

LAPORAN PRAKTIKUM DATA WAREHOUSE
JOBSHEET 3 : DATA BASE ANALYTICAL (STUDY CASE)



DISUSUN OLEH :
AQILA NUR AZZA (2341760022)
KELAS 2A-SIB/04

PROGRAM STUDI D-IV SISTEM INFORMASI BISNIS
JURUSAN TEKNOLOGI INFORMASI

POLITEKNIK NEGERI MALANG

Jl. Soekarno Hatta No. 9, Jattimulyo, Kec. Lowokwaru, Kota Malang, Jawa Timur

65141

Soal :

Pak Marto merupakan komisaris dari LegendVehicle. Pak Marto butuh laporan untuk analisa dari hasil penjualan dilihat dari sisi barang / product. Buatlah database OLAP tersebut untuk membantu pak marto menganalisa penjualan barang

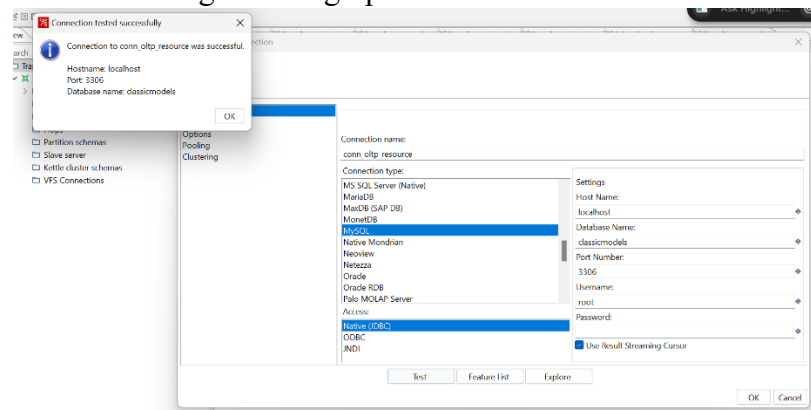
Jawaban :

1. Membuat tabel dimensi yang bernama dim_product

- Menambahkan tabel dimProduct pada database dw_legendVehicle

```
CREATE TABLE dimProduct (  
    id_dimProduct INT AUTO_INCREMENT PRIMARY KEY,  
    productCode VARCHAR(15),  
    productName VARCHAR(100),  
    productLine VARCHAR(50),  
    productScale VARCHAR(20),  
    productVendor VARCHAR(50)  
);
```

- Menambahkan database connection untuk mengkoneksikan pada tabel classicmodels guna menginputkan data

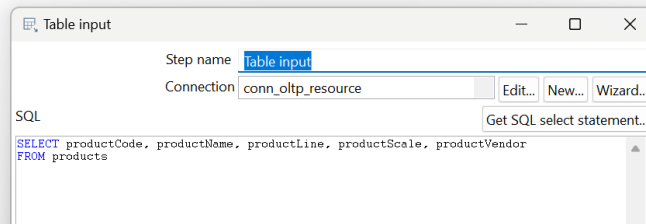


- Menyiapkan elemen-elemen berikut

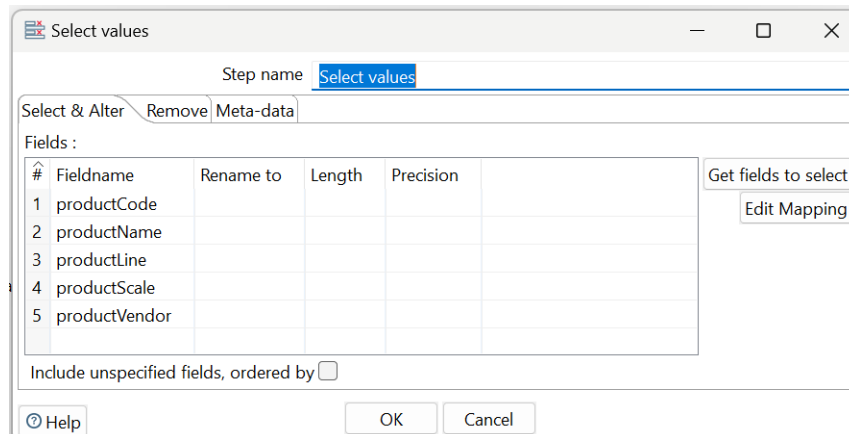


Fungsi :

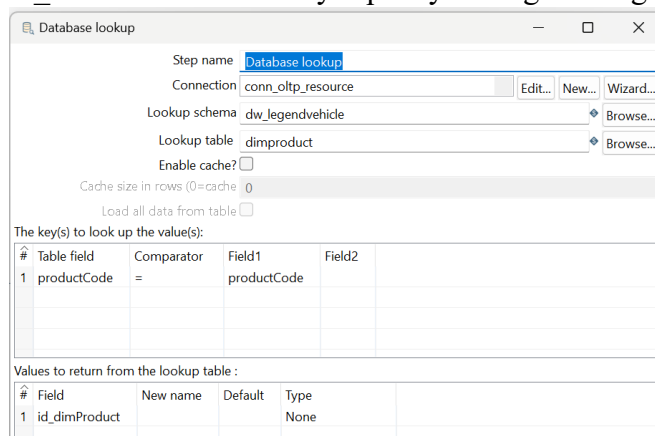
- Tabel input : untuk mengambil data dari kolom products dengan via SQL
- Select Values : untuk mengurutkan kolom dan menentukan tipe data yang diperlukan
- Database lookup : untuk mencocokkan data
- Filter rows : untuk mengurutkan baris sesuai dengan kondisi yang diperlukan
- Tabel output : untuk menyimpan hasil akhir
- Konfigurasi pada elemen Tabel input (mengambil data) sesuai dengan kolom yang diinginkan



- Konfigurasi Select Values dengan menentukan kolom productCode, productName, productLine, productScale, productVendor yang akan diambil



- Konfigurasi Database lookup dengan melakukan lookup pada database dw_legendvehicle pada table dimproduct, sehingga kita dapat mengambil id_dimProduct dan menyimpannya sebagai foreign key pada tabel fakta.



- Konfigurasi filter rows untuk mengambil data dengan syarat kolom id_dimProduct bernilai NULL, maka data akan dikirim ke langkah Table output.

Step name: Filter rows

Send 'true' data to step: Table output

Send 'false' data to:

The condition:

id_dimProduct IS NULL

Buttons: Help, OK, Cancel

- Konfigurasi Tabel Output untuk menyimpan data hasil transformasi ke dalam tabel database ke dalam tabel dimproduct yang berada di skema dw_legendvehicle

Step name: Table output

Connection: conn_oltp_resource

Target schema: dw_legendvehicle

Target table: dimproduct

Commit size: 1000

Truncate table: ☐

Ignore insert errors: ☐

Specify database fields: ☒

Main options: Database fields

Fields to insert:

#	Table field	Stream field
1	productCode	productCode
2	productName	productName
3	productLine	productLine
4	productScale	productName
5	productVendor	productVendor

Buttons: Help, OK, Cancel, SQL

- Eksekusi transformasi dan hasilnya semua 110 data baru yang sebelumnya tidak ditemukan di tabel dimproduct (id_dimProduct IS NULL) berhasil dimasukkan.

Execution Results

Logging Execution History Step Metrics Performance Graph Metrics Preview data

2025/04/09 20:05:04 - Spoon - Transformation opened.

2025/04/09 20:05:04 - Spoon - Launching transformation [casestudy-dimproduct]...

2025/04/09 20:05:04 - Spoon - Started the transformation execution.

2025/04/09 20:05:04 - casestudy-dimproduct - Dispatching started for transformation [casestudy-dimproduct]

2025/04/09 20:05:04 - Table output.0 - Connected to database [conn_oltp_resource] (commit=1000)

2025/04/09 20:05:04 - Table input.0 - Finished reading query, closing connection

2025/04/09 20:05:04 - Table input.0 - Finished processing (I=110, O=0, R=0, W=110, U=0, E=0)

2025/04/09 20:05:04 - Select values.0 - Finished processing (I=0, O=0, R=110, W=110, U=0, E=0)

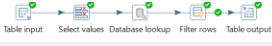
2025/04/09 20:05:04 - Database lookup.0 - Finished processing (I=0, O=0, R=110, W=110, U=0, E=0)

2025/04/09 20:05:04 - Filter rows.0 - Finished processing (I=0, O=0, R=110, W=110, U=0, E=0)

2025/04/09 20:05:04 - Table output.0 - Finished processing (I=0, O=110, R=110, W=110, U=0, E=0)

2025/04/09 20:05:04 - Spoon - The transformation has finished!!

- Pada preview menunjukkan semua data adalah data baru (akan masuk pada tabel output karna bernilai true).



Execution Results

Logging | Execution History | Step Metrics | Performance Graph | Metrics | Preview data

First rows | Last rows | Off

#	productCode	productName	productLine	productScale	productVendor	id_dimProduct
1	S10_1678	1969 Harley Davidson Ultimate Chopper	Motorcycles	1:10	Min Lin Diecast	<null>
2	S10_1949	1952 Alpine Renault 1300	Classic Cars	1:10	Classic Metal Creations	<null>
3	S10_2016	1996 Moto Guzzi 1100	Motorcycles	1:10	Highway 66 Mini Classics	<null>
4	S10_4698	2003 Harley Davidson Eagle Drag Bike	Motorcycles	1:10	Red Start Diecast	<null>
5	S10_4757	1972 Alfa Romeo GTA	Classic Cars	1:10	Motor City Art Classics	<null>
6	S10_4962	1962 Lancia Delta 16V	Classic Cars	1:10	Second Gear Diecast	<null>
7	S12_1099	1968 Ford Mustang	Classic Cars	1:12	Autoart Studio Design	<null>
8	S12_1108	2001 Ferrari Enzo	Classic Cars	1:12	Second Gear Diecast	<null>
9	S12_1666	1958 Setra Bus	Trucks and Buses	1:12	Welly Diecast Productions	<null>
10	S12_2823	2002 Suzuki XREO	Motorcycles	1:12	Unimax Art Galleries	<null>
11	S12_3148	1969 Corvair Monza	Classic Cars	1:18	Welly Diecast Productions	<null>

- Hasil akhir pada tabel output akan otomatis tersimpan pada database dw_legendvehicle kolom dimproduct

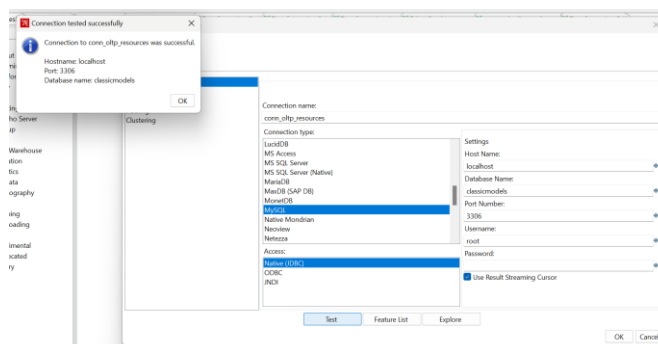
	id_dimProduct	productCode	productName	productLine	productScale	productVendor
<input type="checkbox"/>	Edit	40	S10_1678	1969 Harley Davidson Ultimate Chopper	Motorcycles	1969 Harley Davidson Ultimate Chopper
<input type="checkbox"/>	Edit	41	S10_1949	1952 Alpine Renault 1300	Classic Cars	1952 Alpine Renault 1300
<input type="checkbox"/>	Edit	42	S10_2016	1996 Moto Guzzi 1100	Motorcycles	1996 Moto Guzzi 1100
<input type="checkbox"/>	Edit	43	S10_4698	2003 Harley Davidson Eagle Drag Bike	Motorcycles	2003 Harley Davidson Eagle Drag Bike
<input type="checkbox"/>	Edit	44	S10_4757	1972 Alfa Romeo GTA	Classic Cars	1972 Alfa Romeo GTA
<input type="checkbox"/>	Edit	45	S10_4962	1962 Lancia Delta 16V	Classic Cars	1962 Lancia Delta 16V
<input type="checkbox"/>	Edit	46	S12_1099	1968 Ford Mustang	Classic Cars	1968 Ford Mustang
<input type="checkbox"/>	Edit	47	S12_1108	2001 Ferrari Enzo	Classic Cars	2001 Ferrari Enzo
<input type="checkbox"/>	Edit	48	S12_1666	1958 Setra Bus	Trucks and Buses	1958 Setra Bus
<input type="checkbox"/>	Edit	49	S12_2823	2002 Suzuki XREO	Motorcycles	2002 Suzuki XREO
<input type="checkbox"/>	Edit	50	S12_3148	1969 Corvair Monza	Classic Cars	1969 Corvair Monza
<input type="checkbox"/>	Edit	51	S12_3380	1968 Dodge Charger	Classic Cars	1968 Dodge Charger
<input type="checkbox"/>	Edit	52	S12_3891	1969 Ford Falcon	Classic Cars	1969 Ford Falcon
<input type="checkbox"/>	Edit	53	S12_3990	1970 Plymouth Hemi Cuda	Classic Cars	1970 Plymouth Hemi Cuda
<input type="checkbox"/>	Edit	54	S12_4473	1957 Chevy Pickup	Trucks and Buses	1957 Chevy Pickup
<input type="checkbox"/>	Edit	55	S12_4675	1969 Dodge Charger	Classic Cars	1969 Dodge Charger
<input type="checkbox"/>	Edit	56	S18_1097	1940 Ford Pickup Truck	Trucks and Buses	1940 Ford Pickup Truck
<input type="checkbox"/>	Edit	57	S18_1129	1993 Mazda RX-7	Classic Cars	1993 Mazda RX-7
<input type="checkbox"/>	Edit	58	S18_1342	1937 Lincoln Bertline	Vintage Cars	1937 Lincoln Bertline
<input type="checkbox"/>	Edit	59	S18_1367	1936 Mercedes-Benz 500K Special Roadster	Vintage Cars	1936 Mercedes-Benz 500K Special Roadster
<input type="checkbox"/>	Edit	60	S18_1589	1965 Aston Martin DB5	Classic Cars	1965 Aston Martin DB5

2. Membuat tabel fakta yang bernama fact_sales

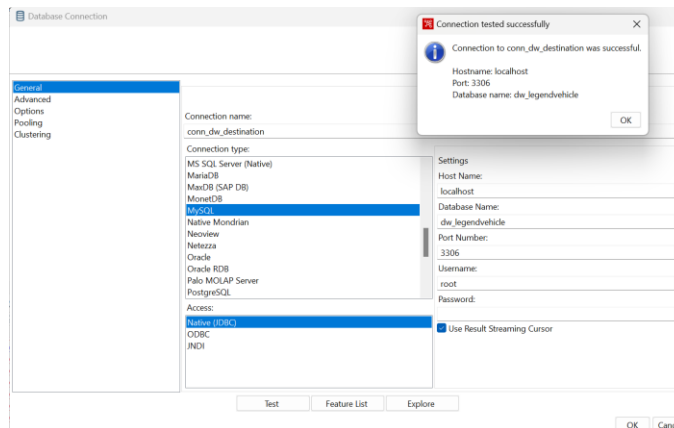
- Membuat tabel baru pada database dw_legendvehicle dengan nama factsales

```
CREATE TABLE factSales (
    id_factSales INT NOT NULL AUTO_INCREMENT PRIMARY KEY,
    id_dimProduct INT,
    id_dimDate INT,
    quantitySold INT,
    salesAmount DECIMAL(10,2),
    FOREIGN KEY (id_dimProduct) REFERENCES dimProduct(id_dimProduct),
    FOREIGN KEY (id_dimDate) REFERENCES dimDate(id_dimDate)
);
```

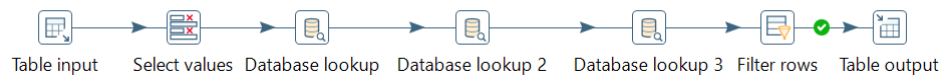
- Mengkoneksikan dengan database classicmodels sebagai input



- Mengkonsikn juga dengan database dw_legendvehicle sebagai output

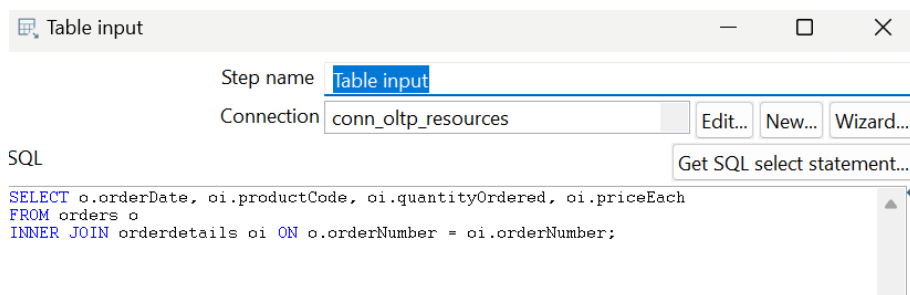


- Menyiapkan elemen-elemen berikut



Fungsi :

- Tabel input : untuk mengambil data dari database classicmodels dengan via SQL
 - Select values : untuk mesorting kolom dan menentukan tipe data yang diperlukan
 - Database lookup 1 : untuk mengambil id_dimProduct dari dimensi produk (dimproduct).
 - Database lookup 2 : untuk mengambil id_dimDate dari dimensi tanggal (dimdate).
 - Database lookup 3 : untuk memasukkan data ke tabel fakta (factsales)
 - Filter rows : untuk mensorting baris sesuai dengan kondisi yang diperlukan
 - Tabel output : untuk menyimpan hasil akhir
- Konfigurasi pada elemen Tabel input (mengambil data) sesuai dengan kolom yang diinginkan



- Konfigurasi Select Values dengan menentukan kolom orderDate, productCode, quantityOrder, priceEach

Select values

Step name: Select values

Select & Alter Remove Meta-data

Fields :

#	Fieldname	Rename to	Length	Precision
1	orderDate			
2	productCode			
3	quantityOrdered			
4	priceEach			

Get fields to select
Edit Mapping

Include unspecified fields, ordered by ☐

Help OK Cancel

- Konfigurasi database lookup1 untuk mengambil data dari dimproduct

Database lookup

Step name: Database lookup

Connection: conn_oltp_resources Edit... New... Wizard...

Lookup schema: dw_legendvehicle Browse...

Lookup table: dimproduct Browse...

Enable cache? ☐

Cache size in rows (0=cache): 0

Load all data from table ☐

The key(s) to look up the value(s):

#	Table field	Comparator	Field1	Field2
1	productCode	=	productCode	

Values to return from the lookup table :

#	Field	New name	Default	Type
1	id_dimProduct			None

Do not pass the row if the lookup fails ☐

Fail on multiple results? ☐

Order by:

Help OK Cancel Get Fields Get lookup fields

- Konfigurasi database lookup2 untuk mengambil data dari dimdate

Database lookup

Step name: Database lookup 2

Connection: conn_oltp_resources

Lookup schema: dw_legendvehicle

Lookup table: dimdate

Enable cache? ☐

Cache size in rows (0=cache): 0

Load all data from table ☐

The key(s) to look up the value(s):

#	Table field	Comparator	Field1	Field2
1	date	=	orderDate	

Values to return from the lookup table :

#	Field	New name	Default	Type
1	id_dimDate			None

Do not pass the row if the lookup fails ☐

Fail on multiple results? ☐

Order by

Help OK Cancel Get Fields Get lookup fields

- Konfigurasi database lookup3 untuk memasukkan data ke factsales

Database lookup

Step name: Database lookup 3

Connection: conn_oltp_resources

Lookup schema: dw_legendvehicle

Lookup table: factsales

Enable cache? ☐

Cache size in rows (0=cache): 0

Load all data from table ☐

The key(s) to look up the value(s):

#	Table field	Comparator	Field1	Field2
1	id_dimProduct	=	id_dimProduct	
2	id_dimDate	=	id_dimDate	
3	quantitySold	=	quantityOrdered	
4	salesAmount	=	priceEach	

Values to return from the lookup table :

#	Field	New name	Default	Type
1	id_factSales			None

Do not pass the row if the lookup fails ☐

Fail on multiple results? ☐

Order by

Help OK Cancel Get Fields Get lookup fields

- Konfigurasi filter rows untuk mengambil data dengan syarat kolom id_factsales bernilai NULL, maka data akan dikirim ke langkah Table output.

Filter rows

Step name: **Filter rows**

Send 'true' data to step: **Table output**

Send 'false' data to:

The condition:

id_factSales **IS NULL** **-**

-

Help **OK** **Cancel**

- Konfigurasi Tabel Output untuk menyimpan data hasil transformasi ke dalam tabel database ke dalam tabel factsales yang berada di skema dw_legendvehicle

Table output

Step name: **Table output**

Connection: **conn_dw_destination**

Target schema: **dw_legendvehicle**

Target table: **factsales**

Commit size: **1000**

Truncate table: ☐

Ignore insert errors: ☐

Specify database fields: ☒

Main options: **Database fields**

Fields to insert:

#	Table field	Stream field
1	id_dimProduct	id_dimProduct
2	id_dimDate	id_dimDate
3	quantitySold	quantityOrdered
4	salesAmount	priceEach

Get fields

Enter field mapping

Help **OK** **Cancel** **SQL**

- Eksekusi transformasi dan hasilnya semua 2996 data baru yang sebelumnya tidak ditemukan di tabel factsales (id_factsales IS NULL) berhasil dimasukkan.

Table input → Select values → Database lookup → Database lookup 2 → Database lookup 3 → Filter rows → Table output

Execution Results

Logging | Execution History | Step Metrics | Performance Graph | Metrics | Preview data

2025/04/09 22:42:52 - Spoon - Transformation opened.

2025/04/09 22:42:52 - Spoon - Launching transformation [casestudy-factsales].

2025/04/09 22:42:52 - Spoon - Started the transformation execution.

2025/04/09 22:42:53 - casestudy-factsales - Dispatching started for transformation [casestudy-factsales]

2025/04/09 22:42:53 - Table output.0 - Connected to database [conn_dw_destination] (commit=1000)

2025/04/09 22:42:53 - Table input.0 - Finished reading query, closing connection

2025/04/09 22:42:53 - Table input.0 - Finished processing (I=2996, O=0, R=0, W=2996, U=0, E=0)

2025/04/09 22:42:53 - Select values.0 - Finished processing (I=0, O=0, R=2996, W=2996, U=0, E=0)

2025/04/09 22:42:55 - Database lookup.0 - Finished processing (I=2996, O=0, R=2996, W=2996, U=0, E=0)

2025/04/09 22:42:56 - Database lookup.2.0 - Finished processing (I=2996, O=0, R=2996, W=2996, U=0, E=0)

2025/04/09 22:42:56 - Database lookup.3.0 - Finished processing (I=0, O=0, R=2996, W=2996, U=0, E=0)

2025/04/09 22:42:56 - Filter rows.0 - Finished processing (I=0, O=0, R=2996, W=2996, U=0, E=0)

2025/04/09 22:42:56 - Table output.0 - Finished processing (I=0, O=2996, R=2996, W=2996, U=0, E=0)

2025/04/09 22:42:56 - Spoon - The transformation has finished!

#	orderDate	productCode	quantityOrdered	priceEach	id_dimProduct	id_dimDate	id_factSales
1	2003/01/06 00:00:00.000	S18_1749	30	136.0	62	6	<null>
2	2003/01/06 00:00:00.000	S18_2248	50	55.09	66	6	<null>
3	2003/01/06 00:00:00.000	S18_4409	22	75.46	89	6	<null>
4	2003/01/06 00:00:00.000	S24_3969	49	35.29	119	6	<null>
5	2003/01/09 00:00:00.000	S18_2325	25	108.06	68	9	<null>
6	2003/01/09 00:00:00.000	S18_2795	26	167.06	72	9	<null>
7	2003/01/09 00:00:00.000	S24_1937	45	32.53	100	9	<null>
8	2003/01/09 00:00:00.000	S24_2022	46	44.35	103	9	<null>
9	2003/01/10 00:00:00.000	S18_1342	39	95.55	58	10	<null>
1	2003/01/10 00:00:00.000	S18_1367	41	43.13	59	10	<null>
1	2003/01/29 00:00:00.000	S10_1949	26	214.3	41	29	<null>
1	2003/01/29 00:00:00.000	S10_4962	42	119.67	45	29	<null>

- Pada preview menunjukkan semua data adalah data baru (akan masuk pada tabel output karna bernilai true).

- Hasil akhir pada tabel output akan otomatis tersimpan pada database dw_legendvehicle kolom factsales

	id_factSales	id_dimProduct	id_dimDate	quantitySold	salesAmount
<input type="checkbox"/> Edit Copy Delete	1	62	6	30	136.00
<input type="checkbox"/> Edit Copy Delete	2	66	6	50	55.09
<input type="checkbox"/> Edit Copy Delete	3	89	6	22	75.46
<input type="checkbox"/> Edit Copy Delete	4	119	6	49	35.29
<input type="checkbox"/> Edit Copy Delete	5	68	9	25	108.06
<input type="checkbox"/> Edit Copy Delete	6	72	9	26	167.06
<input type="checkbox"/> Edit Copy Delete	7	100	9	45	32.53
<input type="checkbox"/> Edit Copy Delete	8	103	9	46	44.35
<input type="checkbox"/> Edit Copy Delete	9	58	10	39	95.55
<input type="checkbox"/> Edit Copy Delete	10	59	10	41	43.13
<input type="checkbox"/> Edit Copy Delete	11	41	29	26	214.30
<input type="checkbox"/> Edit Copy Delete	12	45	29	42	119.67
<input type="checkbox"/> Edit Copy Delete	13	48	29	27	121.64
<input type="checkbox"/> Edit Copy Delete	14	56	29	35	94.50
<input type="checkbox"/> Edit Copy Delete	15	69	29	22	58.34
<input type="checkbox"/> Edit Copy Delete	16	74	29	27	92.19
<input type="checkbox"/> Edit Copy Delete	17	75	29	35	61.84
<input type="checkbox"/> Edit Copy Delete	18	77	29	25	86.92
<input type="checkbox"/> Edit Copy Delete	19	83	29	46	86.31
<input type="checkbox"/> Edit Copy Delete	20	91	29	36	98.07
<input type="checkbox"/> Edit Copy Delete	21	92	29	41	40.75
<input type="checkbox"/> Edit Copy Delete	22	104	29	36	107.34

3. Membuat job untuk menggabungkan dimdate, dimproduct dan factsales

- Menyiapkan elemen-elemen berikut



Start: Objek untuk melakukan konfigurasi cron job dari proses ETL yang telah dibuat
 Transformation 1 : digunakan untuk menjalankan transformation pembuatan dimDate.

Transformation

Entry Name: Transformation

Transformation: D:\Data Warehouse\Jobsheet3\Transform Browse...

Options Logging Arguments Parameters

Run configuration: Pentaho local

Execution

- ☐ Execute every input row
- ☐ Clear results rows before execution
- ☐ Clear results files before execution
- ☒ Wait for remote transformation to complete
- ☐ Follow local abort to remote transformation
- ☐ Suppress result data from remote transformation

Help OK Cancel

Transformation 2 : digunakan untuk menjalankan transformation pembuatan dimProduct.

Transformation

Entry Name: transformation 2

Transformation: D:\Data Warehouse\Jobsheet3\casestudy Browse...

Options Logging Arguments Parameters

Run configuration: Pentaho local

Execution

- ☐ Execute every input row
- ☐ Clear results rows before execution
- ☐ Clear results files before execution
- ☒ Wait for remote transformation to complete
- ☐ Follow local abort to remote transformation
- ☐ Suppress result data from remote transformation

Help OK Cancel

Transformation 3 : digunakan untuk menjalankan transformation pembuatan factSales.

Transformation

Entry Name:
Transformation 3

Transformation:
D:\Data Warehouse\Jobsheet3\casestudy Browse...

Options Logging Arguments Parameters

Run configuration:
Pentaho local

Execution

☐ Execute every input row

☐ Clear results rows before execution

☐ Clear results files before execution

☒ Wait for remote transformation to complete

☐ Follow local abort to remote transformation

☐ Suppress result data from remote transformation

Help OK Cancel

Success: Objek untuk menandakan bahwa proses telah selesai

- Eksekusi Job

Execution Results

Logging History Job metrics Metrics

2025/04/09 23:22:17 - Select values.0 - Finished processing (I=0, O=0, R=1825, W=1825, U=0, E=0)

2025/04/09 23:22:19 - Database lookup.0 - Finished processing (I=1825, O=0, R=1825, W=1825, U=0, E=0)

2025/04/09 23:22:19 - Filter rows.0 - Finished processing (I=0, O=0, R=1825, W=0, U=0, E=0)

2025/04/09 23:22:19 - casestudy-job - Starting entry [Transformation 2]

2025/04/09 23:22:19 - Transformation 2 - Using run configuration [Pentaho local]

2025/04/09 23:22:19 - casestudy-dimproduct - Dispatching started for transformation [casestudy-dimproduct]

2025/04/09 23:22:19 - Table output.0 - Connected to database [conn_oltp_resource] (commit=1000)

2025/04/09 23:22:19 - Table input.0 - Finished reading query, closing connection

2025/04/09 23:22:19 - Table input.0 - Finished processing (I=110, O=0, R=110, W=110, U=0, E=0)

2025/04/09 23:22:19 - Select values.0 - Finished processing (I=0, O=0, R=110, W=110, U=0, E=0)

2025/04/09 23:22:19 - Database lookup.0 - Finished processing (I=110, O=0, R=110, W=110, U=0, E=0)

2025/04/09 23:22:19 - Filter rows.0 - Finished processing (I=0, O=0, R=110, W=0, U=0, E=0)

2025/04/09 23:22:19 - casestudy-job - Starting entry [Transformation 3]

2025/04/09 23:22:19 - Transformation 3 - Using run configuration [Pentaho local]

2025/04/09 23:22:19 - casestudy-factsales - Dispatching started for transformation [casestudy-factsales]

2025/04/09 23:22:19 - Table output.0 - Connected to database [conn_dw_destination] (commit=1000)

2025/04/09 23:22:19 - Table input.0 - Finished reading query, closing connection

2025/04/09 23:22:19 - Table input.0 - Finished processing (I=2996, O=0, R=2996, W=2996, U=0, E=0)

2025/04/09 23:22:19 - Select values.0 - Finished processing (I=0, O=0, R=2996, W=2996, U=0, E=0)

2025/04/09 23:22:21 - Database lookup.0 - Finished processing (I=2996, O=0, R=2996, W=2996, U=0, E=0)

2025/04/09 23:22:22 - Database lookup 2.0 - Finished processing (I=2996, O=0, R=2996, W=2996, U=0, E=0)

2025/04/09 23:22:22 - Database lookup 3.0 - Finished processing (I=2996, O=0, R=2996, W=2996, U=0, E=0)

2025/04/09 23:22:22 - Filter rows.0 - Finished processing (I=0, O=0, R=2996, W=0, U=0, E=0)

2025/04/09 23:22:22 - casestudy-job - Starting entry [Success]

2025/04/09 23:22:22 - casestudy-job - Finished job entry [Success] (result=[true])

2025/04/09 23:22:22 - casestudy-job - Finished job entry [Transformation 3] (result=[true])

2025/04/09 23:22:22 - casestudy-job - Finished job entry [Transformation 2] (result=[true])

2025/04/09 23:22:22 - casestudy-job - Finished job entry [Transformation] (result=[true])

2025/04/09 23:22:22 - casestudy-job - Job execution finished

2025/04/09 23:22:22 - Spoon - Job has ended.

- Struktur tabel pada dw_legendvehicle setelah dieksekusi

