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<p>Hari/Tanggal: Jum'at, 03/05/2024</p>	<p>Praktikum Data Warehouse</p>	<p>Nama Asisten Laboratorium:</p> <ul style="list-style-type: none">1. Exchell S.G Ointu - 0650021000072. Nia Suhernawati – 065002100005

Persiapan Proyek Akhir 2

1. Teori Singkat

Data warehouse adalah jenis sistem manajemen data yang dirancang untuk memungkinkan dan mendukung kegiatan business intelligence (BI), terutama analitik. Gudang data semata-mata dimaksudkan untuk melakukan kueri dan analisis dan sering berisi sejumlah besar data historis. Data dalam gudang data biasanya berasal dari berbagai sumber seperti file log aplikasi dan aplikasi transaksi. Gudang data memusatkan dan mengkonsolidasikan sejumlah besar data dari berbagai sumber. Kemampuan analitisnya memungkinkan organisasi untuk memperoleh wawasan bisnis yang berharga dari data mereka untuk meningkatkan pengambilan keputusan. Seiring waktu, ia membangun catatan sejarah yang dapat sangat berharga bagi para ilmuwan data dan analis bisnis. Karena kemampuan ini, gudang data dapat dianggap sebagai "sumber kebenaran tunggal" organisasi.

2. Alat dan Bahan

Hardware : Laptop/PC

Software : Spoon Pentaho from Hitachi Vantara



3. Elemen Kompetensi

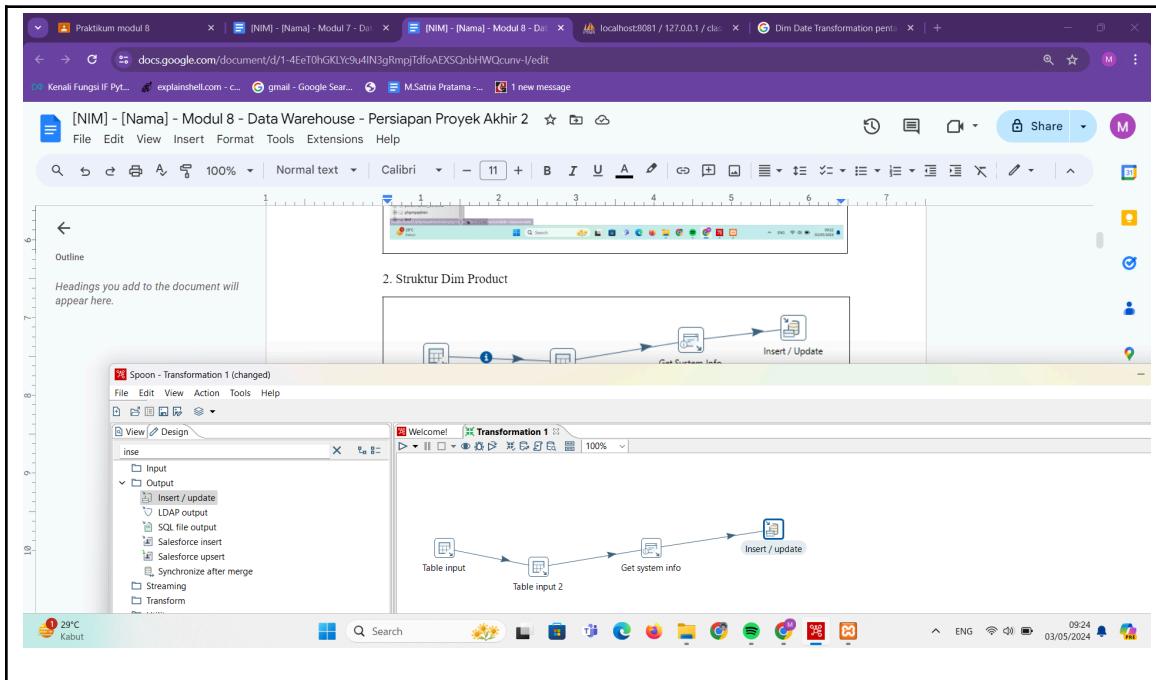
a. Latihan pertama – Dim Product Transformation

1. Tambahkan kolom baru bernama updated dengan tipe data timestamp pada tabel products dalam database classicmodels seperti pada gambar dibawah ini di MySQL.

The screenshot shows the phpMyAdmin interface for the 'classicmodels' database. The left sidebar lists various databases and tables. The main area shows the 'Structure' tab for the 'products' table. A new column 'updated' is being added, defined as 'TIMESTAMP'. The 'Default' dropdown is set to 'None'. Other columns like 'product_id', 'product_name', 'model', etc., are listed with their respective data types. The 'Save' button is visible at the bottom of the form.

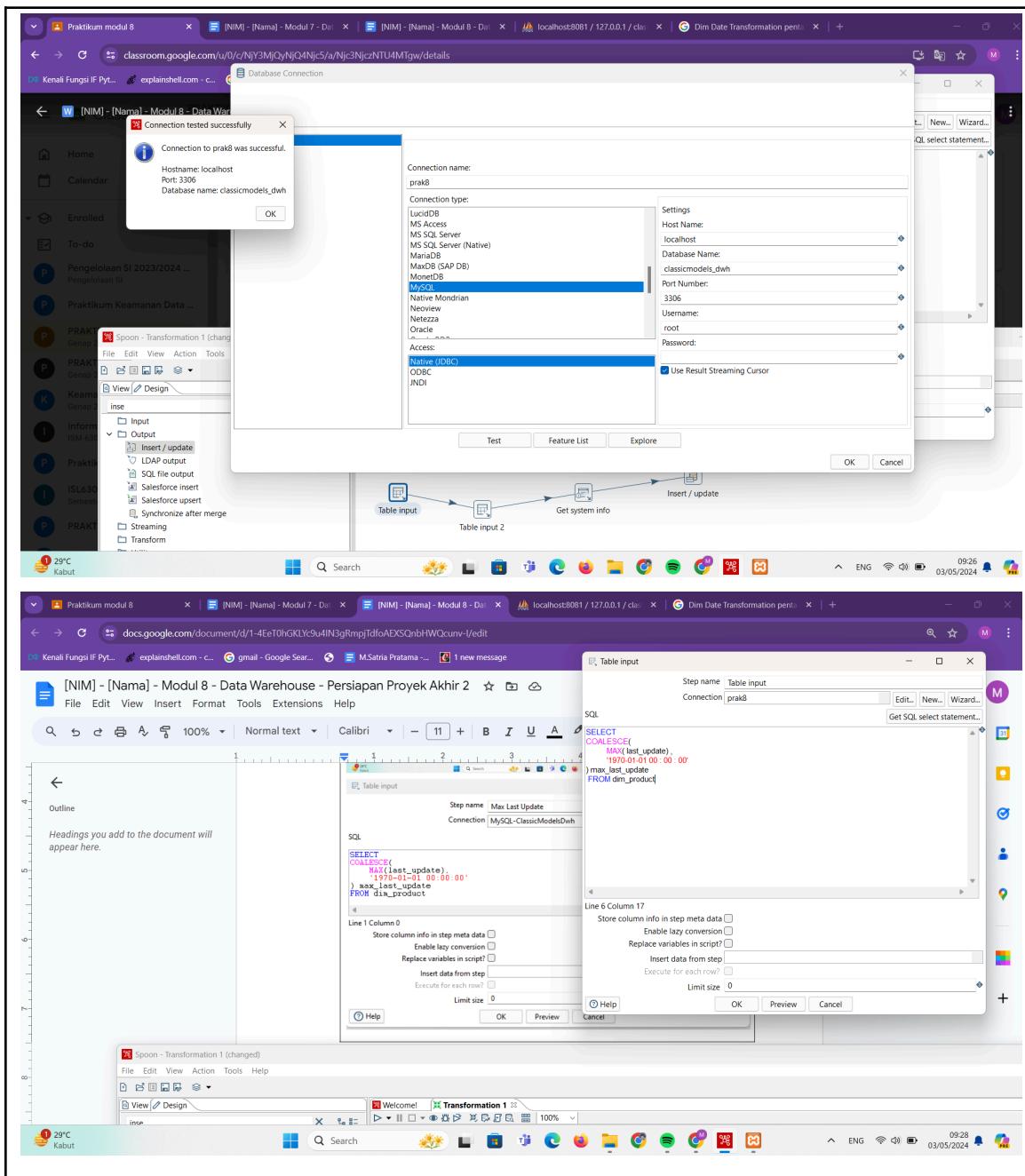
2. Struktur Dim Product





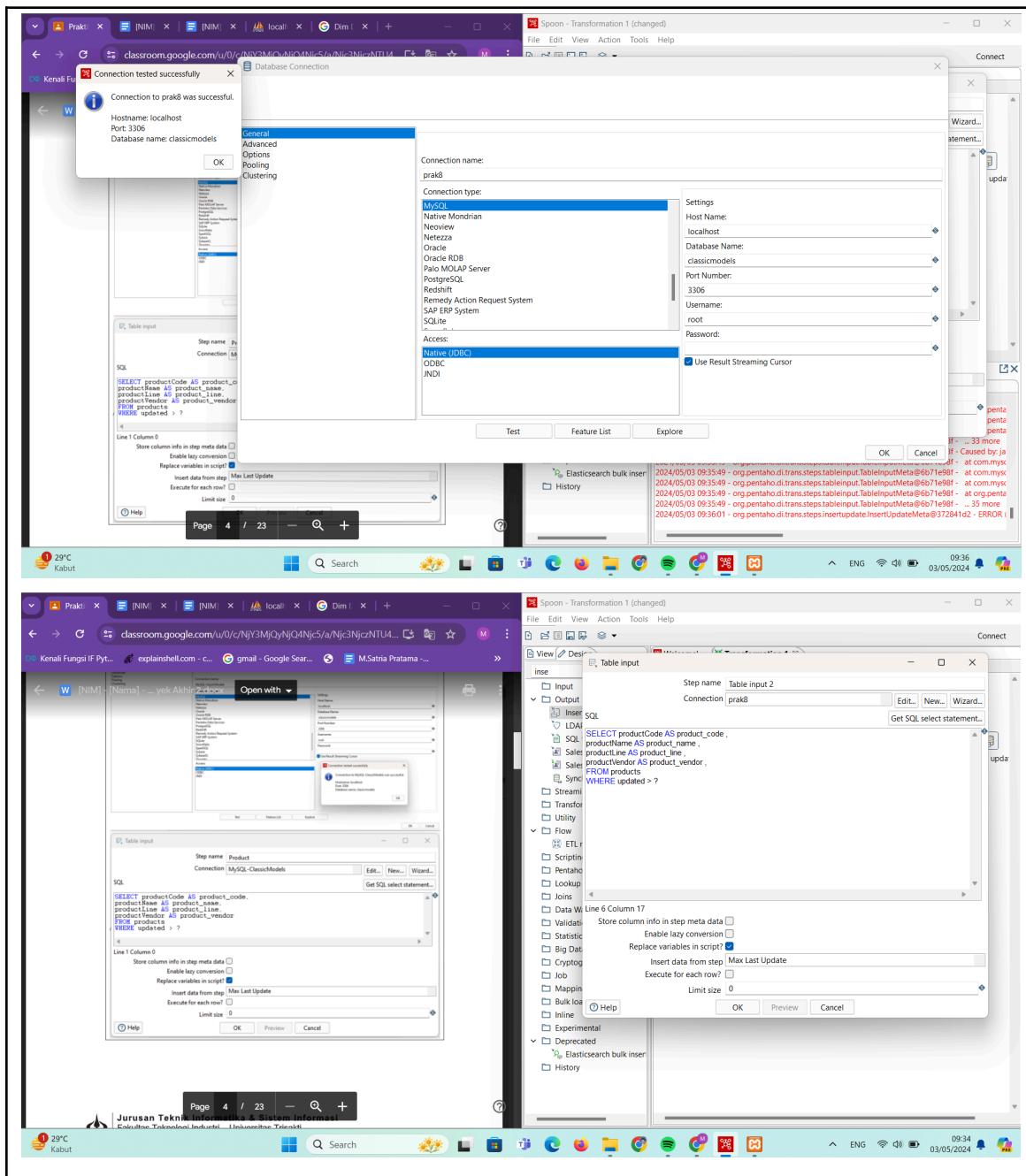
3. Max Last Update – Table input



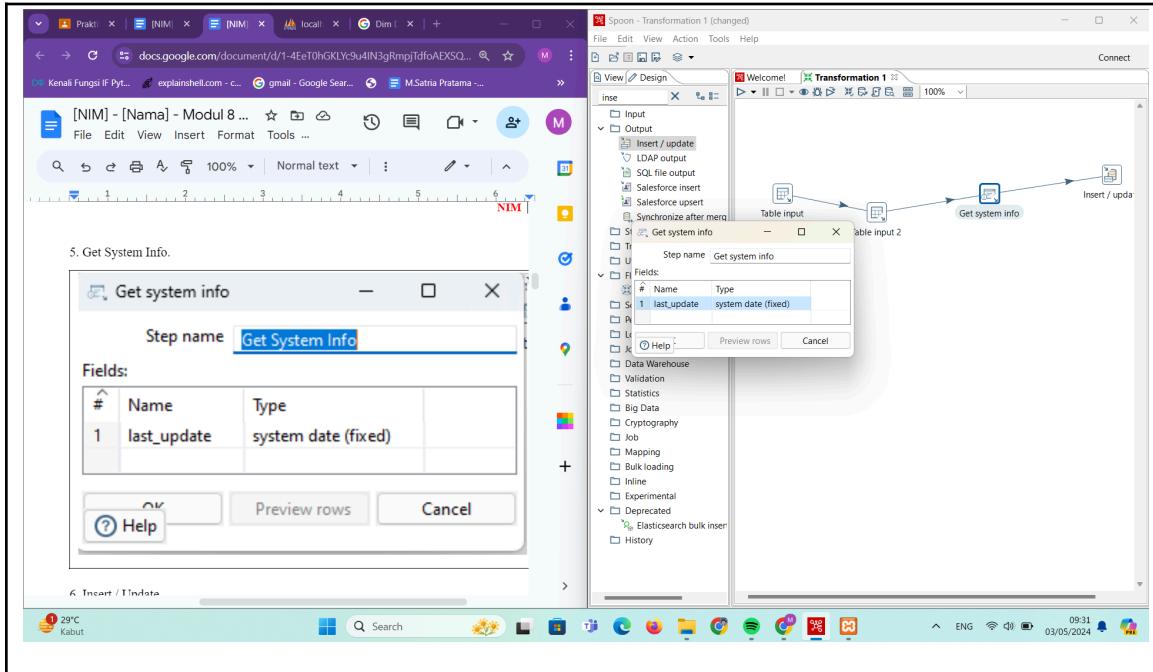


4. Product – Table Input.

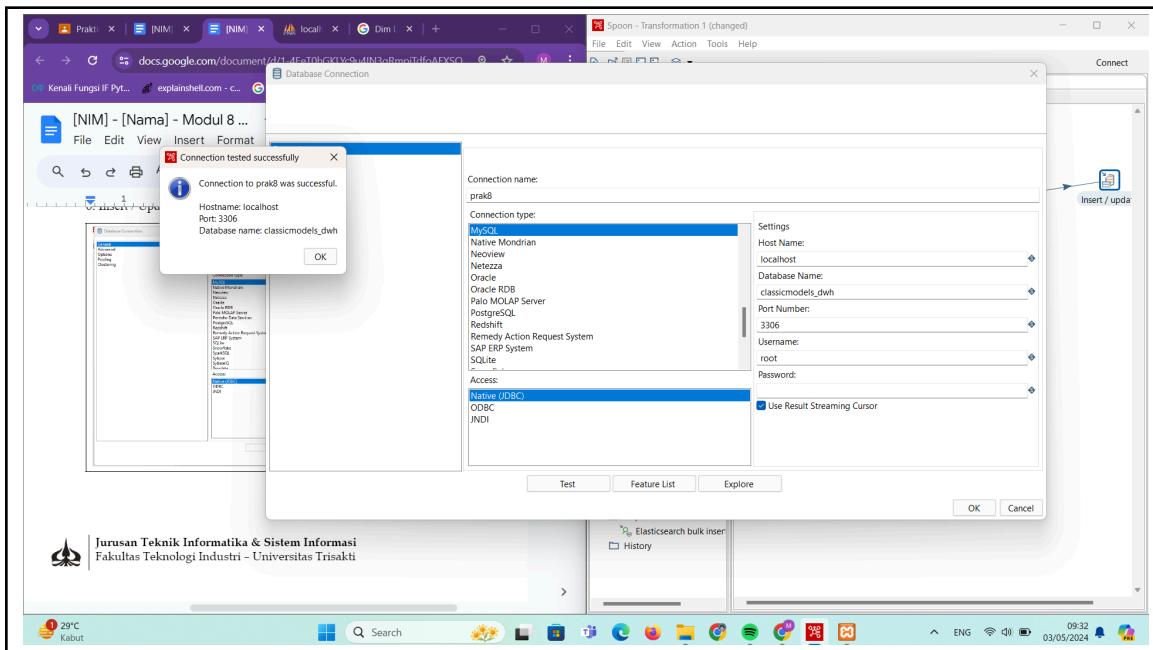


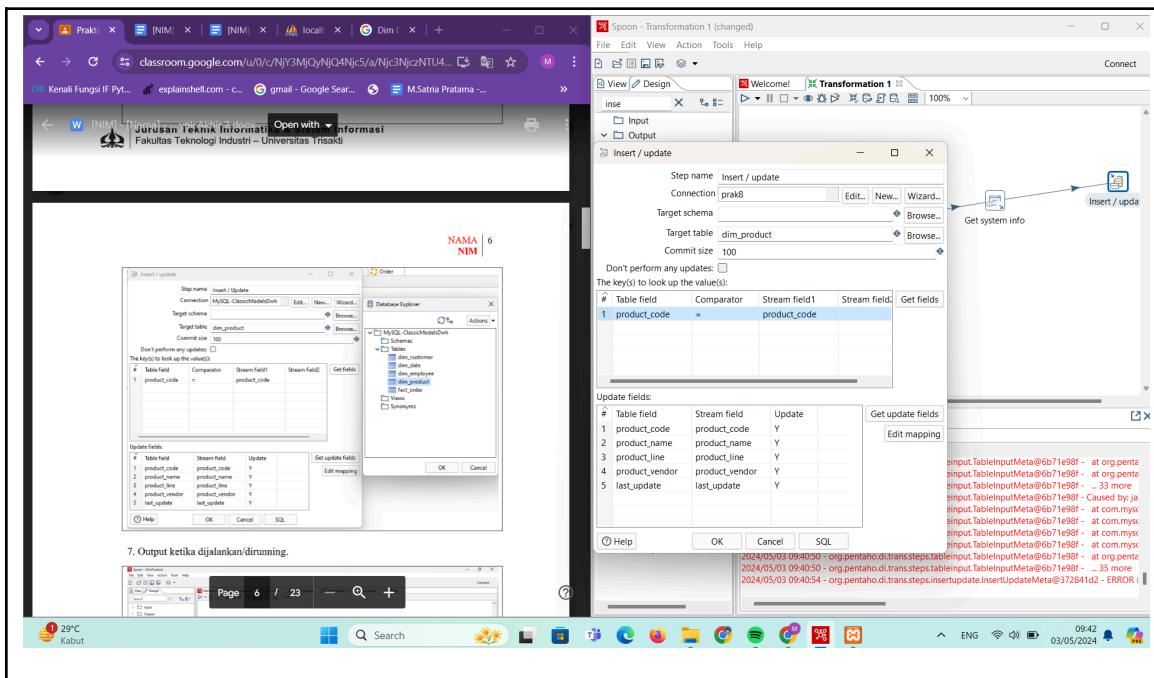


5. Get System Info.

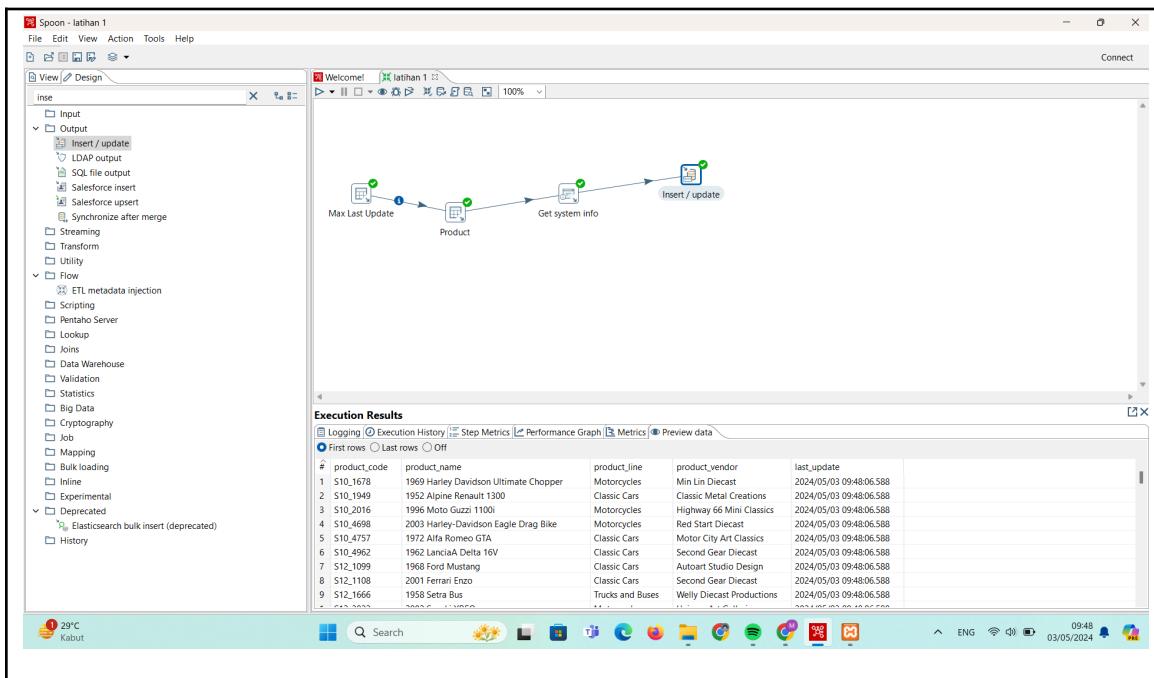


6. Insert / Update.



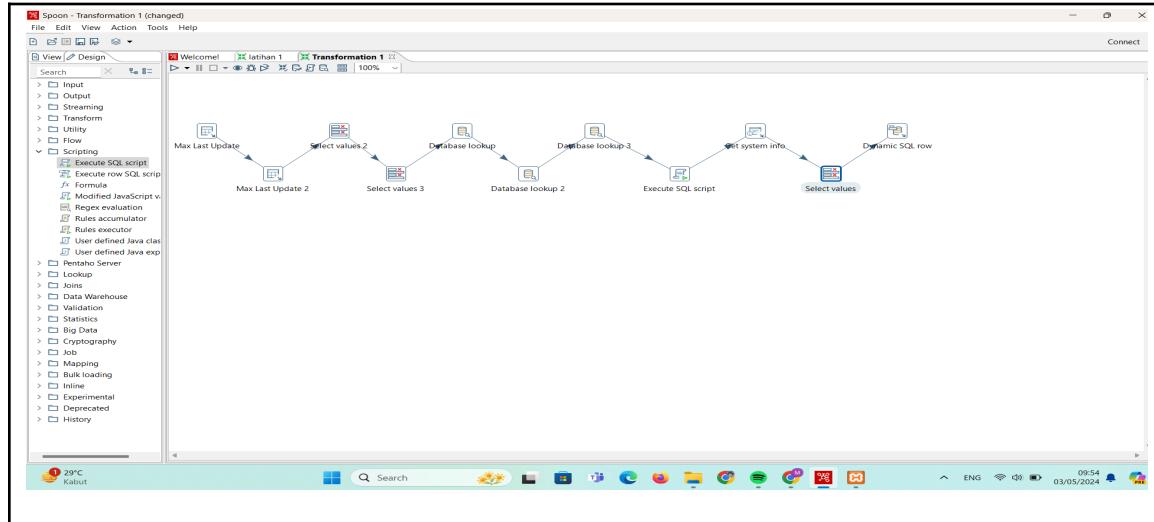


7. Output ketika dijalankan/dirunning.

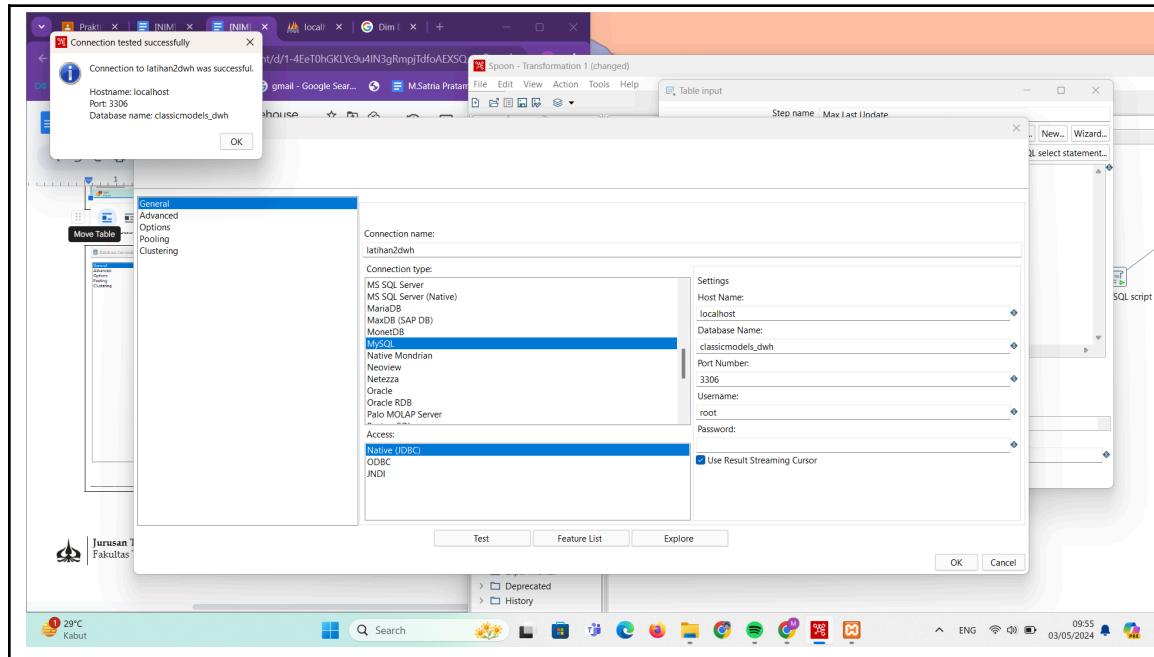


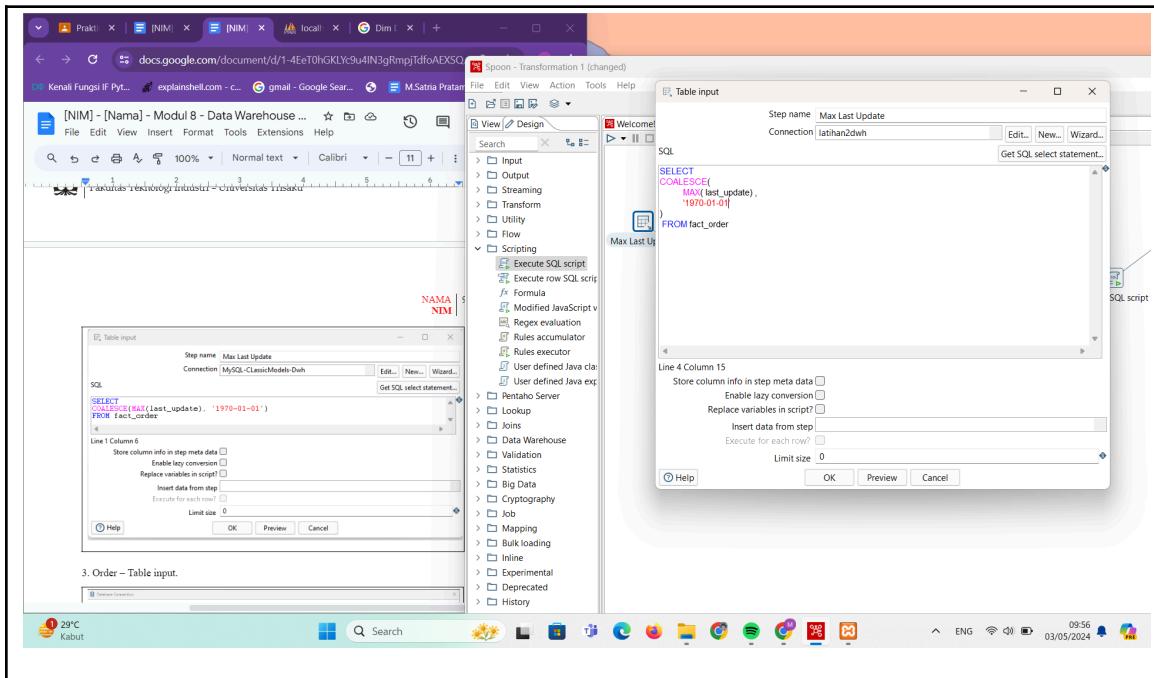
b. Latihan Kedua – Fact Order Transformation

1. Struktur Fact Order.

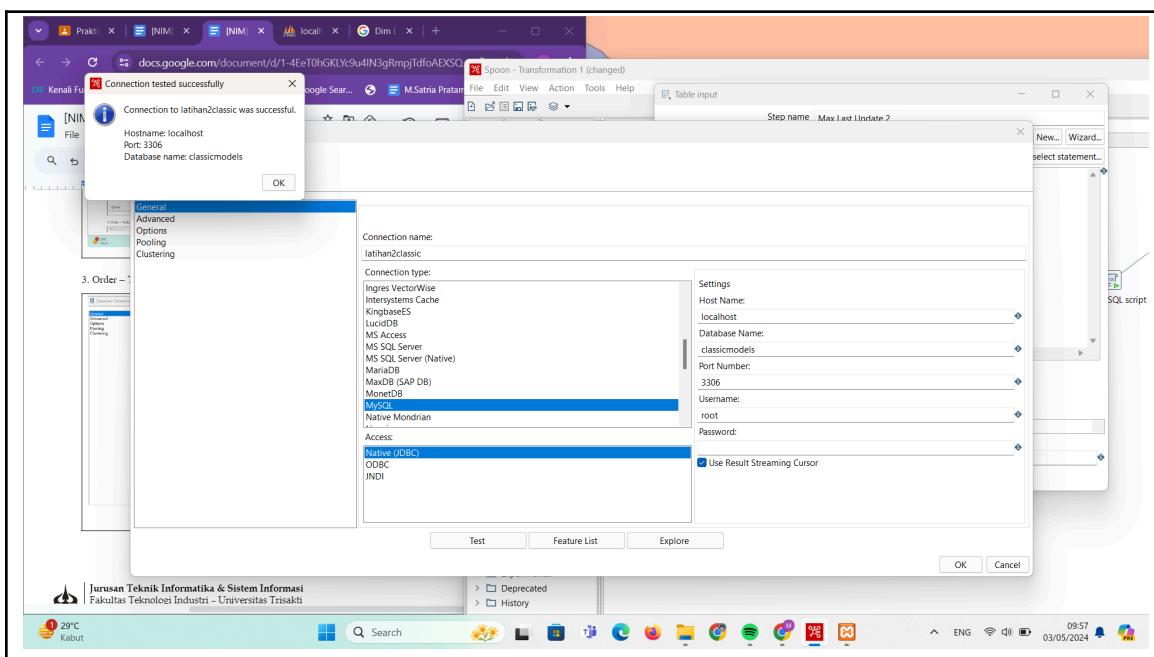


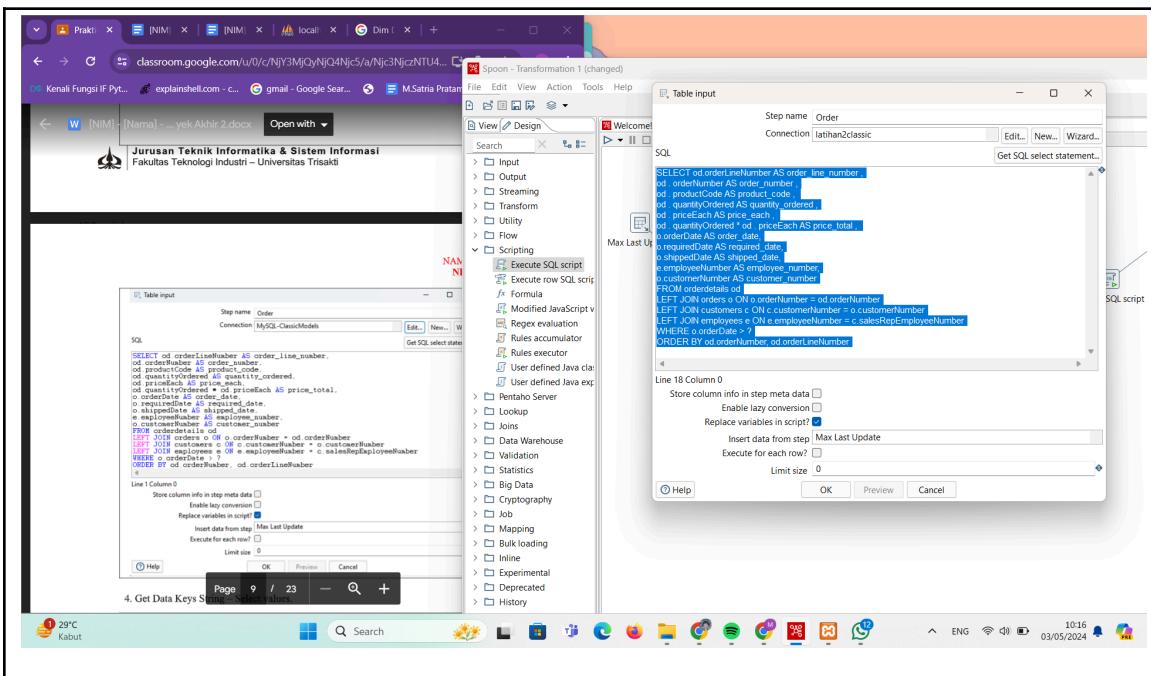
2. Max Last Update – Table input



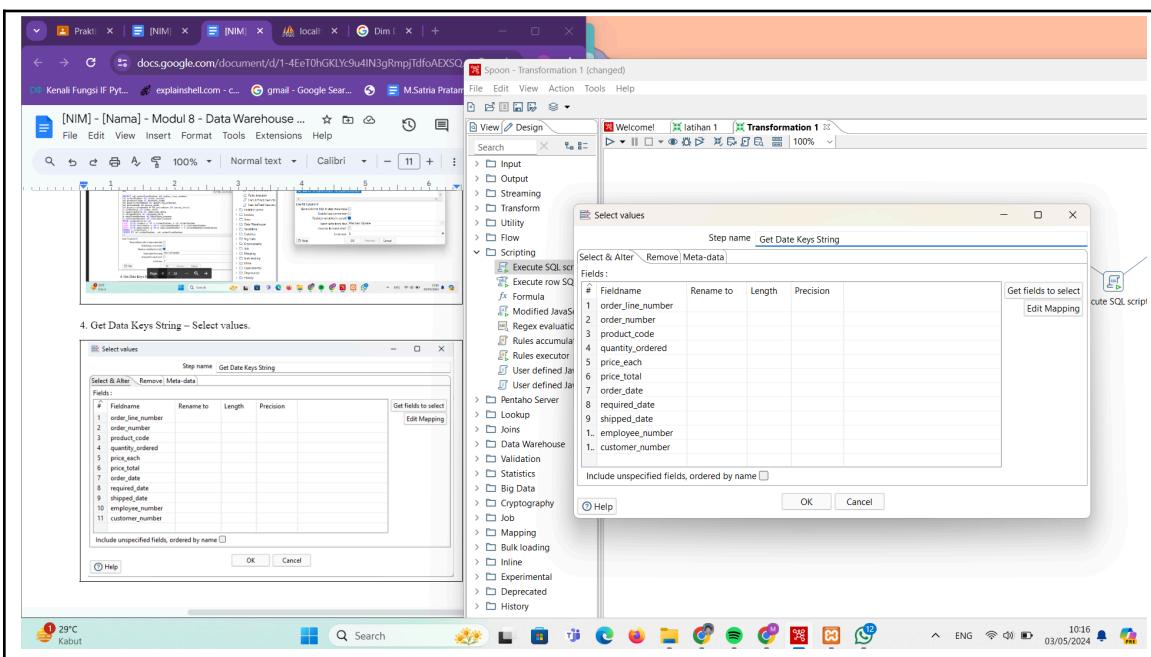


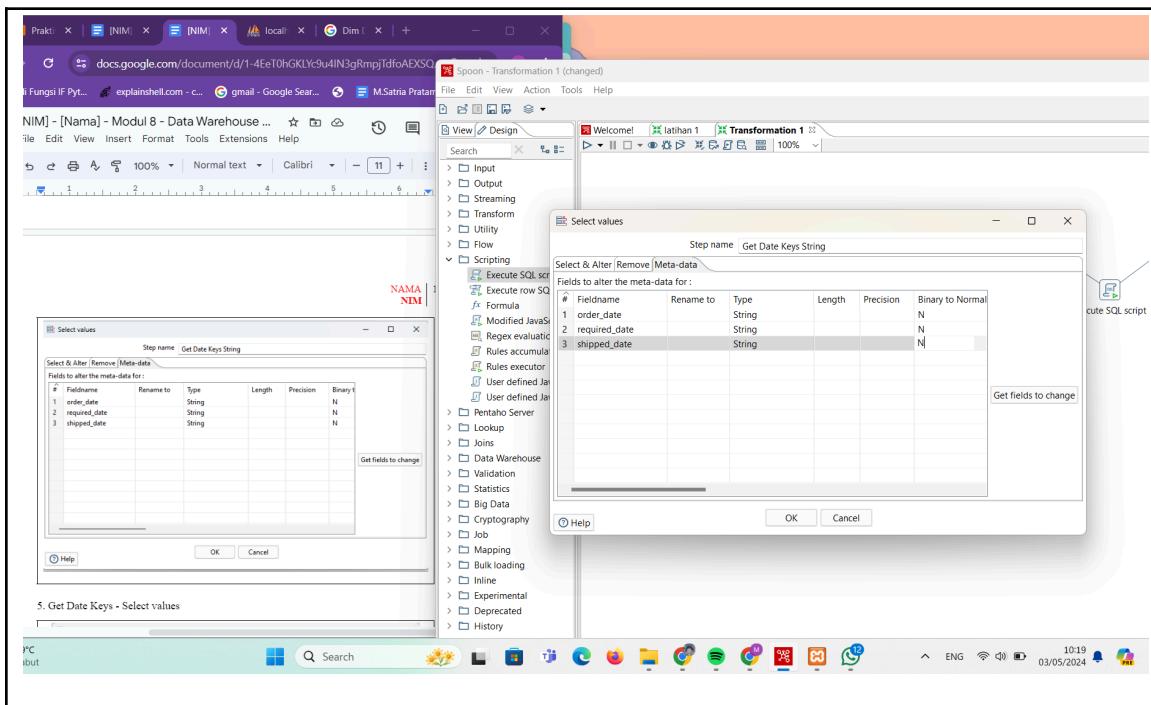
3. Order – Table input.



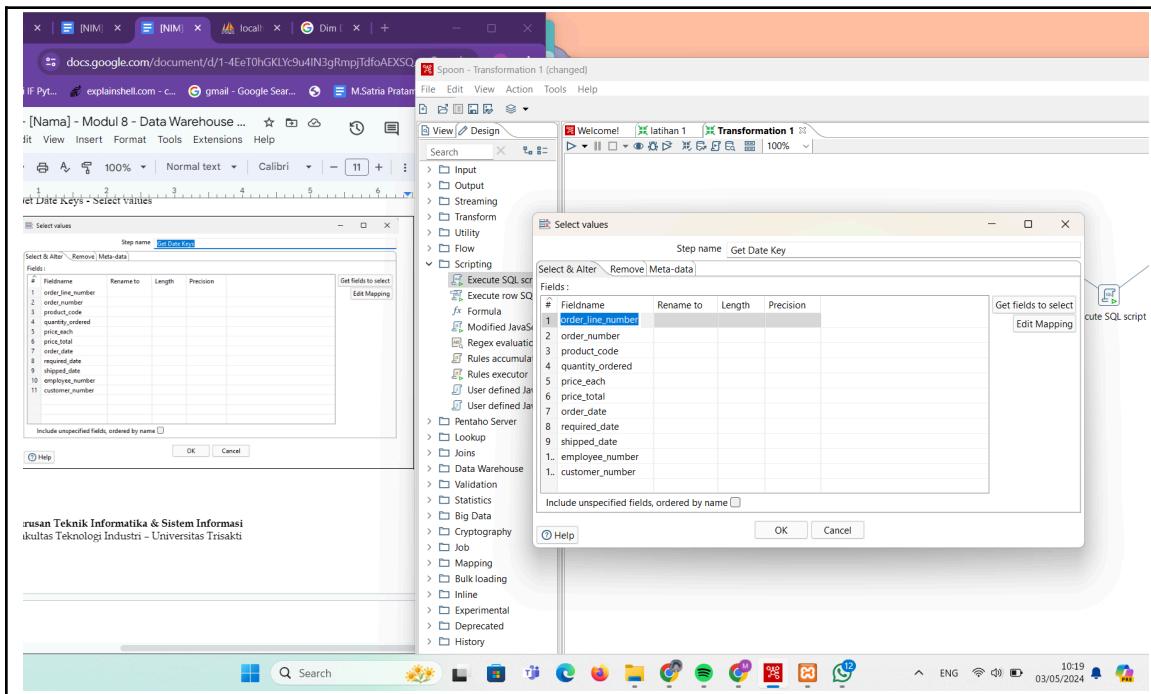


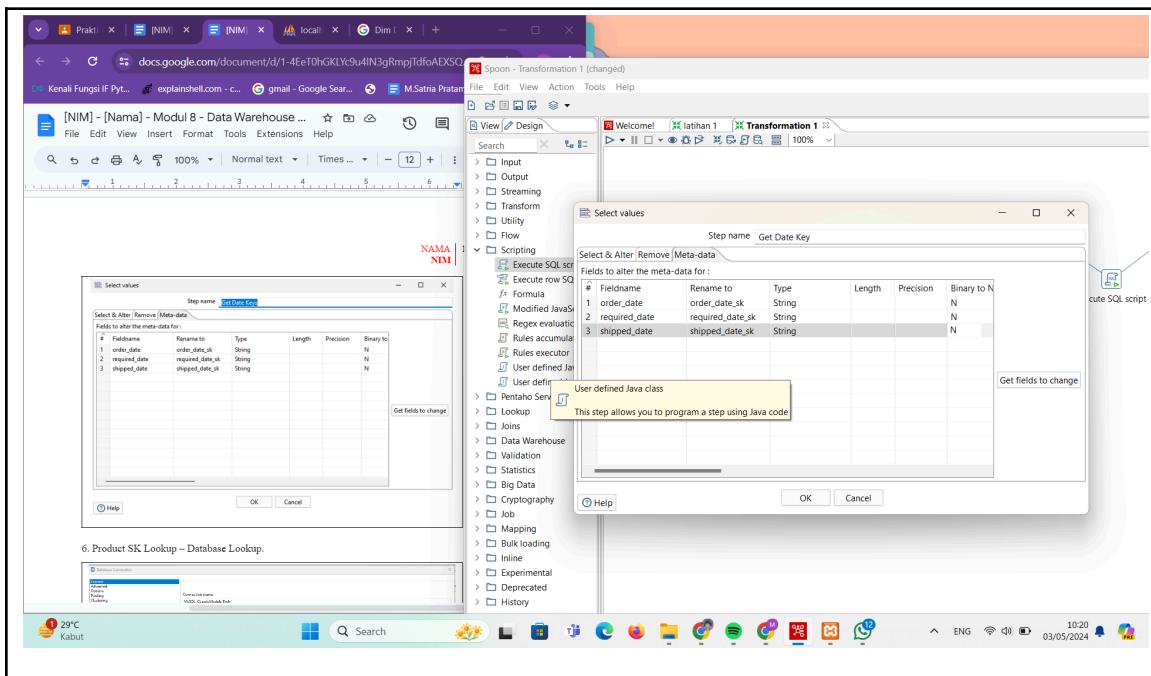
4. Get Data Keys String – Select values.



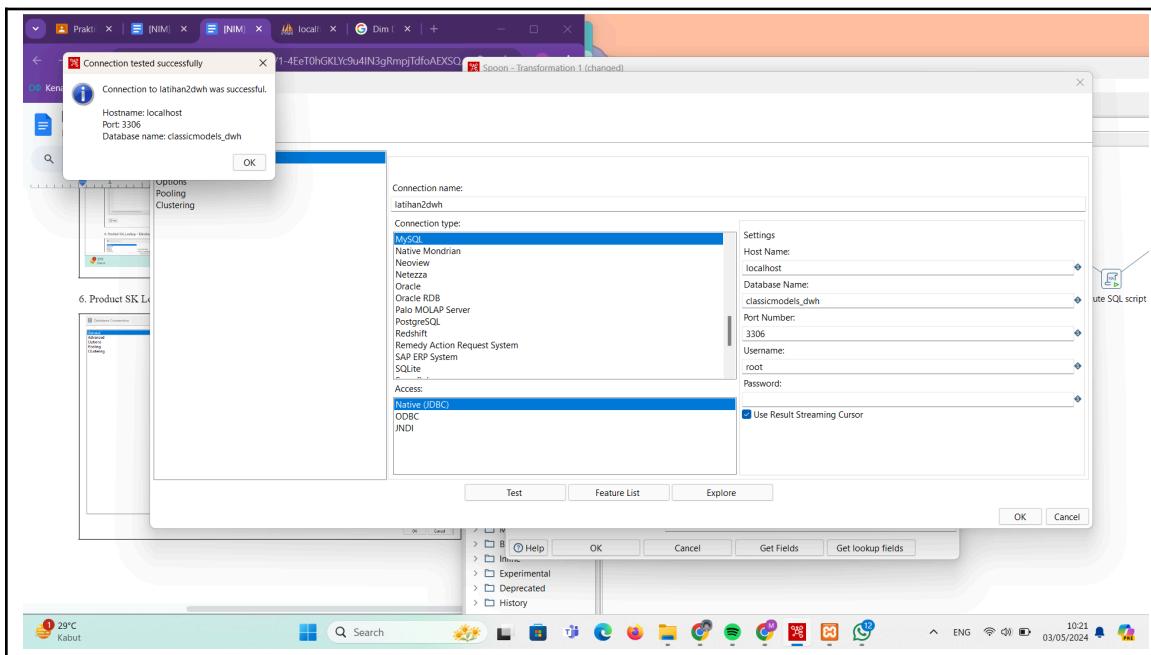


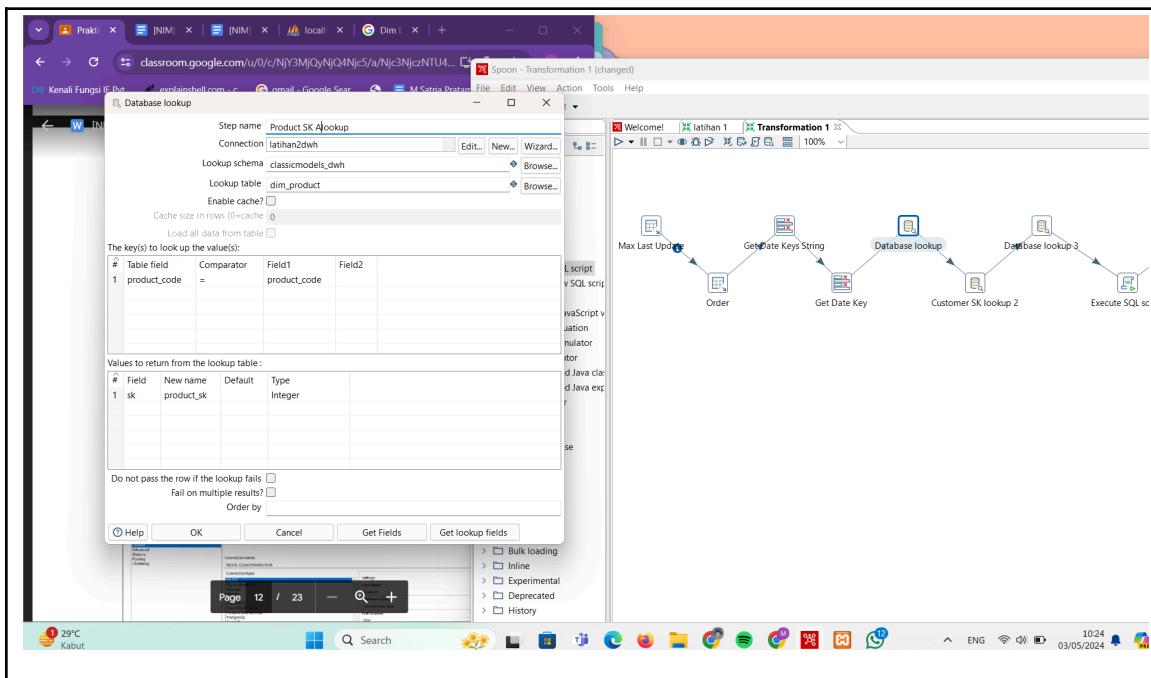
5. Get Date Keys - Select values



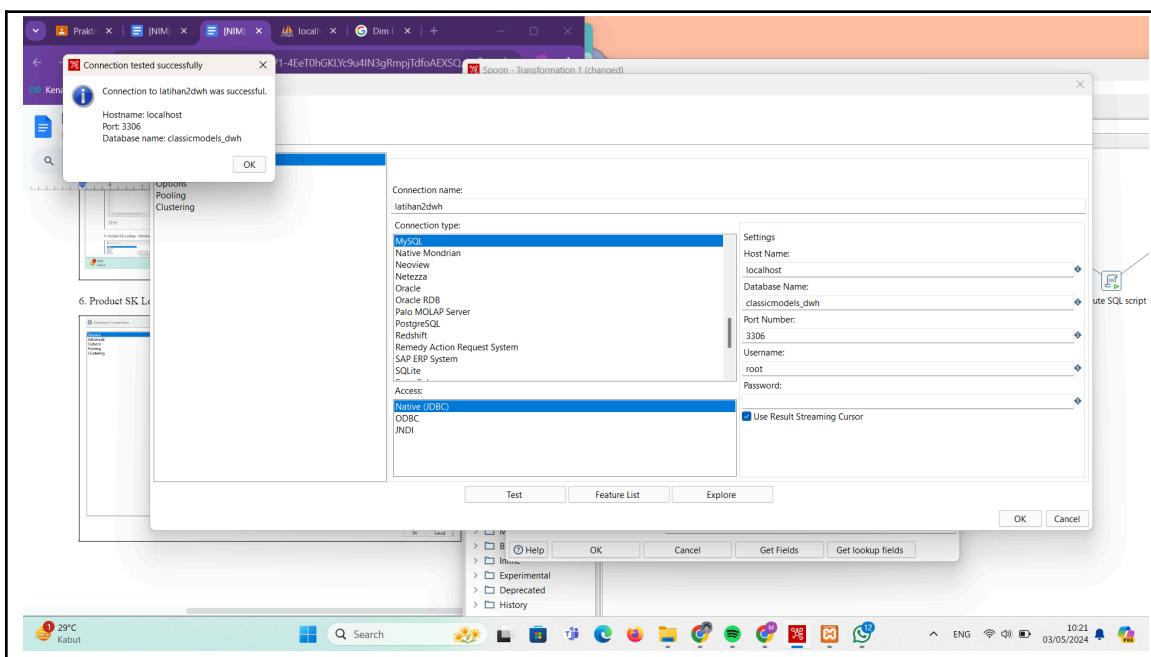


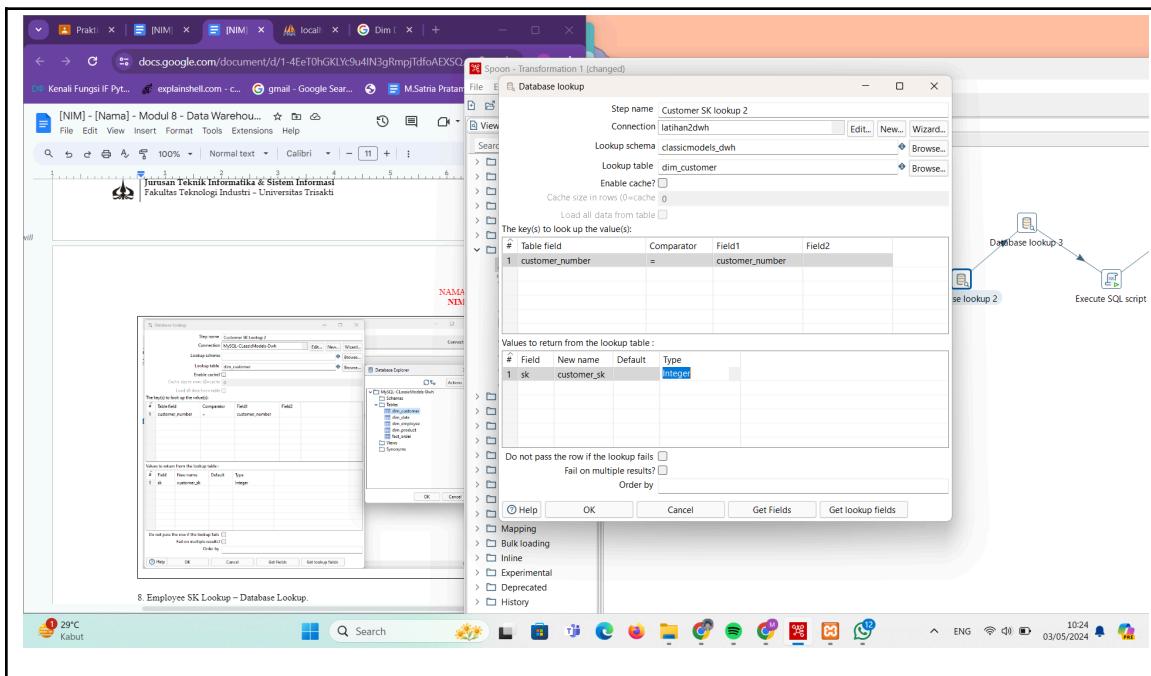
6. Product SK Lookup – Database Lookup.



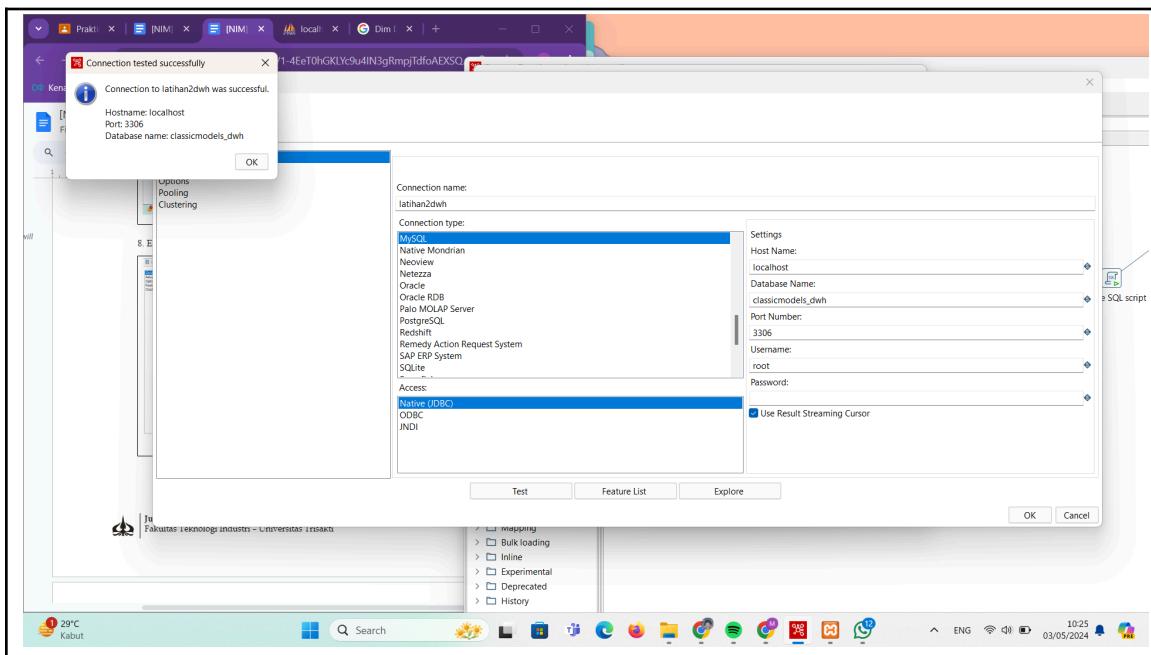


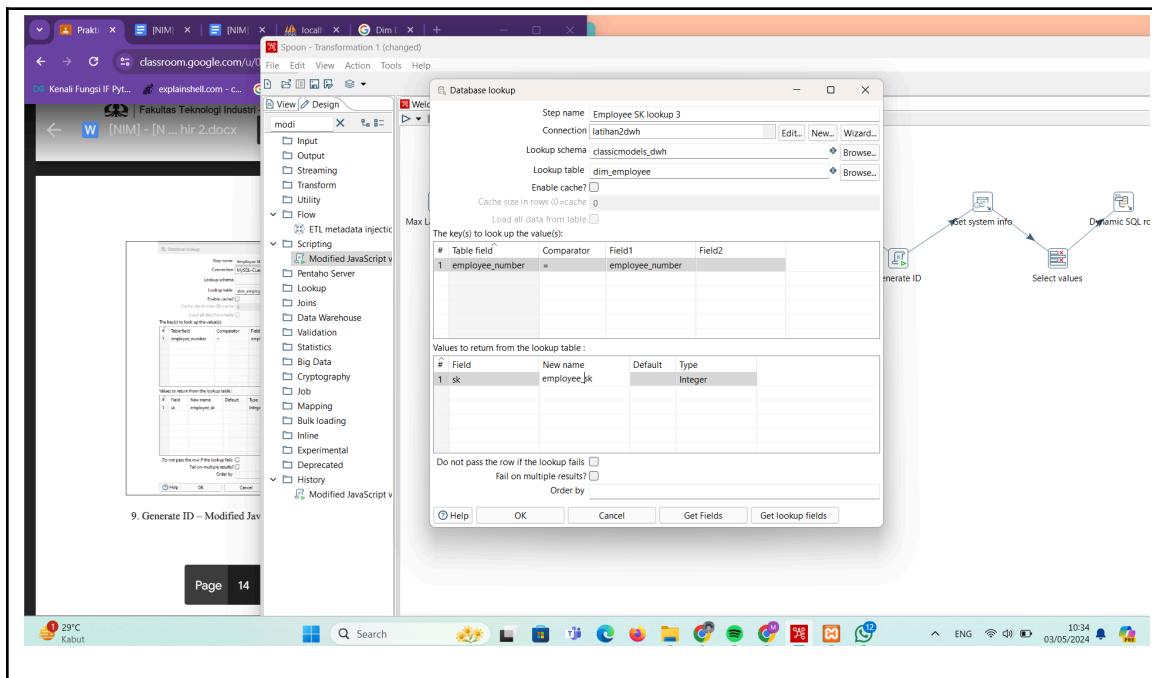
7. Costumer SK Lookup – Database Lookup.





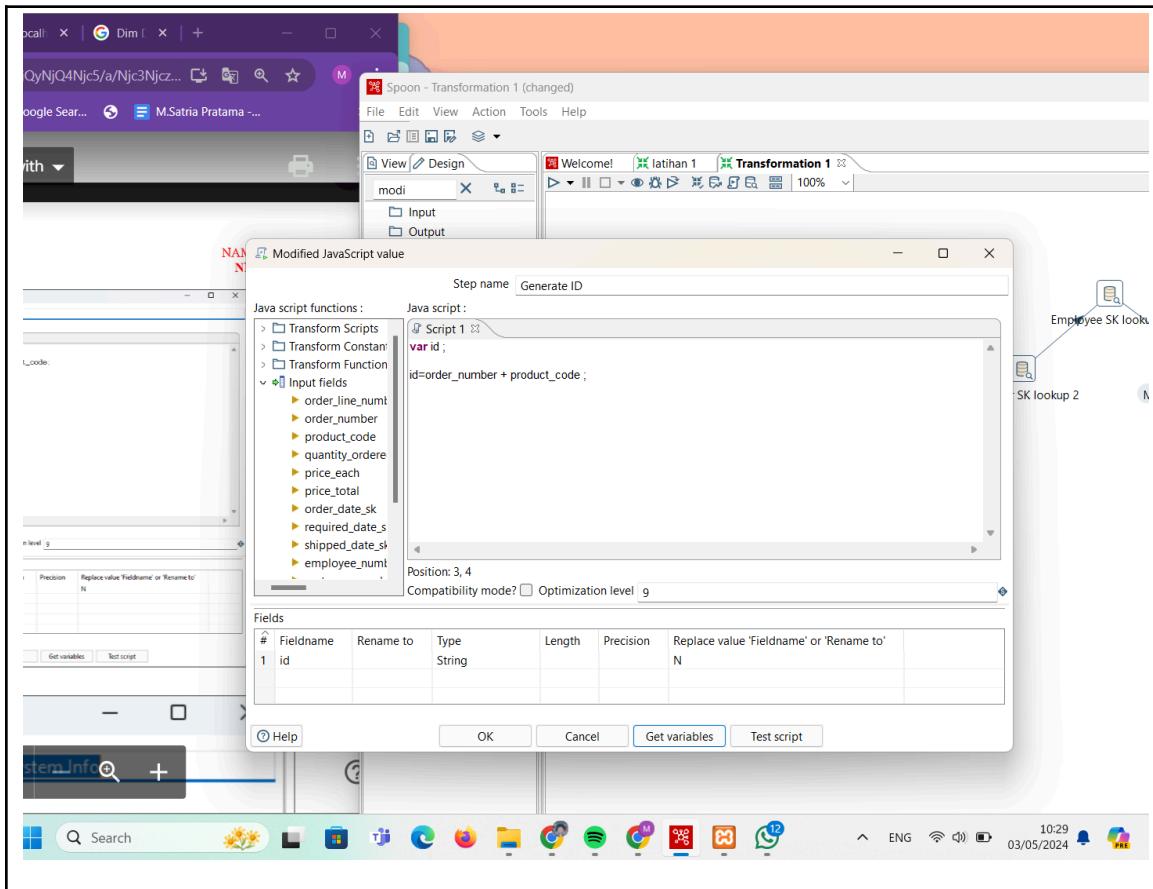
8. Employee SK Lookup – Database Lookup.





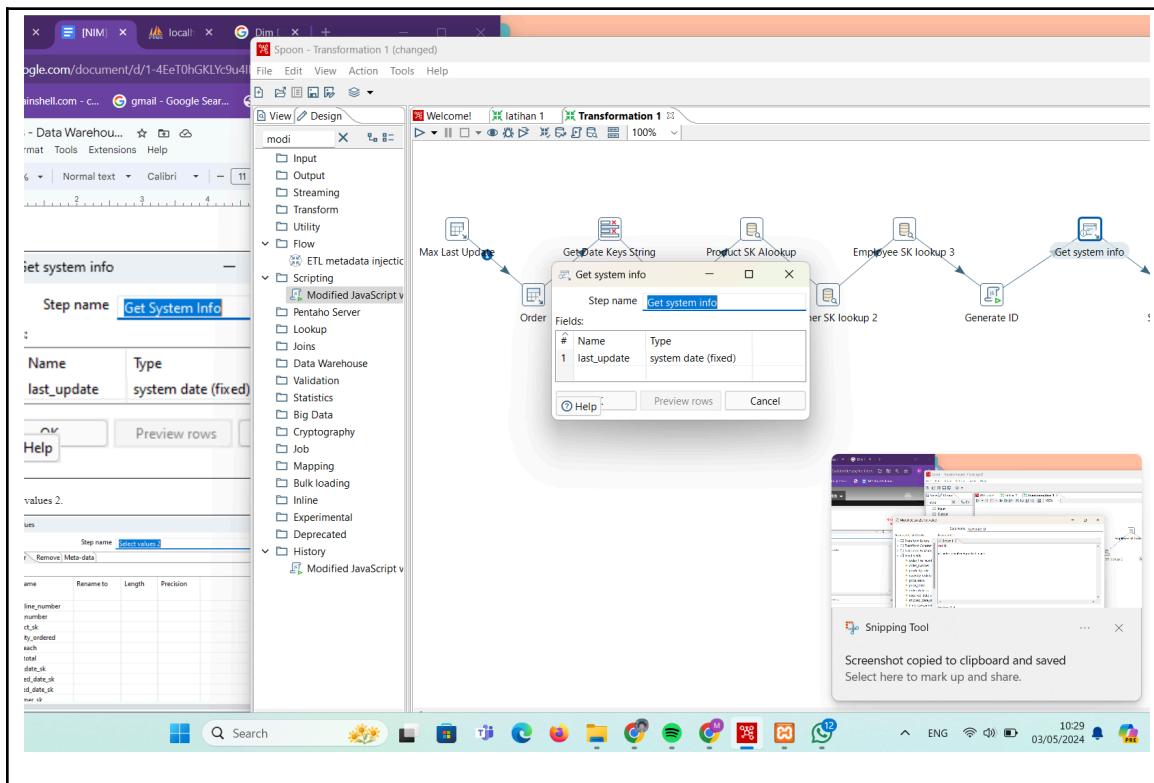
9. Generate ID – Modified JavaScript value.





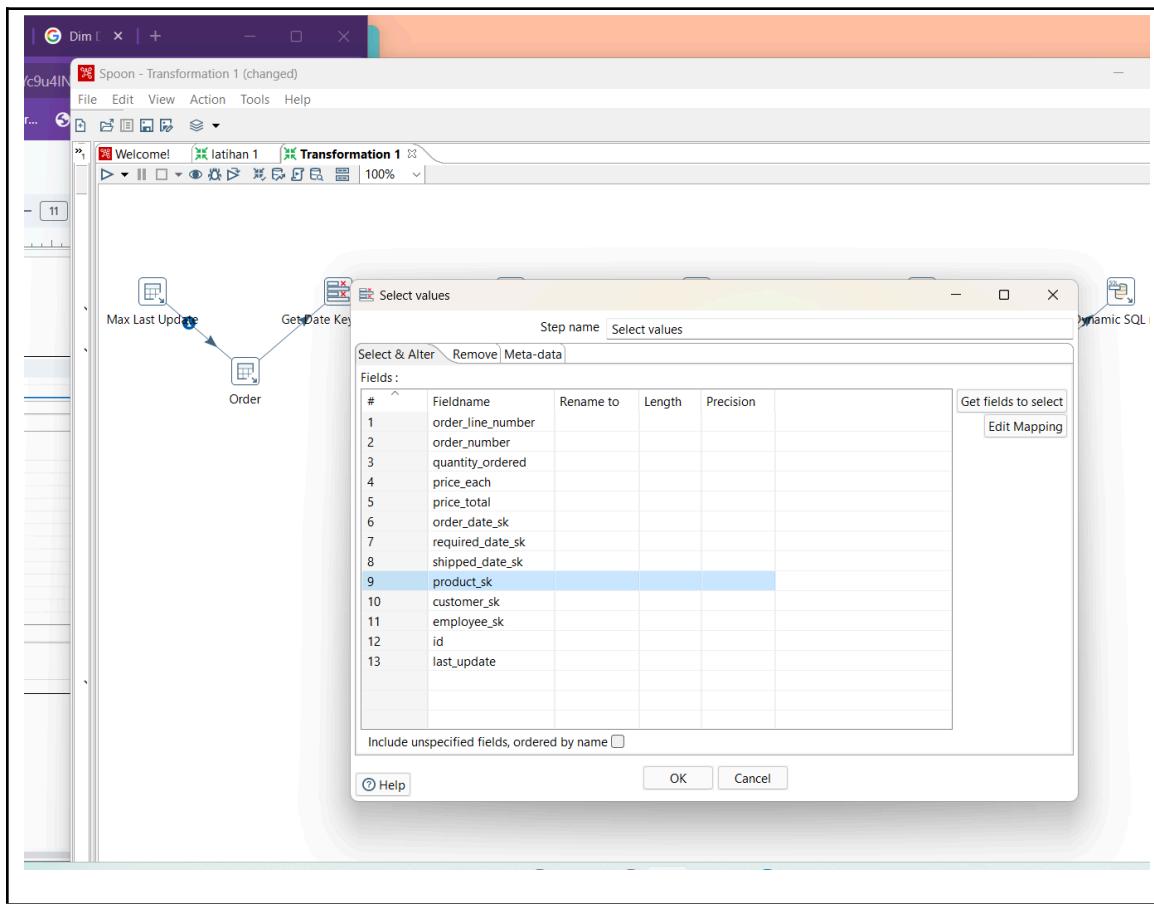
10. Get System Info.





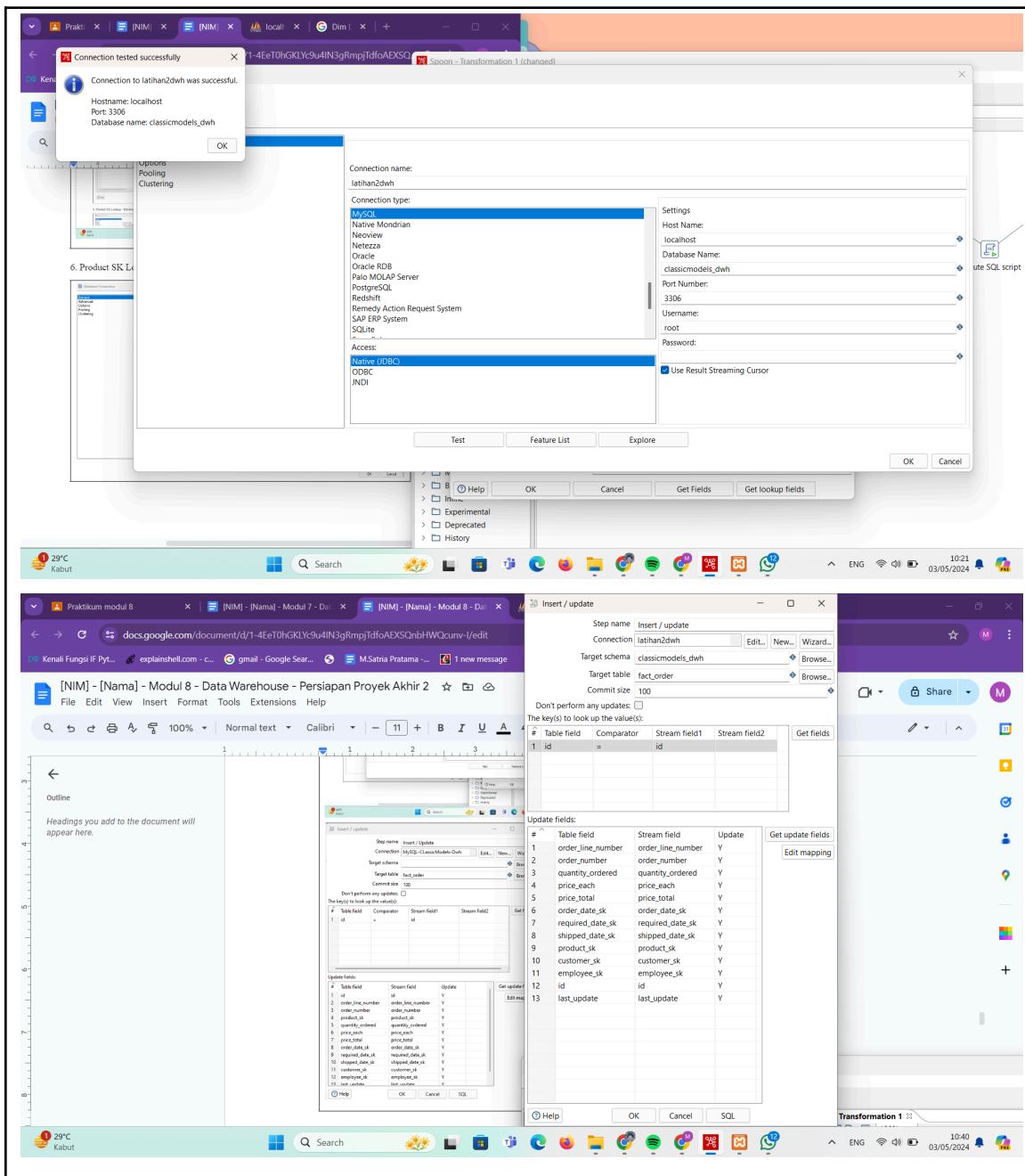
11. Select values 2.





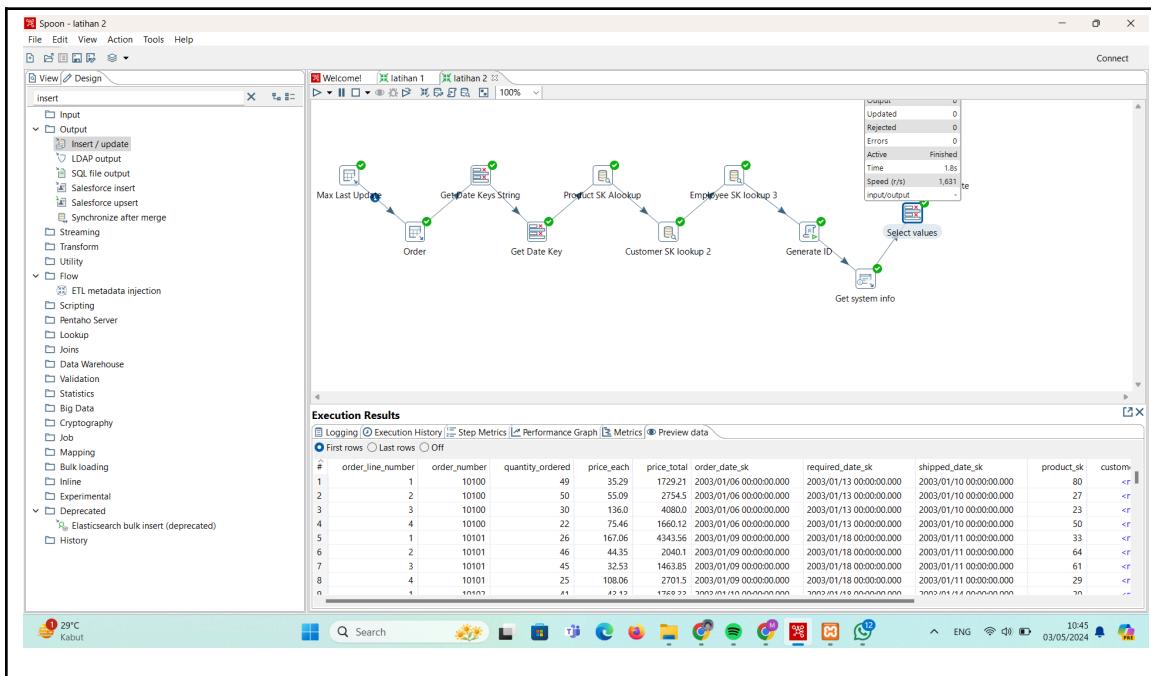
12. Insert / Update.





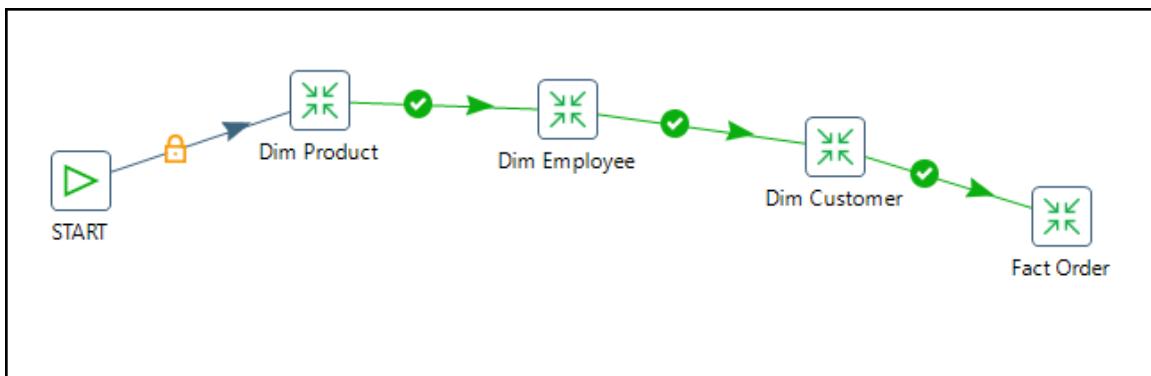
12. Output.



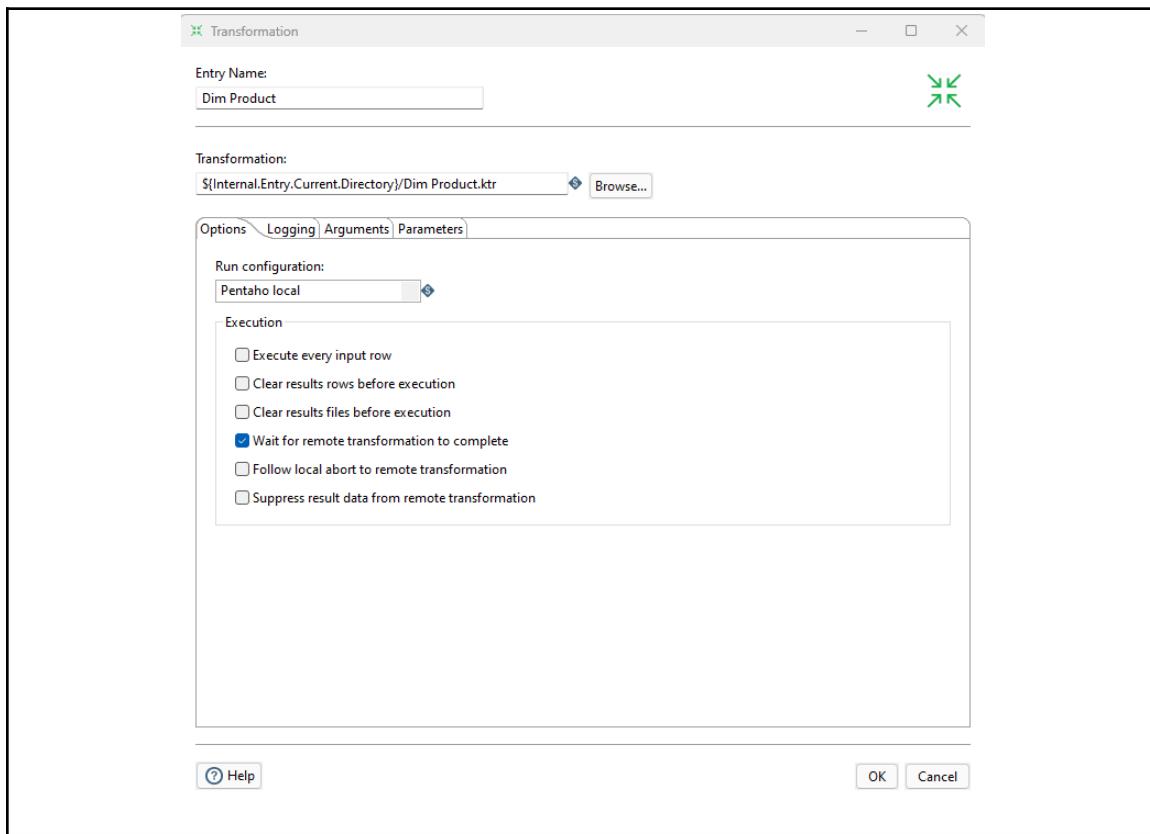


c. Latihan Ketiga – Order Job

- Buatlah Job baru dan simpan dengan nama Order. Lalu buatlah struktur seperti gambar dibawah ini.

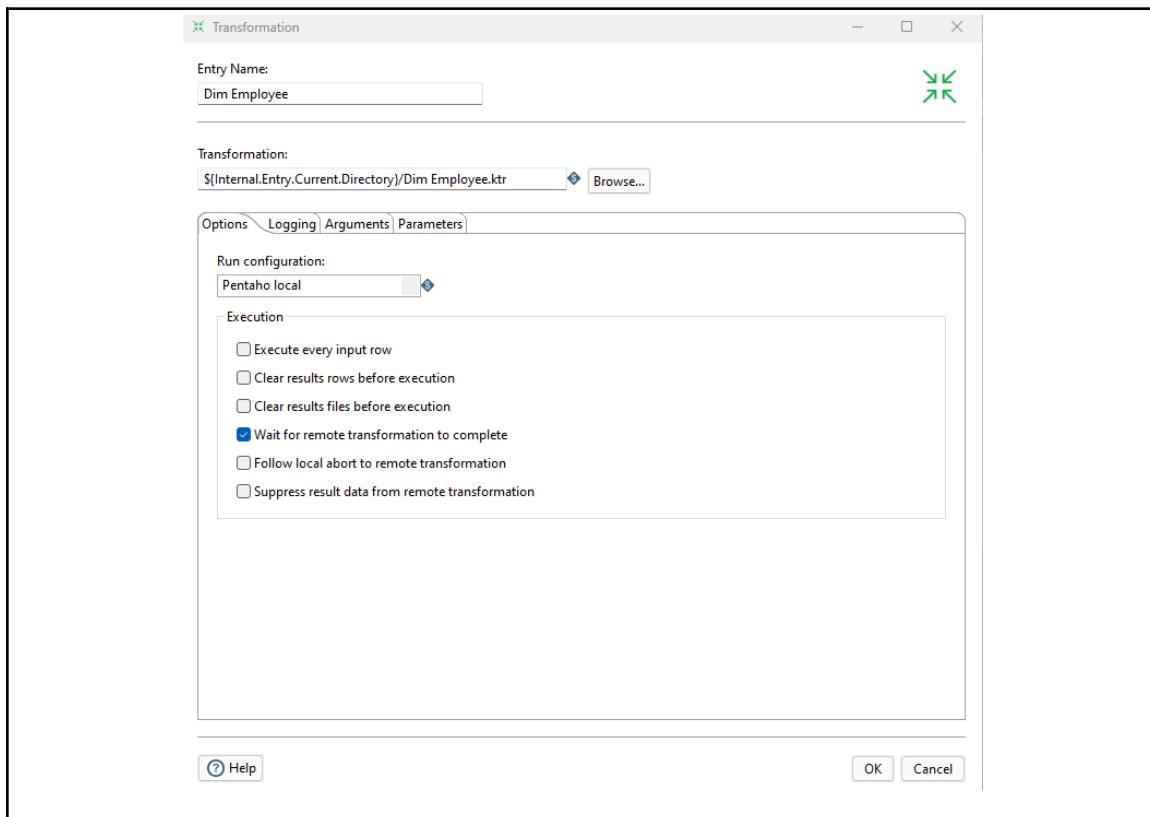


2. Dim Product – Transformation.



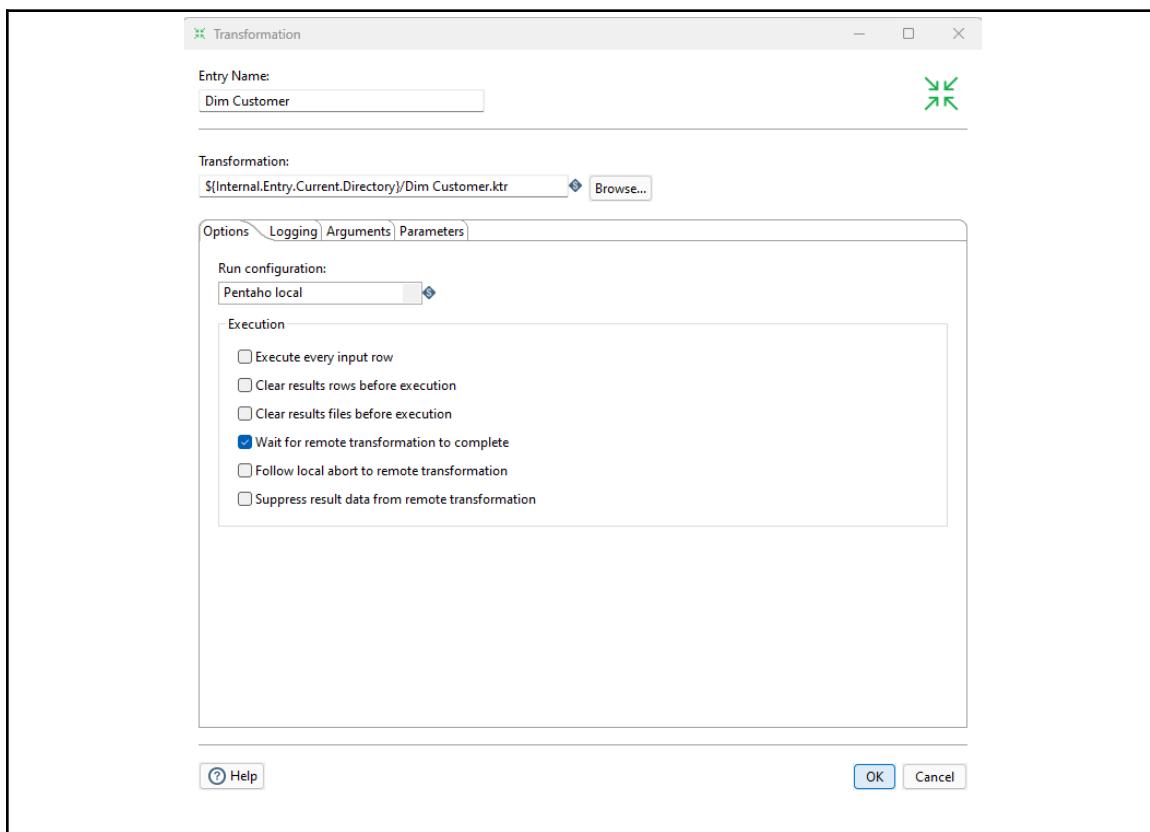
3. Dim Employee – Transformation.





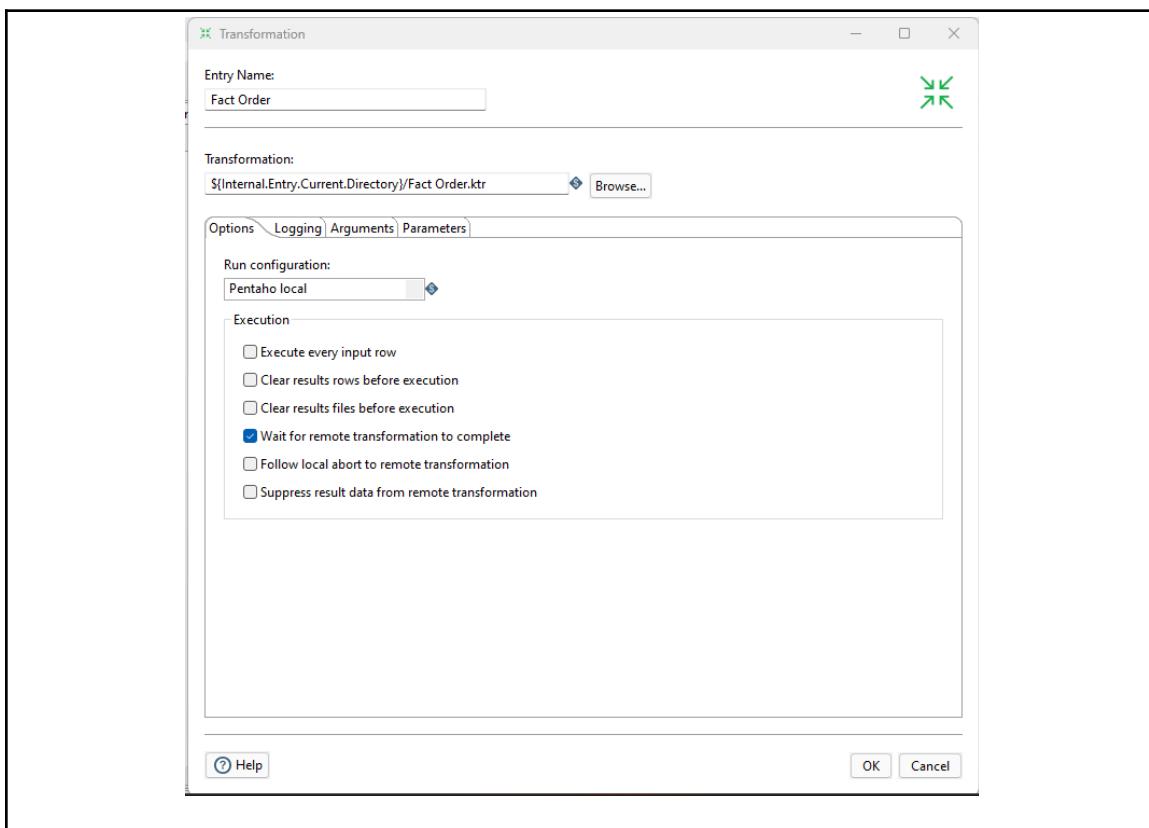
4. Dim Customer – Transformation.



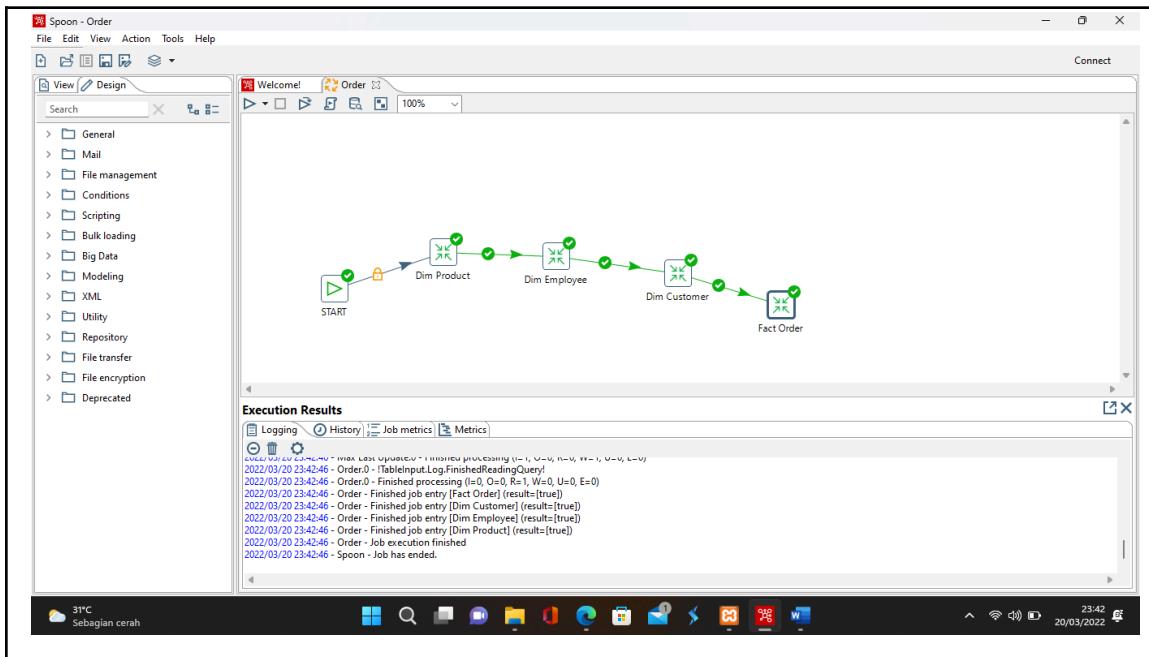


5. Fact Order – Transformation.





6. Output



7. Output Pada Database

The screenshot shows the phpMyAdmin interface for the 'classicmodels_dwh' database. The left sidebar lists various databases, with 'classicmodels_dwh' selected. The main area displays the table structure for the 'classicmodels_dwh' database, specifically the 'dim_customer', 'dim_date', 'dim_employee', 'dim_product', and 'fact_order' tables. A table at the bottom summarizes the total number of rows (13,251), type (InnoDB), size (3.9 MiB), and overhead (0 B).

Table	Action	Rows	Type	Collation	Size	Overhead
dim_customer	Browse Structure Search Insert Empty Drop	122	InnoDB	utf8mb4_general_ci	112.0 Kib	-
dim_date	Browse Structure Search Insert Empty Drop	10,000	InnoDB	utf8mb4_general_ci	2.4 MiB	-
dim_employee	Browse Structure Search Insert Empty Drop	23	InnoDB	utf8mb4_general_ci	88.0 Kib	-
dim_product	Browse Structure Search Insert Empty Drop	110	InnoDB	utf8mb4_general_ci	88.0 Kib	-
fact_order	Browse Structure Search Insert Empty Drop	2,996	InnoDB	utf8mb4_general_ci	1.2 MiB	-
5 tables	Sum	13,251	InnoDB	utf8mb4_general_ci	3.9 MiB	0 B

4. File Praktikum

Github Repository:



5. Soal Latihan

Soal:

1. Apa perbedaan OLAP dengan OLTP?
2. Apa yang dimaksud dengan ETL?

Jawaban:

- 1.
- 2.



6. Kesimpulan

- Dalam pengerjaan praktikum Data Warehouse, kita harus benar-benar teliti dalam menginputkan suatu fungsi untuk menampilkan suatu keluaran pada layar dengan sesuai.
- Kita dapat mengetahui...

7. Cek List (✓)

No	Elemen Kompetensi	Penyelesaian	
		Selesai	Tidak Selesai
1.	Latihan Pertama	...	
2.	Latihan Kedua	...	
3.	Latihan Ketiga	...	

8. Formulir Umpam Balik

No	Elemen Kompetensi	Waktu Pengerjaan	Kriteria
1.	Latihan Pertama	... Menit	...
2.	Latihan Kedua	... Menit	...
3.	Latihan Ketiga	... Menit	...

Keterangan:

- Menarik
- Baik
- Cukup
- Kurang

