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**NIM : 191402024**

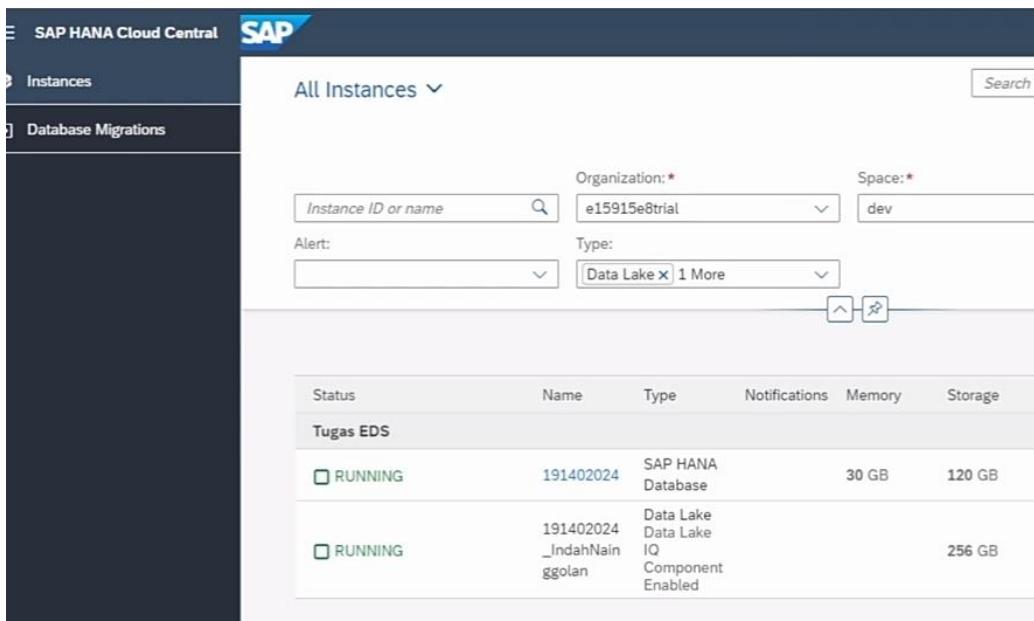
**KOM : C**

**Matkul : Enterprise Development Software**

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#### **Module 4 : Connecting to and Creating Data on SAP HANA Cloud Data Lake**

Starting/Running Sap HANA Data



The screenshot shows the SAP HANA Cloud Central interface. On the left, there's a sidebar with 'Instances' and 'Database Migrations' options. The main area is titled 'All Instances' with a search bar. It displays two SAP HANA instances:

Status	Name	Type	Notifications	Memory	Storage
RUNNING	191402024	SAP HANA Database		30 GB	120 GB
RUNNING	191402024_IndahNainggolan	Data Lake Data Lake IQ Component Enabled			256 GB

Membuka halaman SAP HANA Cloud Cookpit lalu “action” pada SAP HANA Instance dan mengklik “Execute SQL and explore object”

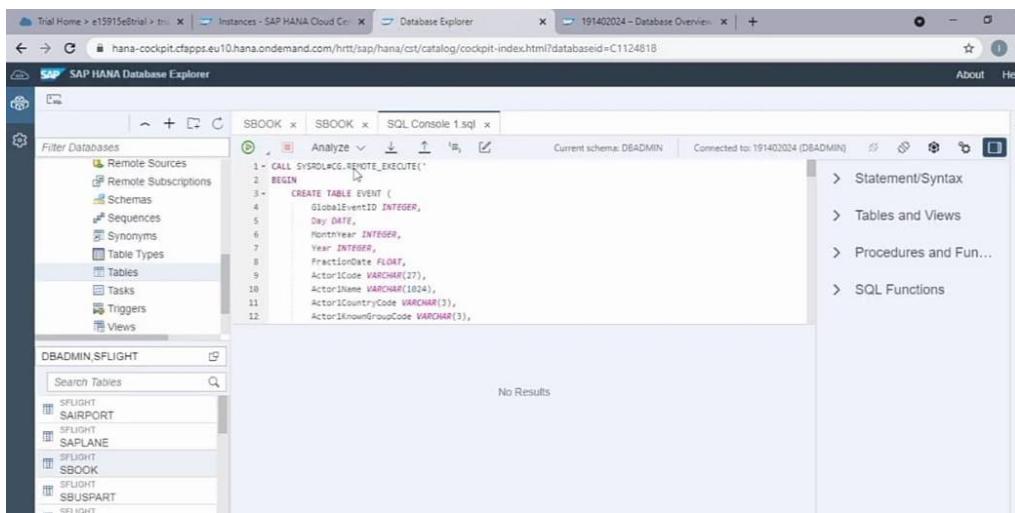
The screenshot shows the SAP BTP Cockpit interface. On the left, a sidebar lists various services: Applications, Services, SAP HANA Cloud, SAP HANA Cloud Migrations, Routes, Security Groups, Events, and Members. The main content area is titled "SAP HANA Cloud". It displays two database instances: "191402024" and "191402024\_IndahNainggolan". Both instances are marked as "Created". The "191402024" instance has the following specifications: Memory 30 GB, CPU 2 vCPUs, and Storage 120 GB. The "191402024\_IndahNainggolan" instance has the following specifications: CPU 4 vCPUs and Storage 256 GB. A search bar and a "Create" button are located at the top right of the main content area.

Create Event GKG Mentions Table, mengklik “SQL” di pojok kiri atas, lalu Copy dan paste file Create\_EVENT\_GKG\_MENTIONS\_Table.txt yang sudah disediakan, dan klik RUN.

The screenshot shows the SAP HANA Database Explorer interface. The left sidebar shows a tree view of database objects under "DBADMIN.SFLIGHT": Remote Sources, Remote Subscriptions, Schemas, Sequences, Synonyms, Table Types, Tables, Tasks, Triggers, and Views. Under "Tables", there are entries for SFLIGHT, SAIRPORT, SFLIGHT, SAPLANE, SFLIGHT, SBBOOK, SFLIGHT, SBUSPART, SFLIGHT, SCARPLAN, and SCARR. In the center, there are three tabs: "SBOOK", "SBOOK", and "SQL Console 1.sql". The SQL console tab contains the following SQL code:

```
CREATE TABLE GKG_Mentions (
    ID INT,
    Mention TEXT,
    Date DATE
);
```

The status bar indicates "Connected to: 191402024 (DBADMIN)". On the right side, there is a context menu with options: Statement/Syntax, Tables and Views, Procedures and Fun..., and SQL Functions.



SAP HANA Database Explorer

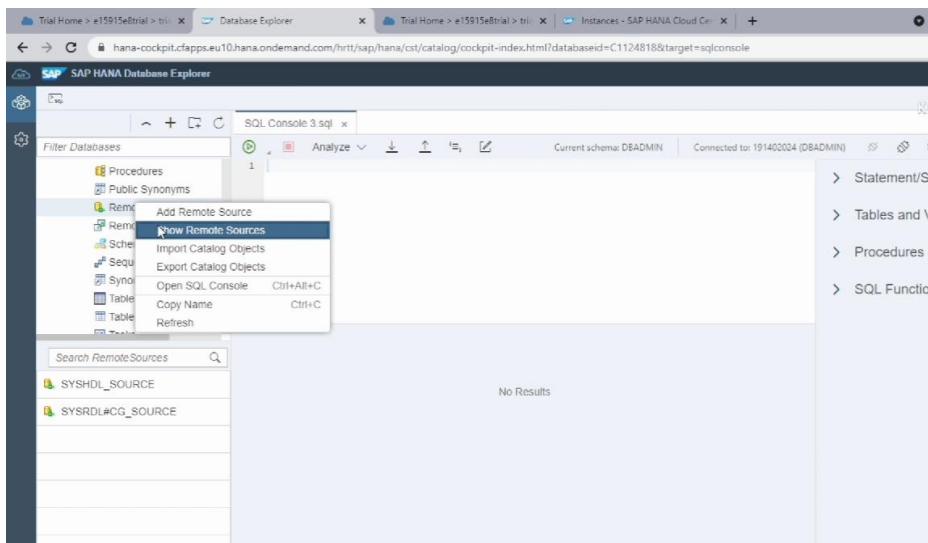
DBADMIN.SFLIGHT

SQL Console 1.sql

```
1 > CALL SYSPROC.REMOTE_EXECUTE('
2 BEGIN
3 + CREATE TABLE EVENT (
4 GlobalEventID INTEGER,
5 Day DATE,
6 MonthYear INTEGER,
7 Year INTEGER,
8 FractionDate FLOAT,
9 Actor1Code VARCHAR(27),
10 Actor1Name VARCHAR(1024),
11 Actor1CountryCode VARCHAR(3),
12 Actor1KnownGroupCode VARCHAR(3),
```

No Results

Klik Catalog dan pilih Remote source, klik kanan dan klik show remote show



The screenshot shows the SAP HANA Database Explorer interface. The left sidebar lists database objects like Procedures, Public Synonyms, Remote Sources, etc. The main area displays a table titled 'Remote Sources' with the following data:

Remote Sour...	Adapter ...	Location	Agent N...	CDC Su...	Total Su...	VT Sub...	SQL Su...	Status	Capture ...	Distribut...
SYSHDL... SYSRDL#CG_SOURCE	IQODBC	indexserver		FALSE	0	0	0			
SYSRDL#CG_S...	IQODBC	indexserver		FALSE	0	0	0			

Select SYSRDL#CG seperti dibawah ini

The screenshot shows the SAP HANA Database Explorer interface. The left sidebar lists database objects like Procedures, Public Synonyms, Remote Sources, etc. The main area displays a table titled 'Remote Sources' with the following data, where the row for 'SYSRDL#CG\_SOURCE' is selected:

Remote Sour...	Adapter ...	Location	Agent N...	CDC Su...	Total Su...	VT Sub...	SQL Su...	Status	Capture ...	Distribut...
SYSHDL... SYSRDL#CG_SOURCE	IQODBC	indexserver		FALSE	0	0	0			
<b>SYSRDL#CG_S...</b>	IQODBC	indexserver		FALSE	0	0	0			

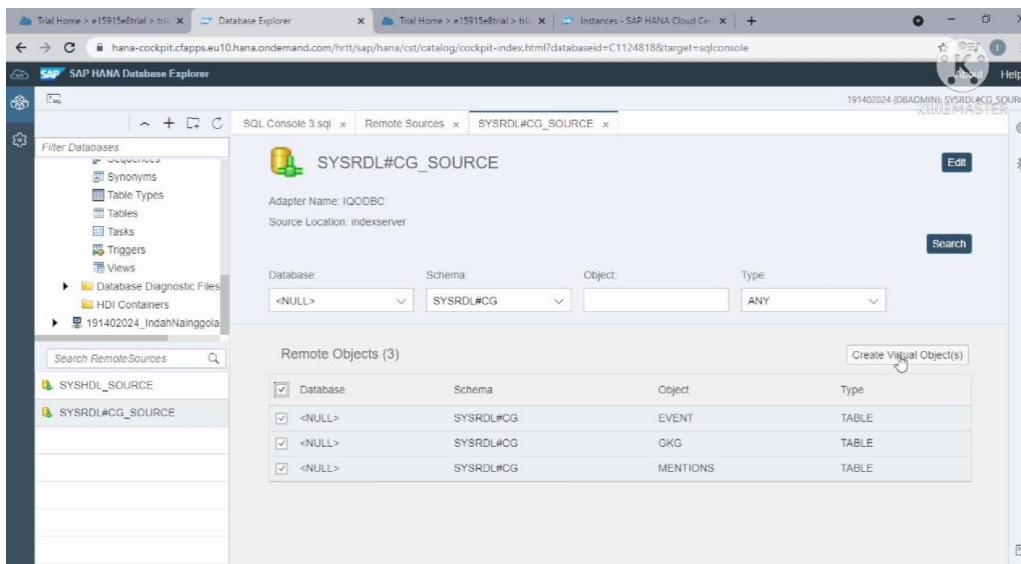
Lalu ubah Schema menjadi SYSRDL#CG

The screenshot shows the SAP HANA Database Explorer interface. The left sidebar lists databases, including '191402024\_IndahNainggola'. The main panel displays the results for the search term 'SYSRDL#CG\_SOURCE'. It includes a table with columns: Database, Schema, Object, and Type. The table shows several entries under the Schema 'SYSRDL#CG', such as 'SYSDL\_VtCreator', 'SYSRDL#CG', 'SYSRDL#CG\_role', 'SYS\_ACCESS\_DISK\_INFORMATION\_ROLE', 'SYS\_ACCESS\_SERVER\_IS\_ROLE', and 'SYS\_ACCESS\_USER\_PASSWORD\_ROLE'. A tooltip indicates that users can enter filter parameters and click 'Search'.

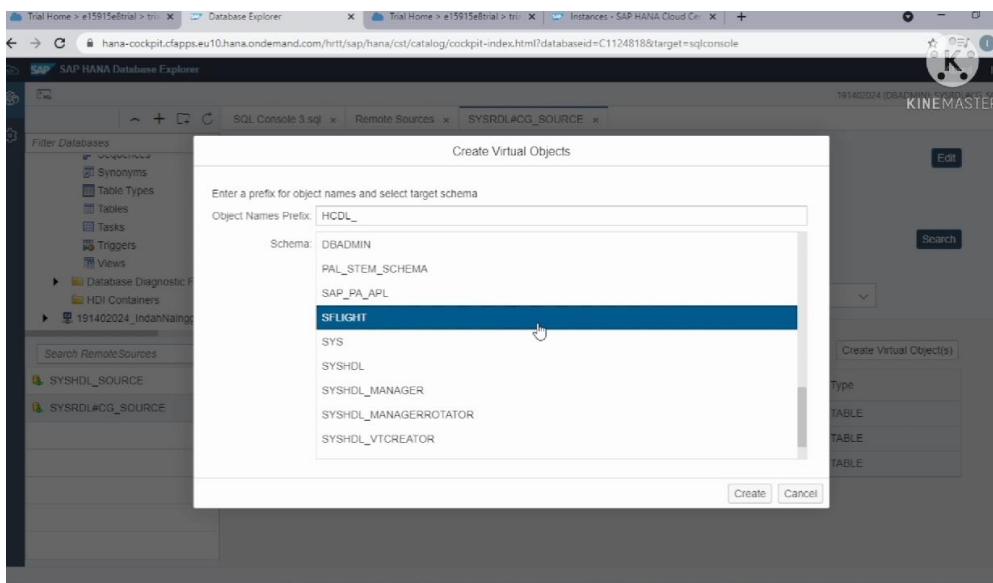
Lalu search, dan akan menampilkan tabel seperti dibawah ini

The screenshot shows the SAP HANA Database Explorer interface. The left sidebar lists databases, including '191402024\_IndahNainggola'. The main panel displays the results for the search term 'SYSRDL#CG\_SOURCE'. It includes a table with columns: Database, Schema, Object, and Type. The table shows several entries under the Schema 'SYSRDL#CG', such as 'SYSDL\_VtCreator', 'SYSRDL#CG', 'SYSRDL#CG\_role', 'SYS\_ACCESS\_DISK\_INFORMATION\_ROLE', 'SYS\_ACCESS\_SERVER\_IS\_ROLE', and 'SYS\_ACCESS\_USER\_PASSWORD\_ROLE'. A tooltip indicates that users can enter filter parameters and click 'Search'. Below the table, there is a section titled 'Remote Objects (3)' which lists three objects: 'EVENT' (TABLE), 'GKG' (TABLE), and 'MENTIONS' (TABLE).

Setelah itu Create Virtual Object



Mengisi nama object dan schema sama seperti dibawah ini :



Dan sekarang kita bisa membuat Data di SAP HANA Cloud Data Lake

The screenshot shows the SAP HANA Database Explorer interface. The main panel displays the details for the object 'SYSRDL#CG\_SOURCE'. The object is of type 'SYN' (Synonym) and is associated with the schema 'SYSRDL#CG'. The adapter name is 'IQODBC' and the source location is 'indexserver'. A table titled 'Remote Objects (3)' lists three entries:

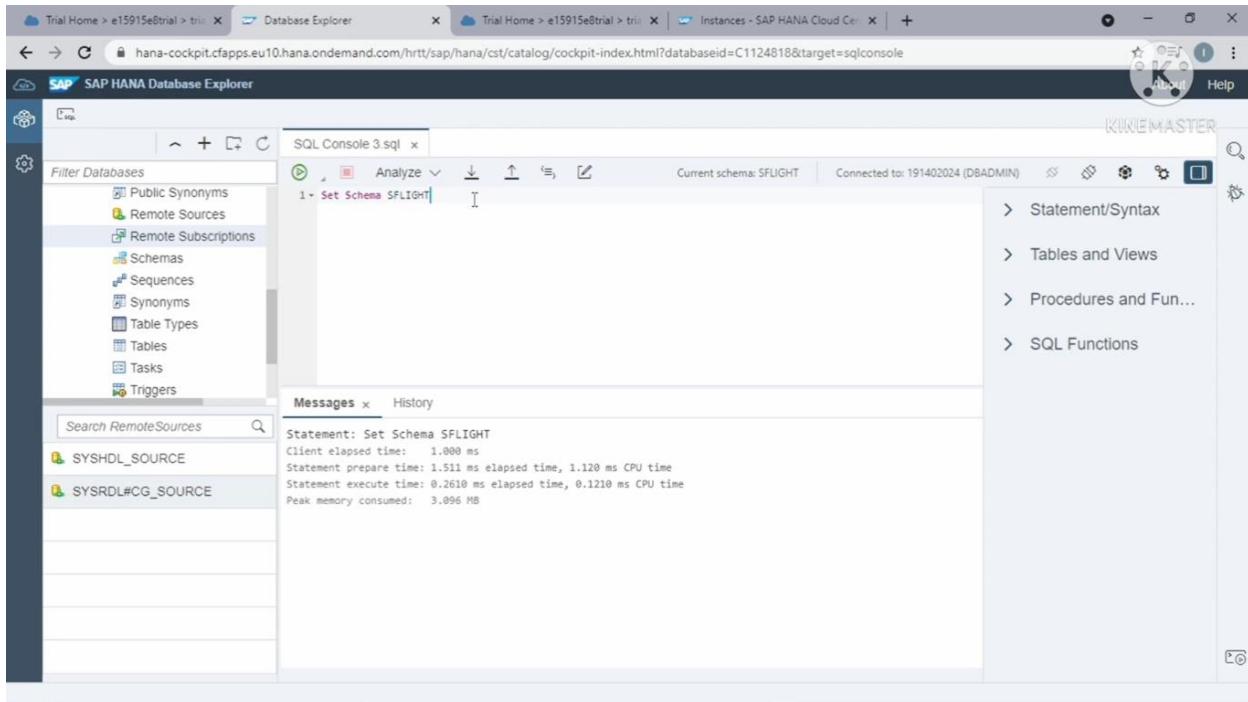
Database	Schema	Object	Type
<NULL>	SYSRDL#CG	EVENT	TABLE
<NULL>	SYSRDL#CG	GKG	TABLE
<NULL>	SYSRDL#CG	MENTIONS	TABLE

## Module 5 : Query Data on SAP HANA Cloud

### Langkah – Langkah :

Klik sql pada pojok kiri atas, dan ketik “Set Schema SFLIGHT”, dimana kita akan mengatur ke schema sflight

The screenshot shows the SAP HANA Database Explorer interface with the SQL console open. The command 'Set Schema SFLIGHT' has been entered into the SQL editor. The right-hand pane displays a navigation tree with sections like 'Statement/Syntax', 'Tables and Views', 'Procedures and Fun...', and 'SQL Functions'.



Copy Query berikut untuk membuat sebuah table SAGENCYDATA yang baru

The screenshot shows a PDF document with several tabs at the top. The main content area contains five numbered queries:

- Query to create a new table SAGENCYDATA

```
CREATE TABLE SAGENCYDATA as (select SBOOK.AGENCYNUM,
count(SBOOK.AGENCYNUM) as NUMBOOKINGS from SBOOK, STRVELAG where
SBOOK.AGENCYNUM=STRVELAG.AGENCYNUM group by SBOOK.AGENCYNUM order by
count(SBOOK.AGENCYNUM) desc);
```
- Query to select the top 5 agencies

```
SELECT TOP 5 SAGENCYDATA.AGENCYNUM,
STRVELAG.NAME,SAGENCYDATA.NUMBOOKINGS from SAGENCYDATA INNER JOIN
STRVELAG on SAGENCYDATA.AGENCYNUM = STRVELAG.AGENCYNUM;
```
- Query to create STOPAGENCY table

```
CREATE TABLE STOPAGENCY as (select top 5 SAGENCYDATA.AGENCYNUM,
STRVELAG.NAME,SAGENCYDATA.NUMBOOKINGS from SAGENCYDATA INNER JOIN
STRVELAG on SAGENCYDATA.AGENCYNUM = STRVELAG.AGENCYNUM);
```
- Query to create SAGBOOKDAYS table

```
CREATE TABLE SAGBOOKDAYS as (select AGENCYNUM, dayname(ORDER_DATE) as
ORDERDAY, count(dayname(ORDER_DATE)) as DAYCOUNT from SBOOK group by
AGENCYNUM, dayname(ORDER_DATE));
```
- Query to get the max booking days for each of the top 5 agencies

```
SELECT SAGBOOKDAYS.AGENCYNUM, STOPAGENCY.NAME, SAGBOOKDAYS.ORDERDAY,
SAGBOOKDAYS.DAYCOUNT from SAGBOOKDAYS INNER JOIN STOPAGENCY on
SAGBOOKDAYS.AGENCYNUM=STOPAGENCY.AGENCYNUM where SAGBOOKDAYS.DAYCOUNT in
(select max(DAYCOUNT) from SAGBOOKDAYS group by AGENCYNUM);
```

Paste ke SQL Console lalu Jalankan/ Run (tombol play diatas kiri), maka terlihat hasil bahwa kita sudah

Membuat tabel SAGENCYDATA

The screenshot shows the SAP HANA Database Explorer interface. In the central SQL console, the following SQL statement is being run:

```
1 Create table SAGENCYDATA as (select SBOOK.AGENCYNUM, count(SBOOK.AGENCYNUM) as NUMBOOKINGS from SBOOK, STRAVELA
```

The message pane displays the execution details:

```
Statement: Create table SAGENCYDATA as (select SBOOK.AGENCYNUM, count(SBOOK.AGENCYNUM) as  
NUMBOOKINGS from ...  
Client elapsed time: 244.0 ms  
Statement prepare time: 4.016 ms elapsed time, 3.645 ms CPU time  
Statement execute time: 242.7 ms elapsed time, 894.6 ms CPU time  
Peak memory consumed: 14.36 MB
```

Lalu kita select dari tabel SAGENCYDATA, dan ketika di RUN akan menghasilkan isi tabel seperti dibawah ini

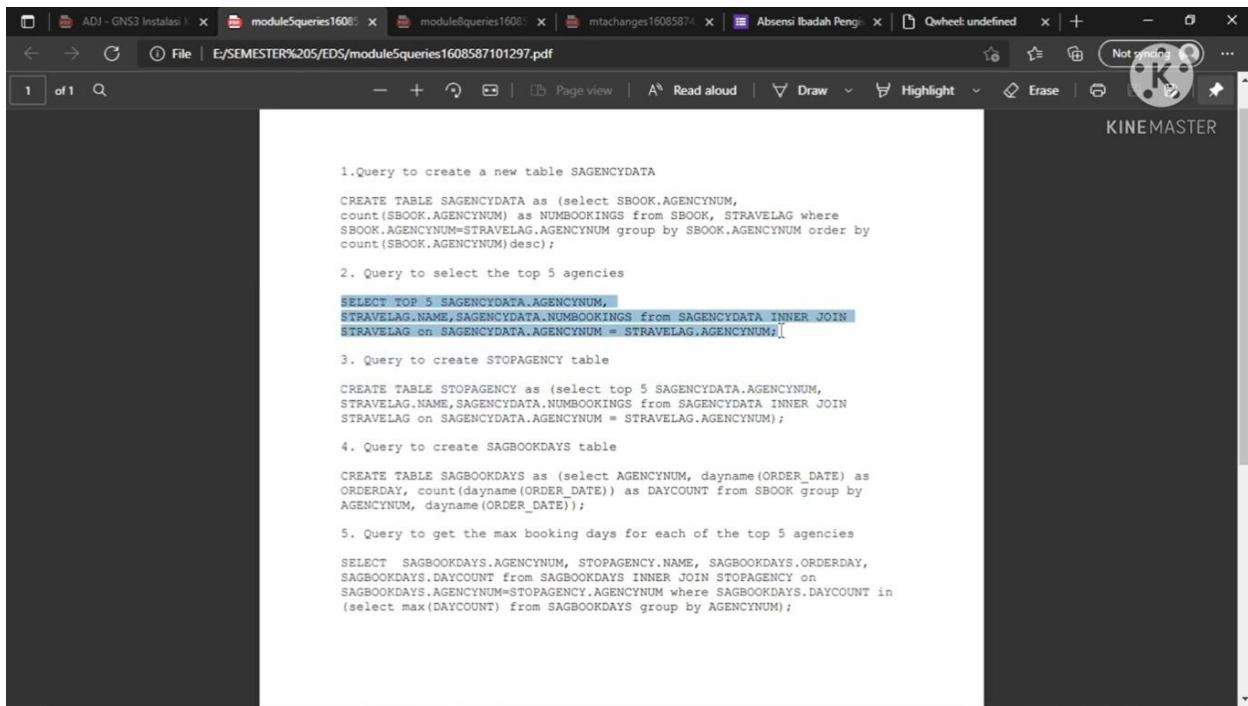
The screenshot shows the SAP HANA Database Explorer interface. In the central SQL console, the following SQL statement is being run:

```
1+ SELECT * FROM SAGENCYDATA
```

The result pane displays the data from the SAGENCYDATA table:

	AGENCYNUM	NUMBOOKINGS
1	00000284	27870
2	00000122	27869
3	00000109	27867
4	00000101	27866
5	00000118	27416
6	00000087	25936
7	00000061	25935
8	00000113	24459

Copy Query seperti dibawah ini untuk menseleksi top 5 agencies



```
1.Query to create a new table SAGENCYDATA
CREATE TABLE SAGENCYDATA as (select SBOOK.AGENCYNUM,
count(SBOOK.AGENCYNUM) as NUMBOOKINGS from SBOOK, STRAVELAG where
SBOOK.AGENCYNUM=STRAVELAG.AGENCYNUM group by SBOOK.AGENCYNUM order by
count(SBOOK.AGENCYNUM) desc);

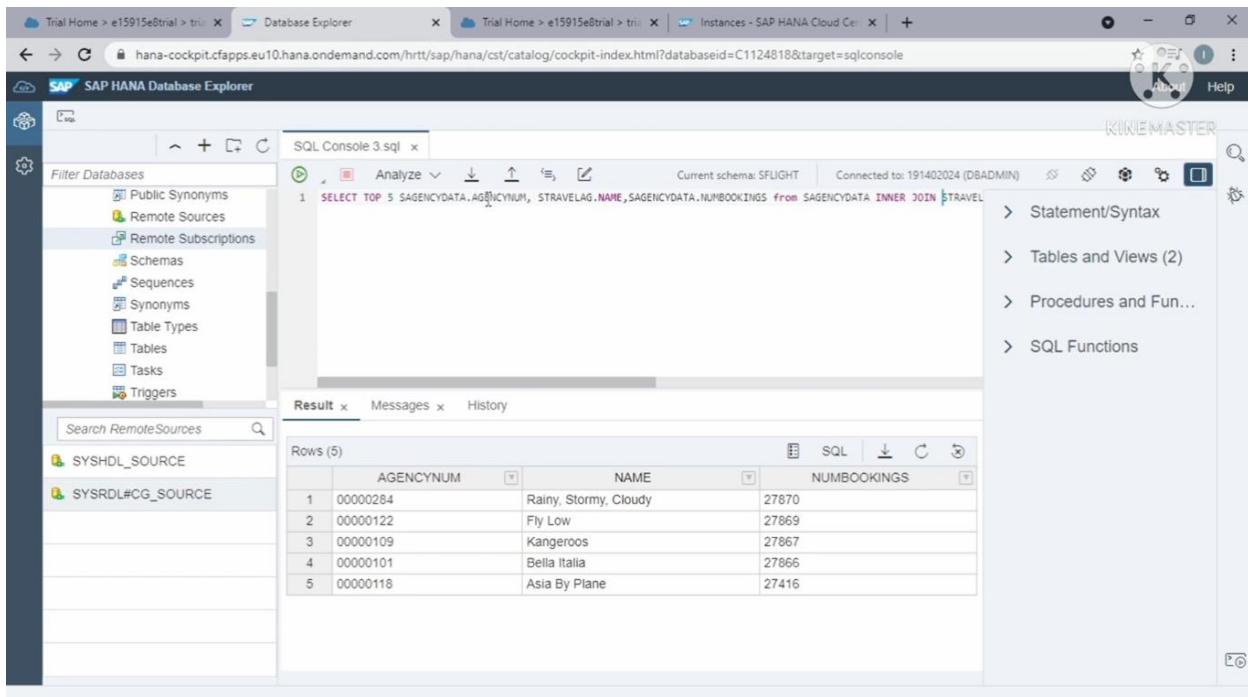
2. Query to select the top 5 agencies
SELECT TOP 5 SAGENCYDATA.AGENCYNUM,
STRAVELAG.NAME, SAGENCYDATA.NUMBOOKINGS from SAGENCYDATA INNER JOIN
STRAVELAG on SAGENCYDATA.AGENCYNUM = STRAVELAG.AGENCYNUM;

3. Query to create STOPAGENCY table
CREATE TABLE STOPAGENCY as (select top 5 SAGENCYDATA.AGENCYNUM,
STRAVELAG.NAME, SAGENCYDATA.NUMBOOKINGS from SAGENCYDATA INNER JOIN
STRAVELAG on SAGENCYDATA.AGENCYNUM = STRAVELAG.AGENCYNUM);

4. Query to create SAGBOOKDAYS table
CREATE TABLE SAGBOOKDAYS as (select AGENCYNUM, dayname(ORDER_DATE) as
ORDERDAY, count(dayname(ORDER_DATE)) as DAYCOUNT from SBOOK group by
AGENCYNUM, dayname(ORDER_DATE));

5. Query to get the max booking days for each of the top 5 agencies
SELECT SAGBOOKDAYS.AGENCYNUM, STOPAGENCY.NAME, SAGBOOKDAYS.ORDERDAY,
SAGBOOKDAYS.DAYCOUNT from SAGBOOKDAYS INNER JOIN STOPAGENCY on
SAGBOOKDAYS.AGENCYNUM=STOPAGENCY.AGENCYNUM where SAGBOOKDAYS.DAYCOUNT in
(select max(DAYCOUNT) from SAGBOOKDAYS group by AGENCYNUM);
```

Paste ke SQL Console lalu RUN, maka hasilnya akan menampilkan 5 top agency beserta nama dan numbookings



	AGENCYNUM	NAME	NUMBOOKINGS
1	00000284	Rainy, Stormy, Cloudy	27870
2	00000122	Fly Low	27869
3	00000109	Kangeroos	27867
4	00000101	Bella Italia	27866
5	00000118	Asia By Plane	27416

Copy Query untuk membuat table STOPAGENCY



1. Query to create a new table SAGENCYDATA  
CREATE TABLE SAGENCYDATA as (select SBOOK.AGENCYNUM,  
count(SBOOK.AGENCYNUM) as NUMBOOKINGS from SBOOK, STRVELAG where  
SBOOK.AGENCYNUM=STRVELAG.AGENCYNUM group by SBOOK.AGENCYNUM order by  
count(SBOOK.AGENCYNUM) desc);  
  
2. Query to select the top 5 agencies  
SELECT TOP 5 SAGENCYDATA.AGENCYNUM,  
STRVELAG.NAME, SAGENCYDATA.NUMBOOKINGS from SAGENCYDATA INNER JOIN  
STRVELAG on SAGENCYDATA.AGENCYNUM = STRVELAG.AGENCYNUM;  
  
3. Query to create STOPAGENCY table  
CREATE TABLE STOPAGENCY as (select top 5 SAGENCYDATA.AGENCYNUM,  
STRVELAG.NAME, SAGENCYDATA.NUMBOOKINGS from SAGENCYDATA INNER JOIN  
STRVELAG on SAGENCYDATA.AGENCYNUM = STRVELAG.AGENCYNUM);  
  
4. Query to create SAGBOOKDAYS table  
CREATE TABLE SAGBOOKDAYS as (select AGENCYNUM, dayname(ORDER\_DATE) as  
ORDERDAY, count(dayname(ORDER\_DATE)) as DAYCOUNT from SBOOK group by  
AGENCYNUM, dayname(ORDER\_DATE));  
  
5. Query to get the max booking days for each of the top 5 agencies  
SELECT SAGBOOKDAYS.AGENCYNUM, STOPAGENCY.NAME, SAGBOOKDAYS.ORDERDAY,  
SAGBOOKDAYS.DAYCOUNT from SAGBOOKDAYS INNER JOIN STOPAGENCY on  
SAGBOOKDAYS.AGENCYNUM=STOPAGENCY.AGENCYNUM where SAGBOOKDAYS.DAYCOUNT in  
(select max(DAYCOUNT) from SAGBOOKDAYS group by AGENCYNUM);

Paste ke SQL Console dan RUN , dan kita berhasil membuat tabel STOPAGENCY



SAP HANA Database Explorer

SQL Console 3.sql

```
1 CREATE TABLE STOPAGENCY as (select top 5 SAGENCYDATA.AGENCYNUM, STRVELAG.NAME, SAGENCYDATA.NUMBOOKINGS from SAGENCYDATA INNER JOIN STRVELAG on SAGENCYDATA.AGENCYNUM = STRVELAG.AGENCYNUM);
```

Messages

Statement: CREATE TABLE STOPAGENCY as (select top 5 SAGENCYDATA.AGENCYNUM, ...  
Client elapsed time: 31.00 ms  
Statement prepare time: 3.998 ms elapsed time, 3.446 ms CPU time  
Statement execute time: 29.97 ms elapsed time, 27.74 ms CPU time  
Peak memory consumed: 6.204 MB

Select lalu RUN dan menampilkan hasil seperti dibawah ini

The screenshot shows the SAP HANA Database Explorer interface. On the left, there's a sidebar with 'Filter Databases' containing options like Public Synonyms, Remote Sources, and Remote Subscriptions. The main area has a 'SQL Console 3.sql' tab open with the query: '1- SELECT \* FROM STOPAGENCY'. The results are displayed in a table titled 'Rows (5)'. The columns are AGENCYNUM, NAME, and NUMBOOKINGS. The data is as follows:

	AGENCYNUM	NAME	NUMBOOKINGS
1	00000284	Rainy, Stormy, Cloudy	27870
2	00000122	Fly Low	27869
3	00000109	Kangeroos	27867
4	00000101	Bella Italia	27866
5	00000118	Asia By Plane	27416

Paste Query dibawah ini untuk membuat tabel SAGBOOKDAYS

The screenshot shows a PDF document with several SQL queries. The queries are numbered and describe the creation of tables:

- Query to create a new table SAGENCYDATA:

```
CREATE TABLE SAGENCYDATA as (select SBOOK.AGENCYNUM,  
count(SBOOK.AGENCYNUM) as NUMBOOKINGS from SBOOK, STRAVELAG where  
SBOOK.AGENCYNUM=STRAVELAG.AGENCYNUM group by SBOOK.AGENCYNUM order by  
count(SBOOK.AGENCYNUM)desc);
```
- Query to select the top 5 agencies:

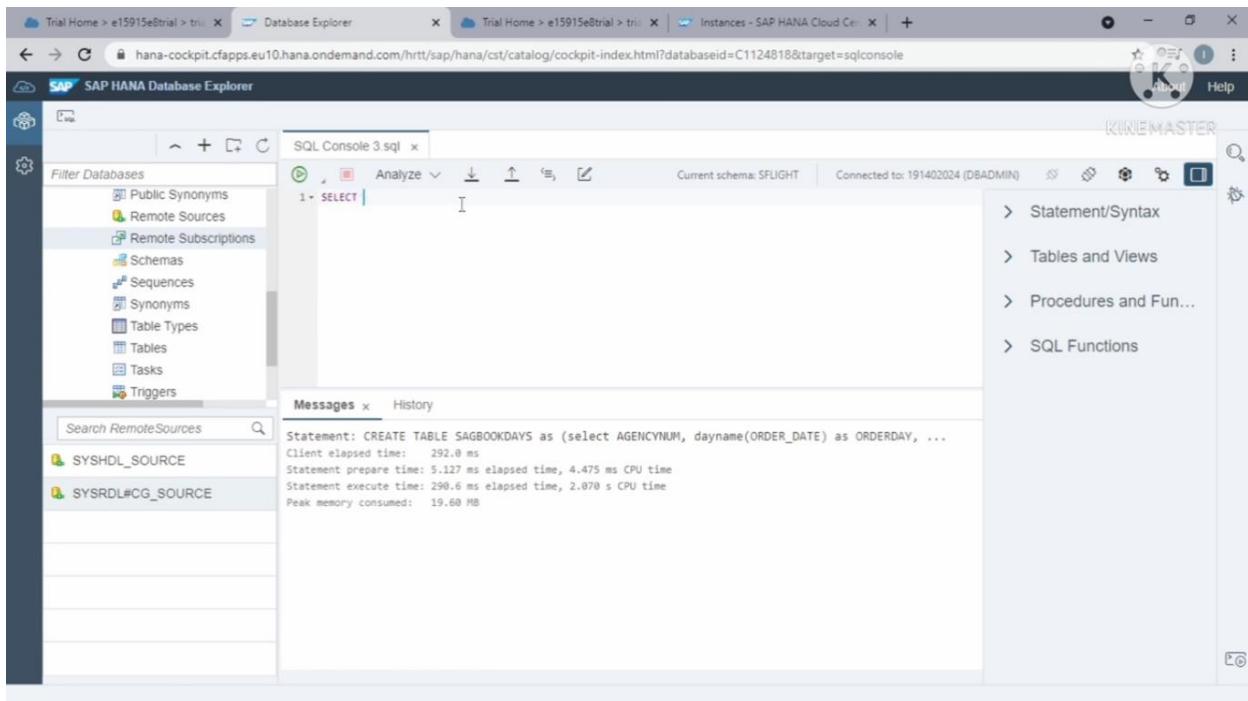
```
SELECT TOP 5 SAGENCYDATA.AGENCYNUM,  
STRAVELAG.NAME,SAGENCYDATA.NUMBOOKINGS from SAGENCYDATA INNER JOIN  
STRAVELAG on SAGENCYDATA.AGENCYNUM = STRAVELAG.AGENCYNUM;
```
- Query to create STOPAGENCY table:

```
CREATE TABLE STOPAGENCY as (select top 5 SAGENCYDATA.AGENCYNUM,  
STRAVELAG.NAME,SAGENCYDATA.NUMBOOKINGS from SAGENCYDATA INNER JOIN  
STRAVELAG on SAGENCYDATA.AGENCYNUM = STRAVELAG.AGENCYNUM);
```
- Query to create SAGBOOKDAYS table:

```
CREATE TABLE SAGBOOKDAYS as (select AGENCYNUM, dayname(ORDER_DATE) as  
ORDERDAY, count(dayname(ORDER_DATE)) as DAYCOUNT from SBOOK group by  
AGENCYNUM, dayname(ORDER_DATE));
```
- Query to get the max booking days for each of the top 5 agencies:

```
SELECT SAGBOOKDAYS.AGENCYNUM, STOPAGENCY.NAME, SAGBOOKDAYS.ORDERDAY,  
SAGBOOKDAYS.DAYCOUNT from SAGBOOKDAYS INNER JOIN STOPAGENCY on  
SAGBOOKDAYS.AGENCYNUM=STOPAGENCY.AGENCYNUM where SAGBOOKDAYS.DAYCOUNT in  
(select max(DAYCOUNT) from SAGBOOKDAYS group by AGENCYNUM);
```

## Paste ke SQL Console dan RUN



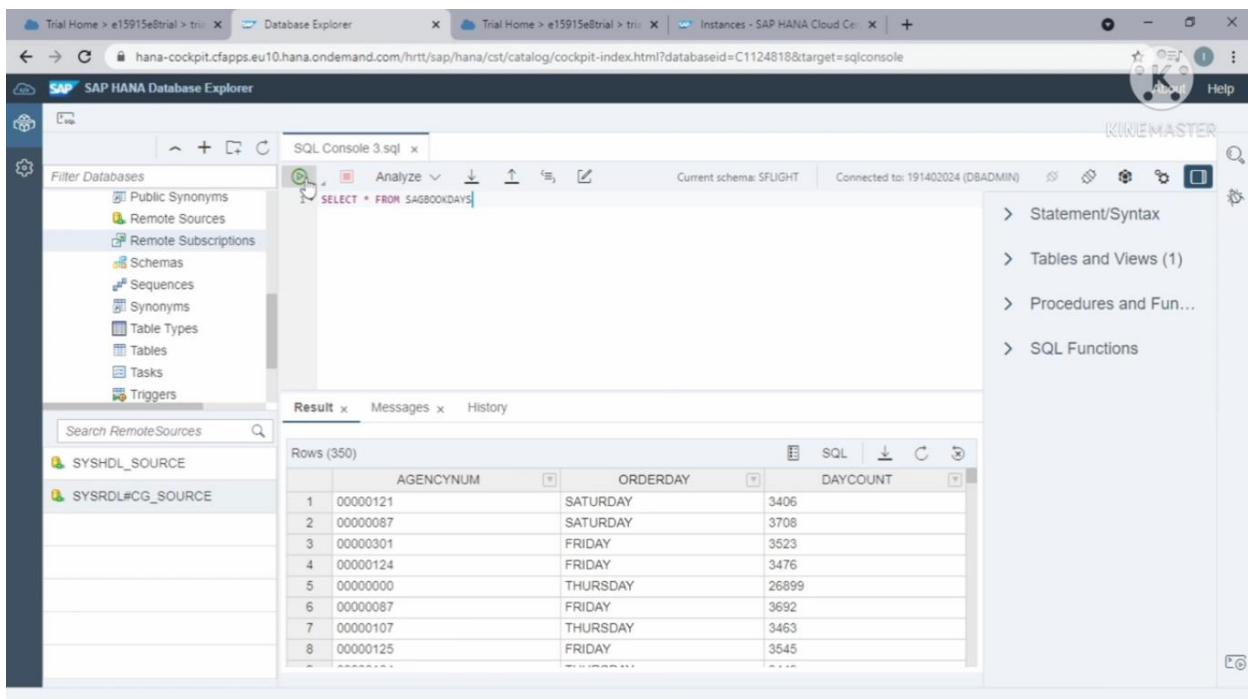
The screenshot shows the SAP HANA Database Explorer interface. In the center, there is a SQL console window titled "SQL Console 3.sql" containing the following SQL statement:

```
1 -> SELECT
```

Below the SQL statement, the "Messages" tab displays the execution results:

```
Statement: CREATE TABLE SAGBOOKDAYS as (select AGENCYNUM, dayname(ORDER_DATE) as ORDERDAY, ...
Client elapsed time: 292.0 ms
Statement prepare time: 5.127 ms elapsed time, 4.475 ms CPU time
Statement execute time: 290.6 ms elapsed time, 2.070 s CPU time
Peak memory consumed: 19.60 MB
```

Select tabel dan RUN , akan menampilkan tabel seperti dibawah ini (result) :



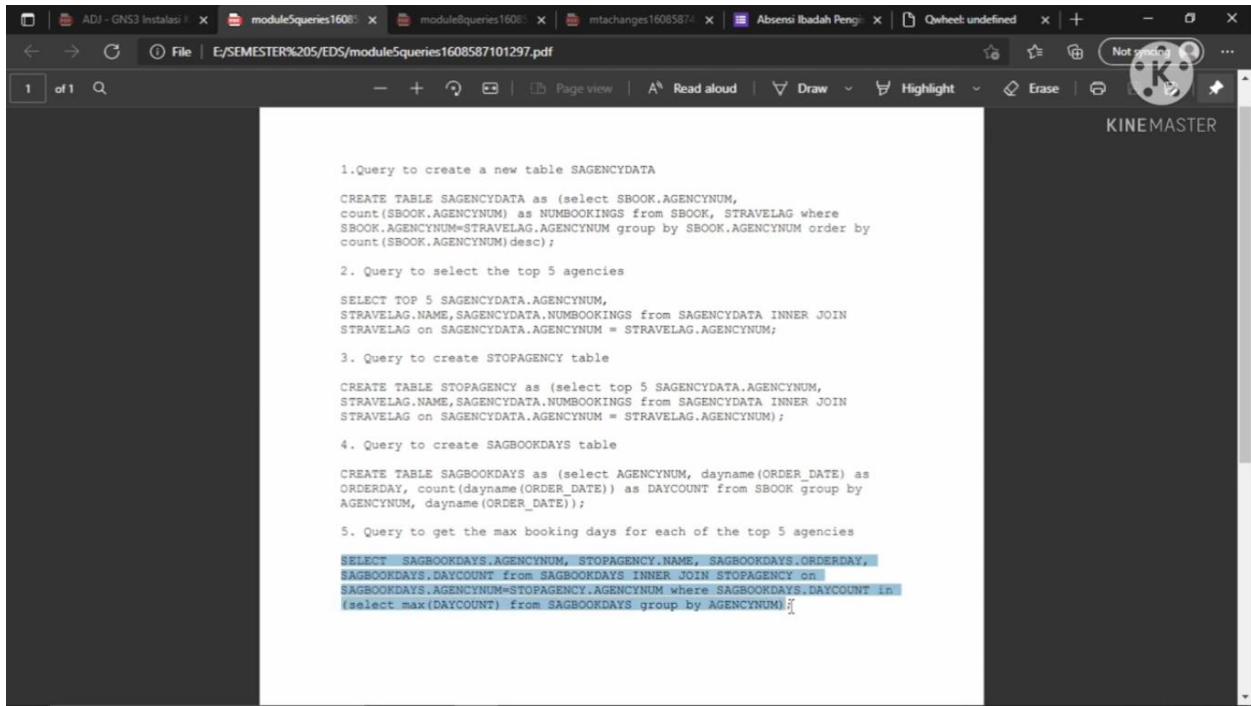
The screenshot shows the SAP HANA Database Explorer interface. In the center, there is a SQL console window titled "SQL Console 3.sql" containing the following SQL statement:

```
1 -> SELECT * FROM SAGBOOKDAYS
```

Below the SQL statement, the "Result" tab displays the query results in a table format:

	AGENCYNUM	ORDERDAY	DAYCOUNT
1	00000121	SATURDAY	3406
2	00000087	SATURDAY	3708
3	00000301	FRIDAY	3523
4	00000124	FRIDAY	3476
5	00000000	THURSDAY	26899
6	00000087	FRIDAY	3692
7	00000107	THURSDAY	3463
8	00000125	FRIDAY	3545

Paste Query untuk mendapatkan max booking days untuk top 5 agency



```
1.Query to create a new table SAGENCYDATA
CREATE TABLE SAGENCYDATA as (select SBOOK.AGENCYNUM,
count(SBOOK.AGENCYNUM) as NUMBOOKINGS from SBOOK, STRVELAG where
SBOOK.AGENCYNUM=STRVELAG.AGENCYNUM group by SBOOK.AGENCYNUM order by
count(SBOOK.AGENCYNUM) desc);

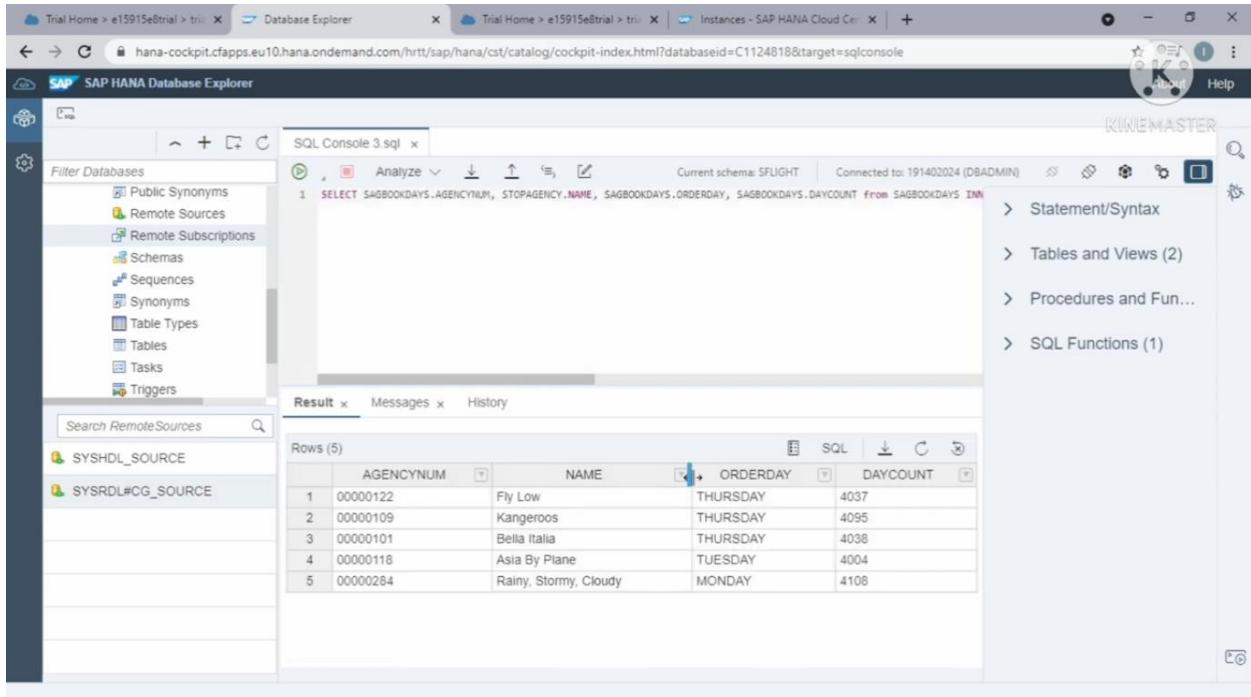
2. Query to select the top 5 agencies
SELECT TOP 5 SAGENCYDATA.AGENCYNUM,
STRVELAG.NAME, SAGENCYDATA.NUMBOOKINGS from SAGENCYDATA INNER JOIN
STRVELAG on SAGENCYDATA.AGENCYNUM = STRVELAG.AGENCYNUM;

3. Query to create STOPAGENCY table
CREATE TABLE STOPAGENCY as (select top 5 SAGENCYDATA.AGENCYNUM,
STRVELAG.NAME, SAGENCYDATA.NUMBOOKINGS from SAGENCYDATA INNER JOIN
STRVELAG on SAGENCYDATA.AGENCYNUM = STRVELAG.AGENCYNUM);

4. Query to create SAGBOOKDAYS table
CREATE TABLE SAGBOOKDAYS as (select AGENCYNUM, dayname(ORDER_DATE) as
ORDERDAY, count(dayname(ORDER_DATE)) as DAYCOUNT from SBOOK group by
AGENCYNUM, dayname(ORDER_DATE));

5. Query to get the max booking days for each of the top 5 agencies
SELECT SAGBOOKDAYS.AGENCYNUM, STOPAGENCY.NAME, SAGBOOKDAYS.ORDERDAY,
SAGBOOKDAYS.DAYCOUNT from SAGBOOKDAYS INNER JOIN STOPAGENCY on
SAGBOOKDAYS.AGENCYNUM=STOPAGENCY.AGENCYNUM where SAGBOOKDAYS.DAYCOUNT in
(select max(DAYCOUNT) from SAGBOOKDAYS group by AGENCYNUM);
```

Paste ke SQL Console lalu RUN, dan akan menampilkan daftar booking days seperti dibawah ini



SQL Console 3.sql

```
1 SELECT SAGBOOKDAYS.AGENCYNUM, STOPAGENCY.NAME, SAGBOOKDAYS.ORDERDAY, SAGBOOKDAYS.DAYCOUNT from SAGBOOKDAYS INNER JOIN STOPAGENCY on SAGBOOKDAYS.AGENCYNUM=STOPAGENCY.AGENCYNUM where SAGBOOKDAYS.DAYCOUNT in (select max(DAYCOUNT) from SAGBOOKDAYS group by AGENCYNUM);
```

Result

	AGENCYNUM	NAME	ORDERDAY	DAYCOUNT
1	00000122	Fly Low	THURSDAY	4037
2	00000109	Kangeroos	THURSDAY	4095
3	00000101	Bella Italia	THURSDAY	4038
4	00000118	Asia By Plane	TUESDAY	4004
5	00000284	Rainy, Stormy, Cloudy	MONDAY	4106

## Module 6 : Setting up your first project in SAP Business Application Studio

Klik trial, Lalu pilih Instance and Subscribers

SAP BTP Cockpit

Global Account: e15915e8trial - Account Explorer

All: 0 directories, 1 subaccounts | Subdomain: e15915e8trial-ga

Create Switch Global Account Delete Trial Account

Directories and Subaccounts Subaccounts (1)

Subaccounts

trial

Provider: Amazon Web Services (AWS)  
Region: Europe (Frankfurt)  
Environment: Multi-Environment

Help and Support Useful Links Legal Information

Learn how global accounts and subaccounts relate to each other and find recommendations for setting up your account model.

SAP BTP Cockpit

Subaccount: trial - Overview

General Cloud Foundry Environment Kyma Environment Entitlements

78 Entitlements 5 Instances Please wait

Subdomain: e15915e8trial Tenant ID: 4a8cac85-7eb9-4e0a-a60a-73e1d8e83d63 Subaccount ID: 4a8cac85-7eb9-4e0a-a60a-73e1d8e83d63 Created On: 15 Sep 2021, 15:05:48 (GMT+07:00) Modified On: 15 Sep 2021, 15:06:02 (GMT+07:00)

Provider: Amazon Web Services (AWS) Region: Europe (Frankfurt) Used for: Beta Feature

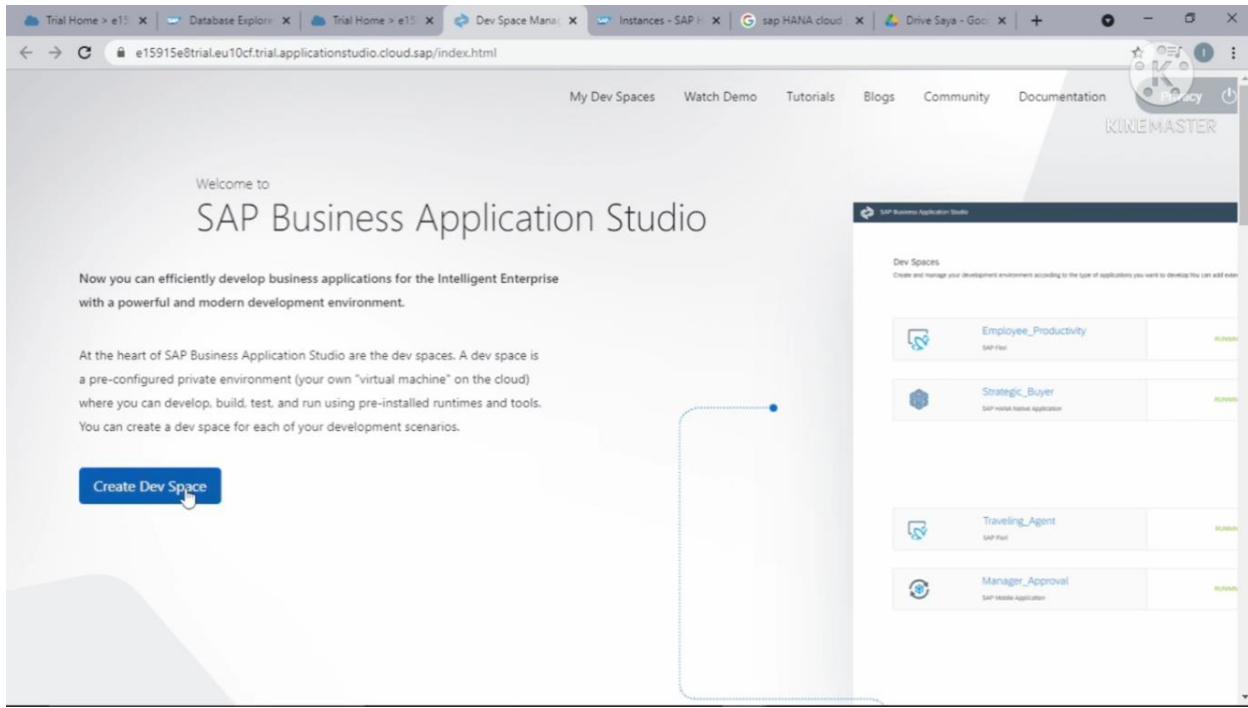
## Klik SAP Business Application Studio

The screenshot shows the SAP BTP Cockpit interface. On the left, the sidebar navigation includes Overview, Services (selected), Service Marketplace, Instances and Subscriptions (selected), Cloud Foundry, HTML5 Applications, Connectivity, Security, Entitlements, and Usage Analytics. Under Instances and Subscriptions, there is a 'Subaccount: trial - Instances and Subscriptions' section with a 'Create' button. Below it, a note says: 'To manage the Cloud Foundry user-provided service instances, navigate to Cloud Foundry - Spaces, select your space, and then from Services select Service Instances.' A search bar and dropdown filters for All Services, All Plans, and All Statuses are present. The 'Subscriptions (1)' tab is selected, showing a table with one row: Application (SAP Business Application Studio), Plan (trial), Created On (15 Sep 2021), Changed On (15 Sep 2021), and Status (Subscribed). The 'Instances (3)' tab is also visible. At the bottom, a note says 'Service instances created in: Cloud Foundry | Kyma/Kubernetes | Other environments'. A detailed view of the SAP Business Application Studio instance is shown on the right, including its plan (trial), status (Subscribed), creation date (15 Sep 2021), and change date (15 Sep 2021). It also includes tabs for Overview, Roles, and a description of the application.

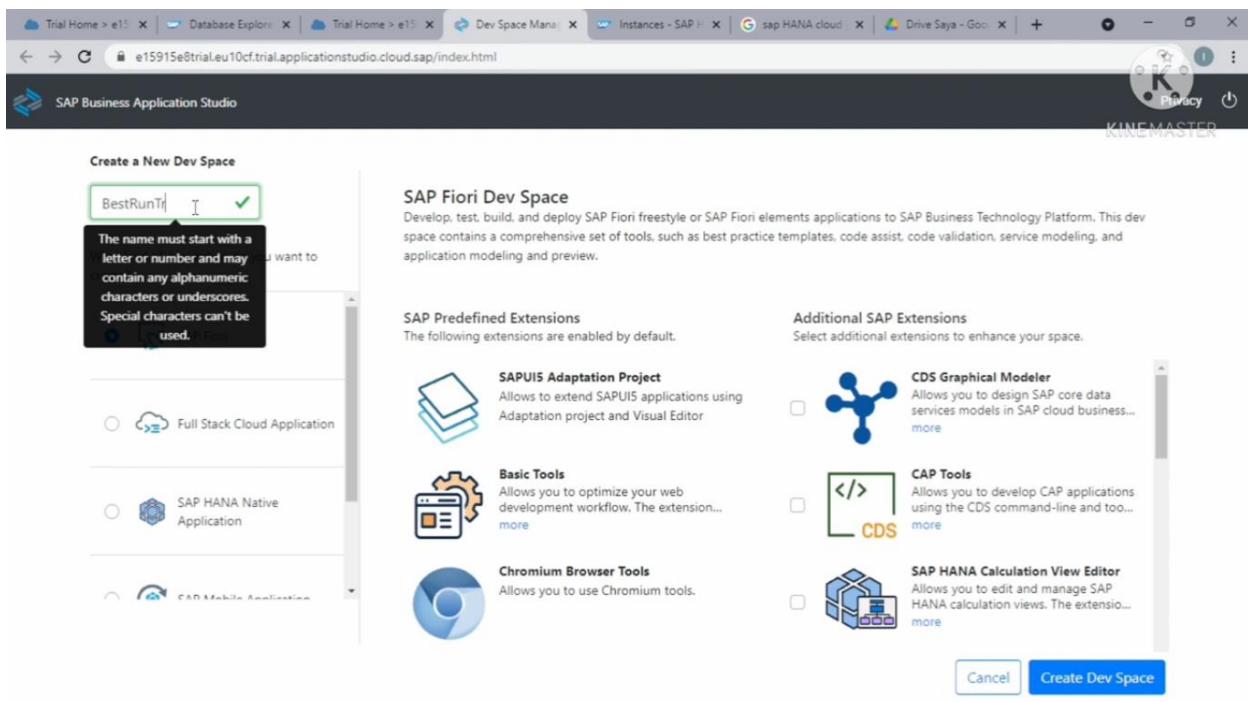
## Klik Go to Application

This screenshot is similar to the previous one but shows a 'Go to Application' button next to the instance details. The 'Go to Application' button is located in the top right corner of the detailed view window. The rest of the interface is identical to the first screenshot, showing the SAP BTP Cockpit dashboard with the SAP Business Application Studio application listed under the Subscriptions tab.

## Klik Create Dev Space



Buat nama untuk dev space, lalu pilih SAP HANA Native Application dan Create Dev Space



SAP Business Application Studio

Create a New Dev Space

BestRunTravel ✓

What kind of application do you want to create?

Full Stack Cloud Application

SAP HANA Native Application

SAP Mobile Application

**SAP Fiori Dev Space**

Develop, test, build, and deploy SAP Fiori freestyle or SAP Fiori elements applications to SAP Business Technology Platform. This dev space contains a comprehensive set of tools, such as best practice templates, code assist, code validation, service modeling, and application modeling and preview.

**SAP Predefined Extensions**

The following extensions are enabled by default.

**SAPUI5 Adaptation Project**

Allows to extend SAPUI5 applications using Adaptation project and Visual Editor

**Basic Tools**

Allows you to optimize your web development workflow. The extension...

**Chromium Browser Tools**

Allows you to use Chromium tools.

**Additional SAP Extensions**

Select additional extensions to enhance your space.

**CDS Graphical Modeler**

Allows you to design SAP core data services models in SAP cloud business... more

**CAP Tools**

Allows you to develop CAP applications using the CDS command-line and too... more

**SAP HANA Calculation View Editor**

Allows you to edit and manage SAP HANA calculation views. The extensio... more

**Create Dev Space**

SAP Business Application Studio

Create a New Dev Space

BestRunTravel ✓

What kind of application do you want to create?

Full Stack Cloud Application

SAP HANA Native Application

SAP Mobile Application

**SAP HANA Native Application Dev Space**

Build and deploy native SAP HANA applications or analytical models. This dev space contains a comprehensive set of editors to support the creation of database artifacts (calculation views, tables, SQLScript procedures, and more), as well as tools to enable an end-to-end development flow from project creation to the deployment to the SAP Cloud Platform.

**SAP Predefined Extensions**

The following extensions are enabled by default.

**SAPUI5 Layout Editor**

Allows you to visually develop your XML view

**SAP Business Application Studio Extension Development**

Allows you to use create, deploy, and manage your own SAP Business...

**Workflow Management**

Allows you to create workflow applications and process templates

**Create Dev Space**

Dev Space berhasil dibuat, lalu tunggu sampai “Running”, lalu Klik BestRunTravel

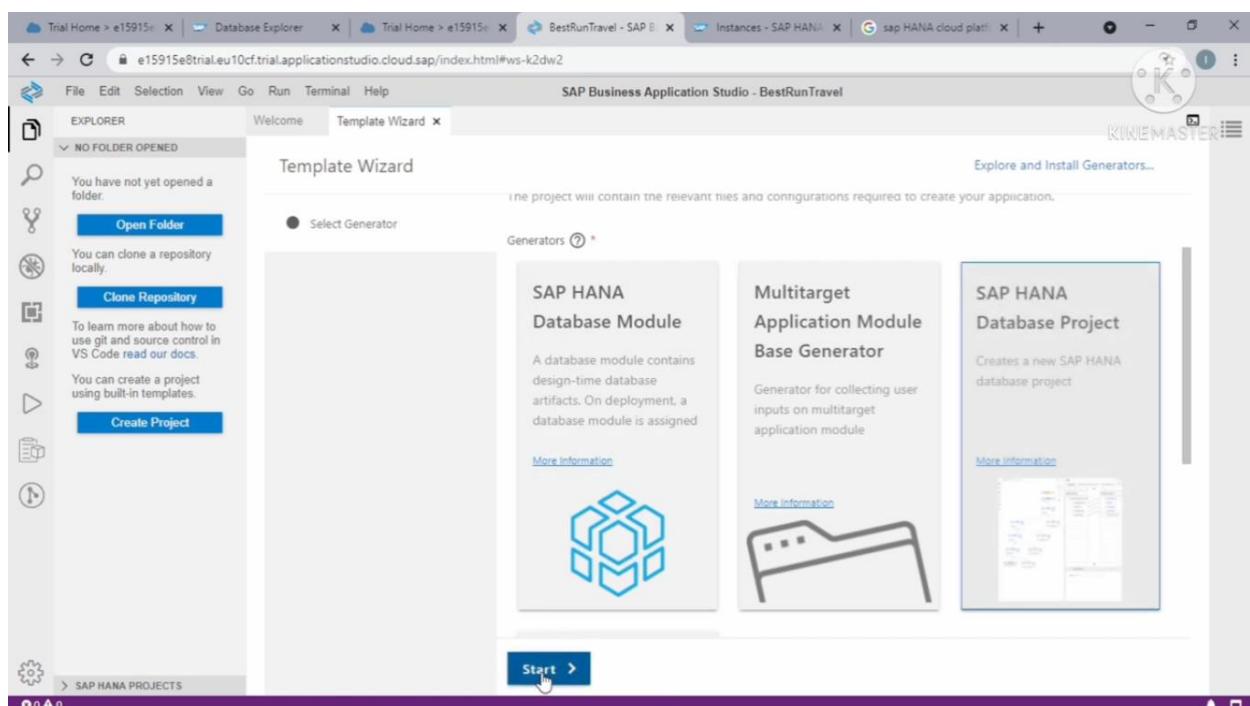
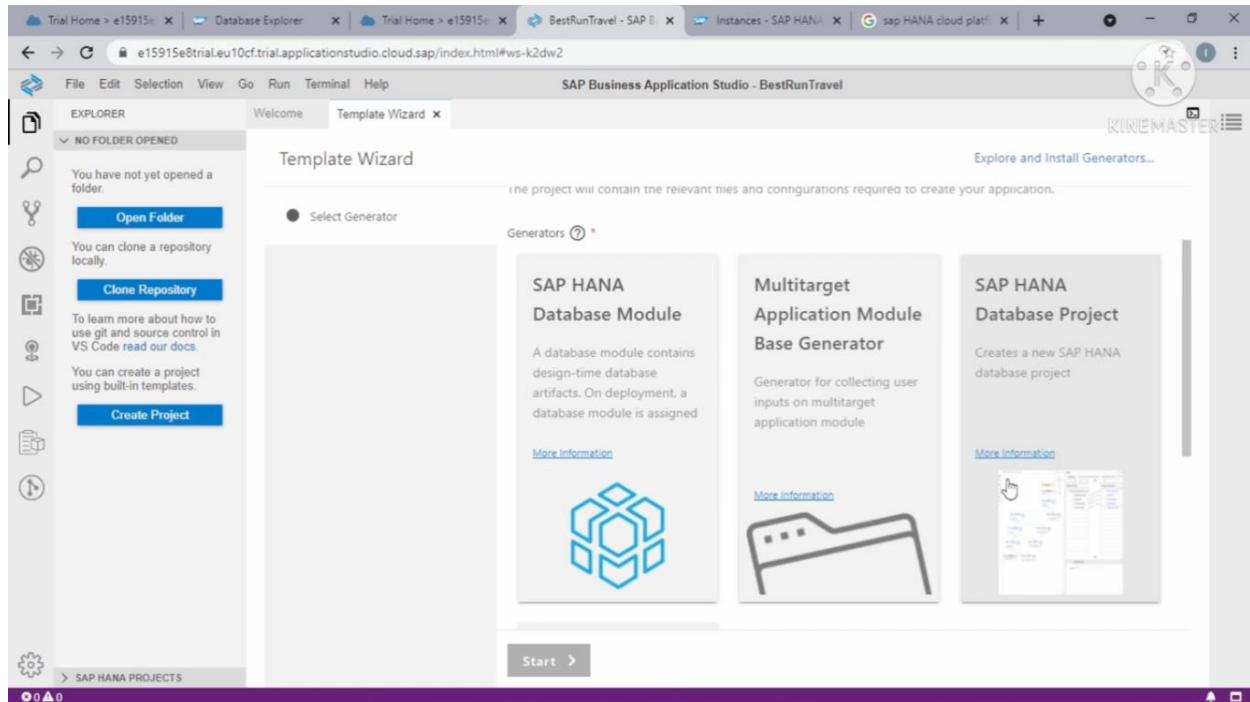
The screenshot shows the SAP Business Application Studio interface. In the top navigation bar, there are several tabs: Trial Home > e15915..., Database Explorer, Trial Home > e15915..., Dev Space Manager, Instances - SAP HANA, and sap HANA cloud plat. The main content area is titled "Dev Spaces". It displays a single dev space entry:

BestRunTravel	SAP HANA Native Application	STARTING	Created On 10/22/2021 11:10 PM	ID ws-k2dw2	Disk Usage Currently unavailable	Actions (refresh, download, delete, edit)
---------------	-----------------------------	----------	-----------------------------------	----------------	-------------------------------------	---

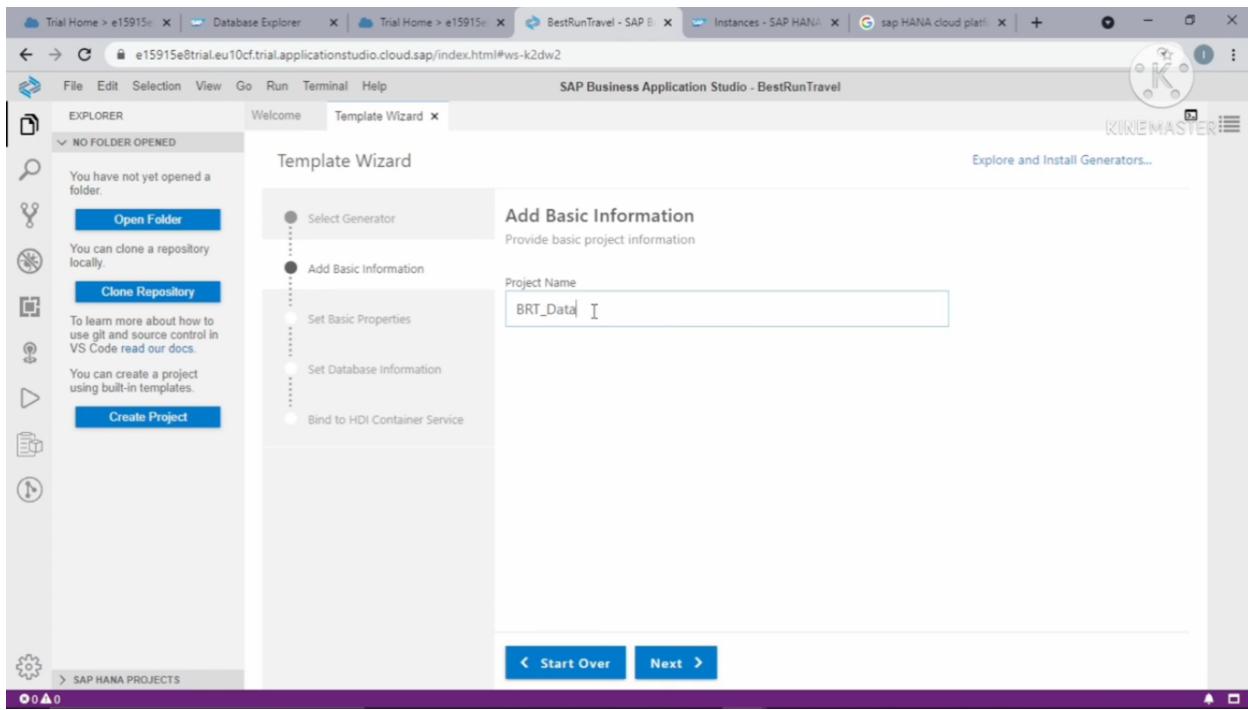
The screenshot shows the SAP Business Application Studio interface again. The dev space "BestRunTravel" is now listed as "RUNNING". The URL in the browser address bar is https://e15915e8trial.eu10cftrial.applicationstudio.cloud.sap/index.html#ws-k2dw2.

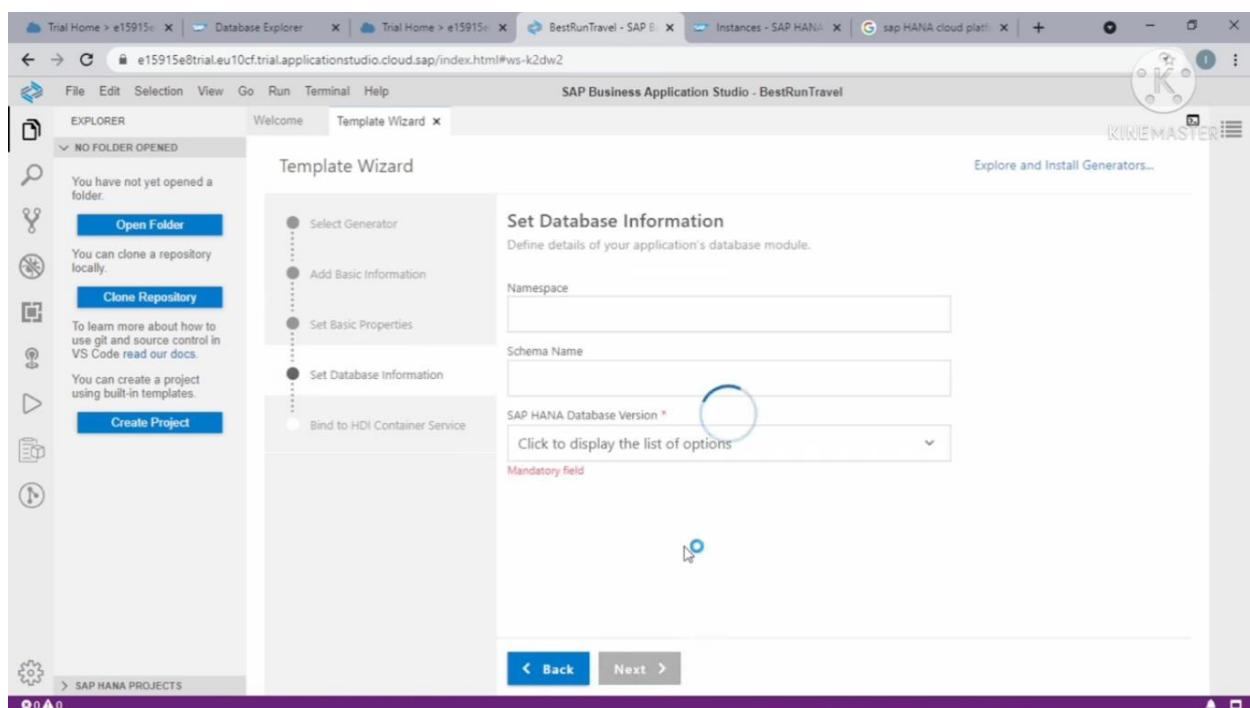
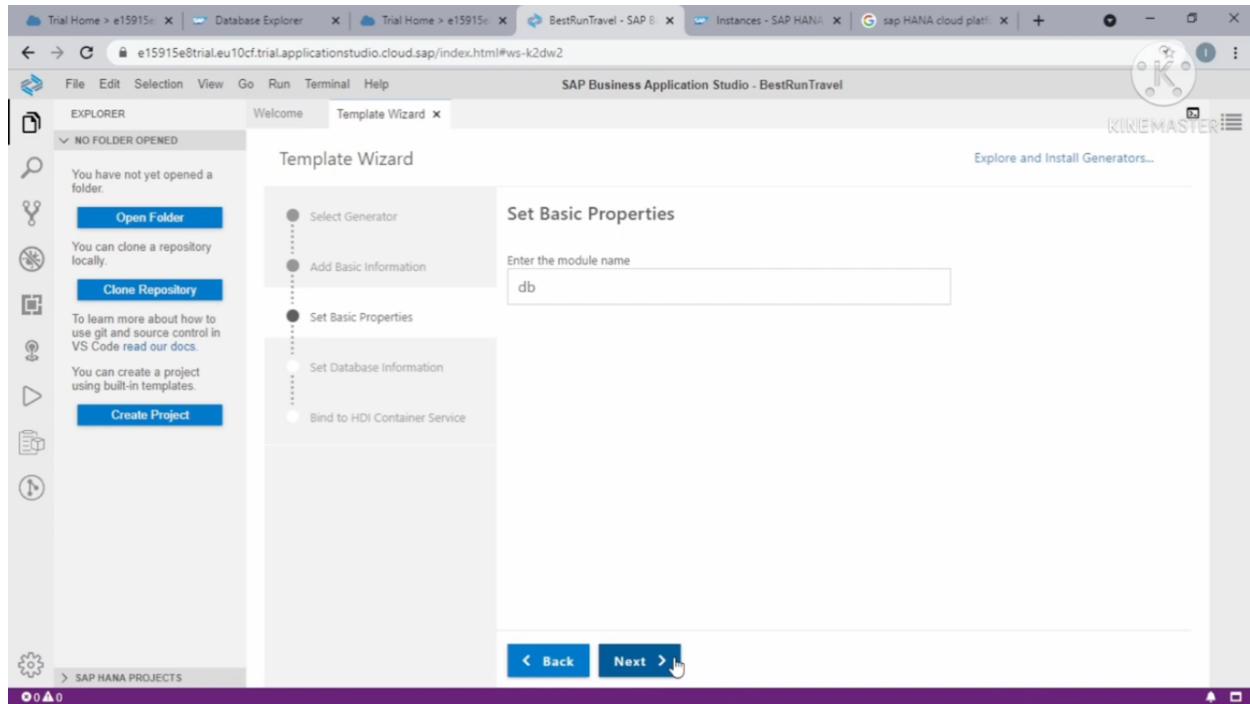
BestRunTravel	SAP HANA Native Application	RUNNING	Created On 10/22/2021 11:10 PM	ID ws-k2dw2	Disk Usage 16 MB / 3.9 GB	Actions (refresh, download, delete, edit)
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Klik Create project with template, dan akan menampilkan halaman seperti dibawah ini. Setelah itu pilih SAP HANA Database Project dan klik Start.

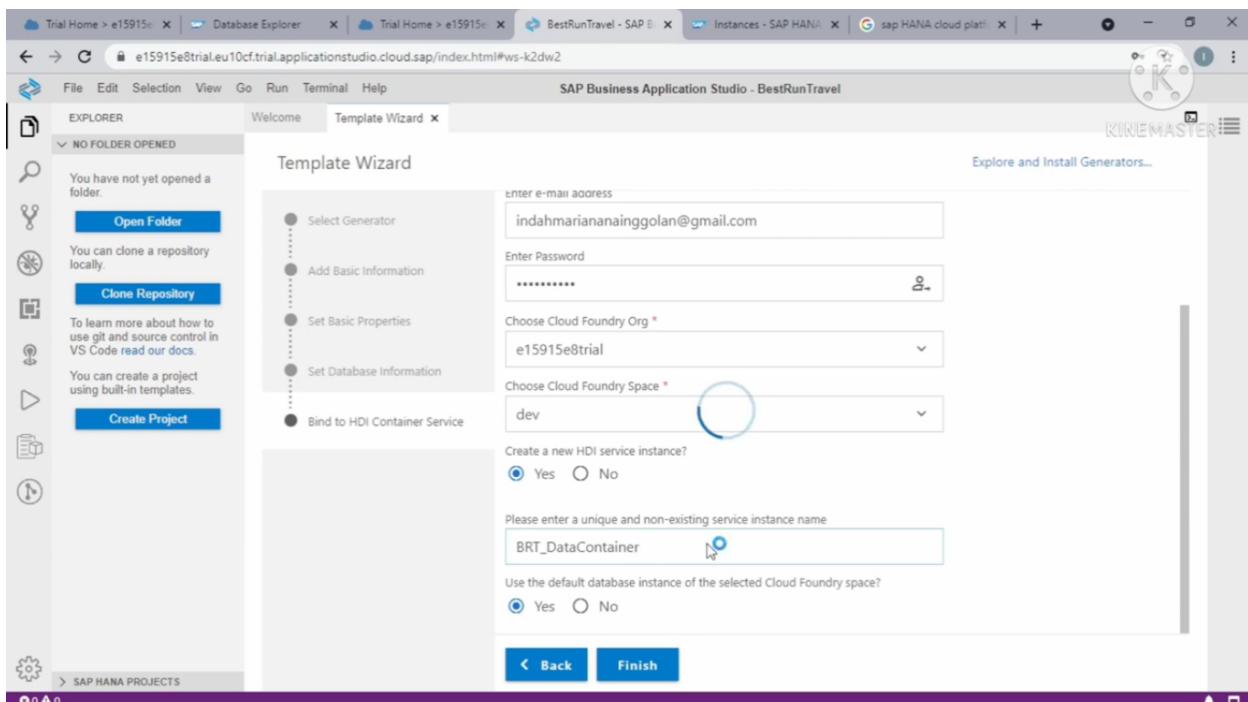
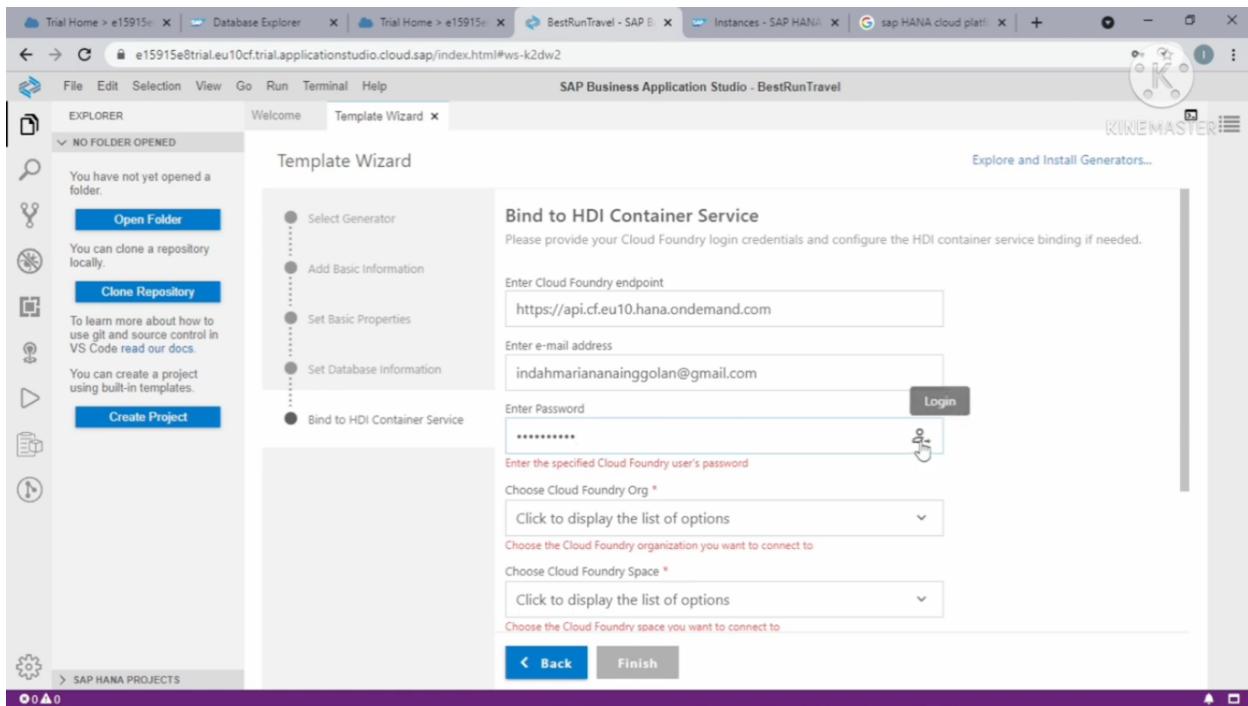


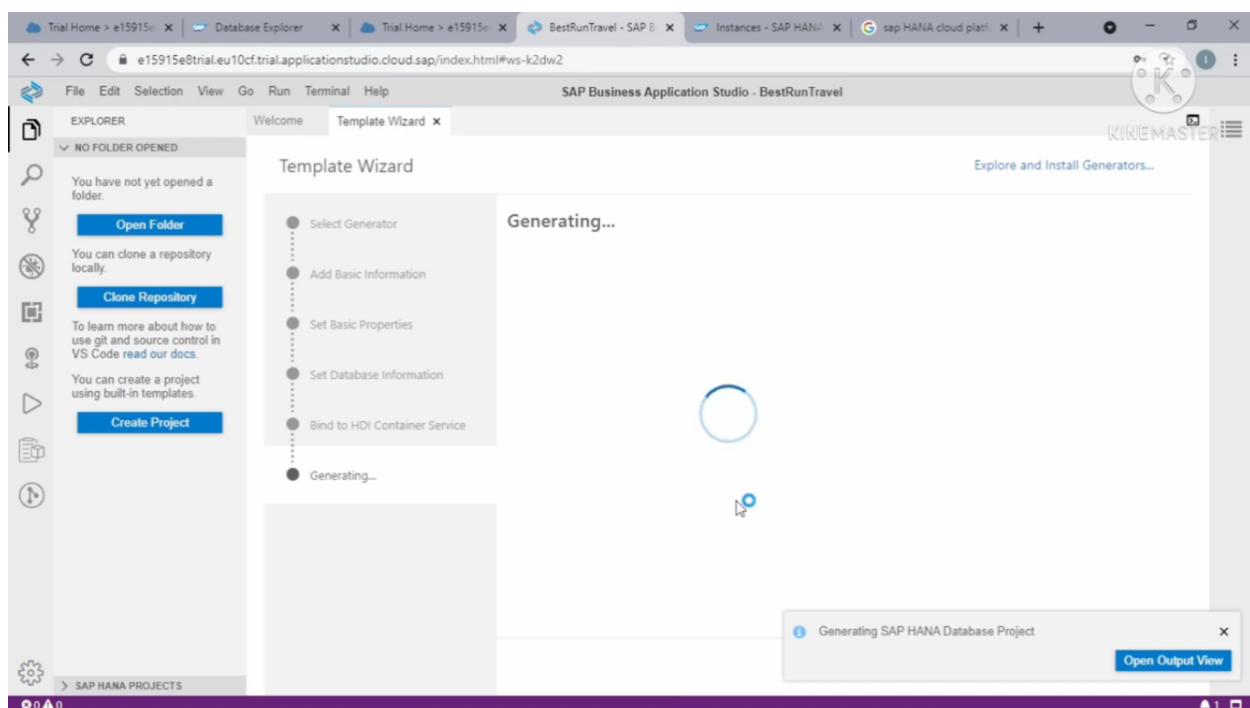
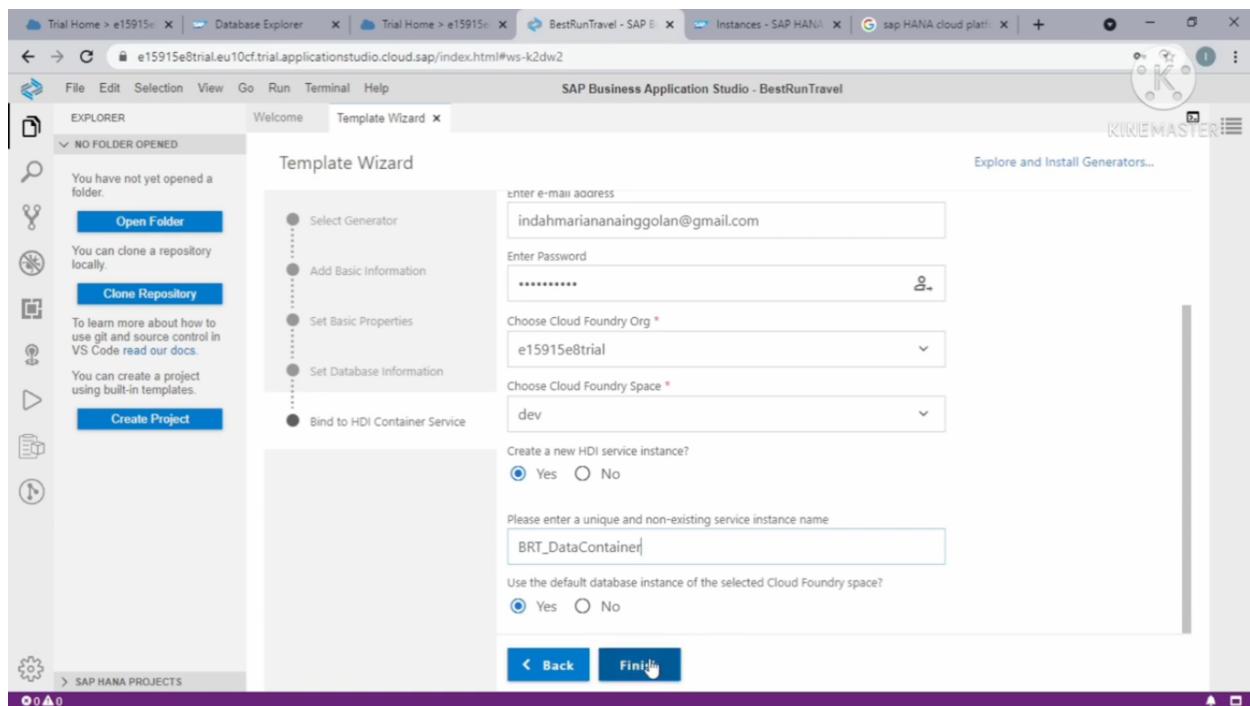
Disini kita akan membuat nama untuk project kita



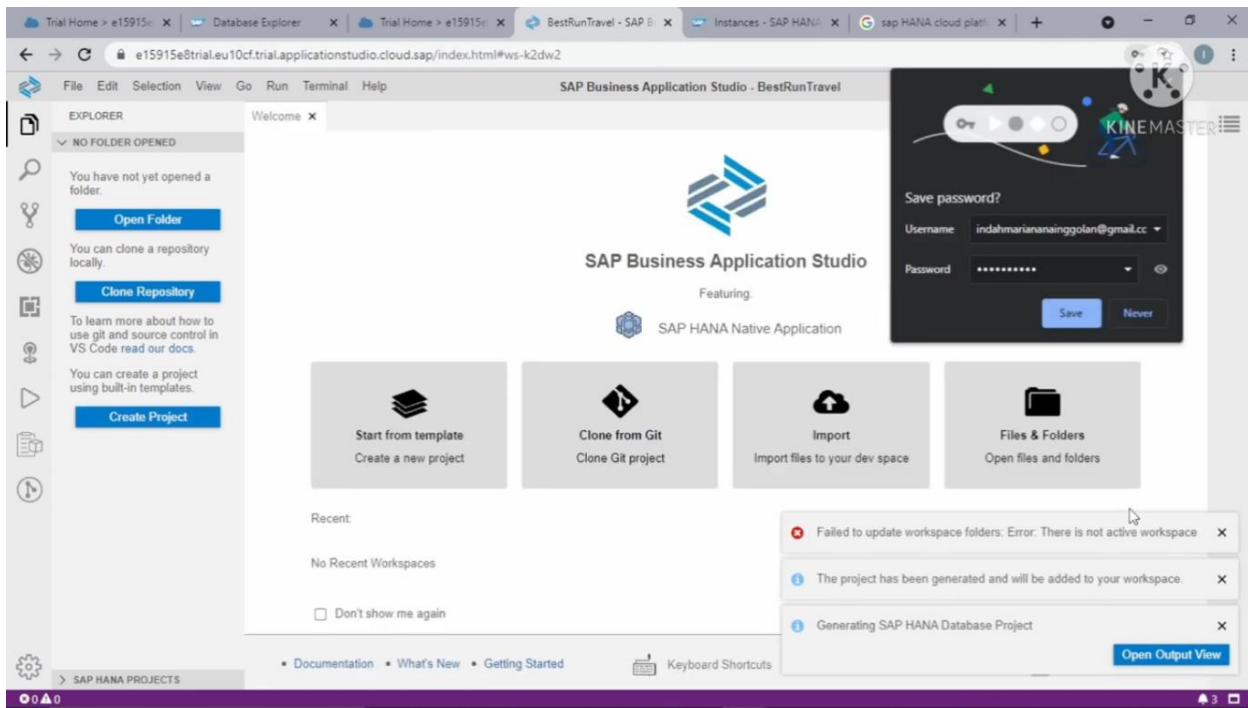


Masukkan email dan password, lalu klik Login





Kita kan dialihkan ke halaman project kita



Tetapi sebelum itu, Copy SQL Endpoint

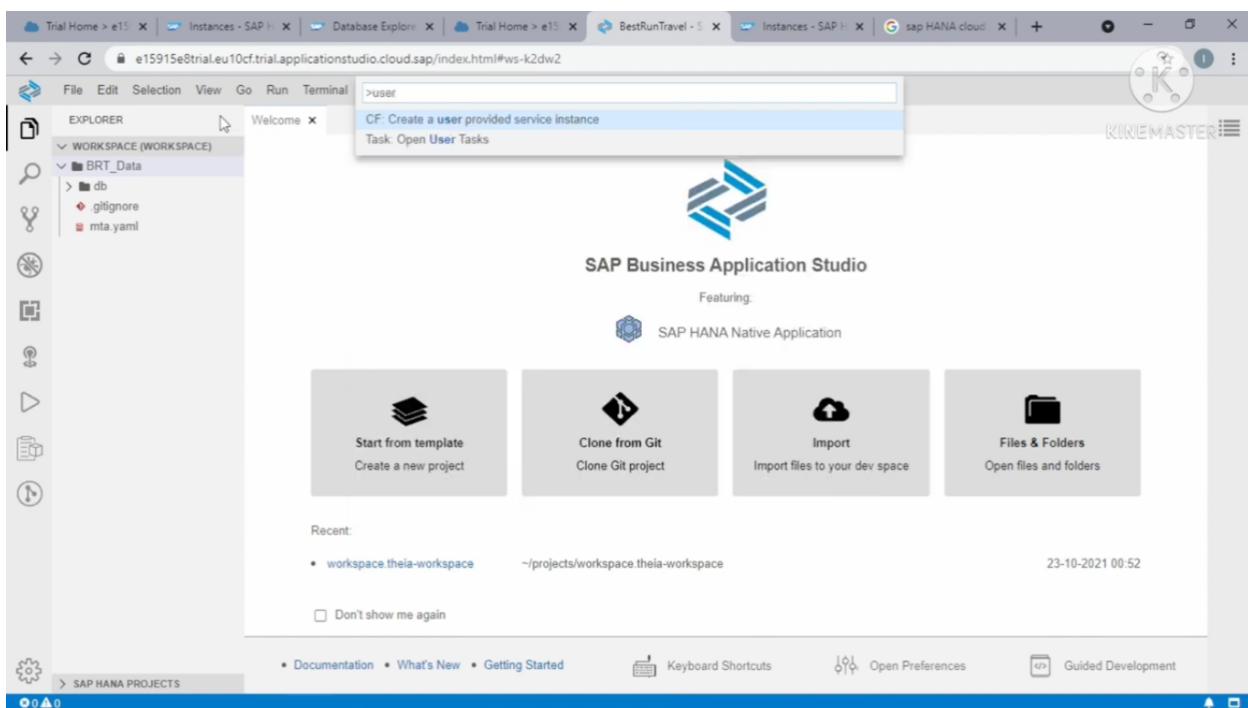
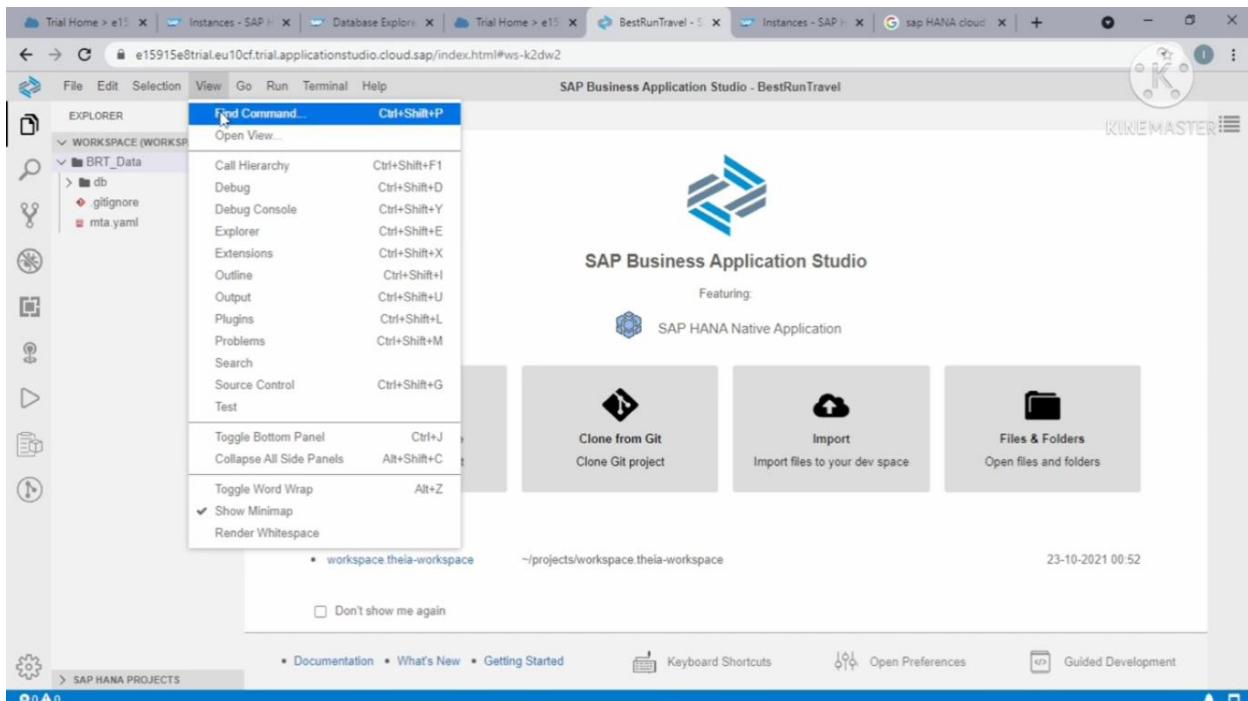
A screenshot of the SAP HANA Cloud Central Instances page. The left sidebar has 'Instances' and 'Database Migrations' options. The main area shows a table of instances under the heading 'All Instances'. One instance named 'Tugas EDS' is selected. A context menu is open over this instance, listing options like 'Edit', 'Copy SQL Endpoint' (which is highlighted with a blue border), 'Copy Instance ID', 'Copy Configuration', 'Stop', 'Upgrade', and 'Delete'. Other options like 'Open in SAP HANA Cockpit' and 'Open in SAP HANA Database Explorer' are also listed. The table columns include Status, Name, Type, Notifications, Memory, Storage, and Components. The 'Tugas EDS' instance is shown as 'RUNNING' with a 'SAP HANA Database' type, 30 GB memory, 120 GB storage, and 2 vCPUs.

Lalu Pastekan yang sudah di copy ke “host:”, lalu ubah user dan password yang sesuai, dan copy seluruh query dibawah ini

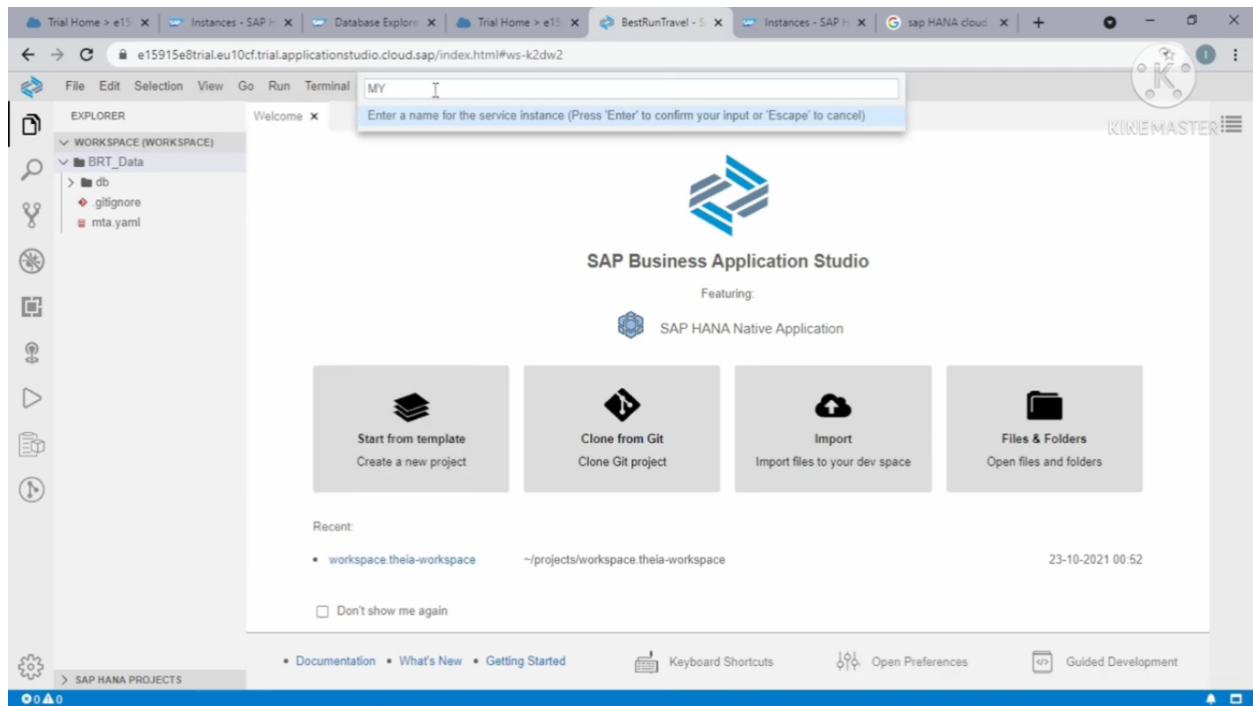


```
"Untitled - Notepad
File Edit Format View Help
"host": "75a54b07-a88e-44e5-8fd8-63a972728d88.hana.trial-eu10.hanacloud.ondemand.com:443",
"port": "443",
"user": "<granting DB user>",
"password": "<password>",
"driver": "com.sap.db.jdbc.Driver",
"tags": [
"hana"
],
"endpoint": "https://api.cf.sap.hana.ondemand.com",
"encrypt": true,
"validate_certificate": true,
"certificate": "-----BEGIN CERTIFICATE-----\nMIIDrzCCApagAwIBAgIQCQDvgVpbCRgHdwJWZHSjANBgkqhkiLG9w0BAQUFADBh\nnMqsuC\nQYDVQGEwVUzvMBNGA1UEChMMRGlnauN1cnQgSw5jMRkuFuVvDVOQjExB3nd3cuZGlnawI\n cnQuY29tMSAwHgYDVQOExdEaWdpq2VydCBhbG91YwglUm9vdCD0\nnQTAeFw0hNfExMTAuMDA\nwMDAfW0zMTExTAvdIDAwMDBaMGExCzA2BgnVBYTA1VT\nnMRUAEnwDVQOKEixEaWdpq2VydC\nB3bmMxGTAXBgNVBAsTEHd3dy5kaWdpV2YdC5j\nnb20xIDAeBgNVBAMTF0RpZ221DZXJ0IEdsb\n23hbCB5b290tEN8M1IB1jANBgqhk1G\nn9w00AQEFAAOCAG8AMII8CgkCAQEAAjvhEXLeqTT\no1eqUKKPC3eQya17hL01lsB\nnCSMAZOnTjC3U\nnDxGkAV531jLdhwZAAIEJzs4bg//fzTt\nxRulWzscF37nh097nnhv0fe63SKM1ztavegw8mV/S10+vbfaq77ukNd0f3p4mVmfaG5c1z\nJLw7A6Fpt\\n43C/dxC//AH2hdmRBBYQ11GNXRon5H4idqJoz-Ek1YYiuvX7Q6hL+hqkplf\nT7Pvn19sd16gSzeRntw15m30FBqQasv+zBMUZBFHwymemr\n/7vrTC0LUq7dBmtcM10/4\\ngd\nW7Jvg/rV0SSiichl0xBh33shbyTAp0B6j5tSjletX+jkMoVjwIDAQABz2MwYTao\nnBgNvH088A\nf8EBAMCAYYwDwDVROTAQH/BAluAwEB\n/zAdBgNVHQ4FgQJA95QWVbR\nnLTm8KP1Gx0D17I9\n0VuhWvYDVR0jBBgwFoAUJA95QWbRTLtm8KP1Gx0D17190Vw\nnQYJKoZInhcNAQEFBQADggE\nBAMuC6pIEIxK+\\tEnE95sPTfrtgT1exKIoYQ/Esr\\nhAtudxH/vTBH1jLuG2cen1nmCm\\Eb\nXjCKhzulYimZOMkD1qu8cvOp\\2P5Adg\\n60\\nVsJ8di041P0jmP6P6fbtGbfYmbb0W5bj\nfIttep3Sp+dw0IRwcbAT+\\tK1JF\\nPn1u1kaY41B1qfv\\8NZ5YbberOg0zW6sRbc4L.0na4U+\nKr2kU886UA3Lu\\EV01s\\nYSEY1Q5teDws0o8rp+uvFRTP2lnBuTsh4pFsiv9kuXc1vzDAGyS\nj4dp30d8tbQK\\nCAUw7C29C79Fv1C5qfPrmAESrcilxpg0X40KPMbp1ZWVbd4=\\n-----END\nCERTIFICATE-----"\n75a54b07-a88e-44e5-8fd8-63a972728d88.hana.trial-eu10.hanacloud.ondemand.com:443
```

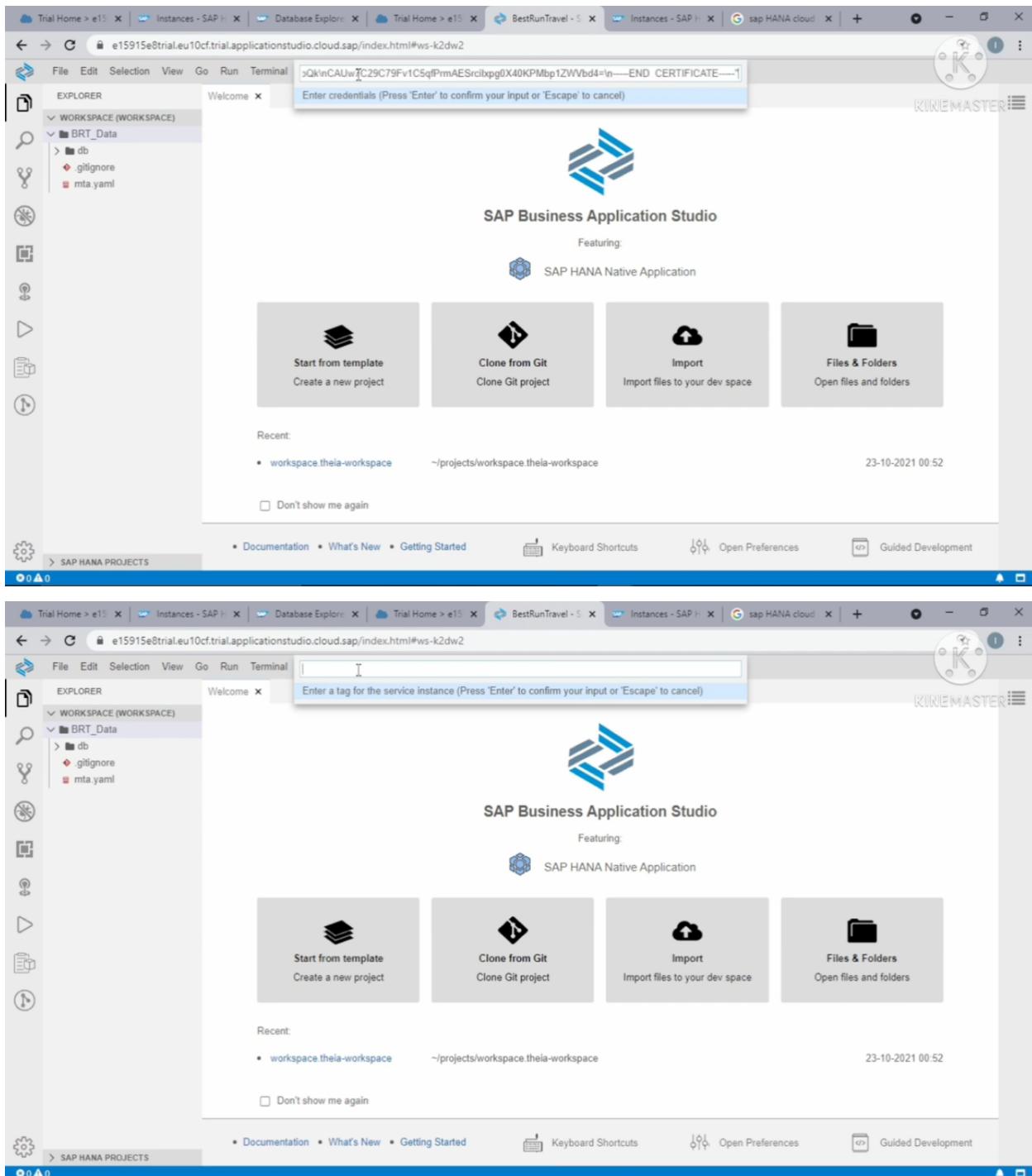
Klik view dan find command, lalu ketik create user



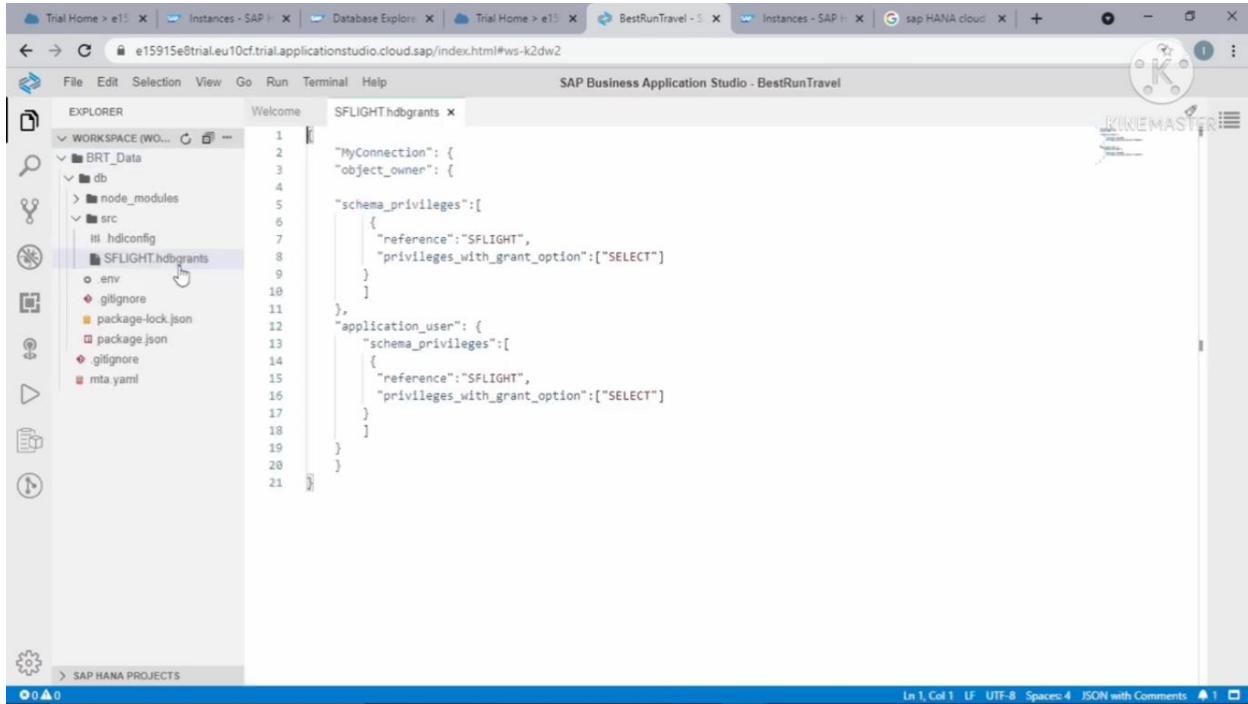
Masukan nama untuk service instance lalu tekan enter



Masukkan query yang sudah kita copy diatas , lalu enter



Sebelum kesini , klik src lalu upload file yang bernama SFLIGHT.hdbgrants, lalu buka dan ubah Myconnection dengan nama project kita

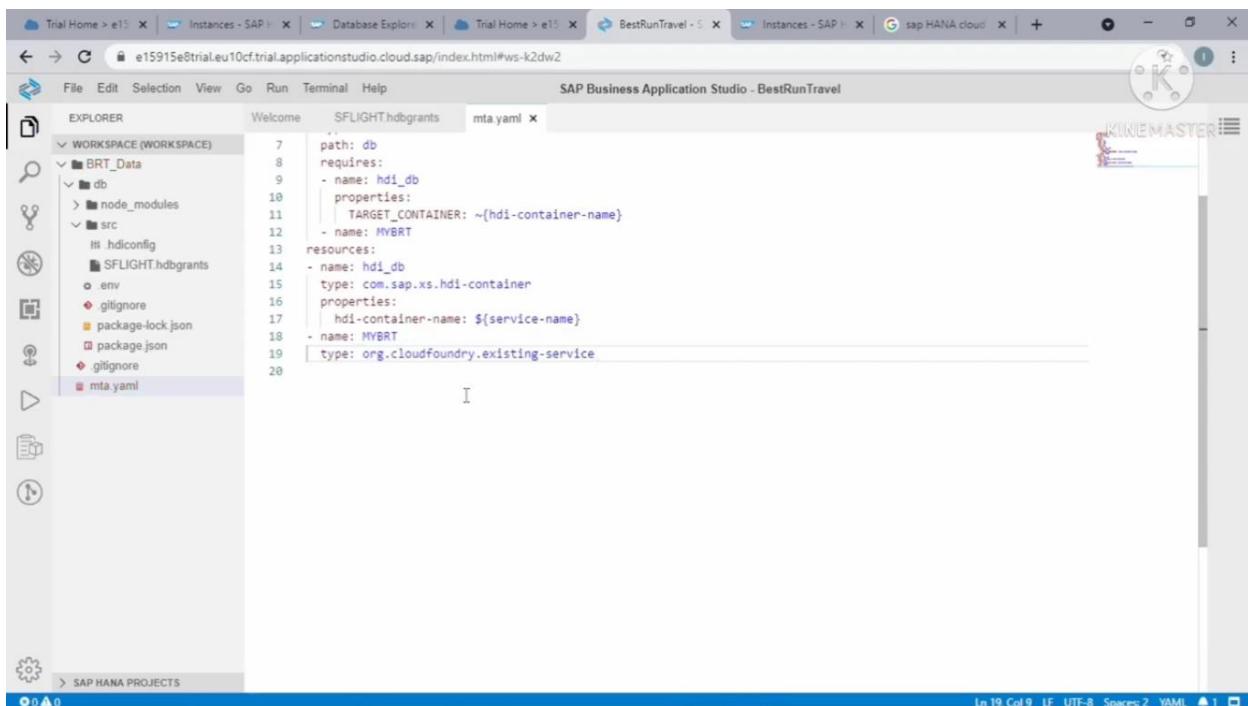


The screenshot shows the SAP Business Application Studio interface. In the center, there is a code editor window titled "SFLIGHT.hdbgrants" containing the following JSON code:

```
1 "MyConnection": {
2   "object_owner": {
3     "schema_privileges": [
4       {
5         "reference": "SFLIGHT",
6         "privileges_with_grant_option": ["SELECT"]
7       }
8     ],
9     "application_user": {
10       "schema_privileges": [
11         {
12           "reference": "SFLIGHT",
13           "privileges_with_grant_option": ["SELECT"]
14         }
15       ]
16     }
17   }
18 }
```

The "src" folder in the Explorer view is selected, and the "SFLIGHT.hdbgrants" file is highlighted.

Buka file mta.yaml, ubah sama seperti dibawah ini

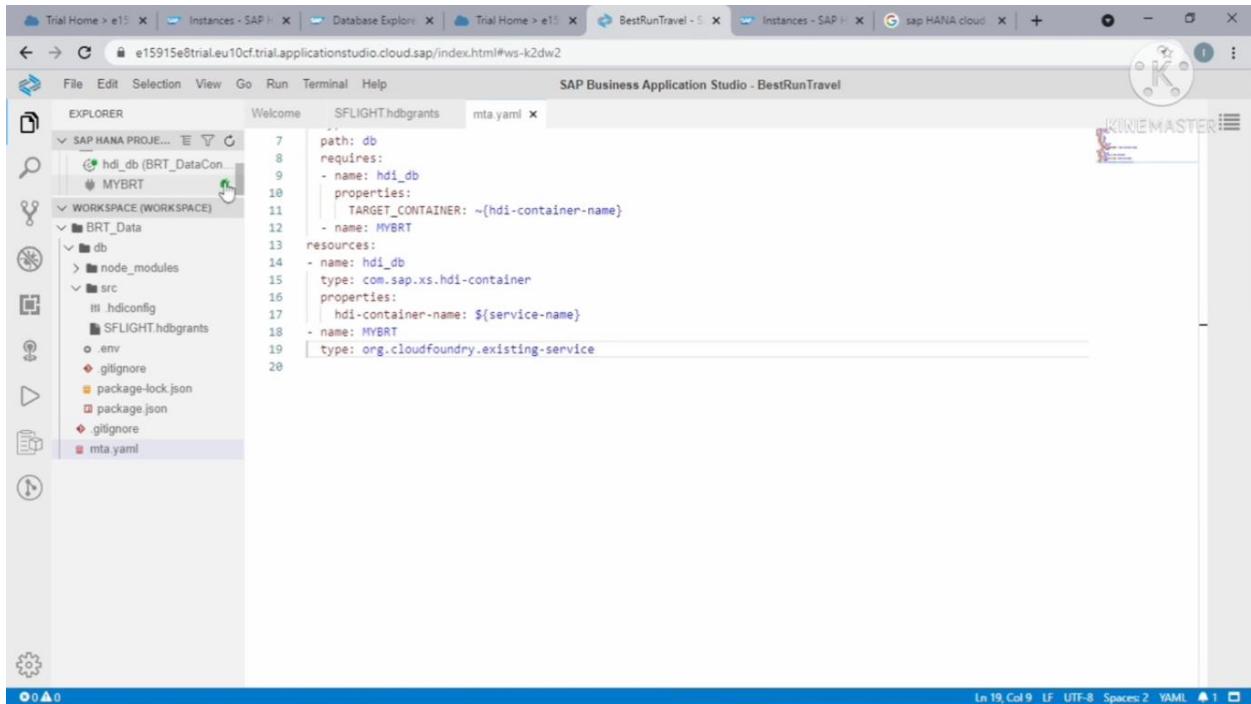


The screenshot shows the SAP Business Application Studio interface. In the center, there is a code editor window titled "mta.yaml" containing the following YAML code:

```
7 path: db
8 requires:
9 - name: hd1_db
10 properties:
11   TARGET_CONTAINER: ~{hd1-container-name}
12 - name: MYBRT
13 resources:
14 - name: hd1_db
15   type: com.sap.xs.hdi-container
16   properties:
17     hd1-container-name: ${service-name}
18 - name: MYBRT
19   type: org.cloudfoundry(existing-service)
```

The "src" folder in the Explorer view is selected, and the "mta.yaml" file is highlighted.

Klik SAP HANA Project, lalu cari database connections maka sudah terdaftar project yg sudah kita buat “MYBRT” klik icon yang berwarna hijau di kanan untuk mengkoneksikan

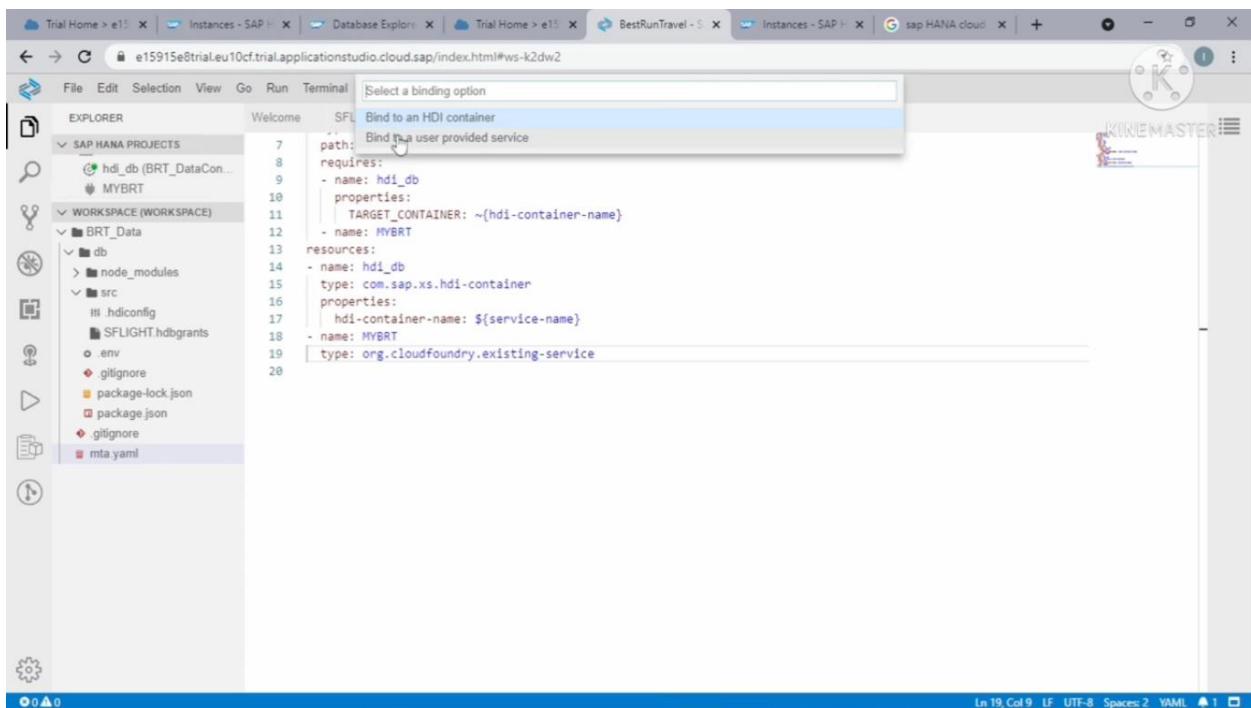


The screenshot shows the SAP Business Application Studio interface. In the top navigation bar, there are several tabs: Trial Home > e15, Instances - SAP, Database Explore, Trial Home > e15, BestRunTravel, Instances - SAP, and sap HANA cloud. The main area has a title bar "SAP Business Application Studio - BestRunTravel". On the left is the "EXPLORER" view, which lists "SAP HANA PROJECTS" containing "hdi\_db (BRT\_DataCon..." and "MYBRT". It also shows a "WORKSPACE (WORKSPACE)" section with "BRT\_Data" containing "db" and "src" folders, and "hdiconfig" and "SFLIGHT.hdbgrants" files. A file named "mta.yaml" is selected in the Explorer. To the right of the Explorer is a code editor window displaying the following YAML code:

```
path: db
requires:
- name: hdi_db
  properties:
    TARGET_CONTAINER: ~{hdi-container-name}
- name: MYBRT
resources:
- name: hdi_db
  type: com.sap.xs.hdi-container
  properties:
    hdi-container-name: ${service-name}
- name: MYBRT
  type: org.cloudfoundry(existing-service)
```

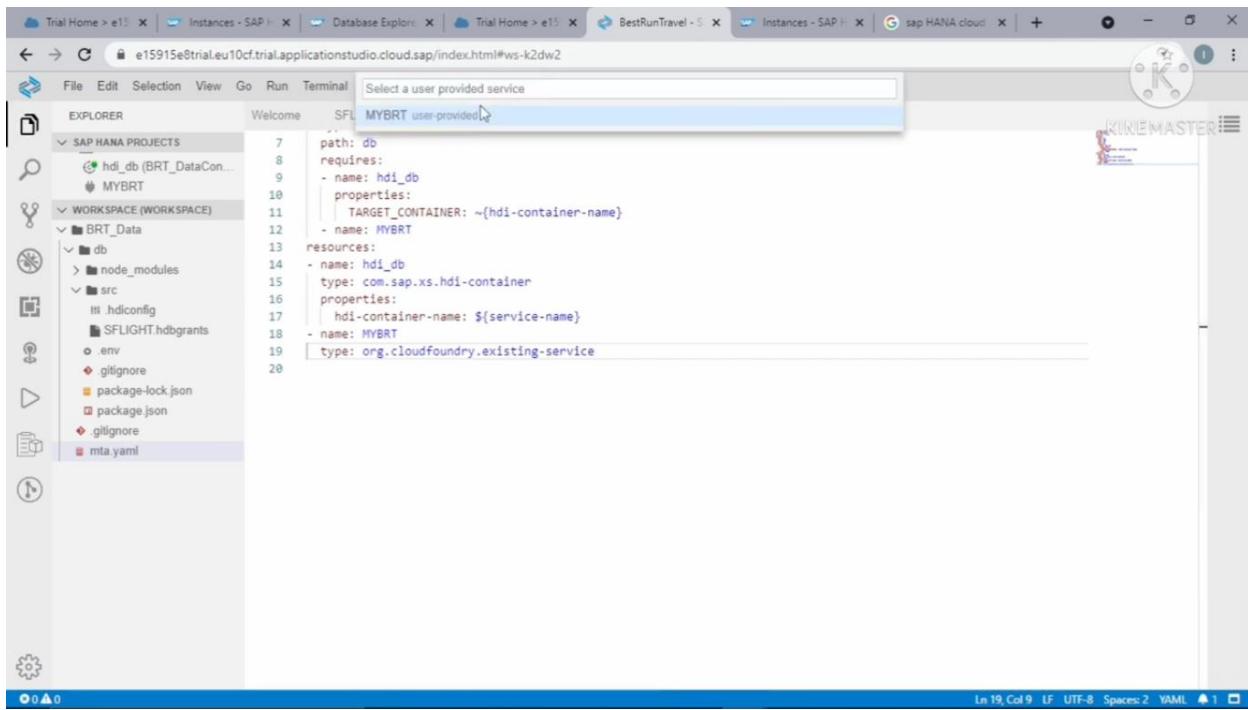
The status bar at the bottom indicates "Ln 19, Col 9 LF UTF-8 Spaces:2 YAML 1".

Pilih Bind to a user provided service



This screenshot is similar to the previous one, showing the SAP Business Application Studio interface. The "mta.yaml" file is still selected in the Explorer view. A context menu is open over the file, with the option "Bind to a user provided service" highlighted. Other options in the menu include "Bind to an HDI container". The code editor window and status bar are identical to the first screenshot.

## Pilih MYBRT

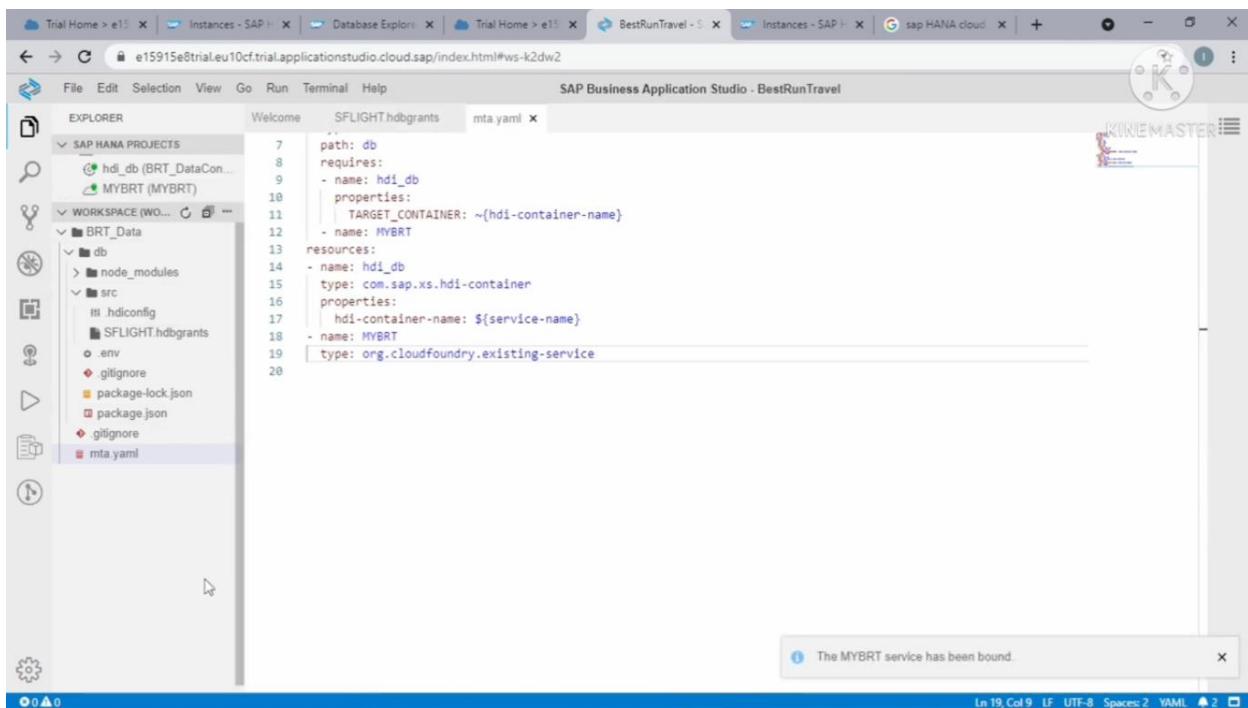


The screenshot shows the SAP Business Application Studio interface. In the center, there is a code editor window titled "mta.yaml" with the following YAML configuration:

```
path: db
requires:
- name: hdi_db
properties:
  TARGET_CONTAINER: ~(hdi-container-name)
resources:
- name: hdi_db
type: com.sap.xs.hdi-container
properties:
  hdi-container-name: ${service-name}
- name: MYBRT
type: org.cloudfoundry.existing-service
```

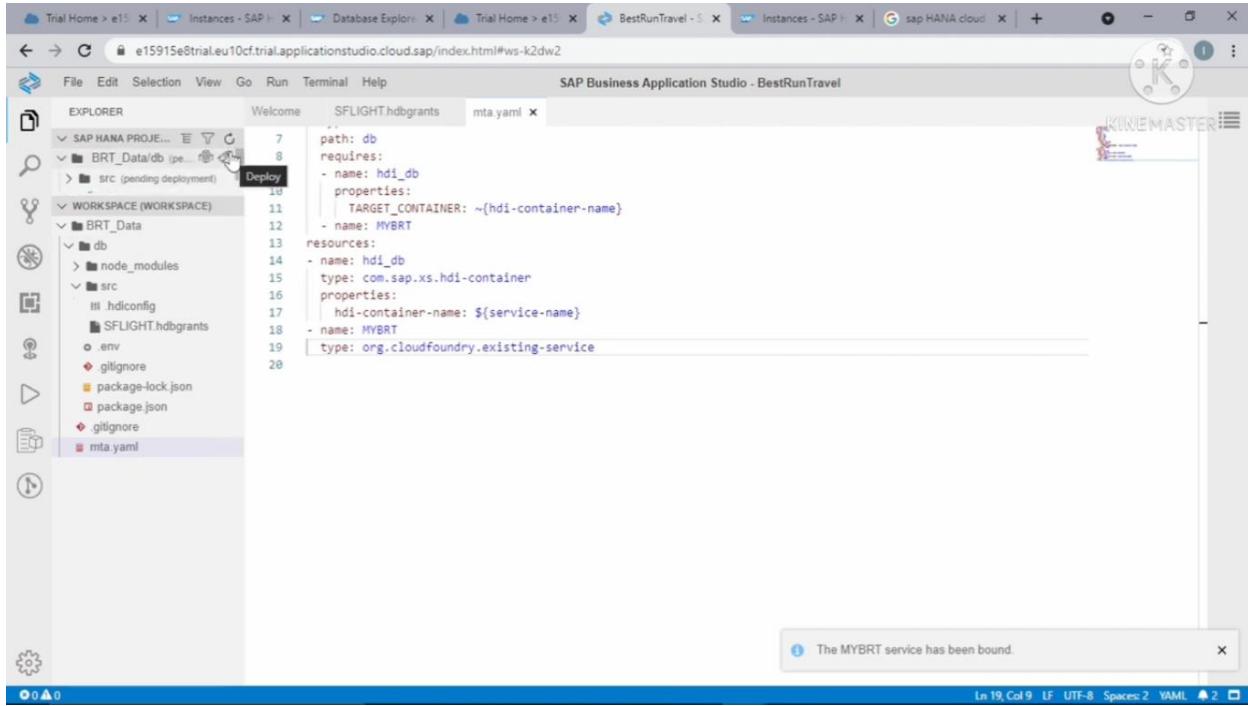
The "mta.yaml" file is selected in the Explorer sidebar. A search bar at the top right contains the text "Select a user provided service" and "MYBRT user-provided". A tooltip or dropdown menu is visible above the search bar, showing the option "MYBRT user-provided". The status bar at the bottom indicates "Ln 19, Col 9 LF UTF-8 Spaces 2 YAML ▲ 1".

Maka MYBRT sudah terkoneksi



The screenshot shows the SAP Business Application Studio interface with the title "SAP Business Application Studio - BestRunTravel". The Explorer sidebar shows the "mta.yaml" file is selected. A message box at the bottom right says "The MYBRT service has been bound." The status bar at the bottom indicates "Ln 19, Col 9 LF UTF-8 Spaces 2 YAML ▲ 2".

## Lalu klik deploy



Kita berhasil membuat project di SAP Bussiness Application Studio

The terminal window displays the deployment logs for the "BRT\_Data\_HDI\_DB" module:

```
Task: Deploy module at /home/user/projects/BRT_Data/db x
Deploying to the container "BRT_DATA_HDI_DB_1"...
Starting make in the container "BRT_DATA_HDI_DB_1" with 0 files to deploy, 0 files to undeploy...
Enabling table replication for the container schema "BRT_DATA_HDI_DB_1"...
Enabling table replication for the container schema "BRT_DATA_HDI_DB_1"... ok (0s 2ms)
Starting make in the container "BRT_DATA_HDI_DB_1" with 0 files to deploy, 0 files to undeploy... ok (0s 0ms)
Default role handling needed; global role "BRT_DATA_HDI_DB_1::access_role" will not be adapted
No default-access-role handling needed; global role "BRT_DATA_HDI_DB_1::access_role" will not be adapted
Unlocking the container "BRT_DATA_HDI_DB_1"... ok (0s 0ms)
Unlocking the container "BRT_DATA_HDI_DB_1"... ok (0s 0ms)
Deployment to container BRT_DATA_HDI_DB_1 done [Deployment ID: none].
(is 53ms)
```

Below the terminal, a note says "Terminal will be reused by tasks."