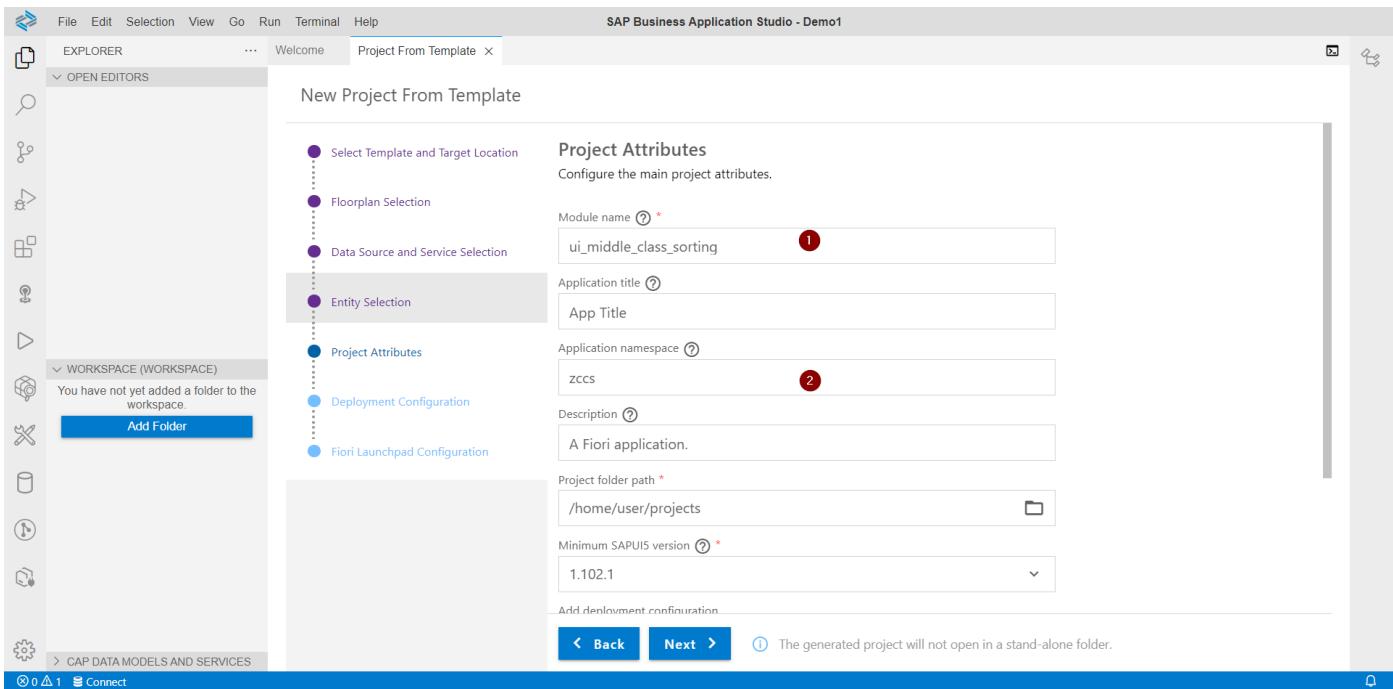


5. 创建初始View,给定View名

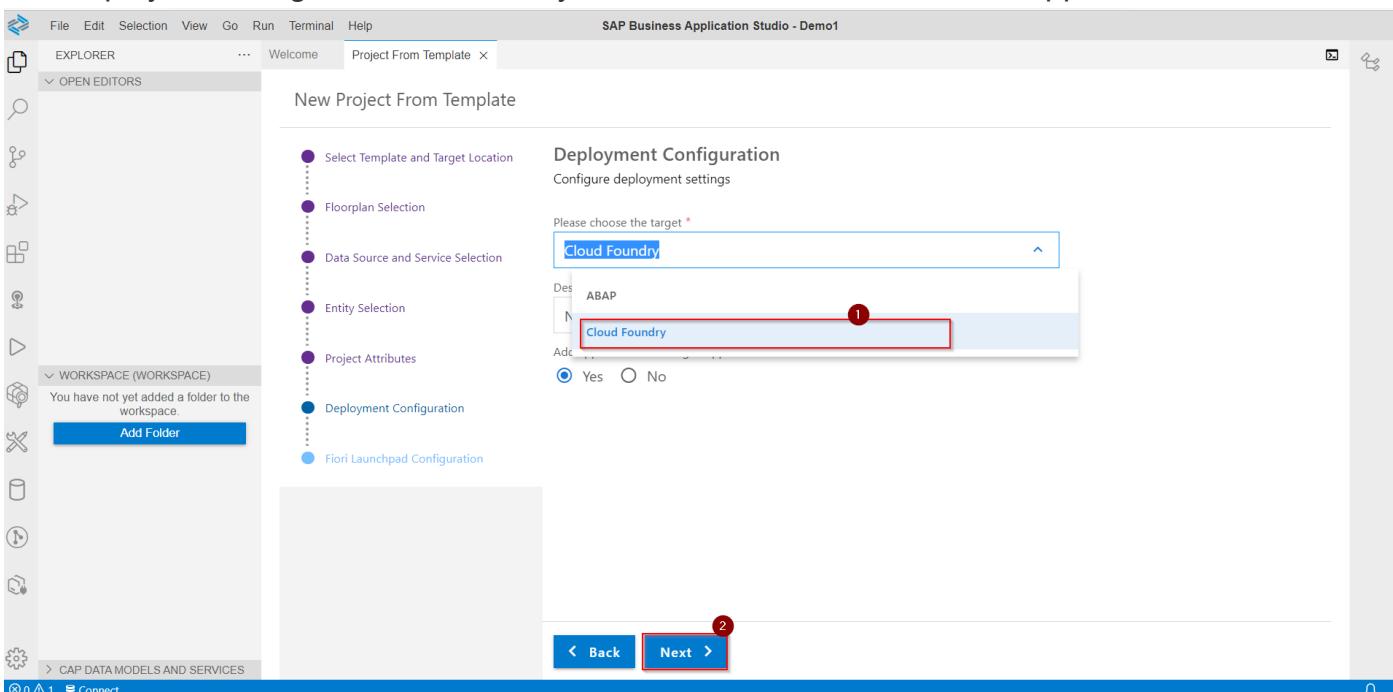


6. 创建初始视图,设定project属性:

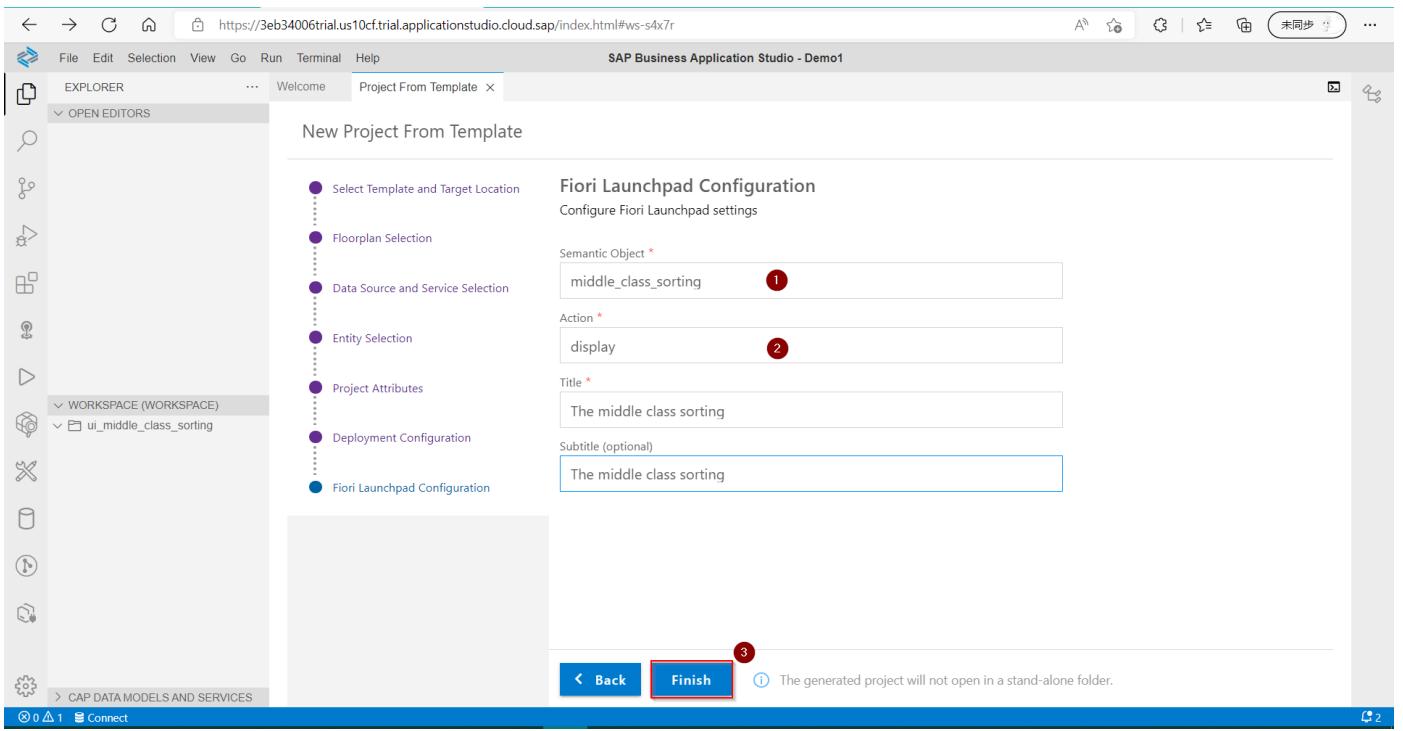
- 指定library version
- 选择是否deploy到cloud boundary
- 选择是否添加Fiori Launchpad配置



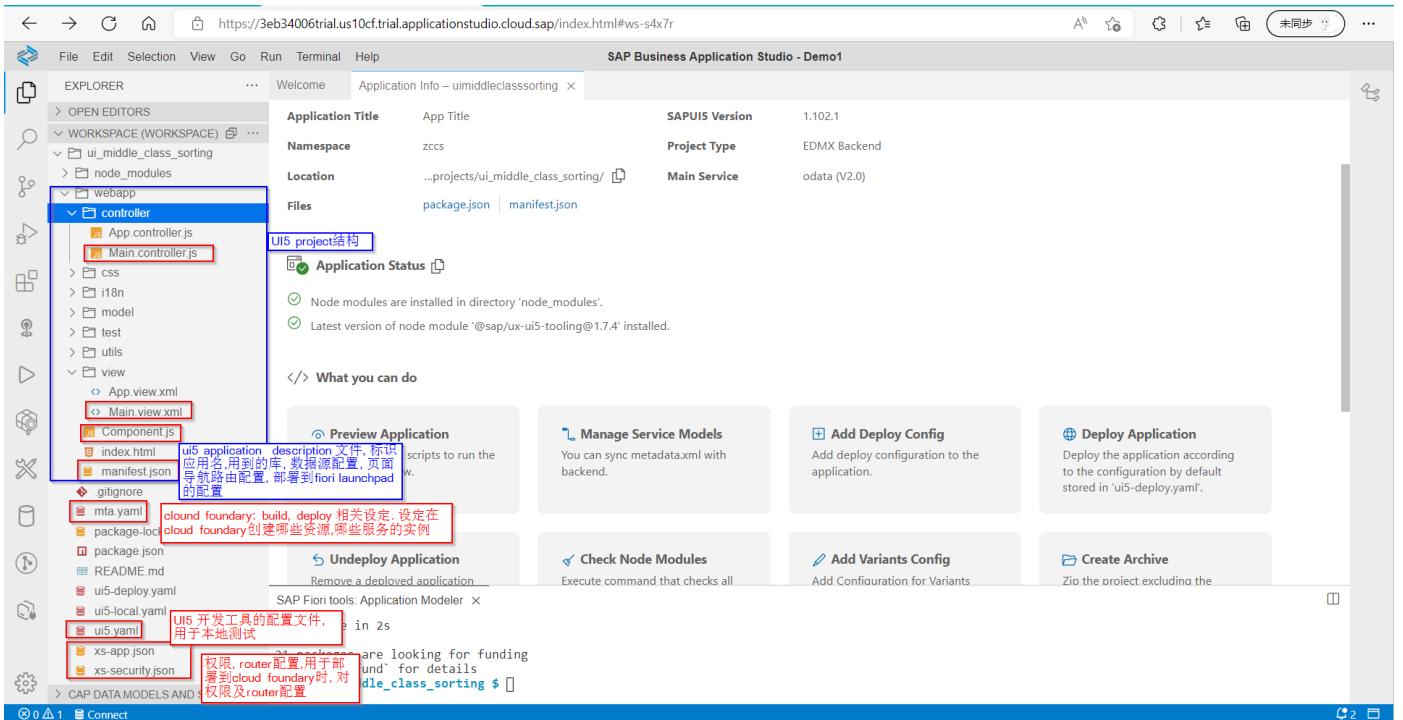
7. 添加deploy配置: Target->Cloud Foundry, Destination name->None, Add application router



8. 添加Fiori Launchpad配置:



9. Project初始结构:



Part3: Project部署

Step1: 查看cf相关信息

1. 查询API Endpoint, Org Name, Spaces in BTP account overview

SAP BTP Cockpit

Subaccount: trial - Overview

General **Cloud Foundry Environment** **Kyma Environment** **Entitlements**

Cloud Foundry 80 Entitlements 7 Instances and Subscriptions

Subdomain: 3eb34006trial **Provider:** Amazon Web Services (AWS) **Used for Production:** No
Tenant ID: Sea2115f-be21-4048-ac17-be1af8a9dad2 **Region:** US East (VA) **Beta Features:** Disabled
Subaccount ID: Sea2115f-be21-4048-ac17-be1af8a9dad2 **Environment:** Multi-Environment

Cloud Foundry Environment

API Endpoint: <https://api.cf.us10-001.hana.ondemand.com> **Org Name:** 3eb34006trial

Org ID: d7fc9123-e268-42eb-82a8-7de18f09df5e

Manage environment instance

Spaces (1)

Name	Applications	Service Instances
dev	6	5

Create Space

Kyma Environment

Currently you do not use Kyma capabilities.

Enable Kyma

Step2:登录cloud foundary

1. 输入Cloud Foundry Endpoint, username, password连接到cf

SAP Business Application Studio - Demo1

Cloud Foundry Sign In and Targets

Provide your Cloud Foundry parameters to sign in to the Cloud Foundry environment

Cloud Foundry Sign In

Enter Cloud Foundry Endpoint * **3**

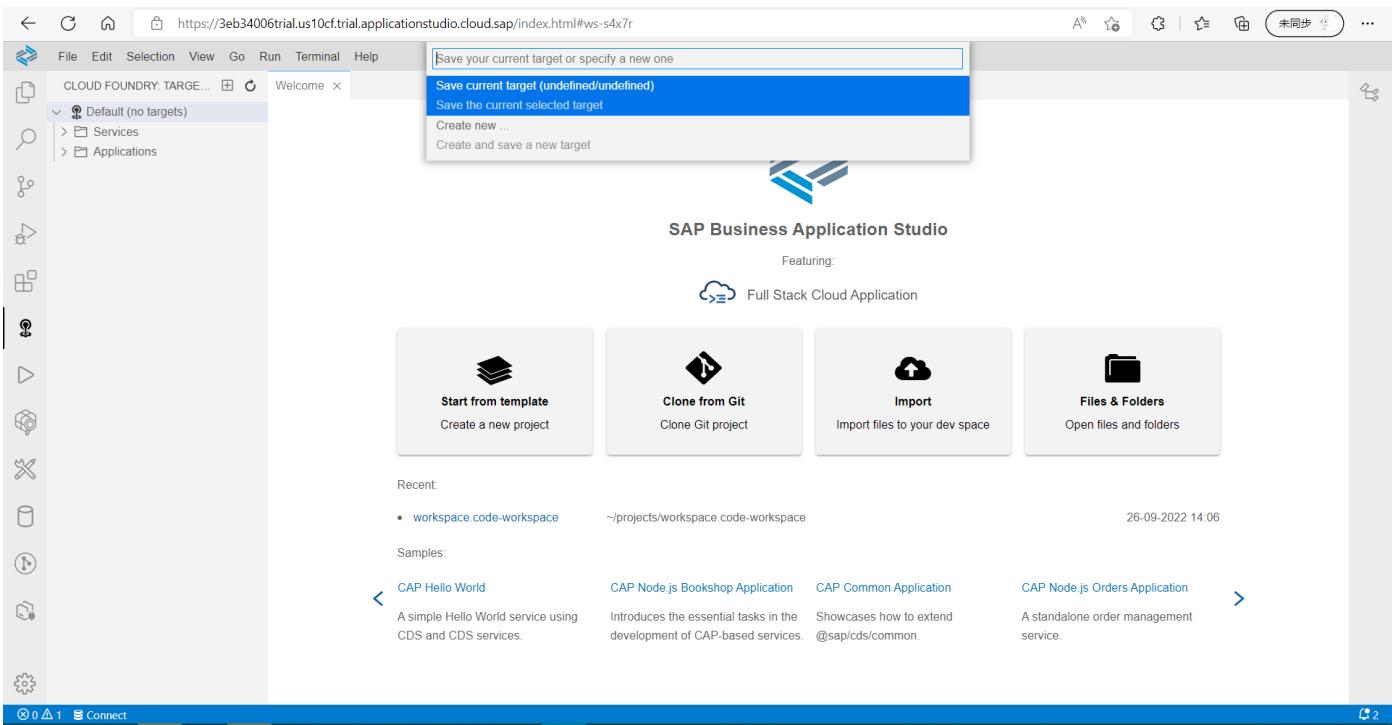
Select authentication method **2**
 Credentials SSO Passcode

Enter your username * **4**

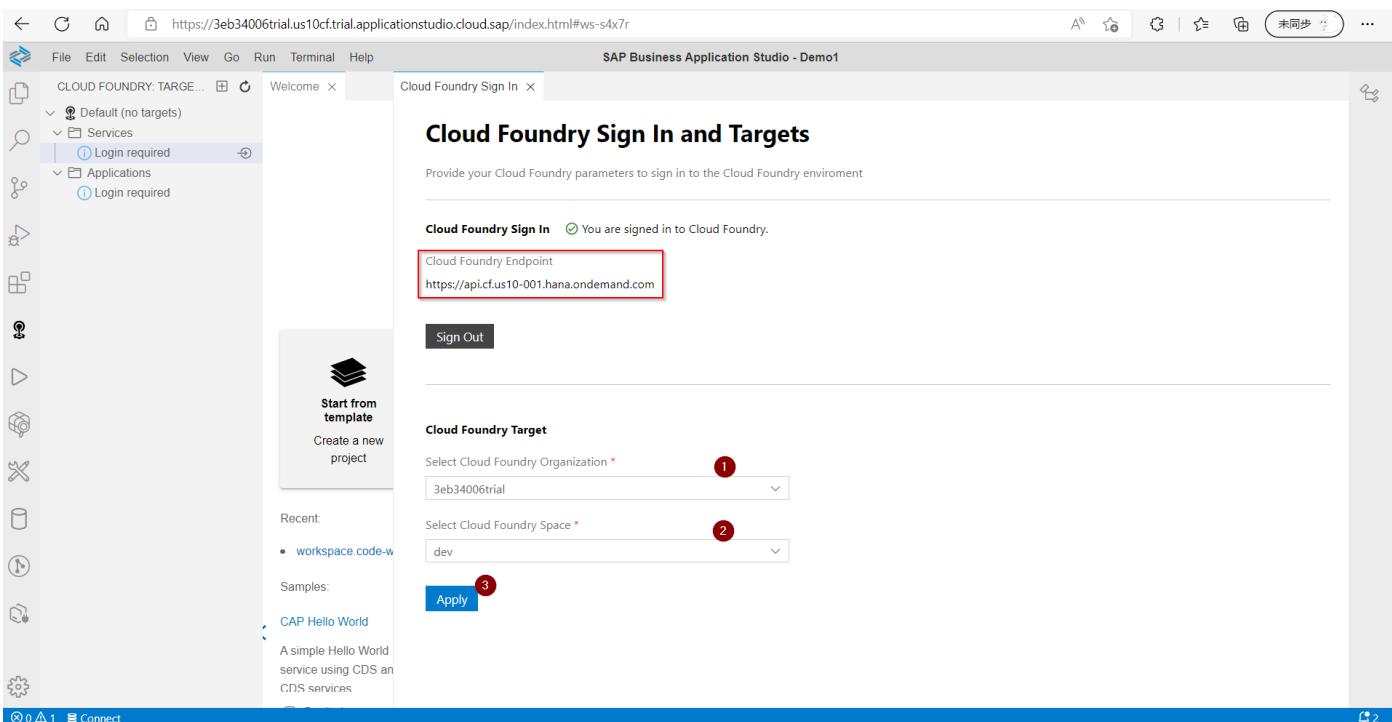
Enter your password * **5**

Sign in **6**

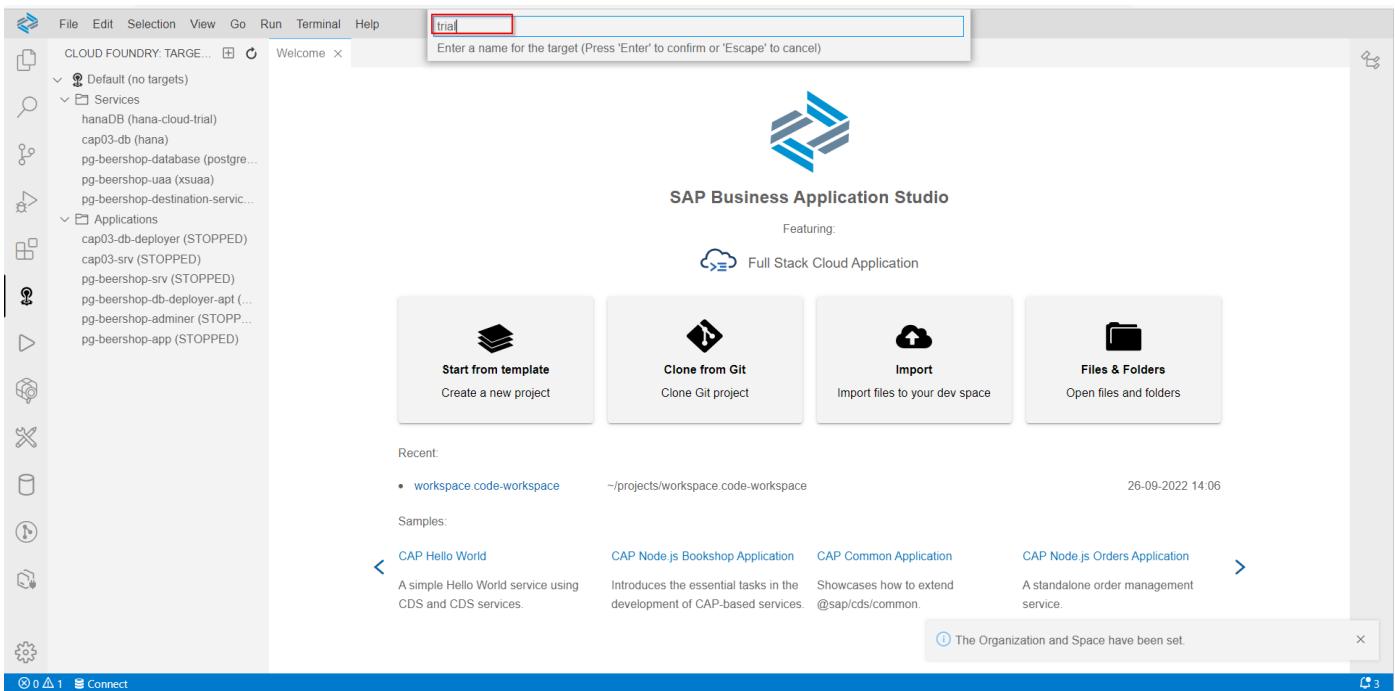
2. Click sign in



3. Create and save new target

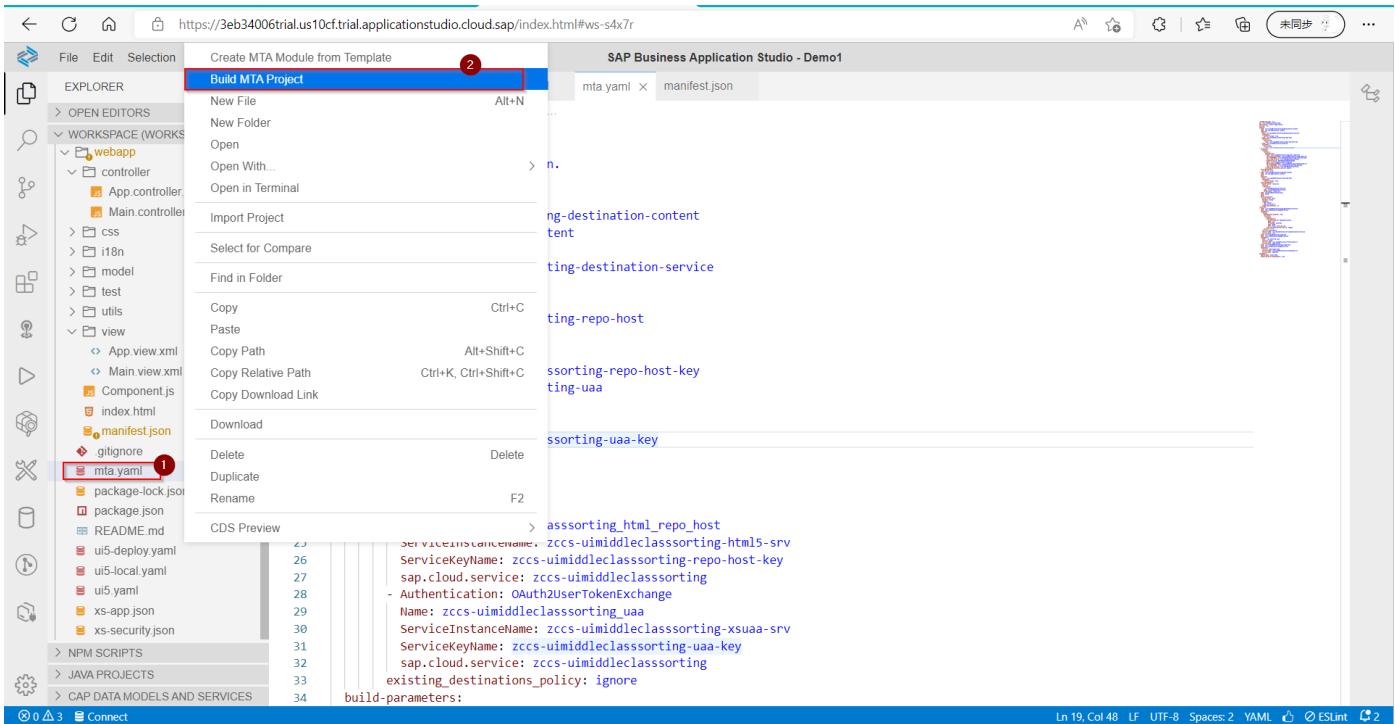


4. 保存登录信息到trial



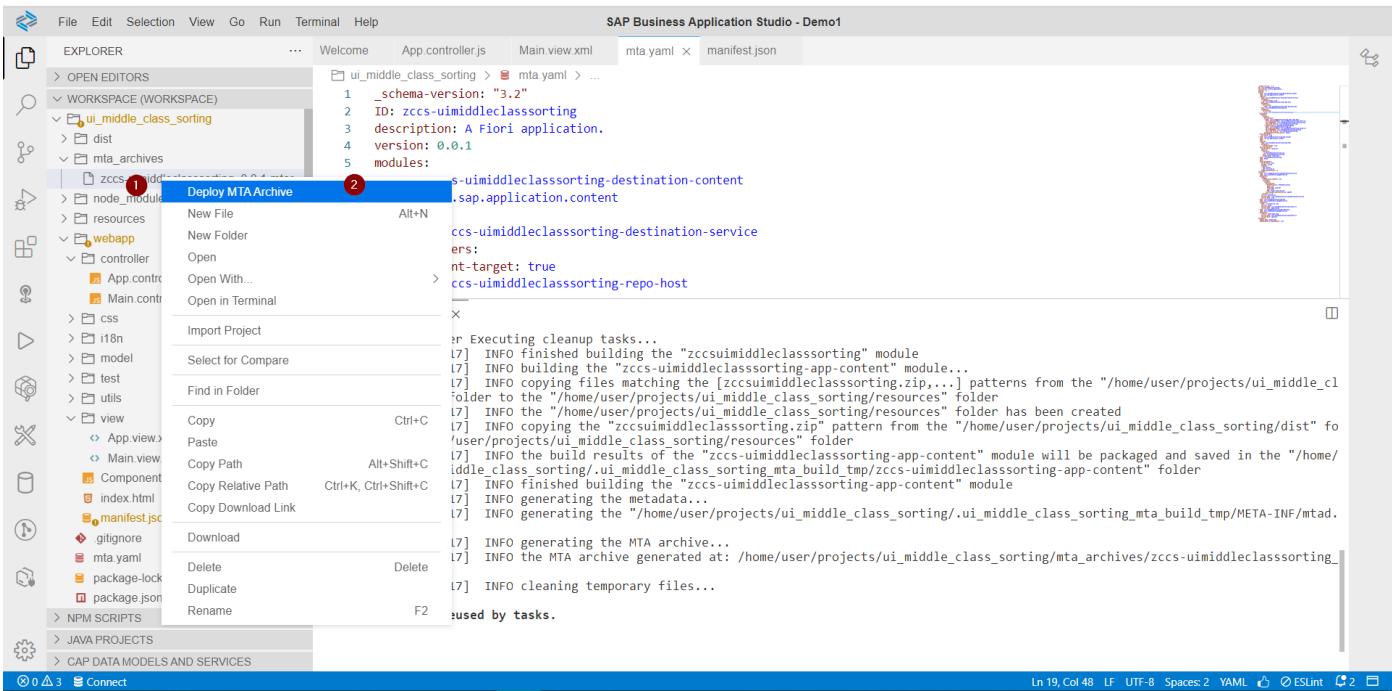
Step3: Build MTA project

- 在mta.yaml上右键菜单,选择Build MTA Project 或者在command line输入mbt build

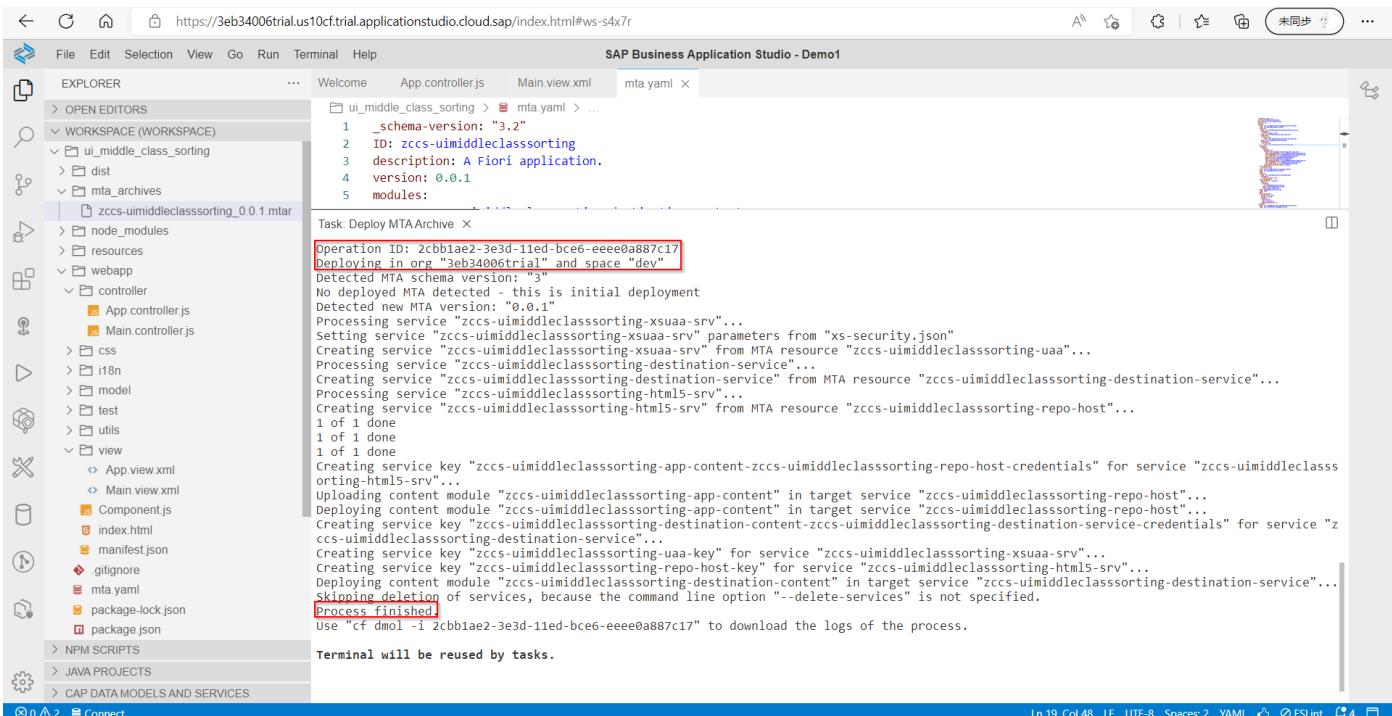


Step4: Deploy

- 在build产生的mta_archives下找到 .mta文件,右键文件菜单选择deploy



2. 部署完成以finish结束, 基于MTA文件的配置, 上传App应用程序, 创建Routing, service instance



Step5: 查看BTP

1. 创建相应的app实例

Subaccount: trial - Instances and Subscriptions

All: 10

To manage the Cloud Foundry user-provided service instances, navigate to Cloud Foundry - Spaces, select your space, and then from Services select Service Instances.

Instance	Service	Plan	Runtime Environm...	Scope	Credentials	Status
cap03-db	SAP HANA Schemas & HD...	hdi-shared	Cloud Foundry	dev	2 bindings	Created
hanaDB	SAP HANA Cloud	hana	Cloud Foundry	dev		Created
pg-beershop-database	PostgreSQL, hyperscaler o...	trial	Cloud Foundry	dev	3 bindings	Created
pg-beershop-destination-service	Destination Service	lite	Cloud Foundry	dev	1 binding	Created
pg-beershop-uaa	Authorization and Trust Ma...	application	Cloud Foundry	dev	2 bindings	Created
zccs-uimiddleclassorting-destination-service	Destination Service	lite	Cloud Foundry	dev	1 key	Created
zccs-uimiddleclassorting-html5-srv	HTML5 Application Reposi...	app-host	Cloud Foundry	dev	2 keys	Created
zccs-uimiddleclassorting-xsuaa-srv	Authorization and Trust Ma...	application	Cloud Foundry	dev	1 key	Created

Environments (1)

Part4: launchpad环境搭建

Lunchpad环境搭建[Trial env]

<https://developers.sap.com/tutorials/cp-portal-cloud-foundry-getting-started.html>

Step1: 订阅服务

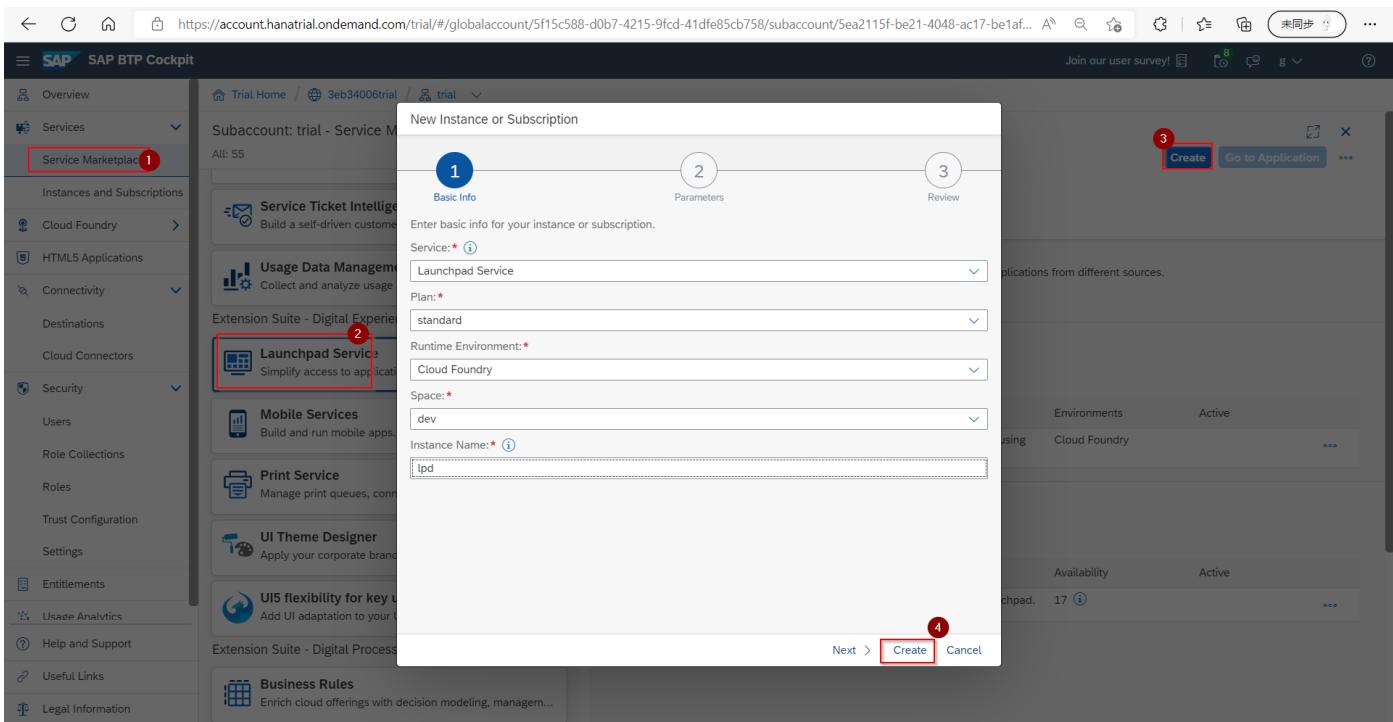
1. 订阅服务

Subaccount: trial - HTML5 Applications

To display or run HTML5 applications, please subscribe to at least one of the following services:

- SAP Launchpad Service [Subscribe](#) | [Learn More](#)
- SAP Cloud Portal Service [Subscribe](#) | [Learn More](#)
- SAP Work Zone [Subscribe](#) | [Learn More](#)
- SAP SuccessFactors Work Zone [Subscribe](#) | [Learn More](#)

2. 创建实例



3. 设定role

This screenshot shows the SAP BTP Cockpit interface focusing on role collections. The left sidebar has 'Role Collections' selected, indicated by a red box labeled '1'. In the main area, a list of role collections is shown, with 'Launchpad_Admin' selected and highlighted by a red box labeled '2'. On the right, the 'Launchpad_Admin' role configuration page is open. Under the 'Users' tab, a table lists users with their ID, Identity Provider, E-Mail, First Name, and Last Name. One user's row has a red box labeled '3' around the 'Identity Provider' dropdown, which is set to 'Default identity provider'. A red box labeled '4' highlights the 'Save' button at the top right of the configuration page.

Step2: 访问LaunchPad

1. 访问launchpad,刚设定完role,访问时需要退出再登录

The screenshot shows the SAP BTP Cockpit interface. On the left, a sidebar lists various service categories like Overview, Services, Service Marketplace, Instances and Subscriptions (highlighted with a red box and number 1), Cloud Foundry, Spaces, Quota Plans, Org Members, HTML5 Applications, Connectivity, Destinations, Cloud Connectors, Security, Users, Role Collections, Roles, Trust Configuration, Help and Support, Useful Links, and Legal Information.

The main content area displays "Subaccount: trial - Instances and Subscriptions". It includes a search bar and filters for All Services, All Plans, and All Statuses. A table titled "Applications to which your subaccount is currently subscribed" shows two entries:

Application	Plan	Created On	Changed On	Status
SAP Business Application Studio	trial	5 Sep 2022	5 Sep 2022	Subscribed
Launchpad Service	standard	27 Sep 2022	27 Sep 2022	Subscribed

Below this is a section for "Instances (8)". A table lists service instances:

Instance	Service	Plan	Runtime Environment	Scope	Credentials	Status
cap03-db	SAP HANA Schemas & HD...	hdi-shared	Cloud Foundry	dev	2 bindings	Created
hanaDB	SAP HANA Cloud	hana	Cloud Foundry	dev		Created
pg-beershop-database	PostgreSQL, hyperscaler o...	trial	Cloud Foundry	dev	3 bindings	Created
pg-beershop-destination-service	Destination Service	lite	Cloud Foundry	dev	1 binding	Created
pg-beershop-uaa	Authorization and Trust Ma...	application	Cloud Foundry	dev	2 bindings	Created

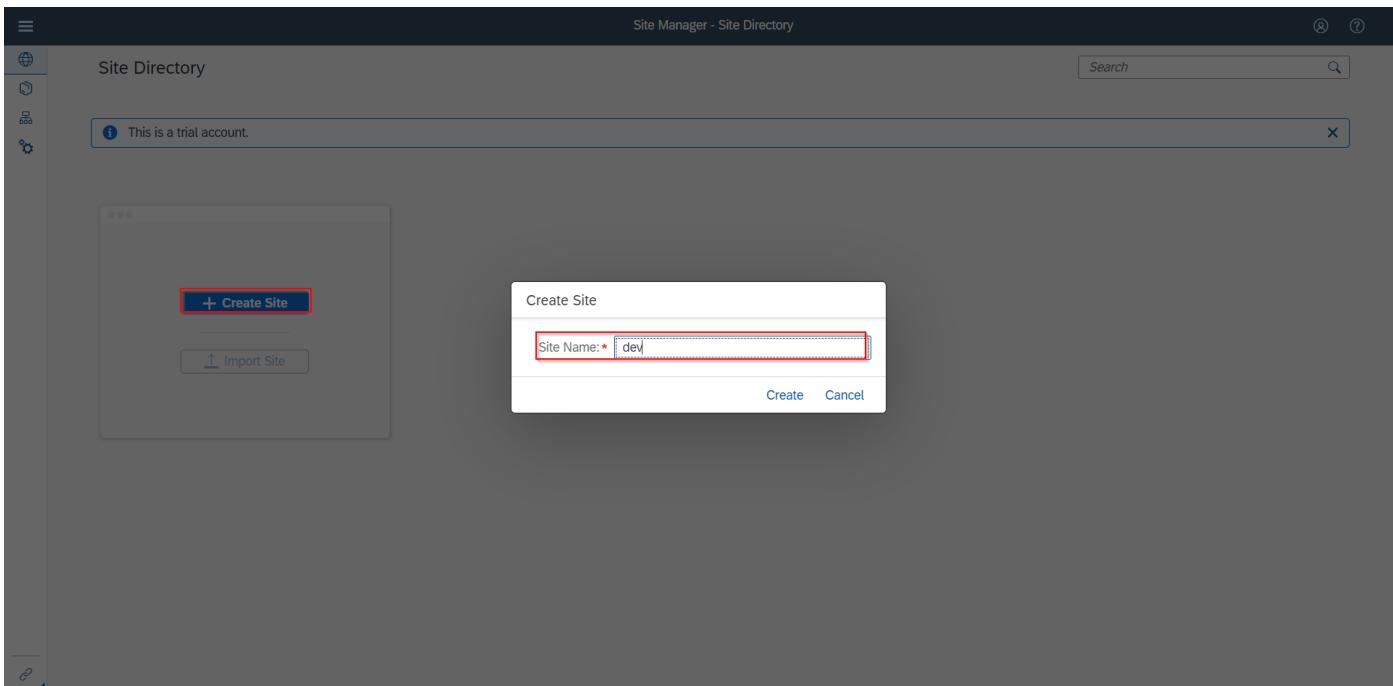
A context menu is open over the "Launchpad Service" row, with the "Go to Application" option highlighted with a red box and number 3.

2. Launchpad页面如下

The screenshot shows the SAP Launchpad Site Manager - Site Directory page. The URL is https://3eb34006trial.dt.launchpad.cfapps.us10.hana.ondemand.com/sites#Site-Directory. A message at the top says "This is a trial account." A modal window titled "+ Create Site" is open, containing a "Create Site" button and an "Import Site" button.

Step3: 创建site

1. 创建site dev



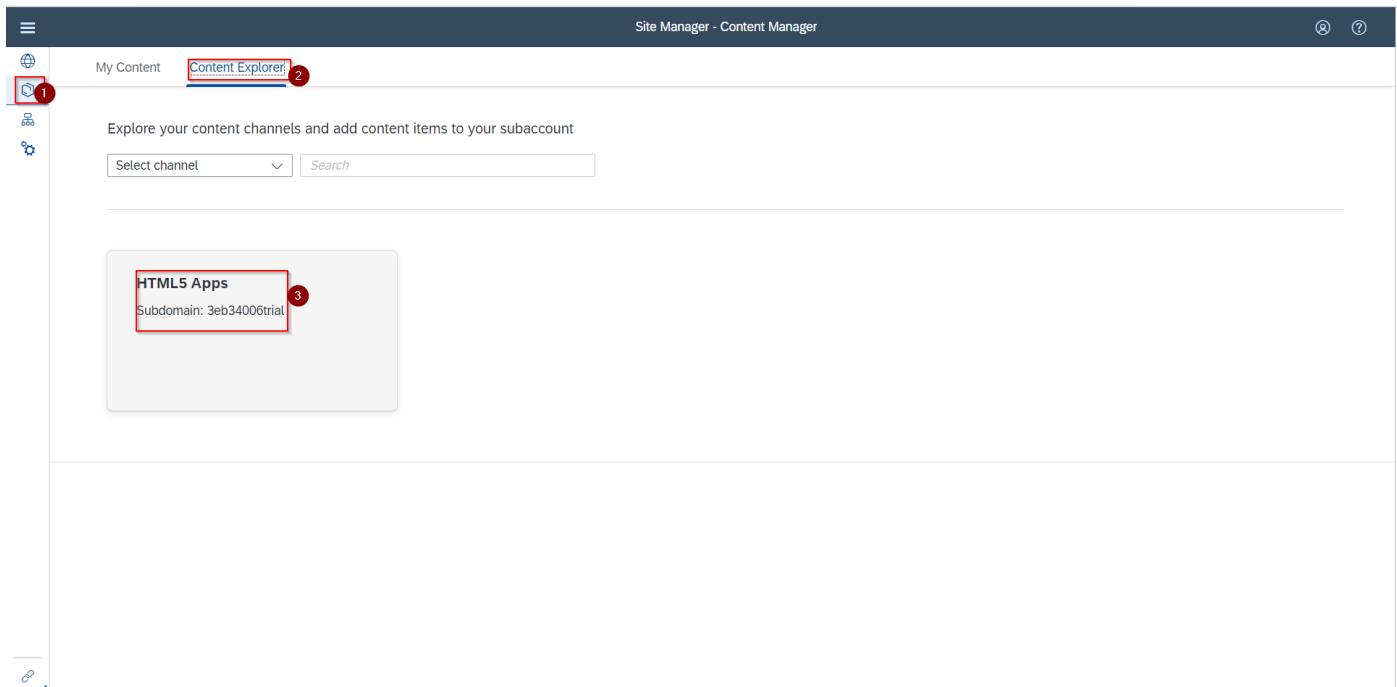
2. Launchpad Site相关设定

A screenshot of the SAP Site Editor interface for a site named 'dev'. The left side shows the 'SITE SETTINGS' tab with various properties like Name, Description, ID, URL, and User Capabilities. The 'User Capabilities' section includes fields for Personalization, Theme Selection, Language Selection, and SAP Mobile Start. The 'Display' section includes fields for Launchpad View Mode, Groups, Tile Size, and Responsive. The right side shows the 'Assignments' tab, which is currently empty under 'Roles'.

Part5: Project添加到Launchpad

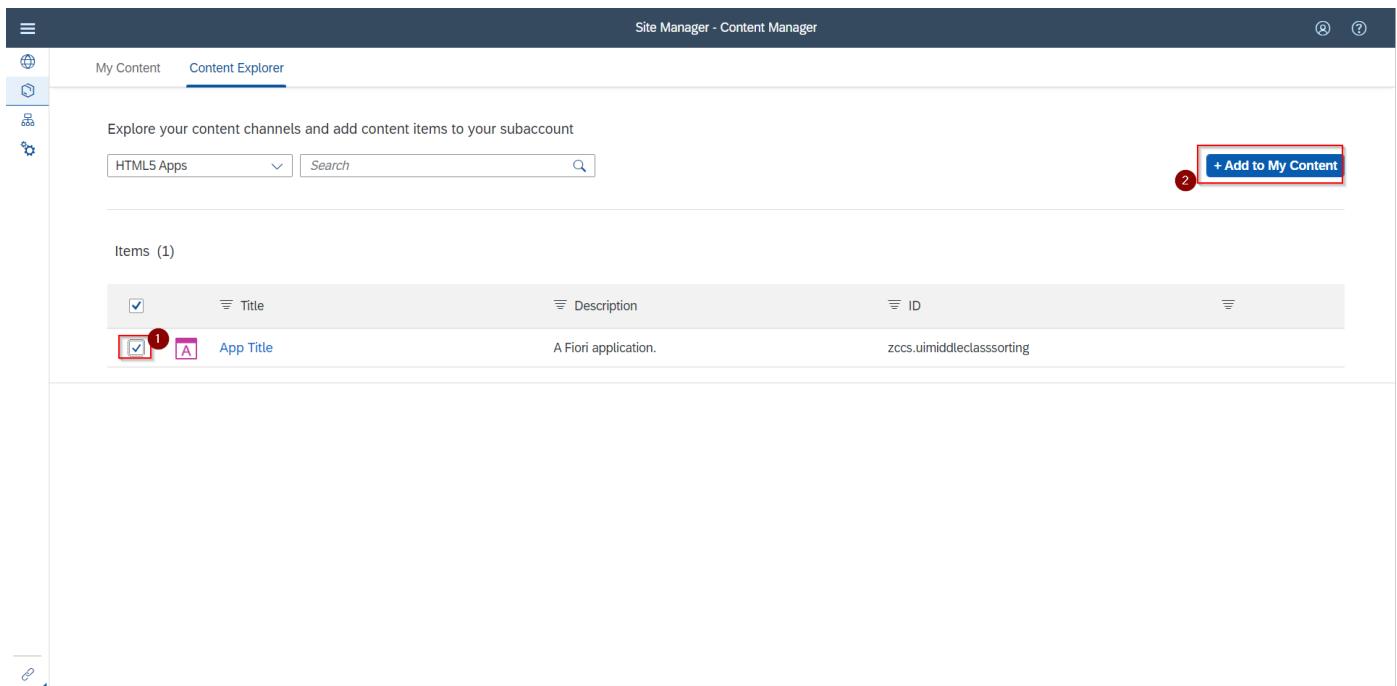
Step1: 添加ui5到site

1. 查看当前BTP环境中的ui5 application



2. 将当前的UI5 application添加到当前user账号

添加完成后,会在my content页签下多一条 app的item



3. 为当前ui5 application分配role.

选择role everyone,单击, 为该role分配application

Site Manager - Content Manager

My Content Content Explorer

Item Type: All items Show Selected (1) Clear

Items (2)

	Title	Description	ID	Channel	Status
<input type="checkbox"/>	A Fiori application.	zccs.uimiddleclasssorting		HTML5 Apps	
<input checked="" type="checkbox"/>	Everyone	Content assigned to this role is visible to all users	sap_subaccount_everyone	Local	

Items (2)

	Title	Description	ID	Channel	Status
<input type="checkbox"/>	A Fiori application.	zccs.uimiddleclasssorting		HTML5 Apps	
<input checked="" type="checkbox"/>	Everyone	Content assigned to this role is visible to all users	sap_subaccount_everyone	Local	

单击编辑,在右侧输入框中单击

Site Manager - Content Manager

ROLE Everyone

Properties Translation

General Additional Info

Title: * Everyone

Created: Sep 27, 2022, 4:48:34 PM

ID: sap_subaccount_everyone

Created By: technicalUser

Description: Content assigned to this role is visible to...

Assignments

Assign Items: Search for items to assign

Results

App Title	HTML5 Apps
A Fiori application.	HTML5 Apps

单击加号后保存

Site Manager - Content Manager

ROLE Everyone

Save Cancel

General Additional Info

Title: * Everyone

Created: Sep 27, 2022, 4:48:34 PM

ID: sap_subaccount_everyone

Created By: technicalUser

Description: Content assigned to this role is visible to...

Assignments

Assign Items: + Search for items to assign

Results (1/1)

App Title HTML5 Apps

Step2: 创建group并关联ui5 application

1. 创建group

Site Manager - Content Manager

My Content Content Explorer

Item Type: All items Show Selected Clear

Search in title, description, ID

Items (2)

<input type="checkbox"/>	Title	Description	ID	Channel
<input type="checkbox"/>	A App Title	A Fiori application.	zccs.uimiddleclasssorting	HTML5 Apps
<input type="checkbox"/>	Everyone	Content assigned to this role is visible to all users	sap_subaccount_everyone	Local

Explore + 2 W

App Catalog Group Role

2. 添加ui5 application

The screenshot shows the 'Site Manager - Content Manager' interface. On the left, there's a sidebar with icons for Home, Groups, Folders, and Settings. The main area has tabs for 'PROPERTIES' (selected) and 'TRANSLATION'. Under 'General', the 'Title:' field contains 'css' (marked with a red box and number 1). The 'Description:' field contains 'CCS application' (marked with a red box and number 2). The 'ID:' field shows a unique identifier: '23d046ce-0162-404c-8955-245b2cf0f9f4'. At the top right are 'Save' and 'Cancel' buttons, with a red box and number 5 indicating the 'Save' button. To the right, a sidebar titled 'Assignments' shows a search bar ('+ Search for items to assign') with a red box and number 3, and a results section for 'HTML5 Apps' with a red box and number 4.

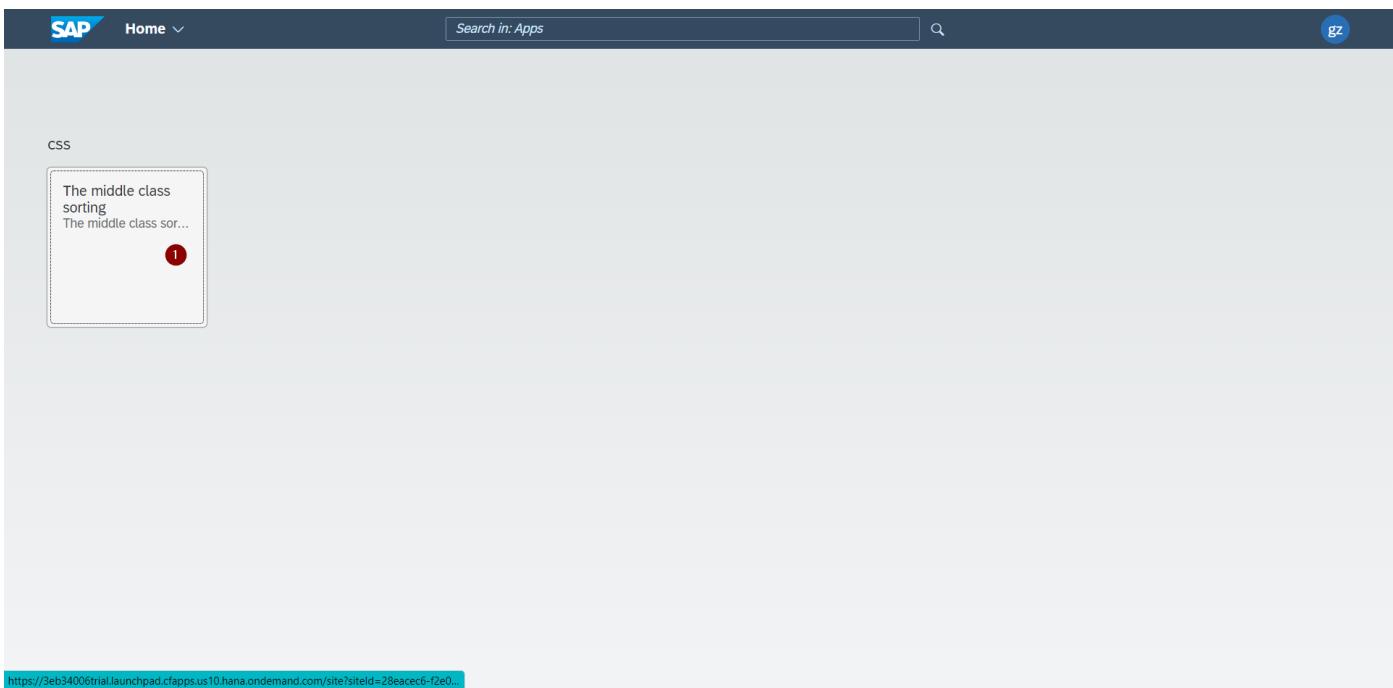
Step3: 在site中查看app

1. 查看添加的application

The screenshot shows the 'Site Manager - Site Directory' interface. The left sidebar includes icons for Home, Site, Folders, and Settings, with a red box and number 1 highlighting the Site icon. The main area displays a 'Site Directory' with a message 'This is a trial account.' A 'Create Site' button and an 'Import Site' button are visible. On the right, a list of sites includes one named 'dev' (marked with a red box and number 2), which was created on 'Oct 7, 2022'. The site card for 'dev' shows a small icon with a red box and number 2.

2. 运行application

单击磁铁小方块即可运行相应的ui5 application



Part6: U5代码编写

此实例基于 [OData V4 tutorial](#) 进行Service CRUD的处理

- UI View的编写
- Data Source引入
- Controll中CRUD实现

Step1: UI View的编写

1. Preview, 页面为一个简单的table控件, 包含一些CRUD的按钮,data source为已发布好的OData Service

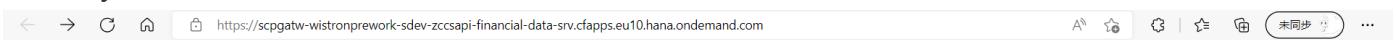
Preview

My Users				Restart Tutorial
User Name	First Name	Last Name	Age	
anghelhuffman	Angel	Huffman	23	
clydegueess	Clyde	Guess	44	
elainestewart	Elaine	Stewart	19	
genevieveeves	Genevieve	Reeves	37	
georginabarlow	Georgina	Barlow	25	
javieralfred	Javier	Alfred	19	
jonirosales	Joni	Rosales	26	
keithpinckney	Keith	Pinckney	41	
kristakemp	Krista	Kemp	30	
laurelosborn	Laurel	Osborn	29	

[More](#)

[10 / 20]

2. Data Source: <https://scpgatw-wistrongprework-sdev-zccsapi-financial-data-srv.cfapps.eu10.hana.ondemand.com> (cap编写的一个基于java的OData Service).
访问 <https://scpgatw-wistrongprework-sdev-zccsapi-financial-data-srv.cfapps.eu10.hana.ondemand.com/odata/v4/MasterDataService/MiddleClasses> 即可获取相应的EntitySet



Welcome to *cds-services*

These are the paths currently served ...

OData V4 endpoints

[/odata/v4/FinancialDataService / \\$metadata](/odata/v4/FinancialDataService / $metadata)

- [FinancialDataBHeaders](#)
- [FinancialDataItems](#)

[/odata/v4/MasterDataService / \\$metadata](/odata/v4/MasterDataService / $metadata)

- [MiddleClasses](#)
- [SmallClasses](#)
- [BigClasses](#)
- [MiddleClassSortings](#)
- [CustomerClasses](#)
- [MiddleClassScores](#)

3. 编写UI页面

1. Table 控件库: sap.ui.table, sap.m. 引入 table命名空间, 添加一个简单table控件, table控件的使用参考[SAP table示例](#)

2. Copy 官方代码示例中table的结构, 修改webapp/view/Main.view.xml文件

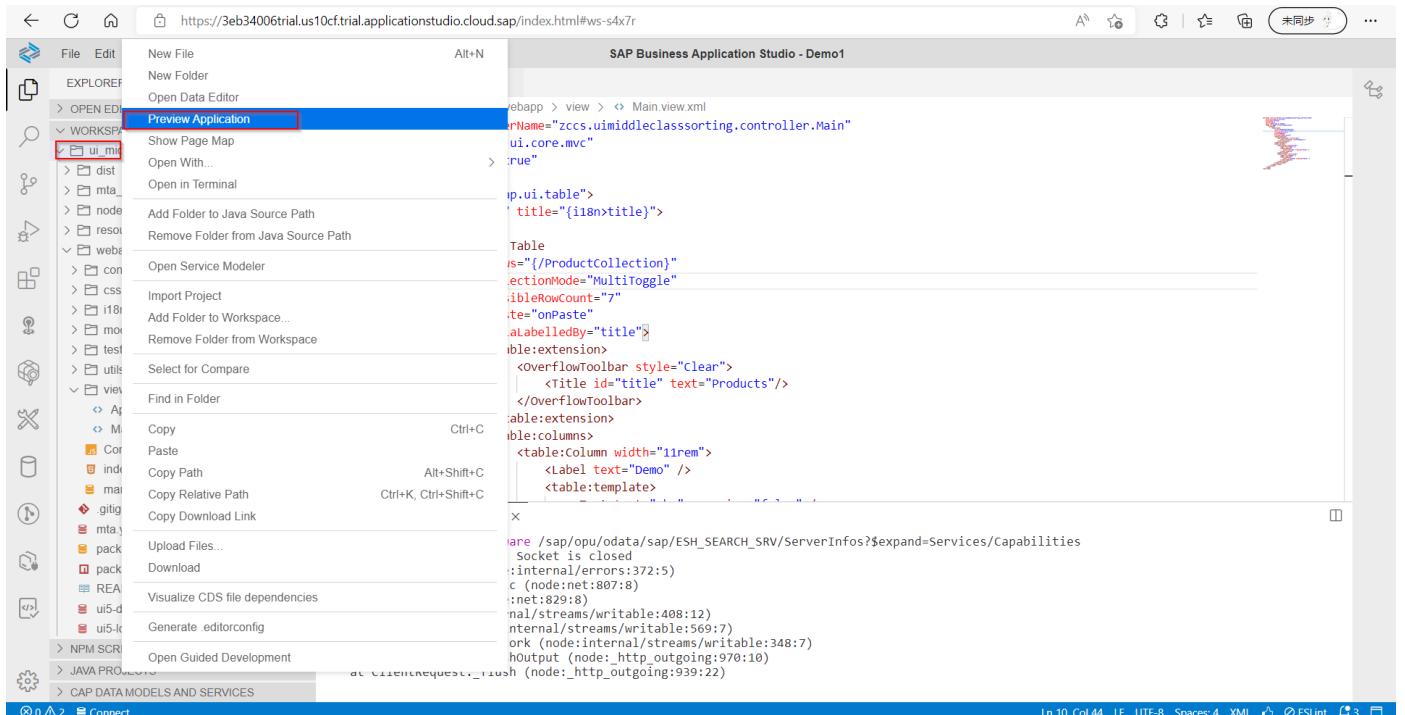
The screenshot shows the SAP Business Application Studio interface with the 'Main.view.xml' file open in the central editor area. The code is an XML snippet defining a table control with specific properties like rows, selectionMode, and visibleRowCount. The left sidebar shows the project structure with files like 'App.view.xml', 'Component.js', and 'index.html'. The bottom status bar indicates the current line (Ln 10), column (Col 36), and encoding (UTF-8).

```
<mvc:View controllerName="zccs.uimiddleclasssorting.controller.Main"
    xmlns:mvc="sap.ui.core.mvc" displayBlock="true"
    xmlns="sap.m"
    xmlns:table="sap.ui.table">
<Page id="page" title="{i18n>title}">
    <content>
        <Table
            rows="{/ProductCollection}"
            selectionMode="MultiToggle"
            visibleRowCount="7"
            paste="onPaste"
            ariaLabelledBy="title">
            <Table:extension>
                <OverflowToolbar style="Clear">
                    <title id="title" text="Products"/>
                </OverflowToolbar>
            </Table:extension>
            <Table:columns>
                <Table:column width="11rem">
                    <Label text="Demo" />
                    <Table:template>
                        <Text text="abc" wrapping="false" />
                    </Table:template>
                </Table:column>
                <Table:column width="11rem">
                    <Label text="Demo2" />
                    <Table:template>
                        <Text text="abcd" wrapping="false" />
                    </Table:template>
                </Table:column>
            </Table:columns>
        </Table>
    </content>
</Page>
```

▶ code

4. 预览当前视图页面修改后效果

在Project上右键菜单 Preview Application或者 执行 npm run start



当前页面效果

Step2: 引入OData Service

1. 修改manifest.json文件.

```

sap.app = {
    "dataSources": {
        "MasterDataService": {
            "uri": "/odata/v4/MasterDataService/",
            "type": "OData",
            "settings": {
                "odataVersion": "4.0"
            }
        },
        "crossNavigation": {}
    },
    "sap.ui": {
        "flexEnabled": true,
        "dependencies": {}
    },
    "sap.uis": {
        "contentDensities": {}
    },
    "models": {
        "i18n": {
            "type": "sap.ui.model.resource.ResourceModel",
            "settings": {
                "bundleName": "zccs.uimiddleclassorting.i18n.i18n"
            }
        },
        "MasterDataService": {
            "dataSource": "MasterDataService",
            "preload": true,
            "settings": {
                "synchronizationMode": "None",
                "type": "sap.ui.model.odata.v4.ODataV4Model"
            }
        }
    }
}

```

在sap.app > dataSources中删除自动生成的mainService 添加指定的service root路径,定义该dataSouce 名字为 MasterDataService

```

1   "dataSources": {
2
3
4       "type": "OData",
5       "settings": {
6           "odataVersion": "4.0"
7       }
8   },
9 }
```

在sap.ui5 > models 中引用 dataSource中定义的 名为 MasterDataService的dataSource并起名为 MasterDataService

```

1   "models": {
2       "i18n": {
3           "type": "sap.ui.model.resource.ResourceModel",
4           "settings": {
5               "bundleName": "zccs.uimiddleclasssorting.i18n.i18n"
6           }
7       },
8
9
10      "preload": true,
11      "settings": {
12          "synchronizationMode": "None",
13          "groupId": "$auto",
14          "operationMode": "Server",
15          "autoExpandSelect": true,
16          "earlyRequests": true
17      }
18  }
```

2. 修改ui5.yaml文件.

处理Cross-Domain代理, 指定代理的url路径, path为请求匹配的路径,同manifest.json datasource的uri, 当访问该uri时,实际访问地址为ui5.yaml中指定的url

```

- path: /odata/v4/MasterDataService
  url: https://scpgatw-wistronprework-sdev-zccsapi-financial-data-srv.cfapps.eu10.hana
```

SAP Business Application Studio - Demo1

```

File Edit Selection View Go Run Terminal Help
EXPLORER Main.view.xml ui5.yaml x i18n.properties App.view.xml
ui5_middle_class_sorting > ui5.yaml > {} server > customMiddleware > ...
4  metadata:
5    | name: zccs.uimiddleclasssorting
6    type: application
7    server:
8      customMiddleware:
9        - name: fiori-tools-proxy
10       afterMiddleware: compression
11       configuration:
12       ignoreCertError: false # If set to true, certificate errors will be acc
13       ui5:
14         path:
15           - /resources
16           - /test-resources
17           url: https://ui5.sap.com
18       backend:
19         - path: /odata/v4/MasterDataService
20           url: https://scpgatw-wistronprework-sdev-zccsapi-financial-data-srv.cfapps.eu10.hana.ondemand.com
21       - name: fiori-tools-appreload
22       afterMiddleware: compression
23       configuration:
24       port: 35729
25       path: webapp
-/projects/ui5_middle_class_sorting x
info ui5-proxy-middleware /1.102.1/resources/sap/ui/vbm/library-preload.js
info ui5-proxy-middleware /1.102.1/resources/sap/ui/export/library-preload.js
info ui5-proxy-middleware /1.102.1/resources/sap/esh/search/ui/resources/resources_en.properties
info ui5-proxy-middleware /1.102.1/resources/sap/ui/export/messagebundle_en.properties
info ui5-proxy-middleware /1.102.1/resources/sap/ui/export/themes/sap_horizon/library.css
info ui5-proxy-middleware /1.102.1/resources/sap/suite/ui/microchart/themes/sap_horizon/library.css
info ui5-proxy-middleware /1.102.1/resources/sap/vk/themes/sap_horizon/library.css
info ui5-proxy-middleware /1.102.1/resources/sap/esh/search/ui/themes/sap_horizon/library.css
info backend-proxy /sap/opu/odata/sap/ESH_SEARCH_SRV/ServerInfos?$expand=Services/Capabilities

```

Ln 23, Col 21 LF UTF-8 Spaces: 2 YAML ESLint 3

3. 修改xs-app.json文件.

在部署到BTP后,请求该Service时通过设定好的destination进行访问

```
{
  "source": "^/odata/v4/MasterDataService/(.*)$",
  "target": "/odata/v4/MasterDataService/$1",
  "authenticationType": "none",
  "destination": "MasterDataService"
},
```

```

1  {
2    "welcomeFile": "/index.html",
3    "authenticationMethod": "route",
4    "routes": [
5      {
6        "source": "^/resources/(.*)$",
7        "target": "/resources/$1",
8        "authenticationType": "none",
9        "destination": "ui5"
10      },
11      {
12        "source": "^/test-resources/(.*)$",
13        "target": "/test-resources/$1",
14        "authenticationType": "none",
15        "destination": "ui5"
16      },
17      {
18        "source": "^/odata/v4/MasterDataService/(.*)$",
19        "target": "/odata/v4/MasterDataService/$1",
20        "authenticationType": "none",
21        "destination": "MasterDataService"
22      },
23      {
24        "source": "^(.*)$",
25        "target": "$1",
26        "service": "html5-apps-repo-rt",
27        "authenticationType": "xsuaa"
28      }
29    ]
30  }

```

预先在BTP上设定的destination

Type	Name	Basic Properties	Actions
HTTP	MasterDataService	Authentication: NoAuthentication Check Connection: Connection to "MasterDataService" established. Response returned: "200: OK" Destination Configuration: Name: MasterDataService, Type: HTTP, Description: Demo, URL: https://scpgatw-wistronprework-sdev-zccsapi-finan..., Proxy Type: Internet, Authentication: NoAuthentication Additional Properties: Use default JDK truststore	Edit Clone Export Delete Check Connection

Step3: 修改View完成数据显示

修改页面,绑定ui 和 data model: 基于特定**绑定语法**进行绑定

- 如果model是没有名字的写法: eg '/firstName'
- 如果model是带带有名字写法: eg 'myModel2>/amount'
- 如果路径以 / 开头是绝对路径, 如果非 / 开头是相对路径, 这个相对

- 路径可以是 {} 包着的 也可以是 path: "" 这种用""包着的

	Middle Class ID	Small Class ID	Ordering
<input type="checkbox"/>	001	A0	000
<input type="checkbox"/>	001	A1	000
<input type="checkbox"/>	001	A2	000
<input type="checkbox"/>	001	A3	000
<input type="checkbox"/>	001	A4	000
<input type="checkbox"/>	001	A5	000
<input type="checkbox"/>	003	A5	000
<input type="checkbox"/>	003	A6	000
<input type="checkbox"/>	006	AC	000
<input type="checkbox"/>	006	AD	000

► [view code](#)

Step4: Demo Create

1. 添加新增按鈕
2. 在對應的controller中添加對應按鈕的事件處理函數
3. 事件處理函數中 獲取當前 table 對象
4. 獲取當前 table 對象綁定的 binding: sap.ui.model.odata.v4.ODataListBinding
5. 調用 list binding 去創建一個新的 binding context -> new entity (new item, new row)
6. 基於 two-way binding, model 新增一條 entity 后, view 對象同樣會新增一條 item
7. 修改 view 中的這一條 item, 然後 save
8. 基於 updategroup, ui 中新增的 item 在顯示調用 submitbatch 后, 發送 odata batch 請求去更新 DB

The screenshot shows a SAP application interface titled "Middle Class Sorting". It features a table with three columns: "Middle Class ID", "Small Class ID", and "Ordering". A new row is being inserted at the bottom of the table. The "Middle Class ID" column contains values like 999, 001, A0, A1, A2, A3, A4, A5, A6, and 006. The "Small Class ID" column contains values 3, A0, 000, 000, 000, 000, 000, 000, 000, and AC. The "Ordering" column has values 1, 000, 000, 000, 000, 000, 000, 000, 000, and 000. A blue selection bar is visible over the "Ordering" field for the new row.

- ▶ view code
- ▶ controller code

Part7: Base Data CRUD

Step1: OData tutorial

1. 修改sap sample代码实现CRUD

The screenshot shows the SAP UI5 code editor with the file "webapp/controller/App.controller.js" open. The left sidebar has a navigation tree with the "OData V4" tab selected. The main area displays the following code:

```

1 * sap.ui.define([
2   "sap/ui/core/mvc/Controller",
3   "sap/m/MessageToast",
4   "sap/m/MessageBox",
5   "sap/ui/model/Sorter",
6   "sap/ui/model/Filter",
7   "sap/ui/model/FilterOperator",
8   "sap/ui/model/FilterType"
9   "sap/ui/model/json/JSONModel"
10 ], function (Controller, MessageToast, MessageBox, Sorter, Filter, FilterOperator, FilterType,
11 JSONModel) {
12   "use strict";
13
14   return Controller.extend("sap.ui.core/tutorial.odatav4.controller.App", {
15
16     /**
17      * Hook for initializing the controller
18     */
19     onInit : function () {
20       var oMessageManager = sap.ui.getCore().getMessageManager(),
21           oMessageModel = oMessageManager.getMessageModel(),
22           oMessageModelBinding = oMessageModel.bindList("messages", undefined, [],
23             new Filter("technical", FilterOperator.EQ, true)),
24             oViewModeModel = new JSONModel({
25               hasUIChanges : false,
26               usernameEmpty : true,
27               order : 0
28             });
29
30             this._getview().setModel(oViewModeModel, "appView");
31             this._getview().setModel(oMessageModel, "message");
32
33             oMessageModelBinding.attachChange(this.onMessageBindingChange, this);
34             this._bTechnicalErrors = false;
35         },
36
37         /**
38          * ===== begin: event handlers =====
39          */
40
41         /**
42          * Create a new entry.
43         */
44         onCreate : function () {
45           var oList = this.byId("peopleList"),
46               oBinding = oList.getBinding("items"),
47               // Create a new entry through the table's list binding
48               oContext = oBinding.create({
49                 "UserName": "...",
50                 "FirstName": "...",
51                 "LastName": "...",
52               });
53             }
54

```

2. Copy the App.view.xml 到 需要编写的 ui view
保留 controllerName="zccs.uimiddleclasssorting2.controller.Main"
3. Copy the App.controller.js 到需要编写的 js controller
保留 return Controller.extend("zccs.uimiddleclasssorting2.controller.Main", {
4. Copy i18n, 删除并修改相关描述

Step2: 修改xml

修改列与数据绑定, 修改属性id值

- 部分修改后Main.view.xml 代码

Step3: 修改js

修改页面属性Id

- 部分修改后Main.controller.js 代码

Step4: 修改manifest.json, ui5.yaml, xs-app.json

- manifest.json

Step5: 删 除不需要的功能

当前效果

The screenshot shows a SAP Fiori application titled "Middle class sorting". The interface includes a header with the SAP logo and a search bar. Below the header is a table with three columns: "userNameLabelText", "firstNameLabelText", and "lastNameLabelText". The table contains 15 rows of data. The first row has the value "999" in the first column. The last row has the value "AF" in the first column. The table has a "Restart change" button at the top right and "Save" and "Cancel" buttons at the bottom right.

userNameLabelText	firstNameLabelText	lastNameLabelText
999	1	1
001	A0	000
001	A1	000
001	A2	000
001	A3	000
001	A4	000
001	A5	000
003	A5	000
003	A6	000
006	AC	000
006	AD	000
006	AE	000
006	AF	000

删除不需要的功能, 修改描述 略

Step6: 修改后source code参考

- ▶ manifest.json
- ▶ ui5.yaml
- ▶ xs-app.json
- ▶ Main.view.xml
- ▶ Main.controller.js

Part8: Base Data CRUD-2

一个基于part7实现vcf2.0的base data的case

Step1: 创建Project

1. git clone vcf_v2 project clone project
2. git checkout -b xxx 创建并切换到自己的branch
3. vcf_v2目录下创建project

The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows the project structure under "VCF_V2". It includes a ".vscode" folder, "ui_v_fin_pic_create" folder, "webapp" folder, and "view" folder. Inside "view", there are "App.view.xml" and "Main.view.xml".
- Code Editor:** Displays the content of "Main.view.xml". The XML code is as follows:

```
<mvc:view controllerName="vcf.ui.vfinpiccreate.controller.Main"
    xmlns:mvc="sap.ui.core.mvc" displayBlock="true"
    xmlns="sap.m">
    <!-- Default PIC -->
    <Page id="page" title="{i18n>title}">
        <content />
    </Page>
</mvc:view>
```

- Terminal:** Shows the command "Z19043041@ZHS-190213734 MINGW64 /d/2.VSCodePro/btp/Dev/vcf_v2/ui_v_fin_pic_create (z19043041_ver)".
- Status Bar:** Shows "行 8, 列 1 空格: 4 UTF-8 LF edmx".

Step2: Copy View/Controller code

1. Copy Main.view.xml 到新创建的 view 中, 并修改对应的controllerName

```

1
2     displayBlock="true"
3     xmlns="sap.m"
4     xmlns:mvc="sap.ui.core.mvc">

```

2. Main.view.xml中修改对应的 column

table name: zvcf_vendor_fin_pic_create

Description: Financial Default PIC for Create Vendor Form

	Column Name	Type	Len	Comments	PK
1	fin	char	12	Finacial ID	Y
2	company_code	char	1000	Company	
3	org	char	1000	Org	
4	sequence	char	1	Sequence	
5	account_group	char	50	Account Group	
6	category	char	5	Category	

```

1 |           <columns>
2 |
3 |
4 |           </Column>
5 |
6 |
7 |           </Column>
8 |
9 |
10 |          </Column>
11 |
12 |
13 |          </Column>
14 |
15 |
16 |          </Column>
17 |
18 |
19 |          </Column>
20 |          </columns>

```

3. i18n.properties中添加i18n描述

```
#Main.view.xml: table column
finText=Finacial ID
companyCodeIDText=Company
orgText=Org
sequenceText=Sequence
accountGroupText=Account Group
categoryText=Category
```

4. Main.view.xml中修改items的 <cells> 的binding value

```
1   <ColumnListItem>
2     <cells>
3
4       valueLiveUpdate="true"
5       liveChange=".onInputChange" />
6     </cells>
7     <cells>
8
9       liveChange=".onInputChange" />
10    </cells>
11    <cells>
12
13      liveChange=".onInputChange" />
14    </cells>
15    <cells>
16
17      liveChange=".onInputChange" />
18    </cells>
19    <cells>
20
21      liveChange=".onInputChange" />
22    </cells>
23    <cells>
24
25      liveChange=".onInputChange" />
26    </cells>
27  </ColumnListItem>
```

5. 修改items binding路径

```
1 <Table id="idDataTable"
2     growing="true"
3     growingThreshold="10"
4     items="{
5
6             parameters: {
7                 $count: true,
8
9             }
10        }"
```

6. 添加view中其它的i18n文本描述

```
#Main.view.xml: control text
InsearchFieldPlaceholder=Finacial ID
createButtonText=New
deleteButtonText=Delete
refreshButtonText=Refresh
sortButtonText=Sort

#Main.view.xml: control text
saveButtonText=Save
cancelButtonText=Cancel
```

7. Copy Main.controller.js

修改 onCreate function:

```
1     onCreate: function () {
2         var oList = this.byId("idDataTable"),
3             oBinding = oList.getBinding("items"),
4             // Create a new entry through the table's list binding
5             oContext = oBinding.create({
6
7
8
9
10
11
12     });
```

8. 修改 onInputChange

修改 id 属性, 用于判断key值是否为空

```

1  onInputChange: function (oEvent) {
2      if (oEvent.getParameter("escPressed")) {
3          this._setUIChanges();
4      } else {
5          this._setUIChanges(true);
6          /**
7             * Check if the fin in the changed table row is empty and set the appV
8             * property accordingly
9             */
10
11         if (pic) {
12             this.getView().getModel("appView").setProperty("/idEmpty", false);
13         }
14     },
15 },

```

9. 修改 onSave

修改table binding的update group name

```

1  onSave: function () {
2      var fnSuccess = function () {
3          this._setBusy(false);
4          MessageToast.show(this._getText("changesSentMessage"));
5          this._setUIChanges(false);
6      }.bind(this),
7      fnError = function (oError) {
8          this._setBusy(false);
9          this._setUIChanges(false);
10         MessageBox.error(oError.message);
11     }.bind(this);
12
13     this._setBusy(true); // Lock UI until submitBatch is resolved.
14
15     // If there were technical errors, a new save resets them.
16     this._bTechnicalErrors = false;
17 },

```

10. 视情况修改onSearch

id值为 view中search 控件的id, filter为 odata entity属性(table field name)

```
1 |     onSearch: function () {
2 |         var oView = this.getView(),
3 |
4 |
5 |             oView.byId("idDataTable").getBinding("items").filter(oFilter, FilterType.A|
6 |         },
7 |     },
```

11. 修改sort

修改排序field值

```
1 |     onSort: function () {
2 |         var oView = this.getView(),
3 |             aStates = [undefined, "asc", "desc"],
4 |             aStateTextIds = ["sortNone", "sortAscending", "sortDescending"],
5 |             iOrder = oView getModel("appView").getProperty("/order"),
6 |             sOrder;
7 |
8 |             // Cycle between the states
9 |             iOrder = (iOrder + 1) % aStates.length;
10 |             sOrder = aStates[iOrder];
11 |
12 |             oView.getModel("appView").setProperty("/order", iOrder);
13 |
14 |             sOrder === "desc"));
15 |
16 |             MessageToast.show(this._getText("sortMessage", [this._getText(aStateTextId|
17 |         },
```

Step3: 修改配置文件

1. 修改ui5.yaml

```
1 metadata:
2   name: zvcf.uivfinpiccreate
3 type: application
4 server:
5   customMiddleware:
6     - name: fiori-tools-proxy
7     afterMiddleware: compression
8   configuration:
9     ignoreCertError: false # If set to true, certificate errors will be ignored. E.g. :
10    ui5:
11      path:
12        - /resources
13        - /test-resources
14      url: https://ui5.sap.com
15    backend:
16
17
18 |
```

2. 修改manifest.json

```
1   "dataSources": {
2     "mainService": {
3
4       "type": "OData",
5       "settings": {
6         "odataVersion": "4.0"
7       }
8     },
9   },
```

3. 修改xs-app.json

```
1  {
2
3
4   "authenticationType": "none",
5
6 },
```