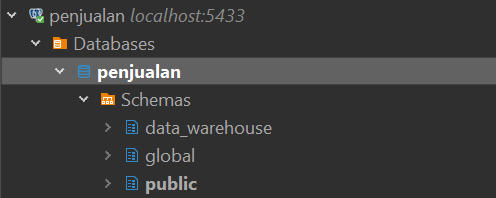
**Data Warehouse Homework**

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Group 4 – Garap Rendang



Tools: Dbeaver

Terlihat pada gambar diatas bahwasannya terdapat 2 schema (global dan data\_warehouse). Schema global adalah schema dari lampiran soal, berisi tabel yang dicontohkan pada soal dengan data yang digenerate dengan query baik secara random ataupun generate series. Schema data\_warehouse adalah schema yang dibuat oleh pribadi untuk menjawab soal-soal pada lampiran.

Berikut merupakan query untuk membuat dimension table dan fact table serta mengopy data dari table schema globale ke schema data\_warehouse:

-- create data\_warehouse schema

**create** **schema** data\_warehouse;

-- create dimension table

**create** **table** data\_warehouse.dim\_customer (

customer\_id SERIAL **primary** **key**,

customer\_name **VARCHAR**(100),

email **VARCHAR**(100),

phone\_number **VARCHAR**(20)

);

**create** **table** data\_warehouse.dim\_product (

product\_id SERIAL **primary** **key**,

product\_name **VARCHAR**(100),

category **VARCHAR**(50),

price **numeric**(10, 2)

);

**create** **table** data\_warehouse.dim\_time (

date\_id SERIAL **primary** **key**,

day\_of\_week **VARCHAR**(100),

month **VARCHAR**(10),

quarter **VARCHAR**(10),

year **INT**

);

-- create fact table

**create** **table** data\_warehouse.fact\_sales (

sale\_id SERIAL **primary** **key**,

customer\_id **INT** **references** data\_warehouse.dim\_customer(customer\_id),

product\_id **INT** **references** data\_warehouse.dim\_product(product\_id),

date\_id **INT** **references** data\_warehouse.dim\_time(date\_id),

quantity **INT**,

revenue **NUMERIC**(12, 2)

);

-- populate the dimension tables

**insert** **into** data\_warehouse.dim\_customer (customer\_name, email, phone\_number)

**select** customer\_name, email, phone\_number **from** global.customer;

**insert** **into** data\_warehouse.dim\_product (product\_name, category, price)

**select** product\_name, category, price **from** global.product;

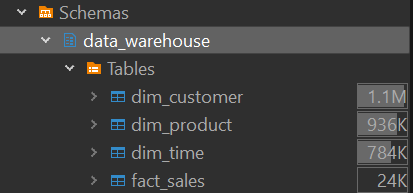
**insert** **into** data\_warehouse.dim\_time (day\_of\_week, month, quarter, year)

**select** day\_of\_week, month, quarter, year **from** global.time;

-- populate the fact table

**insert** **into** data\_warehouse.fact\_sales (customer\_id, product\_id, date\_id, quantity, revenue)

**select** customer\_id, product\_id, date\_id, quantity, revenue **from** global.sales;



|  |
| --- |
| 1. Berapa banyak penjualan total revenue di Quarter 1 2024? |
| **select** \* **from** data\_warehouse.dim\_time;  **select** **sum**(*fs*.revenue) **as** *total\_revenue*  **from** data\_warehouse.fact\_sales *fs*  **join** data\_warehouse.dim\_time *dt* **on** **fs**.date\_id = dt.date\_id  **where** *dt*.quarter = '1' **and** *dt*.year = 2024; |
| Tidak ada data revenue pada quarter 1 tahun 2024. |
| 2. Berapa banyak penjualan secara quantity di Quarter 4 2023? |
| **select** \* **from** data\_warehouse.dim\_time;  **select** **sum**(*fs*.quantity) **as** *total\_quantity*  **from** data\_warehouse.fact\_sales *fs*  **join** data\_warehouse.dim\_time *dt* **on** *fs*.date\_id = *dt*.date\_id  **where** *dt*.quarter = '4' **and** *dt*.year = 2023; |
| Tidak ada data penjualan (secara kuantitas) pada quarter 4 tahun 2023. |
| 3. Dari semua data penjualan yang ada, carilah di Quarter berapa dan tahun berapa penjualan paling banyak secara revenue? |
| **select** *dt*.quarter, *dt*.year, **sum**(*fs*.revenue) **as** *total\_revenue*  **from** data\_warehouse.fact\_sales *fs*  **join** data\_warehouse.dim\_time *dt* **on** *fs*.date\_id = *dt*.date\_id  **group** **by** *dt*.quarter, *dt*.year  **order** **by** *total\_revenue* **desc** **limit** 1; |
|  |