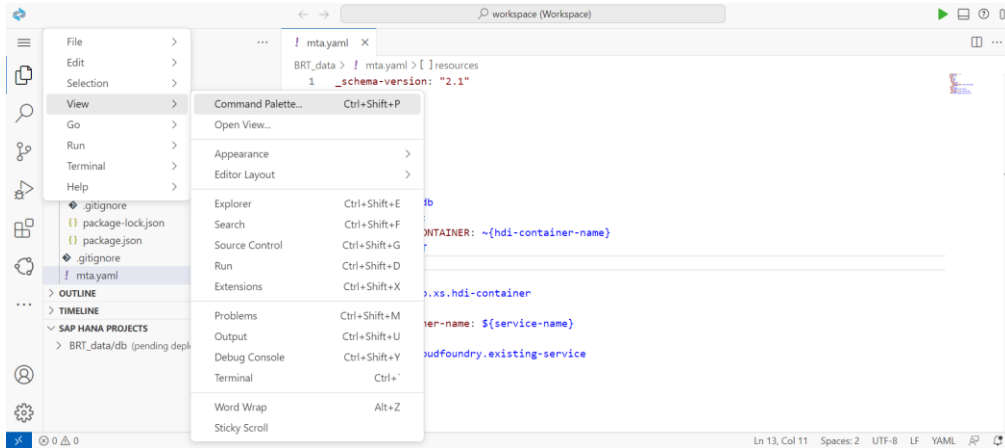


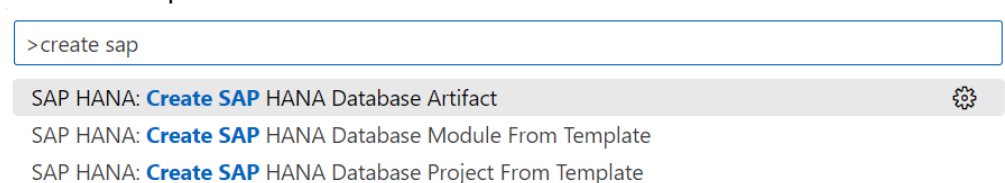
Nama : Ivan Tandella
NIM : 201402022
Mata Kuliah : Enterprise Development Software

UTS Module 7 – Create a Calculation View

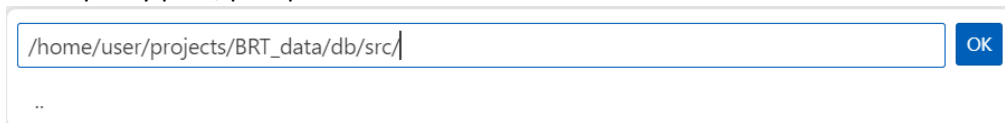
- Klik view -> command palette atau Ctrl + Shift + P



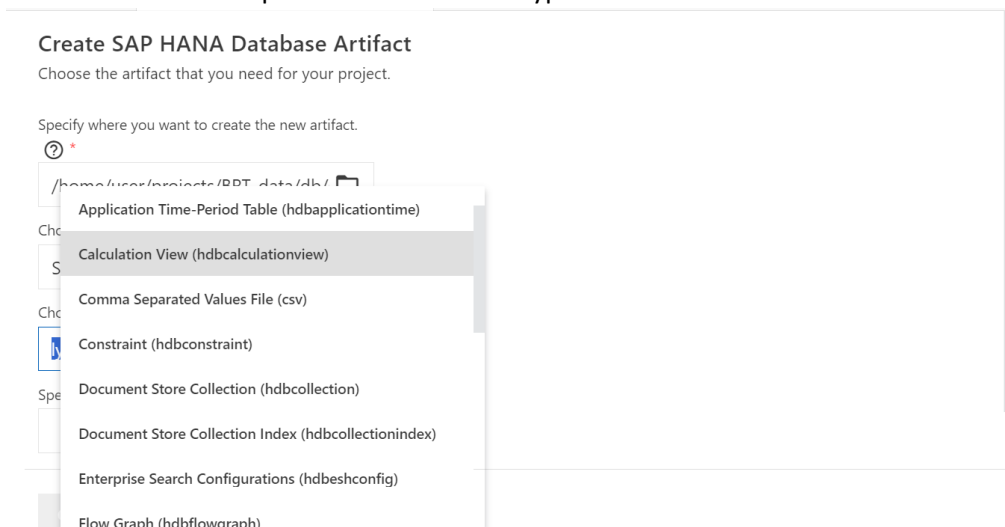
- Cari create sap hana artifact



- Pada specify path, pilih path src



- Pilih calculation view pada Choose Artifact Type



- Isi nama artifact

Specify the artifact name.  *

Calc_BRT_Partners

- Terakhir, klik create

Create SAP HANA Database Artifact

Choose the artifact that you need for your project.

Specify where you want to create the new artifact.

 *

/home/user/projects/BRT_data/db/ 

Choose the database version.  *

SAP HANA Cloud


Choose the artifact type.  *

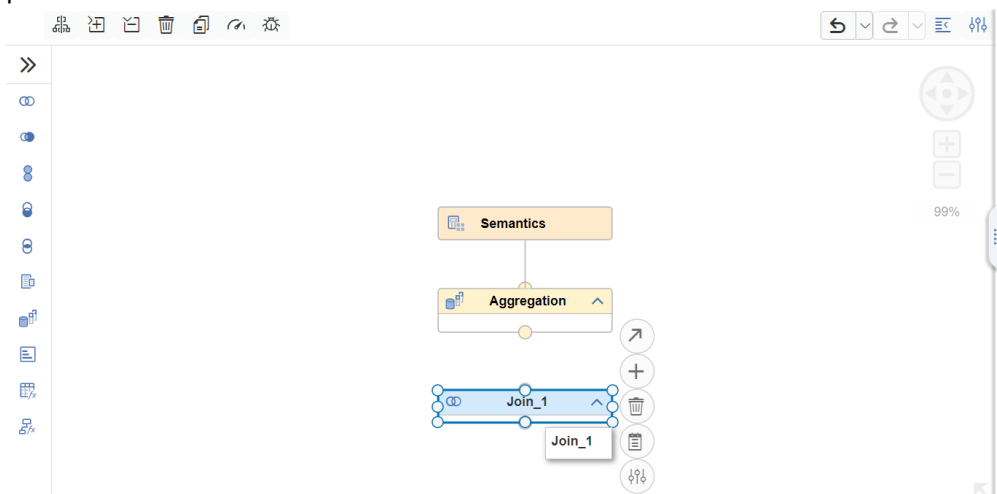
Calculation View (hdbcalculationvie

Specify the artifact name.  *




Calc_BRT_Partners

Create

- Pertama kita akan membuat join node untuk join dua tabel. Klik icon join  pada sidebar, lalu klik pada canvas



- Untuk menambahkan tabel yang ingin dijoin, Klik tanda +, lalu pada service, centang MYBRT

Services: Target Container Service  MYBRT  

Data Source Types: ☒ Target Container Service

☒ MYBRT

- Kemudian search dan centang tabel SAGENCY, lalu klik Create sinonim

Find Data Sources

Services: Target Container Service ⊗ MYBRT ⊗

Data Source Types: Table Function ⊗ Synonym ⊗ 3 More

SAGENCY ⊗ Z Selected: 1 Item ↑↓ ⌵ ⚙

<input checked="" type="checkbox"/>	Type	Name	Schema	Synonym
<input checked="" type="checkbox"/>	TABLE	SAGENCYDATA	SFLIGHT	com.sap::SAGENCYDATA

Result (1)

Create Synonym Previous Finish Cancel

- Klik finish

Create Synonym

Synonym Name	Object Name	Schema	Use Existing Synonym
com.sap::SAGENCY...	SAGENCYDATA	SFLIGHT	<input checked="" type="checkbox"/>

☐ Generate .hdbgrants file ☐ Create synonym configuration file

Previous Finish Cancel

- Lakukan cara yang sama untuk tabel STRAVELAG

Find Data Sources

Services: Target Container Service ⊗ MYBRT ⊗

Data Source Types: Table Function ⊗ Synonym ⊗ 3 More

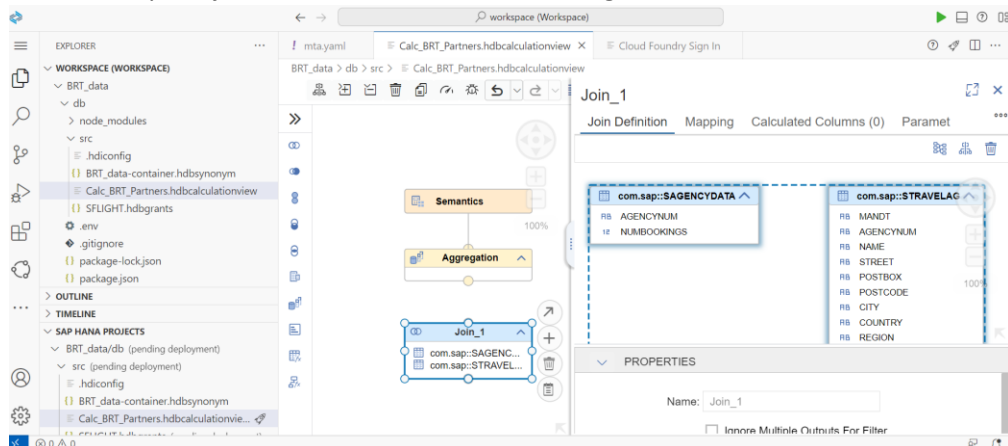
STRAV ⊗ Z Selected: STRAVELAG ⊗ ↑↓ ⌵ ⚙

<input checked="" type="checkbox"/>	Type	Name	Schema	Synonym
<input checked="" type="checkbox"/>	TABLE	STRAVELAG	SFLIGHT	

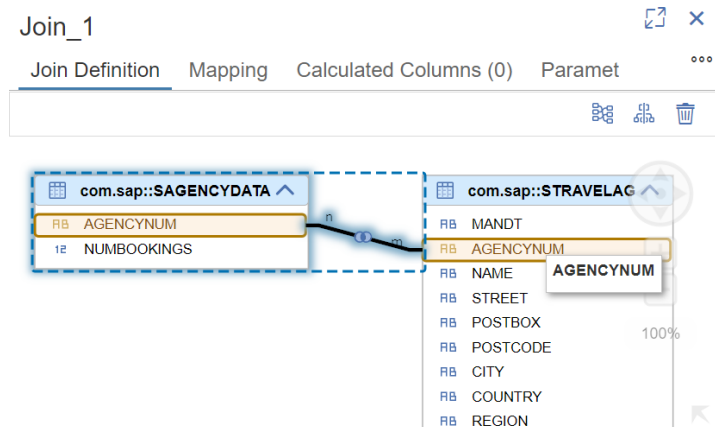
Result (1)

Create Synonym Previous Finish Cancel

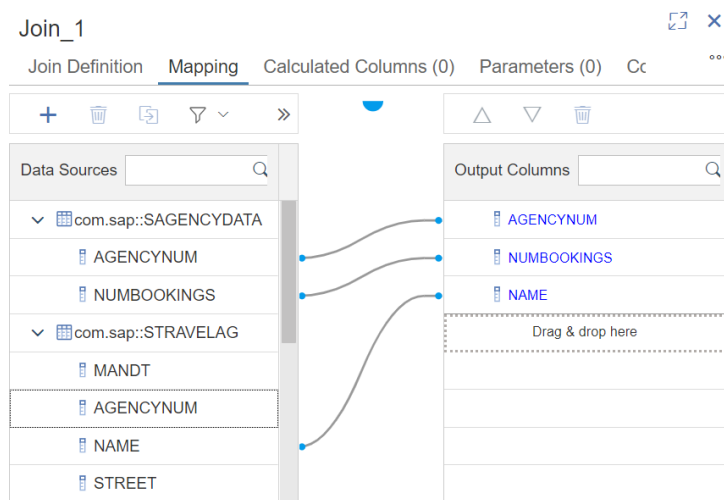
- Double klik pada join node untuk membuka setting



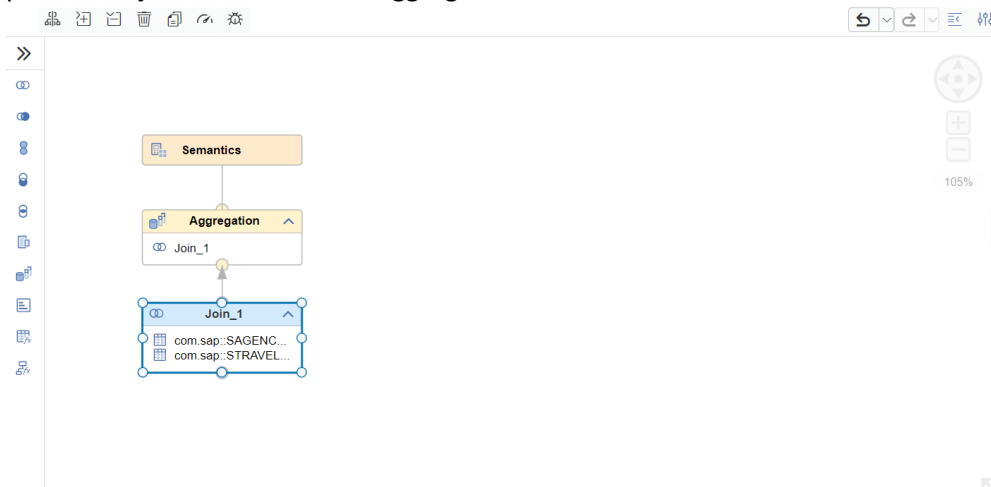
- Klik AGENCYNUM pada tabel SAGENCYDATA, lalu seret ke kolom AGENCYNUM pada tabel STRAVELAG




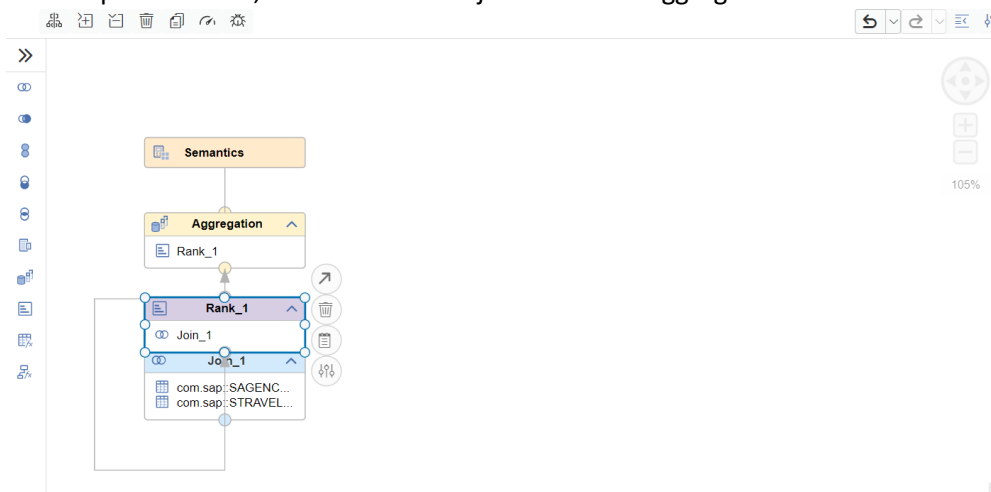
- Pilih tab Mapping, kemudian pilih kolom yang akan menjadi output. Pilih kolom AGENCYNUM, NUMBOOKINGS, dan NAME. Kemudian tutup settingnya




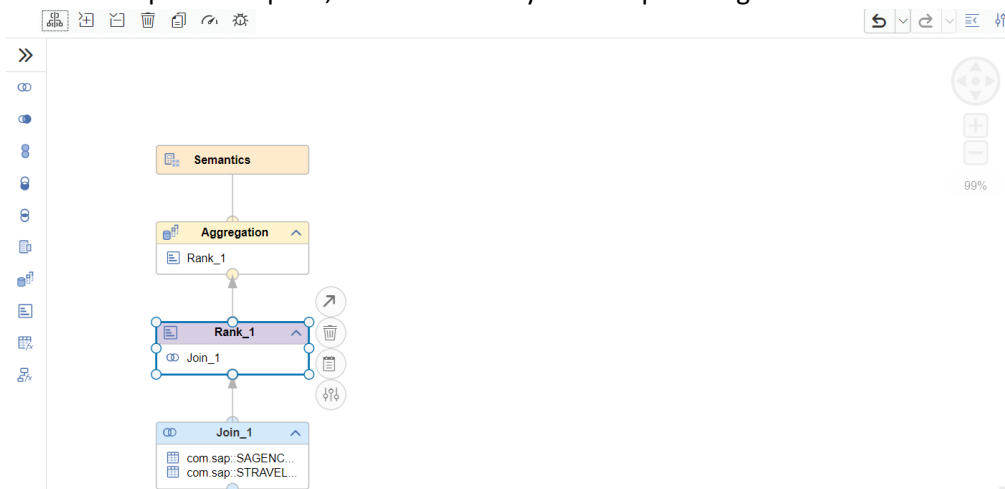
- Tahap selanjutnya adalah menghubungkan join node dengan aggregation node. Klik tanda panah pada node join lalu arahkan ke aggregation node



- Sebab kita ingin melihat top 5 agency, maka kita perlu menambahkan rank node. Caranya klik icon rank  pada sidebar, lalu klik di antara join node dan aggregation node.



- Untuk merapikan tampilan, klik icon auto layout  pada bagian atas



- Buka setting rank node, pada tab defenition, atur general dengan isian seperti berikut

General

* Aggregation Function : Rank

* Result Set Direction : Top

* Result Set Type : Absolute

Target Value : Fixed 5

Offset : Fixed 0

☐ Generate Rank Column :

- Kemudian pada sort column, klik tanda + lalu pilih kolom NUMBOOKINGS dan sort direction DESCENDING

Sort Column

Columns	Sort Direction
NUMBOOKINGS	Descending

- Kemudian buka setting aggregation node, pada tab mapping pastikan seluruh kolom telah dipilih sebagai kolom output

Aggregation

Mapping Calculated Columns (0) Restricted Columns (0) Parameters

Data Sources

- Rank_1
 - AGENCYNUM
 - NUMBOOKINGS
 - NAME

Output Columns

- AGENCYNUM
- NUMBOOKINGS
- NAME

Drag & drop here

- Selanjutnya kita dapat mendeploy calculation view dengan klik icon rocket pada panel sap hana projects. Tunggu hingga proses deploy selesai


```

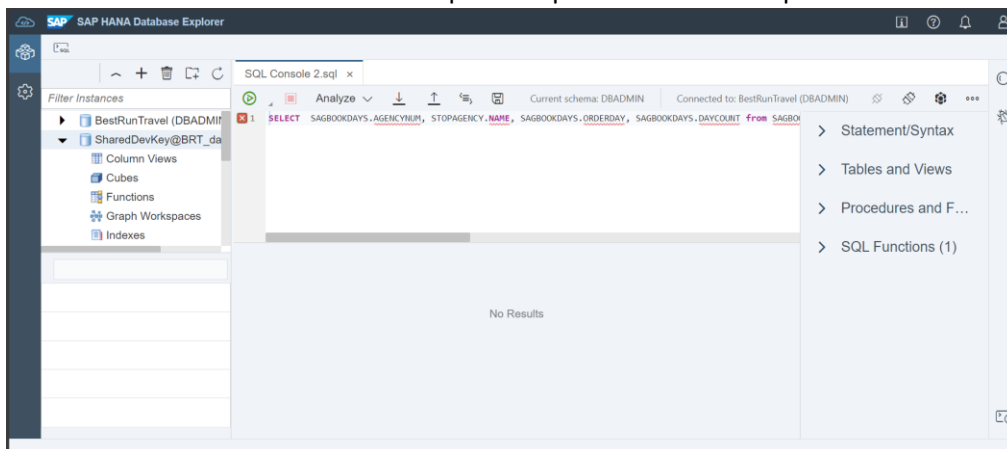
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL
SAP HANA: Deploy module at /home/user/projects/BRT_data/db (BRT_data) - Task ✓ + ▢ ✕ ... ^ x

Finalizing... ok (0s 32ms)
Make succeeded (0 warnings): 1 files deployed (effective 1), 0 files undeployed (effective 0), 0 dependent files redeployed
Making... ok (1s 439ms)
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 11ms)
Starting make in the container "BRT_DATA_HDI_DB_1" with 1 files to deploy, 0 files to undeploy... ok (1s 504ms)
Deploying to the container "BRT_DATA_HDI_DB_1"... ok (1s 699ms)
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].
Deployment ended at 2023-10-16 09:43:49
(4s 323ms)

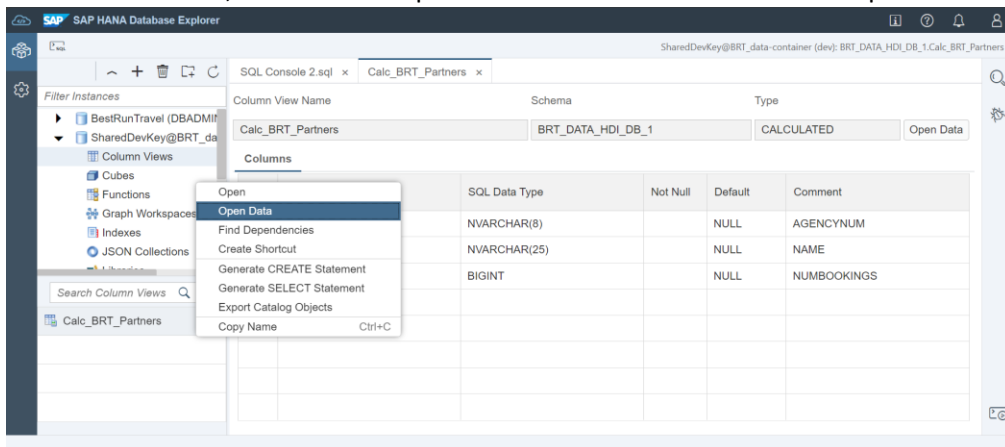
* Terminal will be reused by tasks, press any key to close it.

```

- Selanjutnya mari kita cek outputnya dengan cek preview output. Klik icon hdi container  di panel sap hana projects.
- Tab baru akan terbuka untuk menampilkan sap hana database explorer



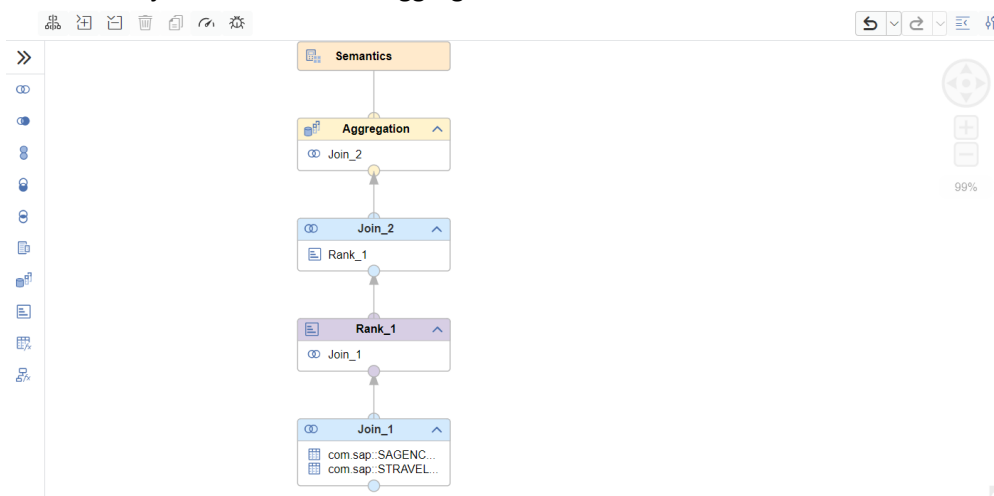
- Pilih column views, lalu klik kanan pada nama calculation view lalu klik Open Data



- Lalu klik tab Raw Data untuk melihat output dari calculation view. Data ini menunjukkan top 5 partner dari best run travel

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

- Kembali ke sap hana application studio lalu cari tau hari paling banyak menerima booking. Kita akan join rank node dengan tabel SAGBOOKDAYS
- Tambahkan join node di antara aggregation node dan rank node



- Tambahkan tabel SAGBOOKDAYS dengan cara seperti sebelumnya

Find Data Sources

Services: Target Container Service MYBRT

Data Source Types: View Table Function Synonym 2 More

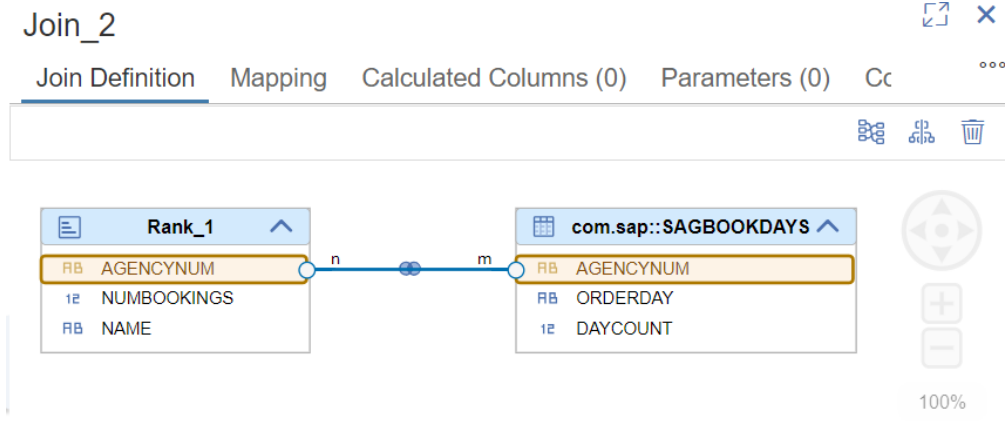
SAGBOO Selected: SAGBOOKDAYS

Type	Name	Schema	Synonym
TABLE	SAGBOOKDAYS	SFLIGHT	

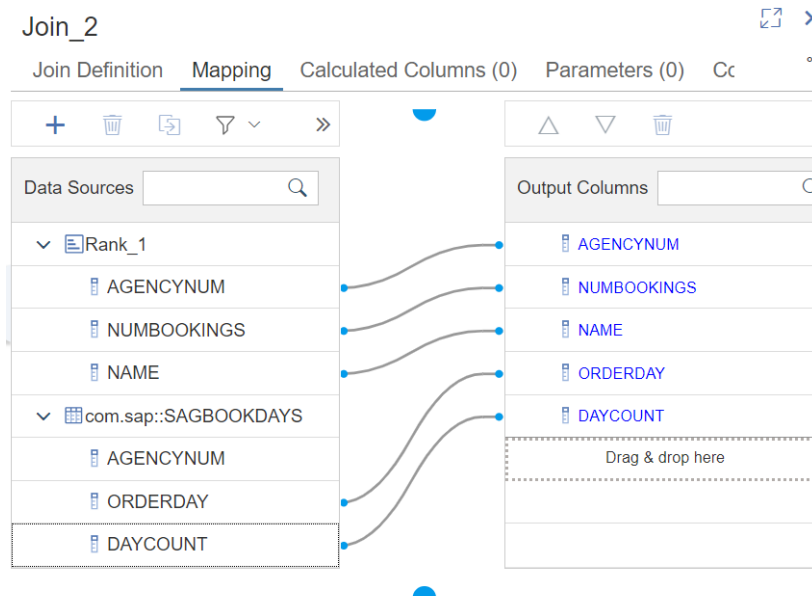
Result (1)

Create Synonym Previous Finish Cancel

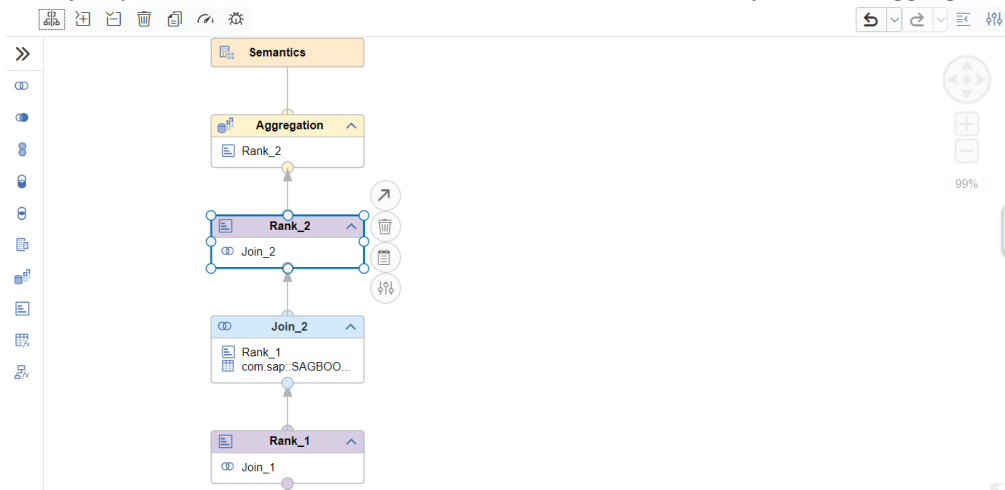
- Buka setting join 2, pada join definition, hubungkan kolom AGENCYNUM pada rank 1 dengan SAGBOOKDAYS




- Pada tab mapping, pastikan semua kolom dibawah telah dipilih sebagai output



- Selanjutnya kita akan menambahkan rank node baru di antara join 2 dan aggregation node





- Buka setting rank 2, buka tab definition lalu atur bagian general seperti berikut


Rank_2 



Mapping Definition Parameters (0) Columns (5) Filter Expression



General

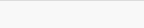
*Aggregation Function : Rank 

*Result Set Direction : Top 

*Result Set Type : Absolute 

Target Value :  Fixed  1

Offset :  Fixed  0

☐ Generate Rank Column : 

- Pada section partition column, klik tanda + lalu tambahkan kolom AGENCYNUM



✓ Partition Column



Logical Partition  

<input type="checkbox"/>	Columns
<input type="checkbox"/>	AGENCYNUM 



- Pada section sort column, tambahkan kolom DAYCOUNT, lalu pilih sort direction Descending


✓ Sort Column


Sort Column  

<input type="checkbox"/>	Columns	Sort Direction
<input type="checkbox"/>	DAYCOUNT 	Descending 

- Tutup setting, lalu double klik pada aggregation node.
- Pada tab mapping pastikan semua kolom telah dipilih sebagai output

Aggregation  

Mapping Calculated Columns (0) Restricted Columns (0) Parameters 

Data Sources 

Rank_2


AGENCYNUM

NUMBOOKINGS

NAME

ORDERDAY

DAYCOUNT

Output Columns 

AGENCYNUM

NUMBOOKINGS

NAME

ORDERDAY

DAYCOUNT

Drag & drop here

- Selanjutnya deploy calculation view yang telah kita buat dengan cara klik icon rocket 🚀 pada panel sap hana projects lalu tunggu hingga selesai

```

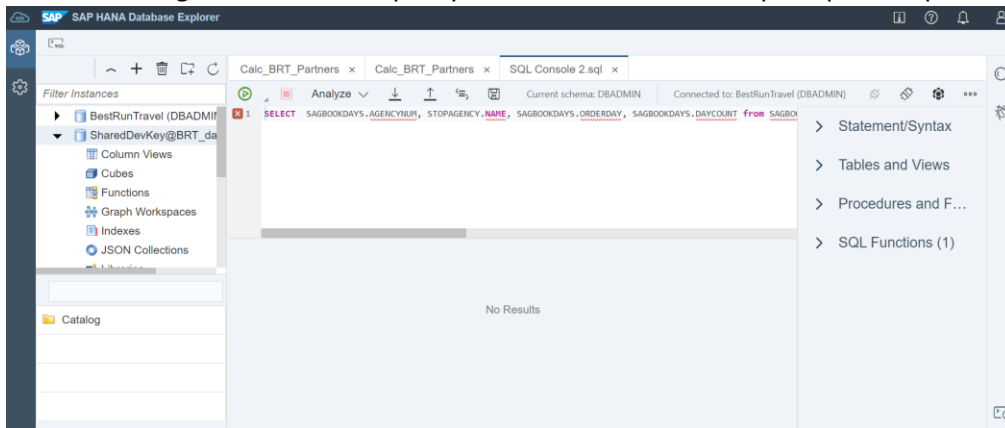
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL
SAP HANA: Deploy module at /home/user/projects/BRT_data/db (BRT_data) - Task ✓ + ▢ ⋮ ⌵ ✕

Make succeeded (0 warnings): 1 files deployed (effective 1), 0 files undeployed (effective 0), 0 dependent files redeployed
Making... ok (0s 558ms)
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 8ms)
Starting make in the container "BRT_DATA_HDI_DB_1" with 1 files to deploy, 0 files to undeploy... ok (0s 597ms)
Deploying to the container "BRT_DATA_HDI_DB_1"... ok (0s 808ms)
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"...
Unlocking the container "BRT_DATA_HDI_DB_1"... ok (0s 0ms)
Deployment to container BRT_DATA_HDI_DB_1 done [Deployment ID: none].
Deployment ended at 2023-10-16 10:15:03
(3s 526ms)

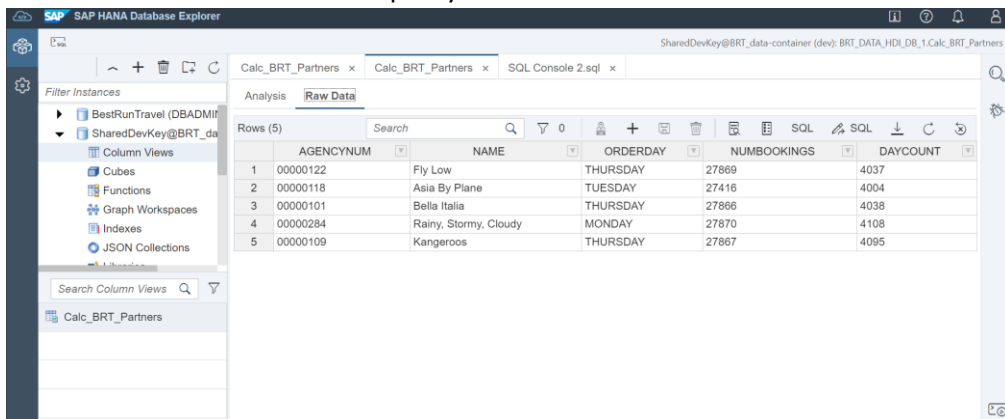
* Terminal will be reused by tasks, press any key to close it.

```

- Kita akan mengecek kembali outputnya. Klik icon hdi container pada panel sap hana projects



- Pilih column view lalu klik kanan pada nama calculation view -> open data
- Pilih raw data untuk melihat outputnya



- Data tersebut menunjukkan top 5 partner dan hari dengan booking terbanyak