

UTS Modul 7 : Enterprise Development Software

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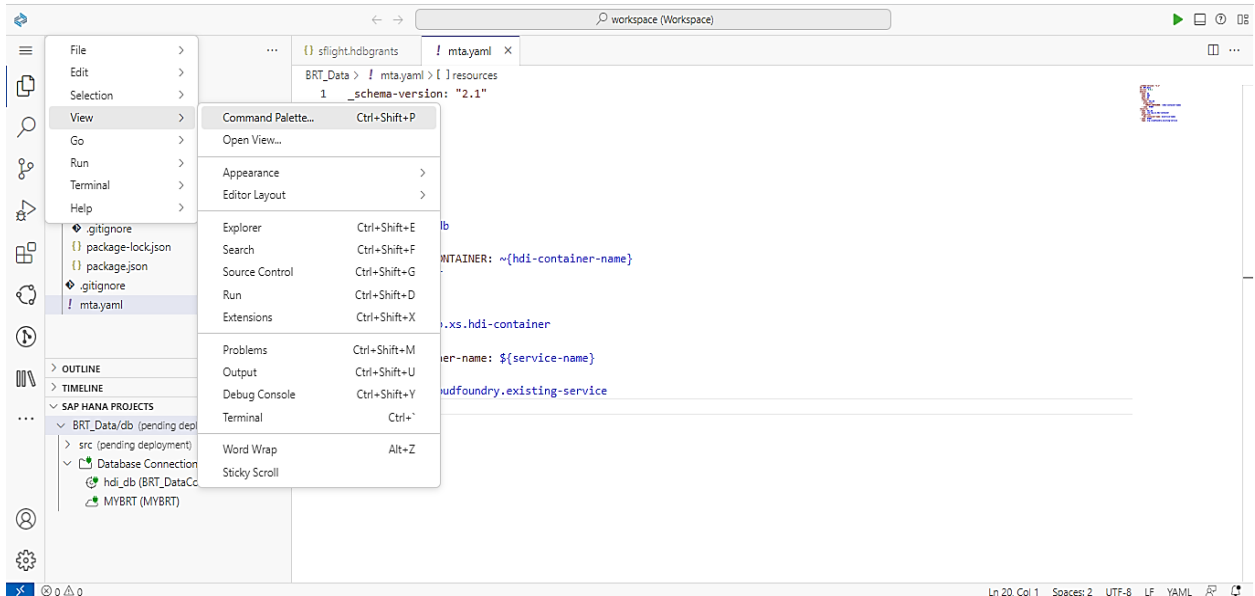
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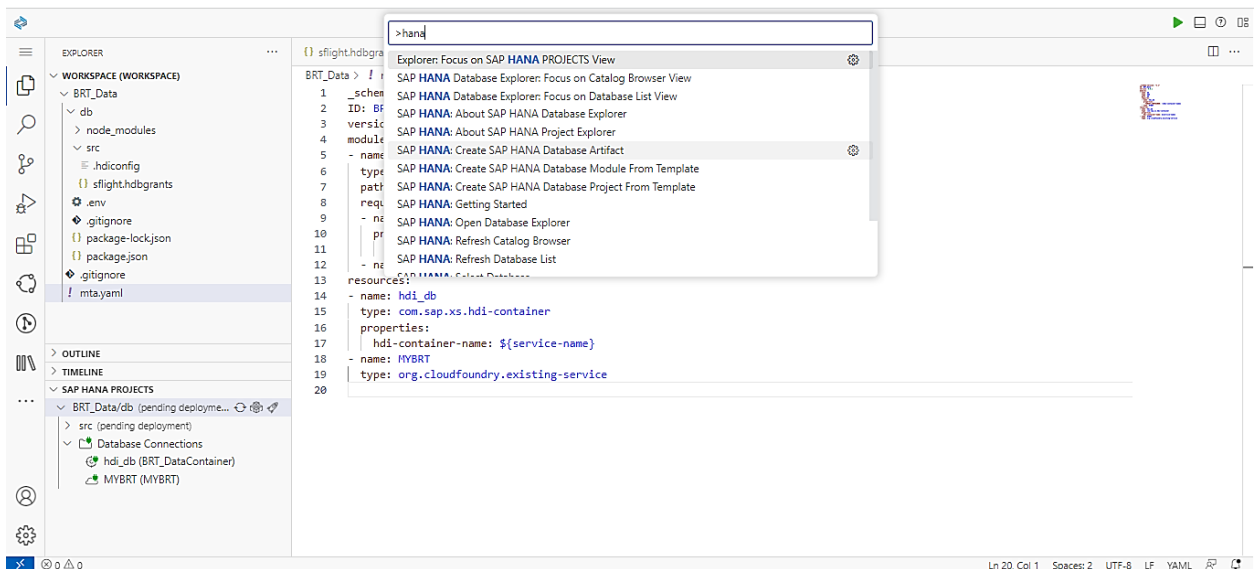
Modul 7 : Create a calculation view

Hasil mengikuti modul 7, sebagai berikut :

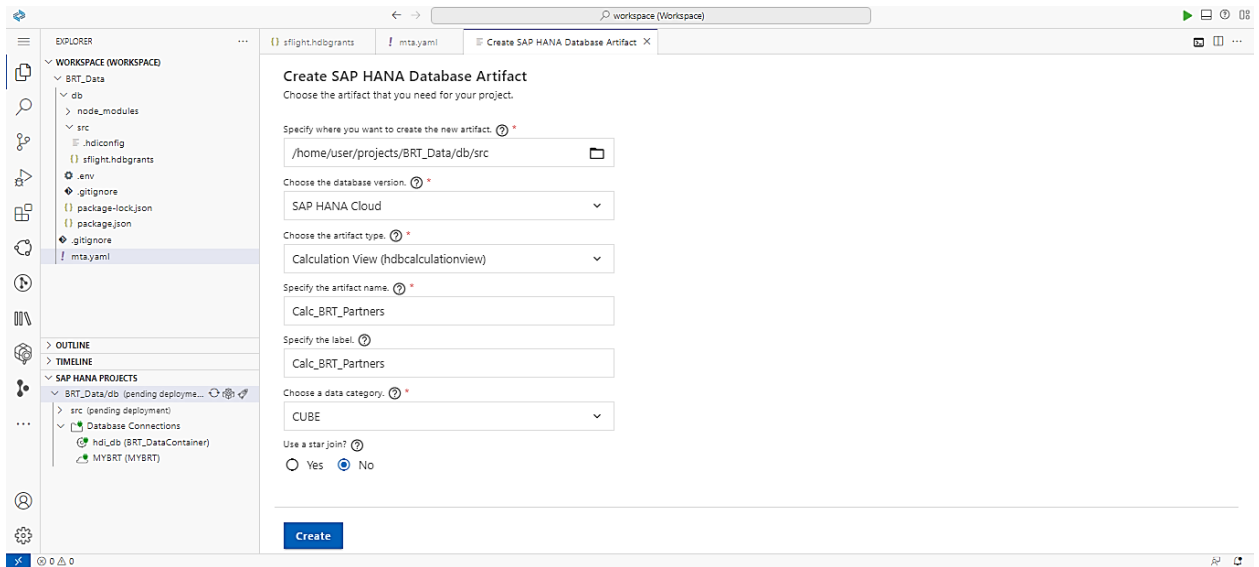
1. Buka SAP HANA Database Project, kemudian pilih View dan klik Command Palette



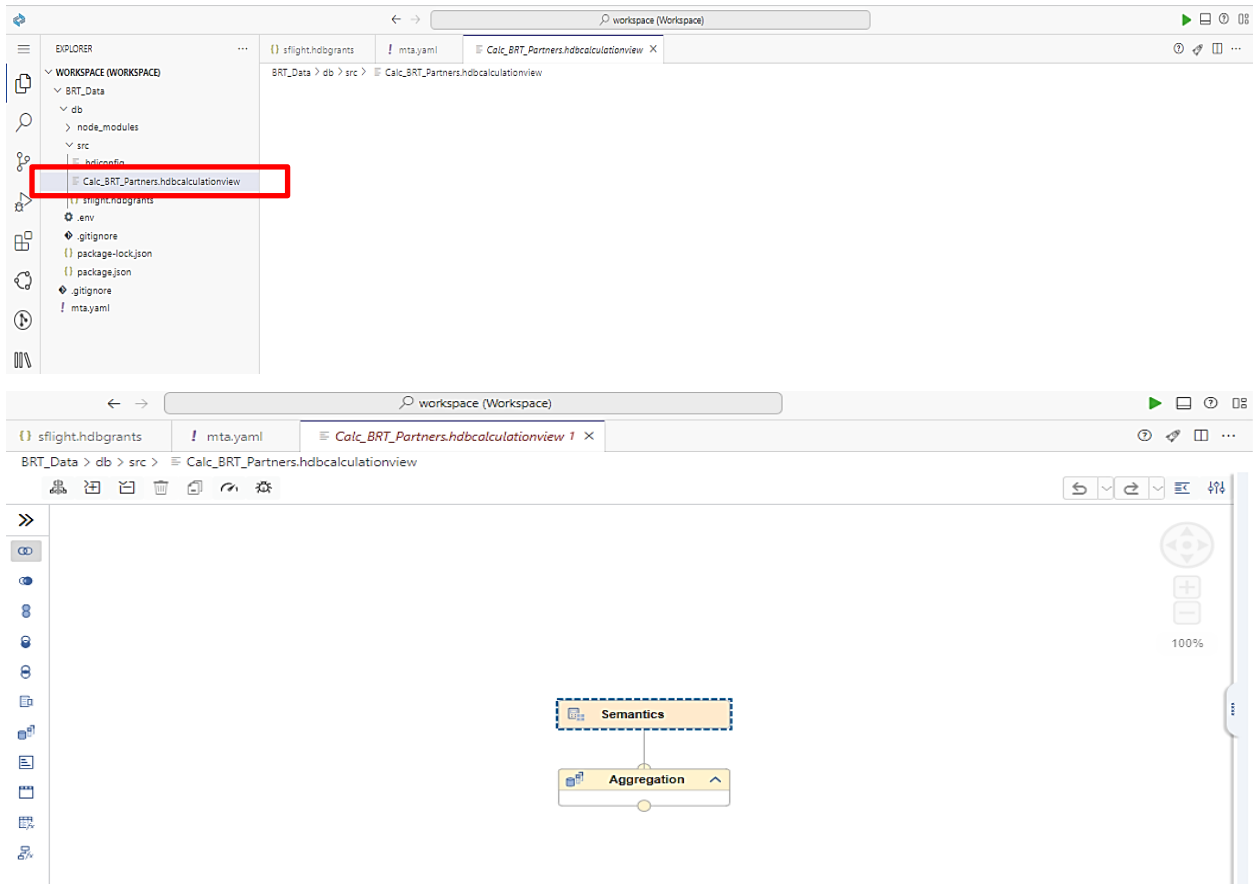
2. Lalu akan muncul Command Prompt yang terletak di area atas tengah, lalu search hana dan pilih SAP HANA: Create SAP HANA Database Artifact



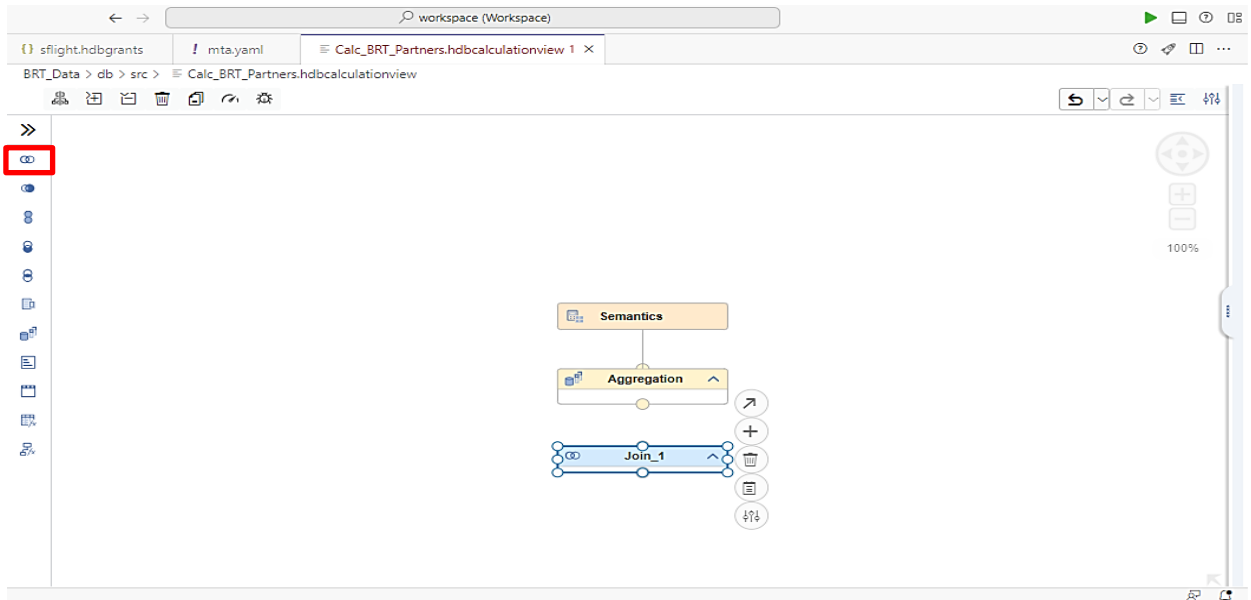
3. Isi Database Artifact seperti gambar di bawah ini. Pilih Artifact Type Calculation View, isi nama Artifact yaitu Calc_BRT_Partners, dan pilih location file Artifact dalam src. Lalu klik Create



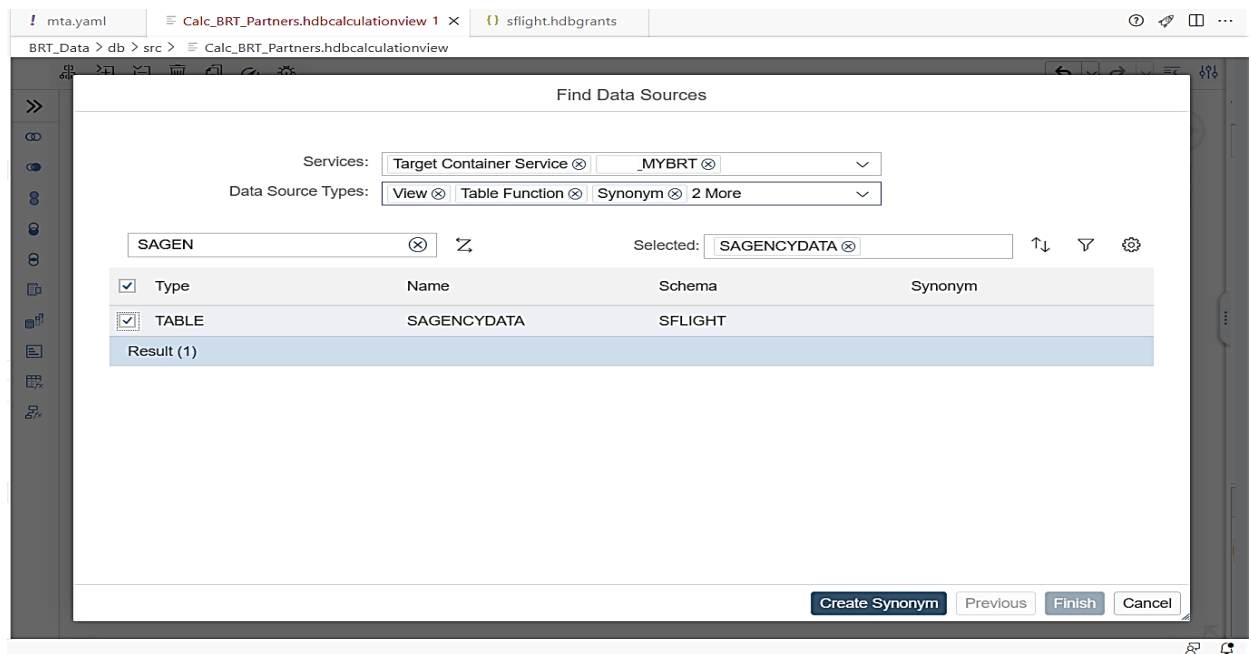
4. Jika sudah berhasil di Create, maka tampilannya seperti di bawah ini. Lalu klik Calc_BRT_Partners yang telah dicreate tadi yang berada di folder src pada BRT_Data

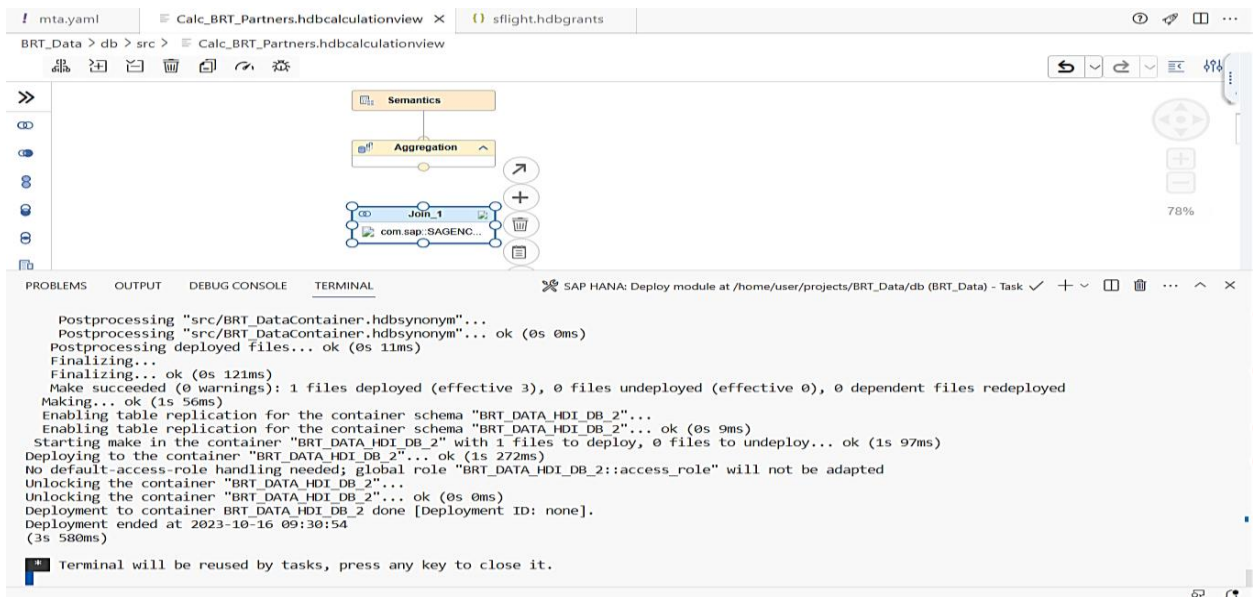


5. Lalu klik icon join yang terdapat di sidebar editor, lalu klik ke canvas nya

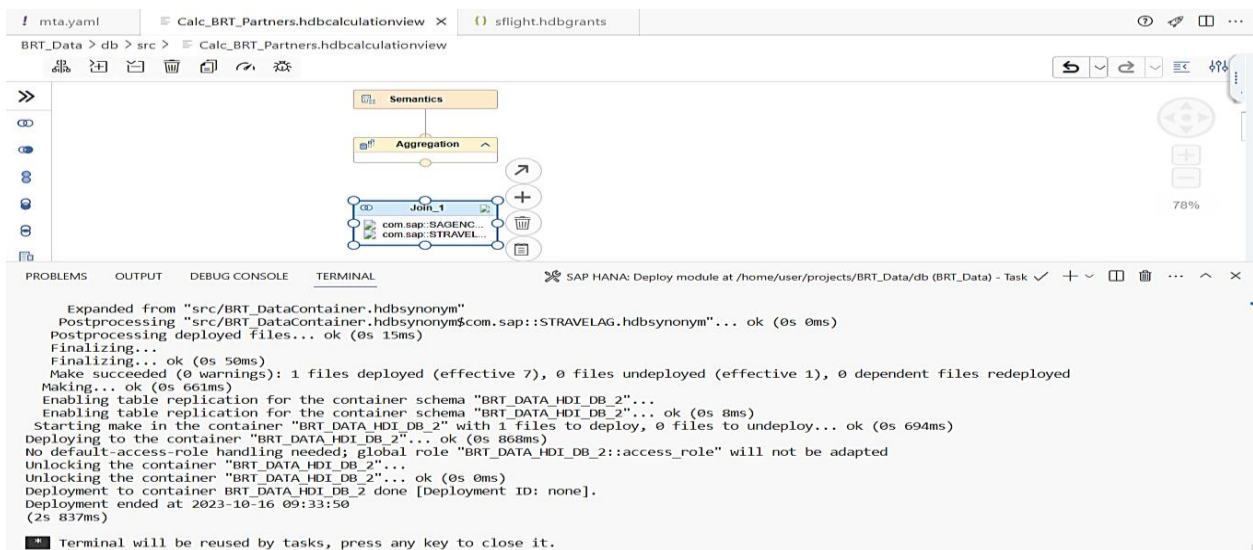
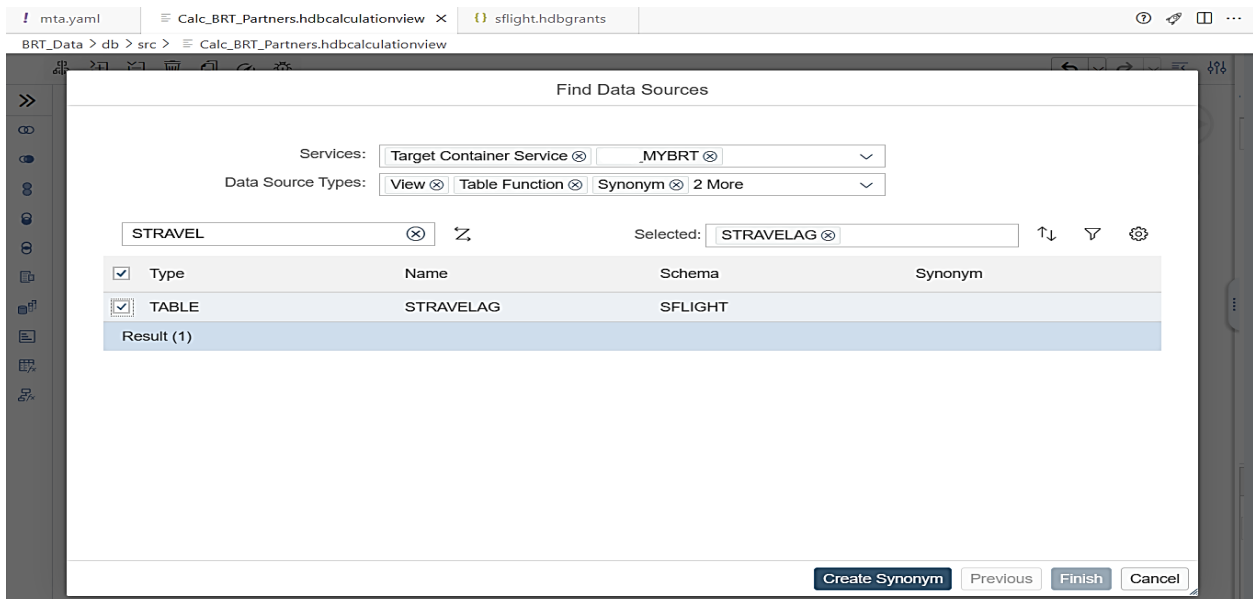


6. Kemudian klik icon + (plus) pada Join_1. Pilih MYBRT, kemudian search SAGENCYDATA, lalu pilih tabelnya dan klik Create Synonym dan Finish.

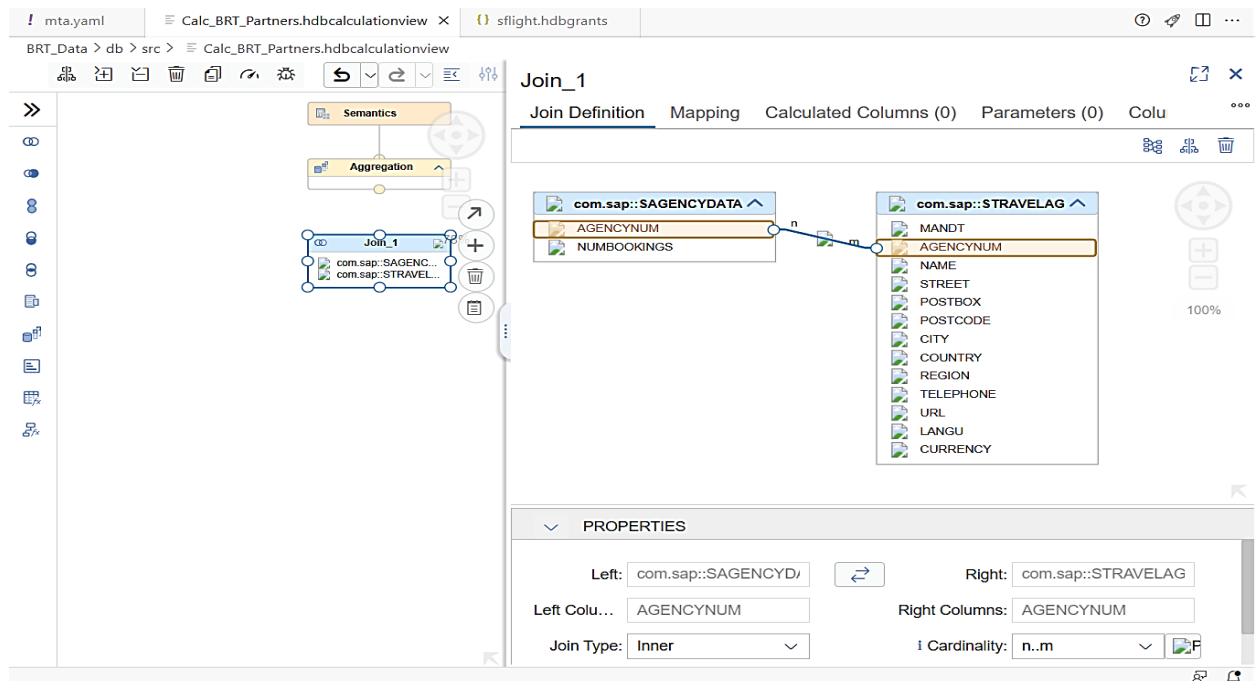




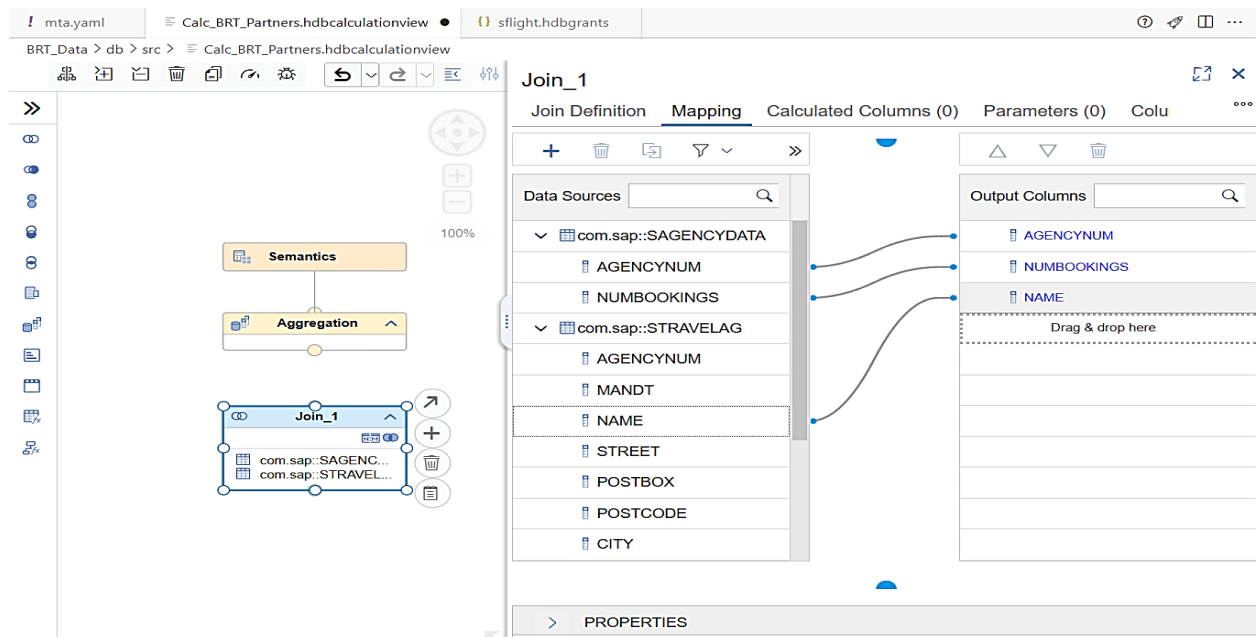
- Kemudian pada Join_1, klik icon + (plus) lagi dan pilih MYBRT, lalu search STRAVELAG. Pilih tabelnya, lalu klik Create Synonym dan Finish.



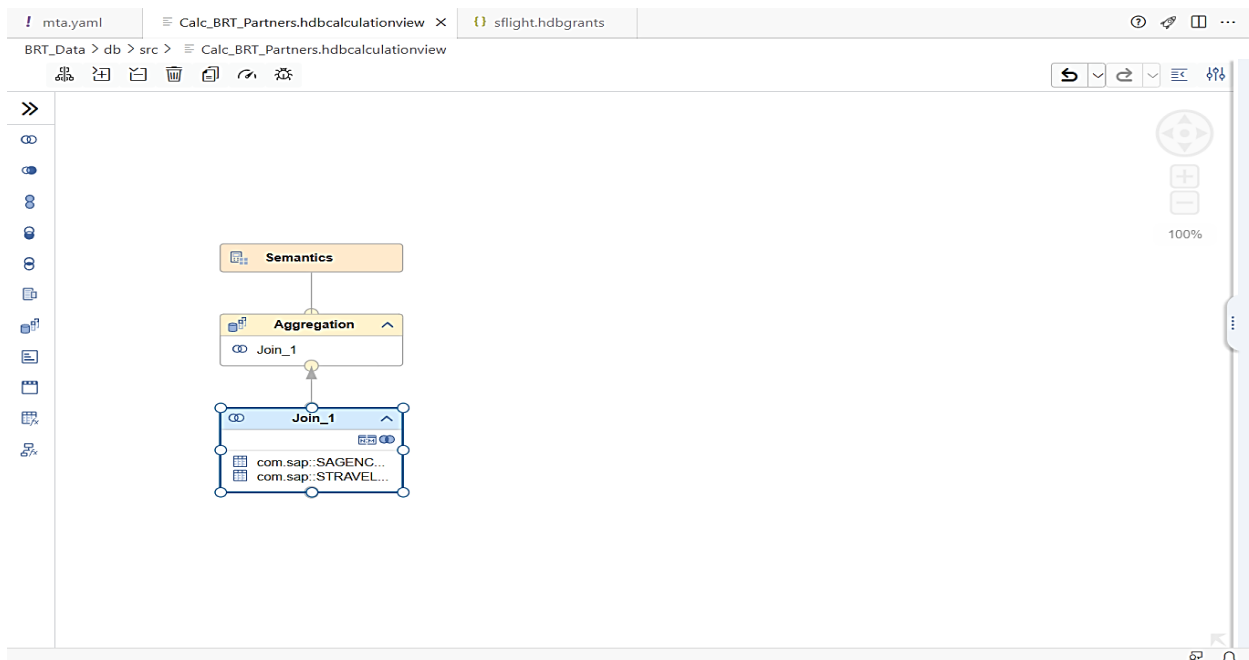
8. Kemudian pada Join_1 klik dua kali,. Lalu pada Join Definition, hubungkan antara tabel SAGENCYDATA dan STRAVELAG dengan menggunakan kolom AGENCYNUM



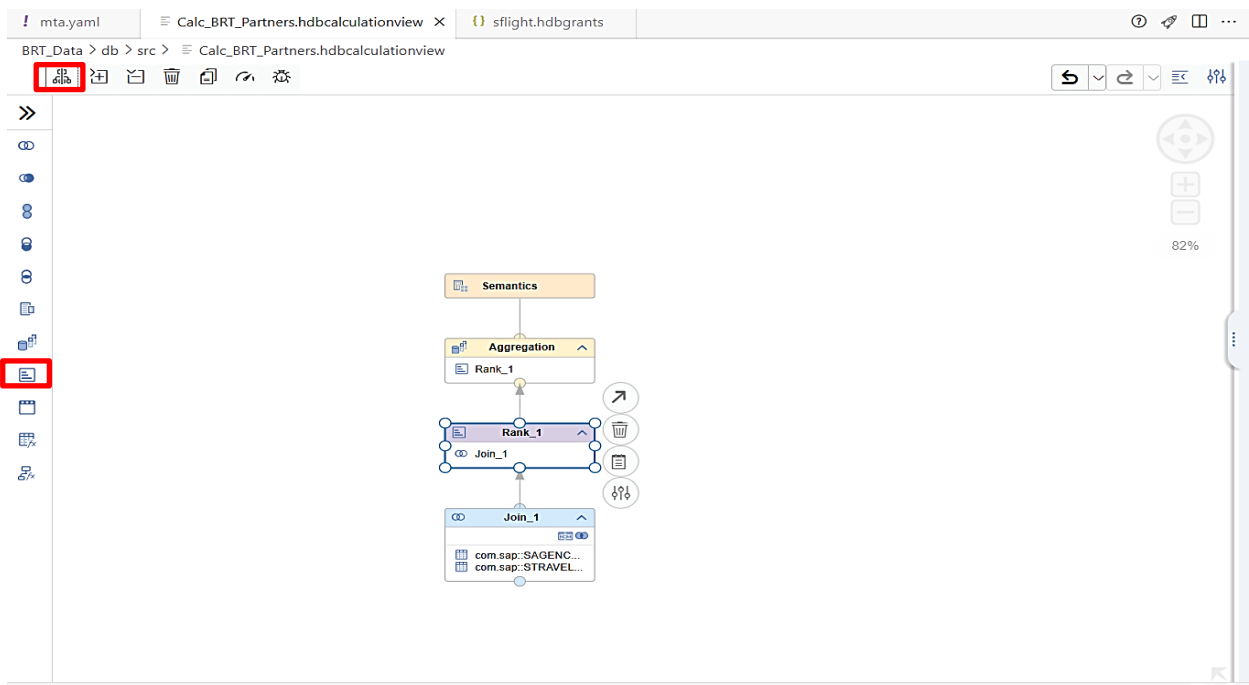
9. Masih pada Join_1, pada bagian Mapping, kita akan memilih kolom yang akan menjadi bagian dari output. Kita akan memilih kolom AGENCYNUM, NUMBOOKINGS, dan NAME.



10. Kemudian menghubungkan join node ke Aggregation dengan klik icon tanda panah pada Join_1 lalu arahkan ke Aggregation.



11. Untuk melihat top 5 hasil dari join tersebut, kita bisa menambahkan rank node. Untuk menambah rank node, klik icon rank pada sidebar editor, lalu klik dan letakkan diantara join node dan projection node. Untuk rearrange canvas, kita bisa mengklik auto layout dan tampilan akan lebih rapi.



12. Klik Rank_1, pada Definition, untuk Aggregation Function pilih Rank, untuk Result Set Direction pilih Top, untuk Result Set Type pilih Absolute, untuk Target Value pilih Fixed dan isikan 5, untuk Offset pilih Fixed dan isikan 0. Lalu pada bagian Sort Column, pilih kolom NUMBOOKINGS dan Sort Direction Descending.

The screenshot shows the SAP BW Data Designer interface. On the left, a diagram shows the data flow: Semantics -> Aggregation -> Rank_1 -> Join_1. The Rank_1 node is selected. On the right, the 'Rank_1' configuration panel is open, showing the 'Definition' tab. The configuration is as follows:

- *Aggregation Function: Rank
- *Result Set Direction: Top
- *Result Set Type: Absolute
- Target Value: Fixed, 5
- Offset: Fixed, 0
- ☐ Generate Rank Column

Below the definition, the 'Sort Column' section is expanded, showing a table with the following configuration:

| Columns | Sort Direction |
|-------------|----------------|
| NUMBOOKINGS | Descending |

13. Kemudian klik Aggregation, pada Mapping pastikan ketiga kolom telah ter-include di output

The screenshot shows the SAP BW Data Designer interface. On the left, the same diagram as before is shown. The 'Aggregation' node is selected. On the right, the 'Aggregation' configuration panel is open, showing the 'Mapping' tab. The configuration is as follows:

- Data Sources: Rank_1
- Output Columns: AGENCYNUM, NUMBOOKINGS, NAME

The 'Output Columns' section is highlighted with a red box, indicating that the three columns (AGENCYNUM, NUMBOOKINGS, and NAME) are included in the output.

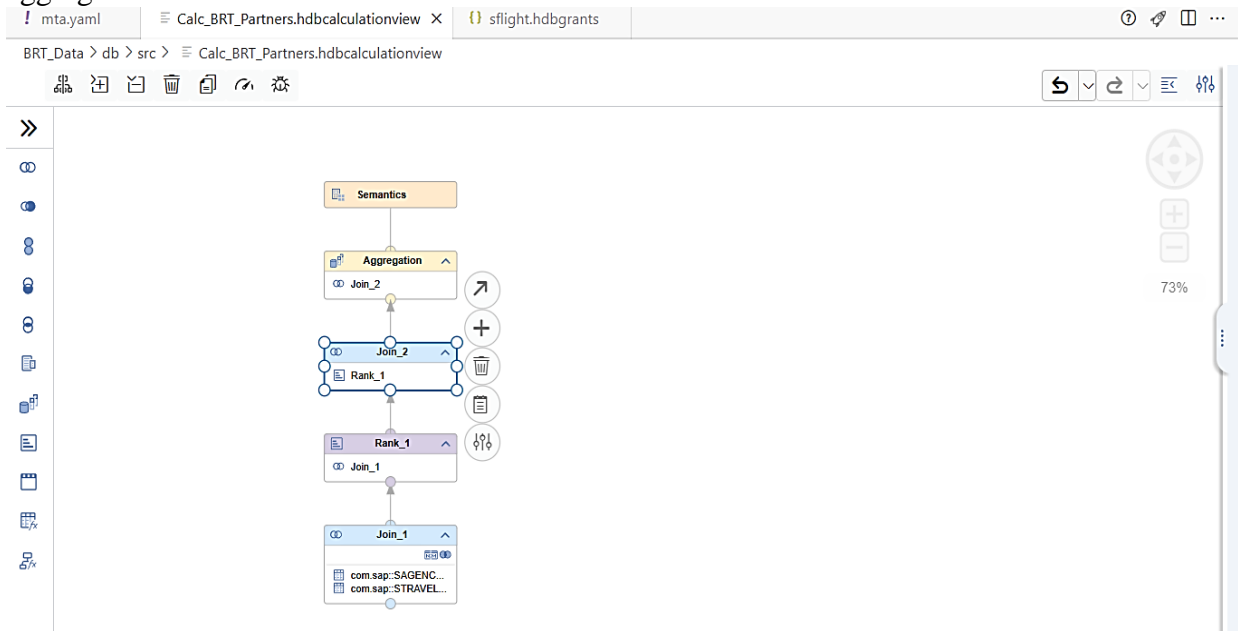
14. Kemudian deploy calculation view dengan meng-klik icon roket pada BRT_Data.

```
Postprocessing "src/BRT_DataContainer.hdbsynonym"...  
Postprocessing "src/BRT_DataContainer.hdbsynonym"... ok (0s 0ms)  
Postprocessing deployed files... ok (0s 16ms)  
Finalizing...  
Make succeeded (0 warnings): 1 files deployed (effective 1), 0 files undeployed (effective 0), 0 dependent files redeployed  
Making... ok (1s 355ms)  
Enabling table replication for the container schema "BRT_DATA_HDI_DB_2"...  
Enabling table replication for the container schema "BRT_DATA_HDI_DB_2"... ok (0s 9ms)  
Starting make in the container "BRT_DATA_HDI_DB_2" with 1 files to deploy, 0 files to undeploy... ok (1s 388ms)  
Deploying to the container "BRT_DATA_HDI_DB_2"... ok (1s 567ms)  
No default-access-role handling needed; global role "BRT_DATA_HDI_DB_2::access_role" will not be adapted  
Unlocking the container "BRT_DATA_HDI_DB_2"... ok (1s 567ms)  
Unlocking the container "BRT_DATA_HDI_DB_2"... ok (0s 0ms)  
Deployment to container BRT_DATA_HDI_DB_2 done [Deployment ID: none].  
Deployment ended at 2023-10-16 09:57:58  
(4s 90ms)
```

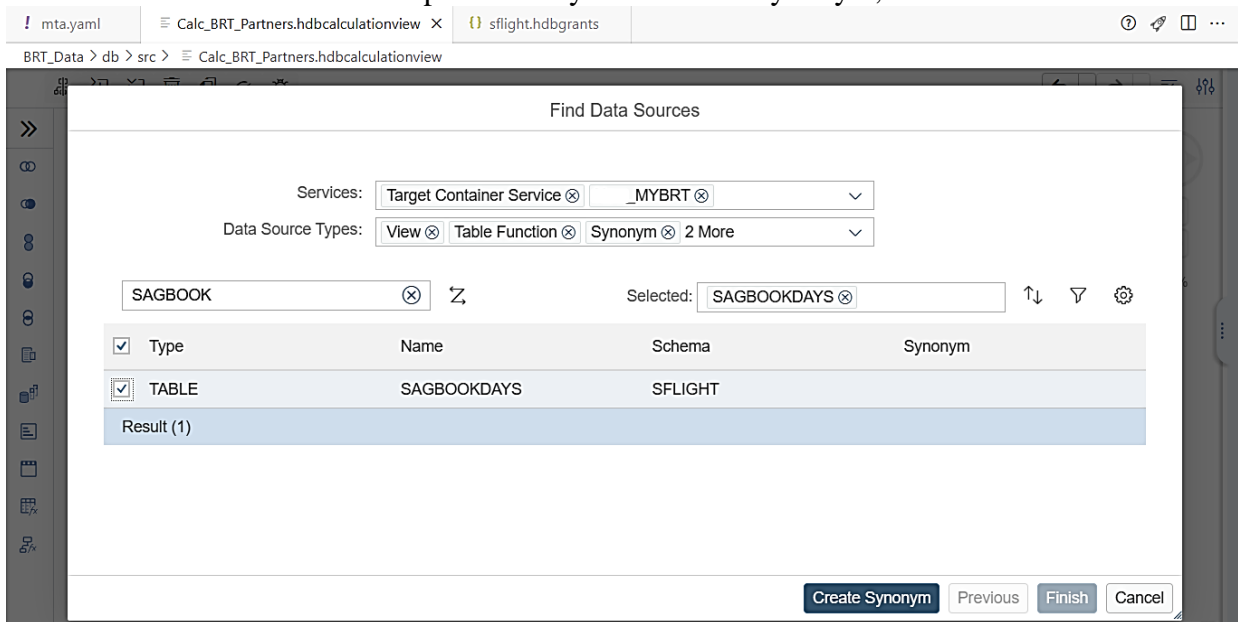
15. Jika proses deploy berhasil, maka kita bisa cek outputnya. Cek bagaimana tampilan data preview dengan meng-klik icon hdi container pada BRT_Data. Lalu akan terbuka tab baru dengan SAP HANA Database Explorer. Pada list database nya, klik Column Views, lalu klik pada nama calculation view di panel bawah. Lalu pilih raw data untuk melihat output dari calculation view sejauh ini. Outputnya akan memperlihatkan top 5 partners 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 |

16. Kembali ke halaman SAP Business application studio dan mencari yang mana top 5 travel agencies dan hari yang memiliki paling banyak bookings. Kita akan join output dari rank node kita ke tabel SAGBOOKDAYS. Tambahkan join node diantara rank node dan aggregation node.



17. Kemudian kita perlu menambahkan SAGBOOKDAYS pada Join_2 dengan klik icon + (plus) lalu cari SAGBOOKDAYS lalu pilih tabelnya dan Create Synonym, kemudian Finish.



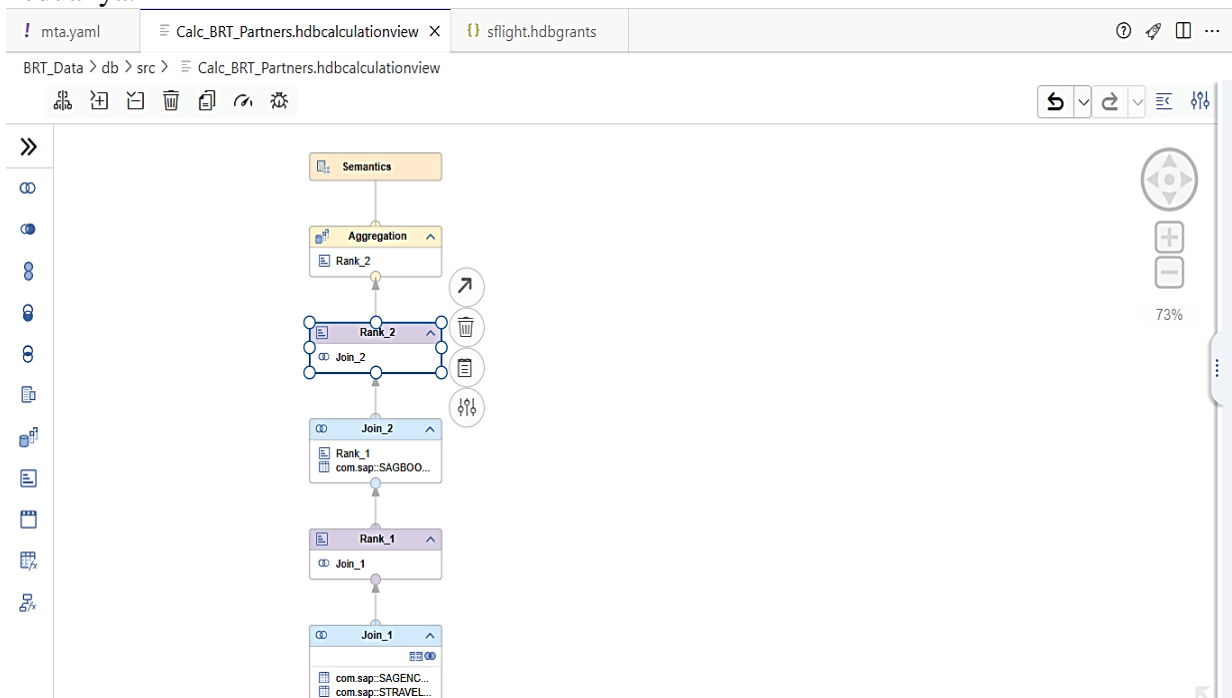
18. Jika tabel sudah terlampir pada Join_2, double klik pada Join_2. Lalu pada Join Definition, hubungkan kolom AGENCYNUM dari Rank_1 ke kolom AGENCYNUM dari tabel SAGBOOKDAYS.

The screenshot shows the SAP HANA Studio interface. On the left, a diagram shows the data model structure: Semantics (Aggregation) -> Join_2 -> Rank_1 -> Join_1. The main panel displays the 'Join Definition' for 'Join_2'. It shows two data sources: 'Rank_1' and 'com.sap::SAGBOOKDAYS'. The columns for 'Rank_1' are AGENCYNUM, NUMBOOKINGS, and NAME. The columns for 'com.sap::SAGBOOKDAYS' are AGENCYNUM, ORDERDAY, and DAYCOUNT. The 'Properties' panel at the bottom shows the 'Name' as 'Join_2' and an option to 'Ignore Multiple Outputs For Filter'.

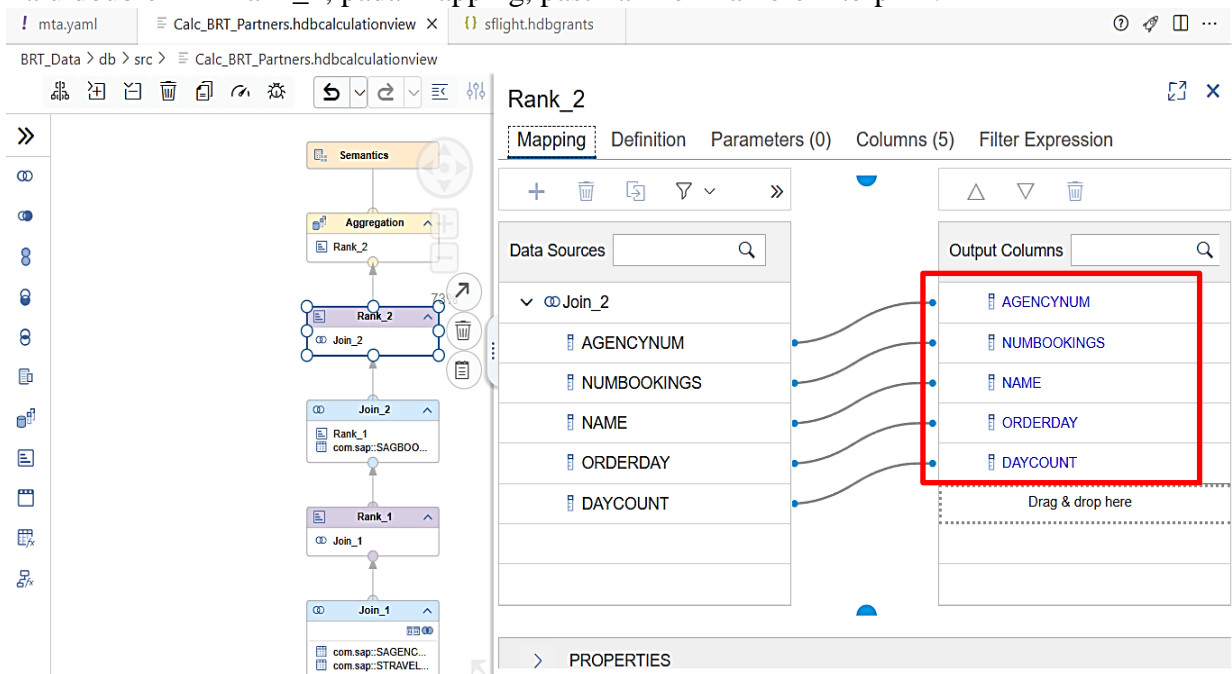
19. Masih pada Join_2, pada Mapping, pastikan kolom yang lain yaitu kolom ORDERDAY dan DAYCOUNT terpilih untuk output.

The screenshot shows the SAP HANA Studio interface. On the left, the same diagram as in the previous screenshot is visible. The main panel displays the 'Mapping' for 'Join_2'. It shows two data sources: 'Rank_1' and 'com.sap::SAGBOOKDAYS'. The columns for 'Rank_1' are AGENCYNUM, NUMBOOKINGS, and NAME. The columns for 'com.sap::SAGBOOKDAYS' are AGENCYNUM, ORDERDAY, and DAYCOUNT. The 'Output Columns' are AGENCYNUM, NUMBOOKINGS, NAME, ORDERDAY, and DAYCOUNT. The 'Properties' panel at the bottom shows the 'Name' as 'Join_2' and an option to 'Ignore Multiple Outputs For Filter'.

20. Untuk melihat data dengan paling banyak bookings, kita dapat menambahkan rank node lain diantara Join_2 dan Aggregation node. Dengan cara klik icon rank dan letakkan diantara keduanya.



21. Lalu double klik Rank_2, pada Mapping, pastikan kelima kolom terpilih.



22. Masih pada Rank_2, pada Definition, untuk Aggregation Function pilih Rank, untuk Result Set Direction pilih Top, untuk Result Set Type pilih Absolute, untuk Target Value pilih Fixed dan isikan 1, dan untuk Offset pilih Fixed dan isikan 0.

The screenshot shows the SAP BW Calculation View Editor. On the left, a diagram shows the hierarchy: Semantics -> Aggregation -> Rank_2 -> Join_2 -> Rank_1 -> Join_1. The Rank_2 node is selected. On the right, the 'Rank_2' configuration panel is open, showing the 'Definition' tab. The 'General' section contains the following settings:

- * Aggregation Function: Rank
- * Result Set Direction: Top
- * Result Set Type: Absolute
- Target Value: Fixed, 1
- Offset: Fixed, 0
- ☐ Generate Rank Column

Kemudian pada bagian Partition Column, pilih AGENCYNUM

The screenshot shows the same SAP BW Calculation View Editor. The Rank_2 node is still selected. On the right, the 'Rank_2' configuration panel is open, showing the 'Definition' tab. The 'Partition Column' section is expanded, showing a table with the following configuration:

| Logical Partition | |
|------------------------------------|--|
| <input type="checkbox"/> Columns | |
| <input type="checkbox"/> AGENCYNUM | |

Below the table, there is a checkbox for 'Dynamic Partition Elements' which is currently unchecked.

Kemudian pada bagian Sort Column, pilih kolom DAYCOUNT dan pilih Descending

The screenshot shows the same SAP BW Calculation View Editor. The Rank_2 node is still selected. On the right, the 'Rank_2' configuration panel is open, showing the 'Definition' tab. The 'Sort Column' section is expanded, showing a table with the following configuration:

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

23. Kemudian double klik pada Aggregation node, pada Mapping pastikan semua kolom pada rank sudah terpilih untuk output.

The screenshot shows the SAP HANA Studio interface. On the left, a project tree displays the calculation view 'Calc_BRT_Partners.hdbcalculationview'. The main workspace shows a diagram of the calculation view with nodes: Semantics, Aggregation, Rank_2, Join_2, Rank_1, Join_1, and Rank_2. The 'Aggregation' node is selected, and its 'Mapping' tab is active. The 'Data Sources' list shows columns from 'Rank_2': AGENCYNUM, NUMBOOKINGS, NAME, ORDERDAY, and DAYCOUNT. The 'Output Columns' list on the right shows the same columns, with a red box highlighting them. The 'Properties' tab at the bottom is also visible.

24. Pada SAP HANA project panel, klik icon roket untuk deploy calculation view. Setelah proses deploy selesai dan sukses, kita bisa cek output nya lagi dengan klik icon hdi container yang terletak disamping nama project. Lalu akan tampil tab baru lagi dengan SAP HANA Database Explorer. Pada list database, klik column views, lalu klik raw data untuk melihat output dari calculation view yang akan menampilkan top 5 partners dari Best Run Travel dan hari yang memiliki paling banyak bookings.

The screenshot shows the SAP HANA Studio interface. The 'Calc_BRT_Partners' project is selected. The 'Raw Data' tab is active, displaying the output of the calculation view. The table shows 5 rows of data, with columns: AGENCYNUM, NAME, ORDERDAY, NUMBOOKINGS, and DAYCOUNT. The data is as follows:

| Row | AGENCYNUM | NAME | ORDERDAY | NUMBOOKINGS | DAYCOUNT |
|-----|-----------|-----------------------|----------|-------------|----------|
| 1 | 00000122 | Fly Low | THURSDAY | 27869 | 4037 |
| 2 | 00000118 | Asia By Plane | TUESDAY | 27416 | 4004 |
| 3 | 00000101 | Bella Italia | THURSDAY | 27866 | 4038 |
| 4 | 00000284 | Rainy, Stormy, Cloudy | MONDAY | 27870 | 4108 |
| 5 | 00000109 | Kangeroos | THURSDAY | 27867 | 4095 |