

**DATA WAREHOUSE**  
**UTS**  
**STUDI KASUS: TOKO BAROKAH**



Disusun Oleh:

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KELAS 2A-SIB

**PROGRAM STUDI D-IV SISTEM INFORMASI BISNIS**

**JURUSAN TEKNOLOGI INFORMASI**

**POLITEKNIK NEGERI MALANG**

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1. Unduh file sql berikut bernama toko\_barokah.sql yang berisi beberapa contoh baris data penjualan di sebuah toko barokah: <https://bit.ly/dbbi>

The screenshot shows the phpMyAdmin interface. At the top, there's a file upload section with a document icon, the filename 'toko\_barokah.sql', and an 'Open File' button. Below this is the 'Databases' section, which includes a 'Create database' button, a text input field containing 'tokobarokah', a dropdown menu for character set (currently showing 'utf8mb4\_0900\_ai\_ci'), and a 'Create' button. There are also 'Check all' and 'Drop' buttons. The main section is titled 'Importing into the database "tokobarokah"'. It features a 'File to import:' section with instructions on file formats and a 'Browse...' button next to a text field containing 'toko\_barokah.sql'. Below this, there's a 'Character set of the file:' dropdown menu set to 'utf-8'. A toolbar with various icons (Structure, SQL, Search, Query, Export, Import, Operations, Privileges, Routines, Events, Triggers, Designer) is visible. The console output shows a successful import message: 'Import has been successfully finished, 45 queries executed. (toko\_barokah.sql)'. Below this, several messages indicate that MySQL returned an empty result set for various queries, including a transaction start and several SET statements for time\_zone, character set, and collation.

toko\_barokah.sql  
Open File

## Databases

Create database

tokobarokah utf8mb4\_0900\_ai\_ci Create

☐ Check all Drop

### Importing into the database "tokobarokah"

File to import:

File may be compressed (gzip, zip) or uncompressed.  
A compressed file's name must end in `.format[.compression]` Example: `.sql.zip`

Browse your computer. (Max: 2,048MiB)

Browse... toko\_barokah.sql

You may also drag and drop a file on any page.

Character set of the file:

utf-8

Structure SQL Search Query Export Import Operations Privileges Routines Events Triggers Designer

Import has been successfully finished, 45 queries executed. (toko\_barokah.sql)

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0001 seconds.)

```
-- phpMyAdmin SQL Dump -- version 5.2.0 -- https://www.phpmyadmin.net/ -- -- Host: 127.0.0.1 -- Generation Time: Apr 16, 2024 at 08:12 AM -- Server version: 10.4.27-MariaDB -- PHP Version: 7.4.33 SET SQL_MODE = "NO_AUTO_VALUE_ON_ZERO";
```

[ Edit inline ] [ Edit ] [ Create PHP code ]

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0000 seconds.)

```
START TRANSACTION;
```

[ Edit inline ] [ Edit ] [ Create PHP code ]

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0001 seconds.)

```
SET time_zone = "+00:00";
```

[ Edit inline ] [ Edit ] [ Create PHP code ]

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0006 seconds.)

```
/*140101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
```

[ Edit inline ] [ Edit ] [ Create PHP code ]

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0001 seconds.)

```
/*140101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
```

[ Edit inline ] [ Edit ] [ Create PHP code ]

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0001 seconds.)

```
/*140101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
```

Console [ Edit ] [ Create PHP code ]

Dan import juga untuk update tanggal transaksi

Importing into the table "transaksi"

File to import:

File may be compressed (gzip, zip) or uncompressed.  
A compressed file's name must end in `[format].[compression]`. Example: `.sql.zip`

Browse your computer: (Max: 2,048MiB)

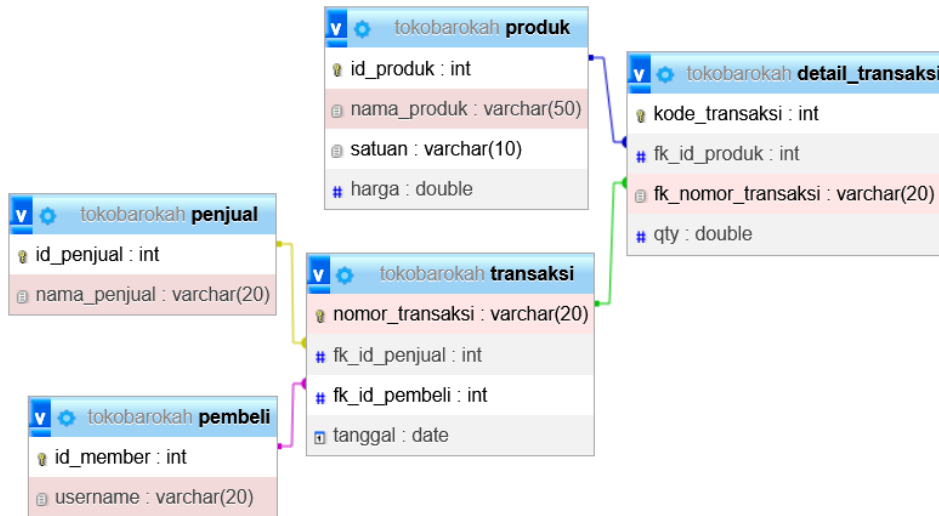
Browse... update.sql

You may also drag and drop a file on any page.

Character set of the file:

utf-8

## 2. Analisis struktur database kemudian gambarkan desain database toko barokah.



### - Analisis Desain Database Toko Barokah

Berikut ini tabel-tabel yang terdapat dalam database toko\_barokah:

Tabel	Keterangan
produk	Data barang/produk
penjual	Data penjual (yang melayani transaksi)
pembeli	Data pembeli (customer)
transaksi	Header transaksi (waktu transaksi, siapa penjual dan pembeli)
detail_transaksi	Detail barang/produk yang dibeli

**3. Tentukan KPI yang akan dianalisis berdasarkan database toko barokah**

- Studi Kasus :
  - a. Mencari TOP 5 produk yang paling banyak dibeli
  - b. Total omset penjual perbulan
  - c. Total penjualan per produk
  - d. Total paling sering beli
  - e. Jumlah transaksi per pembeli

**4. Berdasarkan KPI yang ditentukan, gambarkan skema datawarehouse dengan ketentuan:**

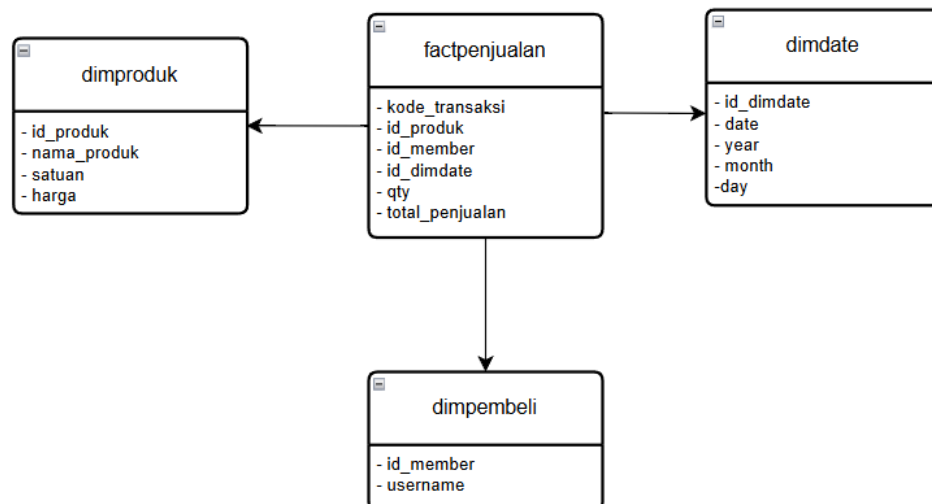
**a. Terdiri dari minimal 2 tabel dimensi**

- Tabel Dimensi
  - 1. dimproduk
  - 2. dimpembeli
  - 3. dimdate

**b. Terdiri dari 1 tabel fakta**

- Tabel Fakta: factpenjualan

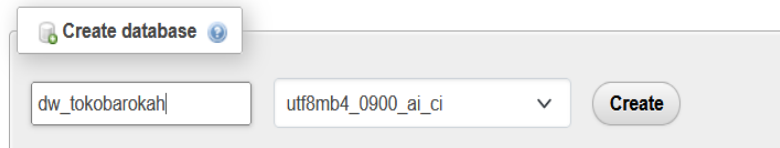
Mencatat kuantitas dan total pembelian setiap item produk dalam transaksi.



5. Buatlah database OLAP menggunakan MySQL dan PENTAHO untuk membantu menganalisis KPI toko barokah.

a. Menggunakan MySQL

Databases



- dimproduk

```
-- Tabel dimproduk
CREATE TABLE dimproduk (
  id_produk INT PRIMARY KEY,
  nama_produk VARCHAR(100),
  satuan VARCHAR(50),
  harga DECIMAL(15,2)
);
```

- dimpembeli

```
-- Tabel dimpembeli
CREATE TABLE dimpembeli (
  id_pembeli INT PRIMARY KEY,
  username VARCHAR(100)
);
```

- dimdate

```
CREATE TABLE dimDate (
  id_dimDate INT NOT NULL AUTO_INCREMENT PRIMARY KEY,
  date DATE,
  year INT,
  month INT,
  day INT
);
```

## - factpenjualan

```
-- Tabel factpenjualan
CREATE TABLE factpenjualan (
  kode_transaksi INT PRIMARY KEY,
  id_produk INT,
  id_member INT,
  id_dimDate INT,
  qty INT,
  total_penjualan DECIMAL(15,2),
  FOREIGN KEY (id_produk) REFERENCES dimproduk(id_produk),
  FOREIGN KEY (id_member) REFERENCES dimpembeli(id_pembeli),
  FOREIGN KEY (id_dimDate) REFERENCES dimdate(id_dimDate)
);
```

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0301 seconds.)

```
-- Tabel dimproduk CREATE TABLE dimproduk ( id_produk INT PRIMARY KEY, nama_produk VARCHAR(100), satuan VARCHAR(50), harga DECIMAL(15,2) );
```

[ Edit inline ] [ Edit ] [ Create PHP code ]

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0065 seconds.)

```
-- Tabel dimpembeli CREATE TABLE dimpembeli ( id_pembeli INT PRIMARY KEY, username VARCHAR(100) );
```

[ Edit inline ] [ Edit ] [ Create PHP code ]

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0155 seconds.)

```
CREATE TABLE dimDate ( id_dimDate INT NOT NULL AUTO_INCREMENT PRIMARY KEY, date DATE, year INT, month INT, day INT );
```

[ Edit inline ] [ Edit ] [ Create PHP code ]

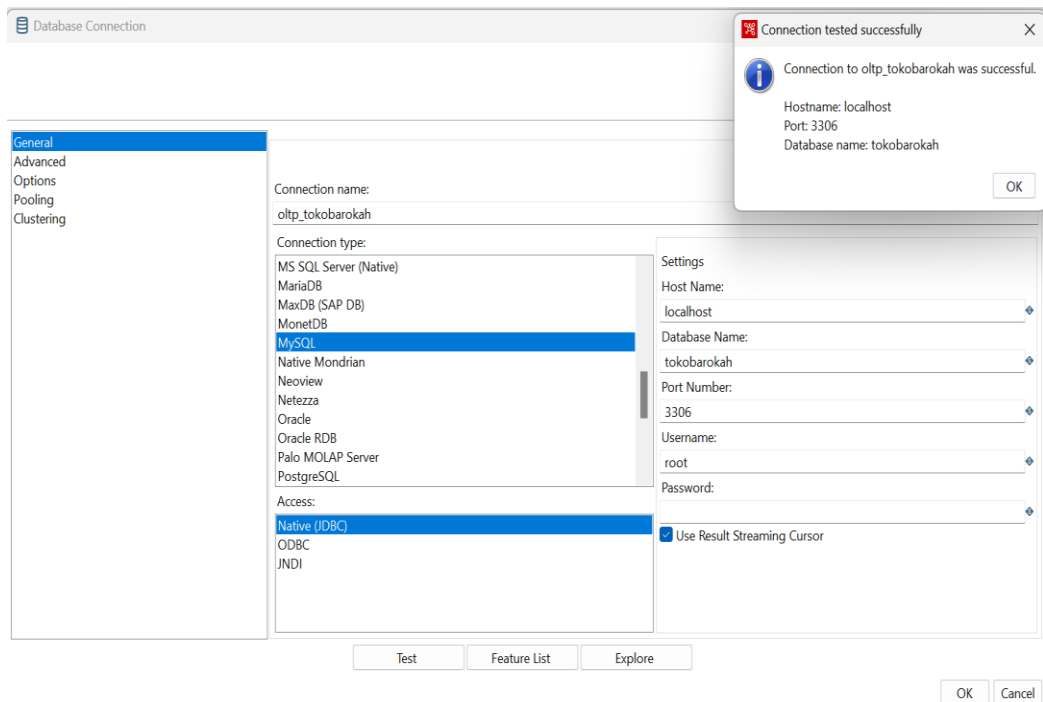
✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0174 seconds.)

```
-- Tabel factpenjualan CREATE TABLE factpenjualan ( kode_transaksi INT PRIMARY KEY, id_produk INT, id_member INT, id_dimDate INT, qty INT, total_penjualan DECIMAL(15,2), FOREIGN KEY (id_produk) REFERENCES dimproduk(id_produk), FOREIGN KEY (id_member) REFERENCES dimpembeli(id_member), FOREIGN KEY (id_dimDate) REFERENCES dimdate(id_dimDate) );
```

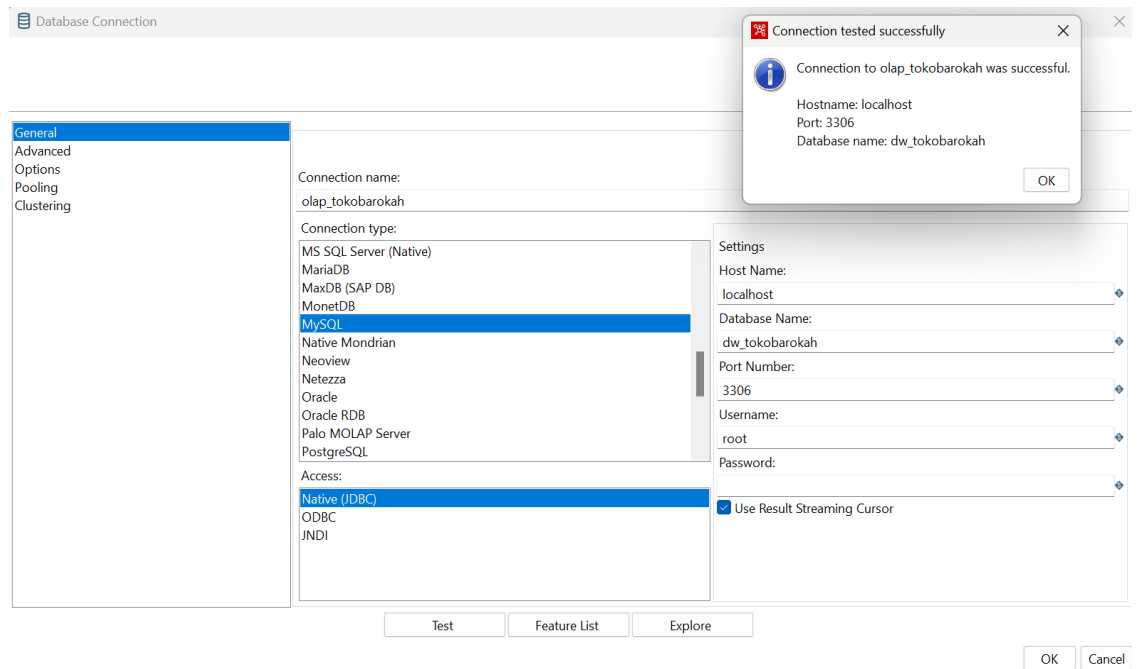
[ Edit inline ] [ Edit ] [ Create PHP code ]

## b. Menggunakan PENTAHO

### - connection oltp



- connection olap



- dimproduk

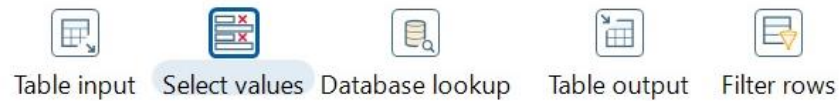
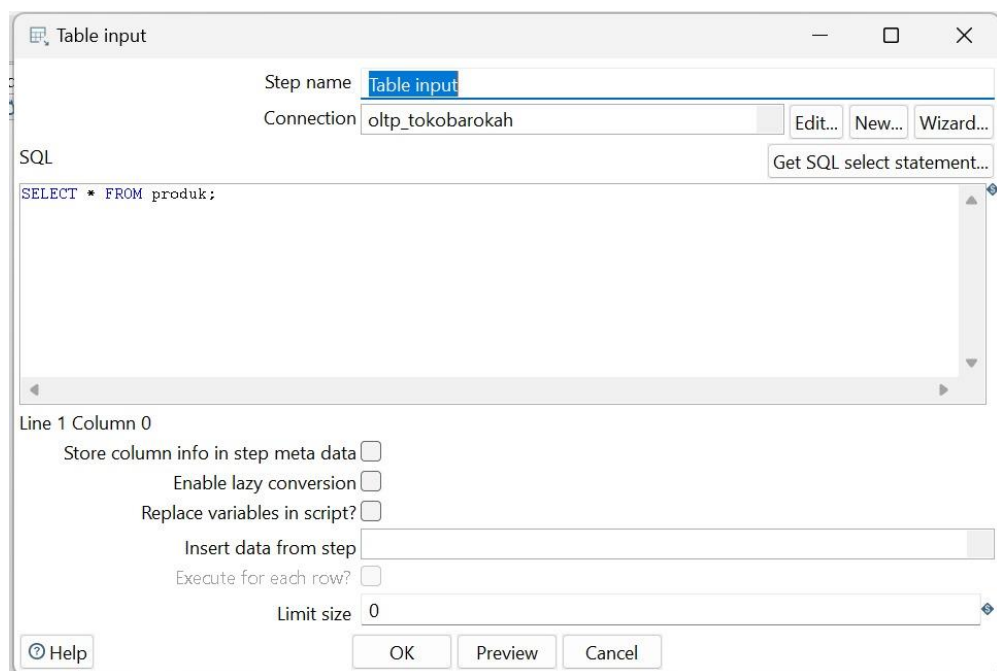


Table input:



Select values:

Select values

Step name

Select & Alter Remove Meta-data

Fields :

#	Fieldname	Rename to	Length	Precision
1	id_produk	streamIdProduk		
2	nama_produk	streamNamaproduk		
3	satuan	streamSatuan		
4	harga	streamHarga		

Get fields to select

Edit Mapping

Include unspecified fields, ordered by ☐

Help OK Cancel

Database lookup:

**Database lookup**

Step name: Database lookup

Connection: olap\_tokobarokah Edit... New... Wizard...

Lookup schema: dw\_tokobarokah Browse...

Lookup table: dimproduk 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	id_produk	=	streamIdProduk	
2	nama_produk	=	streamNamaproduk	
3	satuan	=	streamSatuan	
4	harga	=	streamHarga	

Values to return from the lookup table :

#	Field	New name	Default	Type
1	id_produk			Integer
2	nama_produk			String
3	satuan			String
4	harga			Number

Do not pass the row if the lookup fails ☐

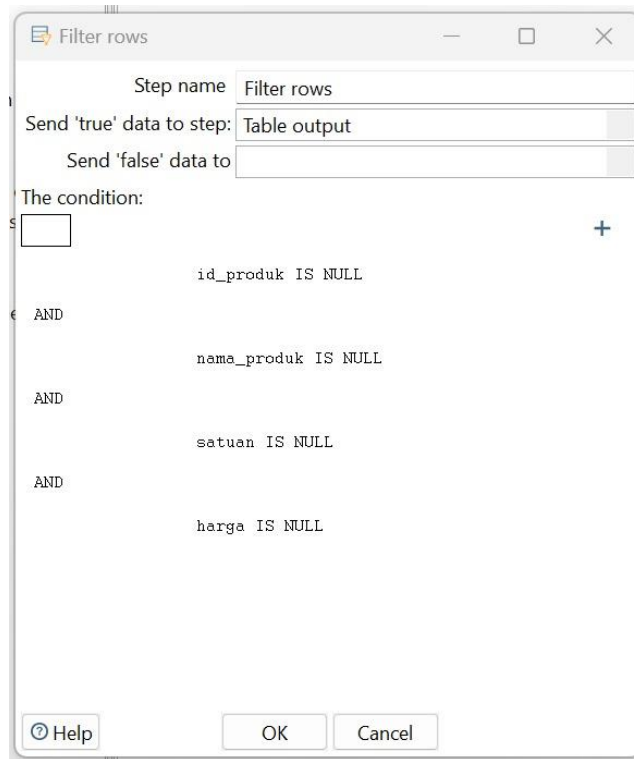
Fail on multiple results? ☐

Order by:

Help OK Cancel Get Fields Get lookup fields



## Filter rows:



The dialog box titled "Filter rows" is used to configure a data filtering step. It includes a "Step name" field set to "Filter rows". Below this, there are two fields for data flow: "Send 'true' data to step:" set to "Table output" and an empty "Send 'false' data to" field. The main section, "The condition:", contains a list of conditions separated by "AND" operators. The conditions are: "id\_produk IS NULL", "nama\_produk IS NULL", "satuan IS NULL", and "harga IS NULL". A "+" button is located to the right of the condition list. At the bottom, there are "Help", "OK", and "Cancel" buttons.

Step name: Filter rows

Send 'true' data to step: Table output

Send 'false' data to:

The condition:

id\_produk IS NULL

AND

nama\_produk IS NULL

AND

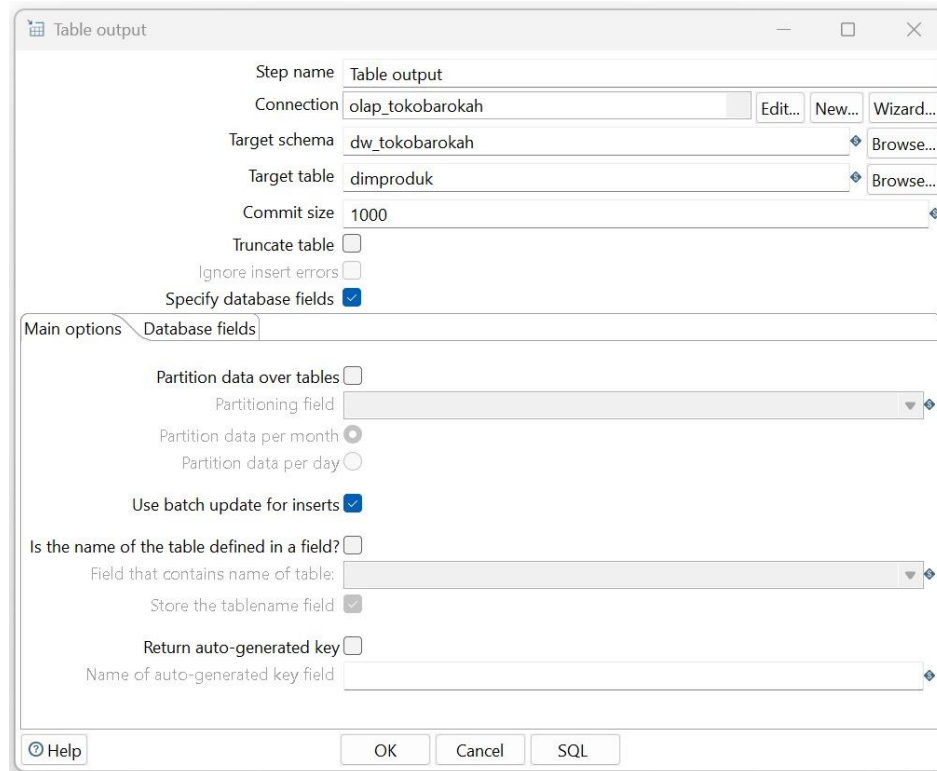
satuan IS NULL

AND

harga IS NULL

Help OK Cancel

## Table output:



The dialog box titled "Table output" is used to configure a data output step. It includes a "Step name" field set to "Table output". Below this, there are fields for "Connection" (olap\_tokobarokah), "Target schema" (dw\_tokobarokah), and "Target table" (dimproduk). There are also buttons for "Edit...", "New...", "Wizard...", and "Browse...". The "Commit size" is set to 1000. There are checkboxes for "Truncate table" and "Ignore insert errors". The "Specify database fields" checkbox is checked. The "Main options" tab is selected, showing the "Database fields" section. This section includes a "Partition data over tables" checkbox, a "Partitioning field" dropdown, and radio buttons for "Partition data per month" (selected) and "Partition data per day". There is a "Use batch update for inserts" checkbox checked. Below this, there is a checkbox for "Is the name of the table defined in a field?", a "Field that contains name of table:" dropdown, and a "Store the tablename field" checkbox checked. At the bottom, there is a "Return auto-generated key" checkbox and a "Name of auto-generated key field" dropdown. At the bottom of the dialog, there are "Help", "OK", "Cancel", and "SQL" buttons.

Step name: Table output

Connection: olap\_tokobarokah

Target schema: dw\_tokobarokah

Target table: dimproduk

Commit size: 1000

Truncate table: ☐

Ignore insert errors: ☐

Specify database fields: ☒

Main options: Database fields

Partition data over tables: ☐

Partitioning field:

Partition data per month: ☒

Partition data per day: ☐

Use batch update for inserts: ☒

Is the name of the table defined in a field?: ☐

Field that contains name of table:

Store the tablename field: ☒

Return auto-generated key: ☐

Name of auto-generated key field:

Help OK Cancel SQL

## Output:



### Execution Results

Logging Execution History Step Metrics Performance Graph Metrics Preview data

2025/04/23 14:00:46 - Spoon - Transformation opened.  
2025/04/23 14:00:46 - Spoon - Launching transformation [dimproduk]...  
2025/04/23 14:00:46 - Spoon - Started the transformation execution.  
2025/04/23 14:00:46 - dimproduk - Dispatching started for transformation [dimproduk]  
2025/04/23 14:00:46 - Table output.0 - Connected to database [olap\_tokobarokah] (commit=1000)  
2025/04/23 14:00:46 - Table input.0 - Finished reading query, closing connection  
2025/04/23 14:00:46 - Table input.0 - Finished processing (I=681, O=0, R=0, W=681, U=0, E=0)  
2025/04/23 14:00:46 - Select values.0 - Finished processing (I=0, O=0, R=681, W=681, U=0, E=0)  
2025/04/23 14:00:46 - Database lookup.0 - Finished processing (I=0, O=0, R=681, W=681, U=0, E=0)  
2025/04/23 14:00:46 - Filter rows.0 - Finished processing (I=0, O=0, R=681, W=681, U=0, E=0)  
2025/04/23 14:00:46 - Table output.0 - Finished processing (I=0, O=681, R=681, W=681, U=0, E=0)  
2025/04/23 14:00:46 - Spoon - The transformation has finished!!

### Execution Results

Logging Execution History Step Metrics Performance Graph Metrics Preview data

First rows Last rows Off

#	streamIdProduk	streamNamaproduk	streamSatuan	streamHarga	id_produk	nama_produk	satuan	harga
1	1	NUTRIJELL PLAIN 15 GR	BOX	2667.0	<null>	<null>	<null>	<null>
2	2	ABC KC HIJAU 200ML KHKS	DOS	2080.0	<null>	<null>	<null>	<null>
3	3	INDOCAFE COFFEMIX 30 X 20G	DOS	23773.0	<null>	<null>	<null>	<null>
4	4	ALKALINE LR-03 (ISI 2)	LSN	7936.0	<null>	<null>	<null>	<null>
5	5	POCARI SWEAT PET 500	DOS	5577.0	<null>	<null>	<null>	<null>
6	6	ROMA SARI GANDUM ROLL 149	DOS	3951.0	<null>	<null>	<null>	<null>
7	7	TARO NET POTATO 16	DOS	950.0	<null>	<null>	<null>	<null>
8	8	COCA-COLA 1,5 LT	PCS	11125.0	<null>	<null>	<null>	<null>
9	9	PASEO BATROM 6 ROLL	PCS	22263.0	<null>	<null>	<null>	<null>
1.	10	PIATOS SAPI PGG 85	PCS	1087.0	<null>	<null>	<null>	<null>
1.	11	FRUIT TEA KLG BLACK	PCS	2916.0	<null>	<null>	<null>	<null>

	id_produk	nama_produk	satuan	harga
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	NUTRIJELL PLAIN 15 GR	BOX	2667.00
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	2	ABC KC HIJAU 200ML KHKS	DOS	2080.00
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	3	INDOCAFE COFFEMIX 30 X 20G	DOS	23773.00
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	4	ALKALINE LR-03 (ISI 2)	LSN	7936.00
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	5	POCARI SWEAT PET 500	DOS	5577.00
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	6	ROMA SARI GANDUM ROLL 149	DOS	3951.00
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	7	TARO NET POTATO 16	DOS	950.00
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	8	COCA-COLA 1,5 LT	PCS	11125.00
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	9	PASEO BATROM 6 ROLL	PCS	22263.00
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	10	PIATOS SAPI PGG 85	PCS	1087.00
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	11	FRUIT TEA KLG BLACK	PCS	2916.00
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	12	PANTENE AD 6X10 ML	STR	2970.00
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	13	PANTENE HAIRFALL 70	PCS	9157.00
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	14	NS SUPERO CRACKER 90	DOS	1875.00
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	15	KEPALA JENGOT TEH 40G	PCS	1375.00
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	16	SIDO MULIA KOPI KNG 250	KG	11875.00
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	17	HELLO PANDA ALL VARIANT 12 G	BOX	1310.00
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	18	ABC TERASI UDANG 20 X 4,2	PCS	3347.00
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	19	H&S CLEAN&BALANCE 180ML	PCS	17975.00
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	20	PANTENE BLACK 170 ML	PCS	19812.00

- dimembeli

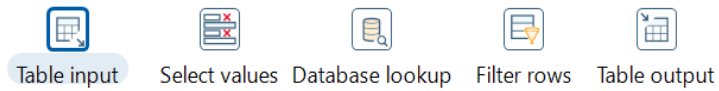


Table input:

Table input

Step name

Connection  Edit... New... Wizard...

SQL Get SQL select statement...

```
SELECT * FROM pembeli;
```

Line 1 Column 0

Store column info in step meta ☐

Enable lazy conversion ☐

Replace variables in script? ☐

Insert data from step

Execute for each row? ☐

Limit size

Help OK Preview Cancel

Cek data masuk:

Examine preview data

Rows of step: Table input (4 rows)

#	id_member	username	
1	1	RIANTI	
2	2	DEWI	
3	3	ETIK	
4	4	ARIF	

[illegible]

Database lookup

Step name

Database lookup

Connection

olap\_tokobarokah

Edit...

New...

Wizard...

Lookup schema

dw\_tokobarokah

Browse...

Lookup table

dimpembeli

Browse...

Enable cache?

☐

Cache size in rows (0=cache all rows)

0

Load all data from table

☐

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

#	Table field	Comparator	Field1	Field2
1	id_member	=	id_member	
2	username	=	username	

Values to return from the lookup table :

#	Field	New name	Default	Type
1	id_member			Integer
2	username			String

Do not pass the row if the lookup fails

☐

Fail on multiple results?

☐

Order by

Help

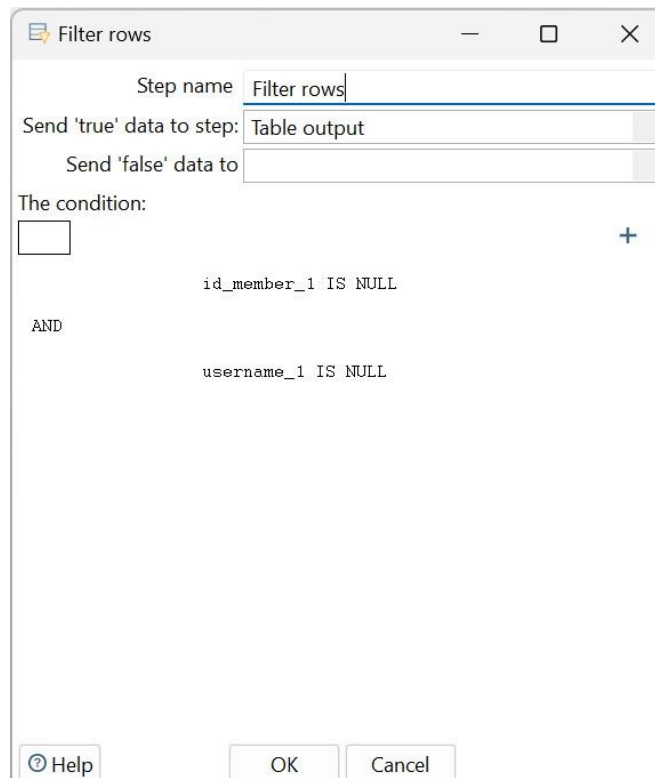
OK

Cancel

Get Fields

Get lookup fields

## Filter rows:



Filter rows dialog box configuration:

- Step name: Filter rows
- Send 'true' data to step: Table output
- Send 'false' data to: (empty)
- The condition:
  - ☐ id\_member\_1 IS NULL
  - AND
  - ☐ username\_1 IS NULL

Buttons: Help, OK, Cancel

## Table output:

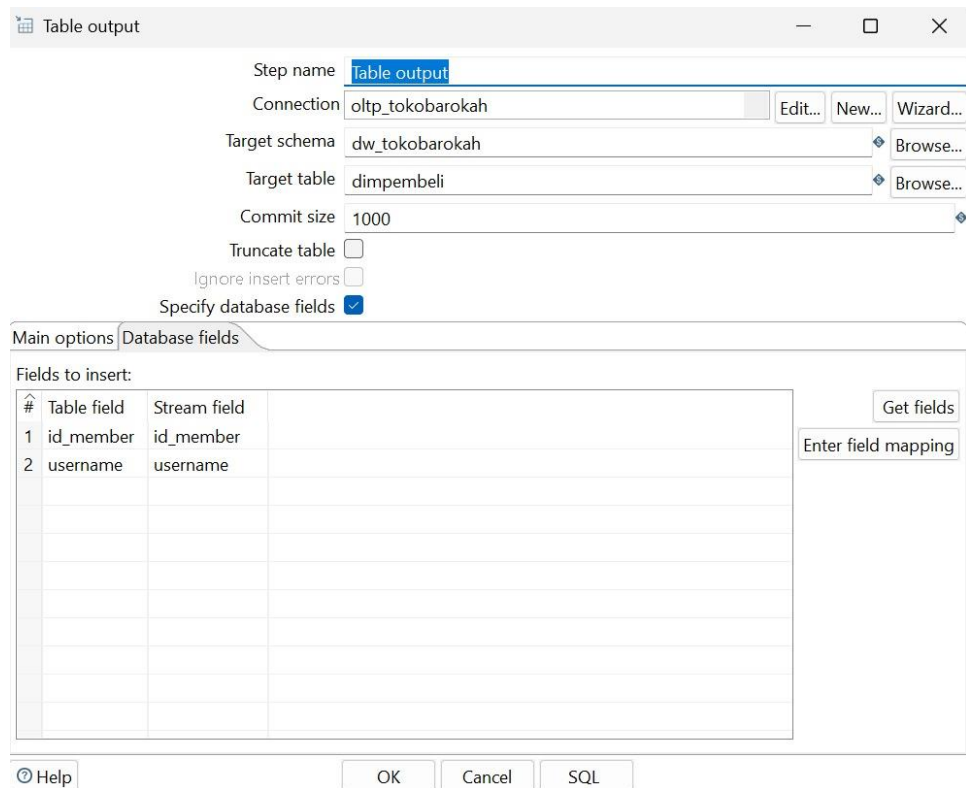


Table output dialog box configuration:

- Step name: Table output
- Connection: oltp\_tokobarokah
- Target schema: dw\_tokobarokah
- Target table: dimpenbeli
- Commit size: 1000
- Truncate table: ☐
- Ignore insert errors: ☐
- Specify database fields: ☒

Database fields configuration:

#	Table field	Stream field
1	id_member	id_member
2	username	username

Buttons: Get fields, Enter field mapping, Help, OK, Cancel, SQL

Output:



2025/04/23 13:41:12 - Spoon - Transformation opened.  
2025/04/23 13:41:12 - Spoon - Launching transformation [dimpembeli]...  
2025/04/23 13:41:12 - Spoon - Started the transformation execution.  
2025/04/23 13:41:12 - dimpembeli - Dispatching started for transformation [dimpembeli]  
2025/04/23 13:41:12 - Table output.0 - Connected to database [oltp\_tokobarokah] (commit=1000)  
2025/04/23 13:41:12 - Table input.0 - Finished reading query, closing connection  
2025/04/23 13:41:12 - Table input.0 - Finished processing (I=4, O=0, R=0, W=4, U=0, E=0)  
2025/04/23 13:41:12 - Select values.0 - Finished processing (I=0, O=0, R=4, W=4, U=0, E=0)  
2025/04/23 13:41:12 - Database lookup.0 - Finished processing (I=0, O=0, R=4, W=4, U=0, E=0)  
2025/04/23 13:41:12 - Filter rows.0 - Finished processing (I=0, O=0, R=4, W=4, U=0, E=0)  
2025/04/23 13:41:12 - Table output.0 - Finished processing (I=0, O=4, R=4, W=4, U=0, E=0)  
2025/04/23 13:41:12 - Spoon - The transformation has finished!!

## Execution Results

Logging	Execution History	Step Metrics	Performance Graph	Metrics	Preview data
<input checked="" type="radio"/> First rows <input type="radio"/> Last rows <input type="radio"/> Off					
#	id_member	username	id_member_1	username_1	
1	1	RIANTI	<null>	<null>	
2	2	DEWI	<null>	<null>	
3	3	ETIK	<null>	<null>	
4	4	ARIF	<null>	<null>	

Showing rows 0 - 3 (4 total, Query took 0.0003 seconds )

SELECT \* FROM `dimpembeli`

☐ Profiling [\[ Edit inline \]](#) [\[ Edit \]](#) [\[ Explain SQL \]](#) [\[ Create PHP code \]](#) [\[ Refresh \]](#)

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Extra options

		id_member	username
<input type="checkbox"/>	Edit Copy Delete	1	RIANTI
<input type="checkbox"/>	Edit Copy Delete	2	DEWI
<input type="checkbox"/>	Edit Copy Delete	3	ETIK
<input type="checkbox"/>	Edit Copy Delete	4	ARIF

☐ Check all | With selected: Edit Copy Delete Export

- dimdate

Generate rows:

[illegible]

Add sequence:

**Add sequence**

Step name

Name of value

Use a database to generate the sequence

Use DB to get sequence? ☐

Connection  Edit... New... Wizard...

Schema name  Schemas...

Sequence name  Sequences...

Use a transformation counter to generate the sequence

Use counter to calculate sequence? ☒

Counter name (optional)

Start at value

Increment by

Maximum value

OK Cancel

Help



## Calculator:

The Calculator dialog box has a title bar with standard window controls. Below the title bar is a 'Step name' field containing the text 'Calculator'. A checkbox labeled 'Throw an error on non-existing files' is checked. Below this is a 'Fields:' section containing a table with 12 columns: #, New field, Calculation, Field A, Field B, Field C, Value type, Length, Precision, Remove, Conversion mask, Decimal symbol, and Grouping symbol. The table contains four rows of data. At the bottom are 'Help', 'OK', and 'Cancel' buttons.

#	New field	Calculation	Field A	Field B	Field C	Value type	Length	Precision	Remove	Conversion mask	Decimal symbol	Grouping symbol
1	streamDate	Date A + B Days	CurrentDate	incrementDay		None			N			
2	streamYear	Year of date A	streamDate			None			N			
3	streamMonth	Month of date A	streamDate			None			N			
4	streamDay	Day of month of date A	streamDate			None			N			

## Select values:

The Select values dialog box has a title bar with standard window controls. Below the title bar is a 'Step name' field containing the text 'Select values'. There are three tabs: 'Select & Alter' (selected), 'Remove', and 'Meta-data'. The 'Fields:' section contains a table with 5 columns: #, Fieldname, Rename to, Length, and Precision. The table contains six rows of data. To the right of the table are two buttons: 'Get fields to select' and 'Edit Mapping'. Below the table is a checkbox labeled 'Include unspecified fields, ordered by'. At the bottom are 'Help', 'OK', and 'Cancel' buttons.

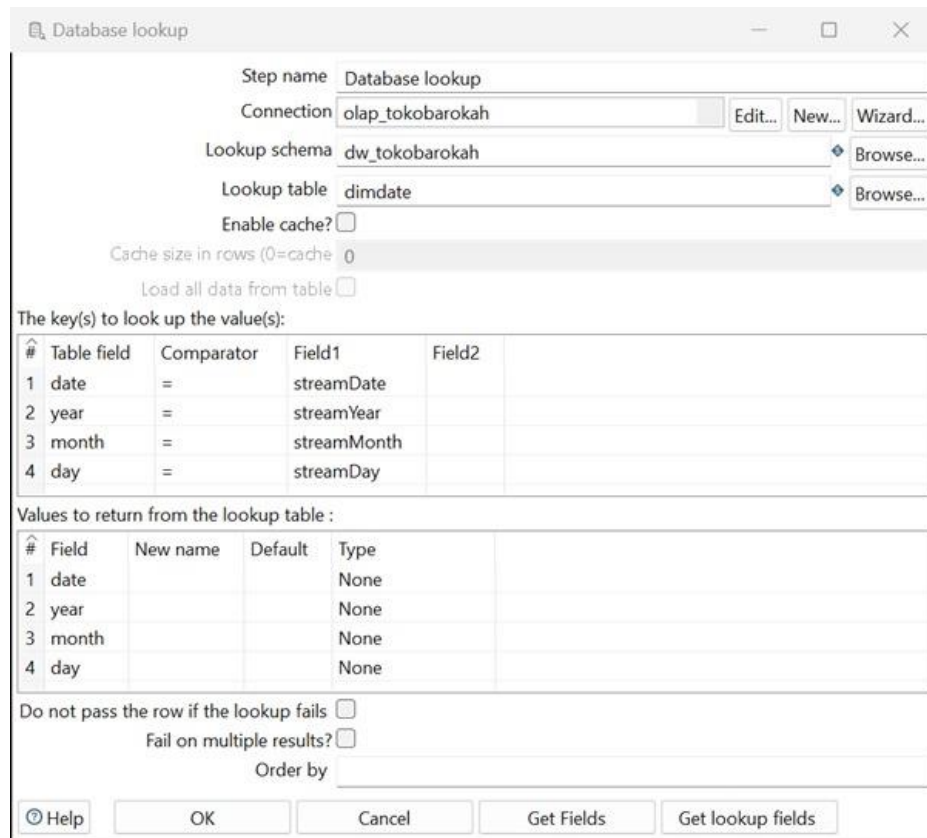
#	Fieldname	Rename to	Length	Precision
1	CurrentDate			
2	incrementDay			
3	streamDate			
4	streamYear			
5	streamMonth			
6	streamDay			

The Select values dialog box has a title bar with standard window controls. Below the title bar is a 'Step name' field containing the text 'Select values'. There are three tabs: 'Select & Alter', 'Remove' (selected), and 'Meta-data'. The 'Fields to remove:' section contains a table with 2 columns: #, and Fieldname. The table contains two rows of data. To the right of the table is a button labeled 'Get fields to remove'. At the bottom are 'Help', 'OK', and 'Cancel' buttons.

#	Fieldname
1	CurrentDate
2	incrementDay



## Database lookup:



Step name: Database lookup

Connection: olap\_tokobarokah [Edit... New... Wizard...]

Lookup schema: dw\_tokobarokah [Browse...]

Lookup table: dimdate [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	date	=	streamDate	
2	year	=	streamYear	
3	month	=	streamMonth	
4	day	=	streamDay	

Values to return from the lookup table:

#	Field	New name	Default	Type
1	date			None
2	year			None
3	month			None
4	day			None

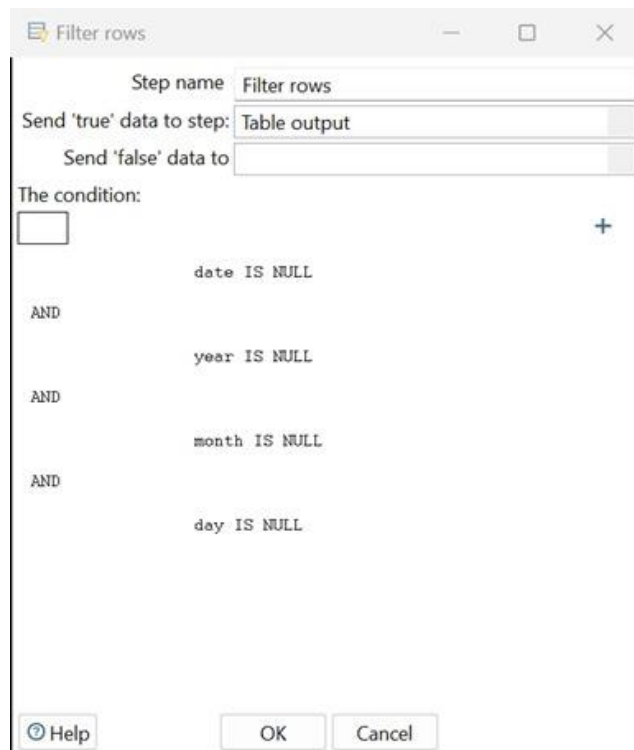
Do not pass the row if the lookup fails ☐

Fail on multiple results? ☐

Order by:

[Help] [OK] [Cancel] [Get Fields] [Get lookup fields]

## Filter rows:



Step name: Filter rows

Send 'true' data to step: Table output

Send 'false' data to:

The condition:

☐ +

date IS NULL

AND

year IS NULL

AND

month IS NULL

AND

day IS NULL

[Help] [OK] [Cancel]

Table output:

Table output

Step name: Table output

Connection: olap\_tokobarokah [Edit... New... Wizard...]

Target schema: dw\_tokobarokah [Browse...]

Target table: dimDate [Browse...]

Commit size: 1000

Truncate table: ☐

Ignore insert errors: ☐

Specify database fields: ☒

Main options

Database fields

Partition data over tables: ☐

Partitioning field: [dropdown]

Partition data per month: ☒

Partition data per day: ☐

Use batch update for inserts: ☒

Is the name of the table defined in a field? ☐

Field that contains name of table: [dropdown]

Store the tablename field: ☒

Return auto-generated key: ☐

Name of auto-generated key field: [dropdown]

[Help] [OK] [Cancel] [SQL]

Output:



2025/04/23 15:45:34 - Spoon - Transformation opened.  
2025/04/23 15:45:34 - Spoon - Launching transformation [dimdate]...  
2025/04/23 15:45:34 - Spoon - Started the transformation execution.  
2025/04/23 15:45:34 - dimdate - Dispatching started for transformation [dimdate]  
2025/04/23 15:45:34 - Table output.0 - Connected to database [olap\_tokobarokah] (commit=1000)  
2025/04/23 15:45:34 - Generate rows.0 - Finished processing (I=0, O=0, R=0, W=7457, U=0, E=0)  
2025/04/23 15:45:34 - Add sequence.0 - Finished processing (I=0, O=0, R=7457, W=7457, U=0, E=0)  
2025/04/23 15:45:34 - Calculator.0 - Finished processing (I=0, O=0, R=7457, W=7457, U=0, E=0)  
2025/04/23 15:45:34 - Select values.0 - Finished processing (I=0, O=0, R=7457, W=7457, U=0, E=0)  
2025/04/23 15:45:40 - Database lookup.0 - Finished processing (I=0, O=0, R=7457, W=7457, U=0, E=0)  
2025/04/23 15:45:40 - Filter rows.0 - Finished processing (I=0, O=0, R=7457, W=7457, U=0, E=0)  
2025/04/23 15:45:40 - Table output.0 - Finished processing (I=0, O=7457, R=7457, W=7457, U=0, E=0)  
2025/04/23 15:45:40 - Spoon - The transformation has finished!!

## Execution Results

Logging Execution History Step Metrics Performance Graph Metrics Preview data

First rows Last rows Off

#	streamDate	streamYear	streamMonth	streamDay	date	year	month	day
1	2020/01/01 00:00:00.000	2020	1	1	<null>	<null>	<null>	<null>
2	2020/01/02 00:00:00.000	2020	1	2	<null>	<null>	<null>	<null>
3	2020/01/03 00:00:00.000	2020	1	3	<null>	<null>	<null>	<null>
4	2020/01/04 00:00:00.000	2020	1	4	<null>	<null>	<null>	<null>
5	2020/01/05 00:00:00.000	2020	1	5	<null>	<null>	<null>	<null>
6	2020/01/06 00:00:00.000	2020	1	6	<null>	<null>	<null>	<null>
7	2020/01/07 00:00:00.000	2020	1	7	<null>	<null>	<null>	<null>
8	2020/01/08 00:00:00.000	2020	1	8	<null>	<null>	<null>	<null>
9	2020/01/09 00:00:00.000	2020	1	9	<null>	<null>	<null>	<null>
1.	2020/01/10 00:00:00.000	2020	1	10	<null>	<null>	<null>	<null>
1.	2020/01/11 00:00:00.000	2020	1	11	<null>	<null>	<null>	<null>
1.	2020/01/12 00:00:00.000	2020	1	12	<null>	<null>	<null>	<null>
1.	2020/01/13 00:00:00.000	2020	1	13	<null>	<null>	<null>	<null>
1.	2020/01/14 00:00:00.000	2020	1	14	<null>	<null>	<null>	<null>
1.	2020/01/15 00:00:00.000	2020	1	15	<null>	<null>	<null>	<null>

Showing rows 0 - 24 (7457 total, Query took 0.0001 seconds.)

```
SELECT * FROM `dimdate`
```

Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

1 > >>

Number of rows: 25

Filter rows: Search this table

Sort by key: No

Extra options

		id_dimDate	date	year	month	day
<input type="checkbox"/>	Edit Copy Delete	1	2020-01-01	2020	1	1
<input type="checkbox"/>	Edit Copy Delete	2	2020-01-02	2020	1	2
<input type="checkbox"/>	Edit Copy Delete	3	2020-01-03	2020	1	3
<input type="checkbox"/>	Edit Copy Delete	4	2020-01-04	2020	1	4
<input type="checkbox"/>	Edit Copy Delete	5	2020-01-05	2020	1	5
<input type="checkbox"/>	Edit Copy Delete	6	2020-01-06	2020	1	6
<input type="checkbox"/>	Edit Copy Delete	7	2020-01-07	2020	1	7
<input type="checkbox"/>	Edit Copy Delete	8	2020-01-08	2020	1	8
<input type="checkbox"/>	Edit Copy Delete	9	2020-01-09	2020	1	9
<input type="checkbox"/>	Edit Copy Delete	10	2020-01-10	2020	1	10
<input type="checkbox"/>	Edit Copy Delete	11	2020-01-11	2020	1	11
<input type="checkbox"/>	Edit Copy Delete	12	2020-01-12	2020	1	12
<input type="checkbox"/>	Edit Copy Delete	13	2020-01-13	2020	1	13
<input type="checkbox"/>	Edit Copy Delete	14	2020-01-14	2020	1	14
<input type="checkbox"/>	Edit Copy Delete	15	2020-01-15	2020	1	15

Console

- factpenjualan

Table Input:

Step name: Table input

Connection: oltp\_tokobarokah

SQL:

```
SELECT
  CONCAT('TRX', t.nomor_transaksi) AS kode_transaksi,
  dt.fk_id_produk AS id_produk,
  t.fk_id_penjual AS id_penjual,
  t.fk_id_pembeli AS id_pembeli,
  t.tanggal AS tanggal_transaksi,
  dt.qty,
  p.harga * dt.qty AS total_harga
FROM detail_transaksi dt
JOIN transaksi t ON dt.fk_nomor_transaksi = t.nomor_transaksi
JOIN produk p ON dt.fk_id_produk = p.id_produk;
```

Line 1 Column 0

Store column info in step meta data ☐

Enable lazy conversion ☐

Replace variables in script? ☐

Insert data from step

Execute for each row? ☐

Limit size: 0

Buttons: Help, OK, Preview, Cancel

Select values:

Step name: Select values

Fields:

#	Fieldname	Rename to	Length	Precision
1	kode_transaksi			
2	id_produk			
3	id_penjual			
4	id_pembeli			
5	tanggal_transaksi			
6	qty			
7	total_harga			

Buttons: Get fields to select, Edit Mapping

Include unspecified fields, ordered by ☐

Buttons: Help, OK, Cancel

The screenshot shows a window titled "Select values". At the top, there's a tab labeled "Step name Select values". Below it are three tabs: "Select & Alter", "Remove", and "Meta-data", with "Meta-data" being the active one. The main area contains the text "Fields to alter the meta-data for :". Below this is a large table with columns: "#", "Fieldname", "Rename to", "Type", "Length", "Precision", and "Binary". The first row has the value "1" under "#", "tanggal\_transaksi" under "Fieldname", and "N" under "Binary". To the right of the table is a button labeled "Get fields to change". At the bottom left is a "Help" icon, and at the bottom center are "OK" and "Cancel" buttons.

Database lookup:

Database lookup

Step name: Database lookup

Connection: olap\_tokobarokah Edit... New... Wizard...

Lookup schema: dw\_tokobarokah Browse...

Lookup table: dimdate Browse...

Enable cache? ☐

Cache size in rows (0=cache all rows): 0

Load all data from table ☐

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

#	Table field	Comparator	Field1	Field2
1	date	=	tanggal_transaksi	

Values to return from the lookup table :

#	Field	New name	Default	Type
1	id_dimDate			Integer

Do not pass the row if the lookup fails ☐

Fail on multiple results? ☐

Order by:

Help OK Cancel Get Fields Get lookup fields

## Database lookup 2:

Database lookup

Step name: Database lookup 2

Connection: olap\_tokobarokah Edit... New... Wizard...

Lookup schema: dw\_tokobarokah Browse...

Lookup table: dimpembeli 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	id_member	=	id_pembeli	

Values to return from the lookup table:

#	Field	New name	Default	Type
1	id_member			Integer

Do not pass the row if the lookup fails ☐

Fail on multiple results? ☐

Order by:

Help OK Cancel Get Fields Get lookup fields

## Database lookup 3:

Database lookup

Step name: Database lookup 3

Connection: olap\_tokobarokah Edit... New... Wizard...

Lookup schema: dw\_tokobarokah Browse...

Lookup table: dimproduk 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	id_produk	=	id_produk	

Values to return from the lookup table:

#	Field	New name	Default	Type
1	id_produk			Integer

Do not pass the row if the lookup fails ☐

Fail on multiple results? ☐

Order by:

Help OK Cancel Get Fields Get lookup fields

Add sequence:

The 'Add sequence' dialog box is shown with the following configuration:

- Step name: Add sequence
- Name of value: kode\_transaksi
- Use a database to generate the sequence: ☐
- Use DB to get sequence?: ☐
- Connection: [Dropdown menu]
- Edit... New... Wizard... buttons
- Schema name: [Dropdown menu]
- Schemas... button
- Sequence name: SEQ\_
- Sequences... button
- Use a transformation counter to generate the sequence: ☒
- Use counter to calculate sequence?: ☒
- Counter name (optional): kode\_transaksi\_counter
- Start at value: 1
- Increment by: 1
- Maximum value: 99999999
- OK Cancel buttons
- Help button

Table output:

The 'Table output' dialog box is shown with the following configuration:

- Step name: Table output
- Connection: olap\_tokobarokah
- Edit... New... Wizard... buttons
- Target schema: dw\_tokobarokah
- Browse... button
- Target table: factpenjualan
- Browse... button
- Commit size: 14000
- Truncate table: ☐
- Ignore insert errors: ☐
- Specify database fields: ☒
- Main options: Database fields
- Partition data over tables: ☐
- Partitioning field: [Dropdown menu]
- Partition data per month: ☒
- Partition data per day: ☐
- Use batch update for inserts: ☒
- Is the name of the table defined in a field?: ☐
- Field that contains name of table: [Dropdown menu]
- Store the tablename field: ☒
- Return auto-generated key: ☐
- Name of auto-generated key field: [Text field]
- Help button
- OK Cancel SQL buttons



## Output:



2025/04/23 16:34:50 - Spoon - Transformation opened.  
2025/04/23 16:34:50 - Spoon - Launching transformation [factpenjualan]...  
2025/04/23 16:34:50 - Spoon - Started the transformation execution.  
2025/04/23 16:34:50 - factpenjualan - Dispatching started for transformation [factpenjualan]  
2025/04/23 16:34:50 - Table output.0 - Connected to database [olap\_tokobarokah] (commit=14000)  
2025/04/23 16:34:50 - Table input.0 - Finished reading query, closing connection  
2025/04/23 16:34:50 - Table input.0 - Finished processing (I=13069, O=0, R=0, W=13069, U=0, E=0)  
2025/04/23 16:34:50 - Select values.0 - Finished processing (I=0, O=0, R=13069, W=13069, U=0, E=0)  
2025/04/23 16:34:52 - Database lookup.0 - Finished processing (I=13069, O=0, R=13069, W=13069, U=0, E=0)  
2025/04/23 16:34:52 - Database lookup 2.0 - Finished processing (I=13069, O=0, R=13069, W=13069, U=0, E=0)  
2025/04/23 16:34:52 - Database lookup 3.0 - Finished processing (I=13069, O=0, R=13069, W=13069, U=0, E=0)  
2025/04/23 16:34:52 - Add sequence.0 - Finished processing (I=0, O=0, R=13069, W=13069, U=0, E=0)  
2025/04/23 16:34:53 - Table output.0 - Finished processing (I=0, O=13069, R=13069, W=13069, U=0, E=0)  
2025/04/23 16:34:53 - Spoon - The transformation has finished!!

## Execution Results

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

First rows | Last rows | Off

#	kode_transaksi	id_produk	id_penjual	id_pembeli	tanggal_transaksi	qty	total_harga	id_dimDate	id_member	id_produk_1	kode_transaksi_1
1.	TRXJC-100871048	1	1	1	2020-03-12	2.0	5334.0	72	1	1	13
1.	TRXJC-090850536	1	1	2	2020-04-01	1.0	2667.0	92	2	1	14
1.	TRXJC-171130469	1	1	1	2020-04-01	2.0	5334.0	92	1	1	15
1.	TRXJC-100480415	1	1	2	2020-02-19	1.0	2667.0	50	2	1	16
1.	TRXJC-090270646	1	1	1	2020-03-17	1.0	2667.0	77	1	1	17
1.	TRXJC-171131737	1	1	1	2020-04-07	1.0	2667.0	98	1	1	18
1.	TRXJC-091150024	2	1	2	2020-02-18	3.0	6240.0	49	2	2	19
2.	TRXJC-091071506	2	1	1	2020-01-17	2.0	4160.0	17	1	2	20
2.	TRXJC-091170021	2	1	1	2020-01-09	1.0	2080.0	9	1	2	21
2.	TRXJC-091170035	2	1	1	2020-01-02	1.0	2080.0	2	1	2	22
2.	TRXJC-091170382	2	1	1	2020-02-18	1.0	2080.0	49	1	2	23
2.	TRXJC-080570104	2	1	1	2020-02-11	2.0	4160.0	42	1	2	24
2.	TRXJC-080550074	2	1	2	2020-01-07	2.0	4160.0	7	2	2	25
2.	TRXJC-080550080	2	1	2	2020-01-17	2.0	4160.0	17	2	2	26
2.	TRXJC-091170203	2	1	1	2020-01-08	3.0	6240.0	8	1	2	27

Showing rows 0 - 24 (13069 total, Query took 0.0004 seconds.)

SELECT \* FROM `factpenjualan`

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

1 > >> Number of rows: 25 Filter rows: Search this table Sort by key: None

Extra options

	kode_transaksi	id_produk	id_member	id_dimDate	qty	total_penjualan
<input type="checkbox"/> Edit Copy Delete		1	1	1	49	1 2667.00
<input type="checkbox"/> Edit Copy Delete		2	1	1	2	1 2667.00
<input type="checkbox"/> Edit Copy Delete		3	1	2	65	1 2667.00
<input type="checkbox"/> Edit Copy Delete		4	1	2	8	1 2667.00
<input type="checkbox"/> Edit Copy Delete		5	1	2	44	5 13335.00
<input type="checkbox"/> Edit Copy Delete		6	1	1	2	2 5334.00
<input type="checkbox"/> Edit Copy Delete		7	1	1	18	1 2667.00
<input type="checkbox"/> Edit Copy Delete		8	1	1	29	1 2667.00
<input type="checkbox"/> Edit Copy Delete		9	1	1	42	1 2667.00



## ➤ Hasil Studi Kasus KPI

- a. Mencari produk yang paling banyak dibeli (TOP 5)

```
SELECT
    p.nama_produk,
    SUM(f.qty) AS total_terjual
FROM factpenjualan f
JOIN dimproduk p ON f.id_produk = p.id_produk
GROUP BY p.id_produk, p.nama_produk
ORDER BY total_terjual DESC
LIMIT 5;
```

nama_produk	total_terjual ▾ 1
SEDAP MIE GORENG	3553
SEDAP MIE SOTO	1589
SIDO MULIA KOPI KNG 250	591
AQUA 330 ML	505
SEDAP MIE AYAM BAWANG	503

- b. Total omset penjual

```
SELECT
    DATE_FORMAT(d.date, '%Y-%m') AS bulan,
    SUM(f.total_penjualan) AS total_omset
FROM factpenjualan f
JOIN dimdate d ON f.id_dimDate = d.id_dimDate
GROUP BY bulan
ORDER BY bulan;
```

bulan ▴ 1	total_omset
2020-01	23164341.00
2020-02	39582800.00
2020-03	33904642.00
2020-04	8208003.00
2020-08	8389.00

- c. Total penjualan per produk

```
SELECT
    dp.nama_produk,
    SUM(f.total_penjualan) AS total_penjualan
FROM factpenjualan f
JOIN dimproduk dp ON f.id_produk = dp.id_produk
GROUP BY dp.nama_produk
ORDER BY total_penjualan DESC;
```

nama_produk	total_penjualan ▾ 1
SIDO MULIA KOPI KNG 250	7018125.00
SEDAP MIE GORENG	4235176.00
CLUB GELAS BESAR 48 X 250 ML	3660246.00
INDOCAFE COFFEMIX 30 X 20G	3328220.00
DJISAMSOE SUP PREM REF 12	2145324.00
MAX CREAMER 500 GR DUS	1993860.00
POCARI SWEAT PET 500	1818102.00
SOKLIN SOFTERGENT PINK 800	1812500.00
INDOCAFE COFFEMIX 5X20GR SAC	1647366.00
SEDAP MIE SOTO	1623958.00
SOKLIN PRO/ POWER 900	1343750.00
KACANG SHANGHAI DK 450	1188250.00
KACANG KUPAS 500 GR	1170416.00
SOKLIN HIGINIS 900	1140625.00
ABC SPC G MELON 585	1063692.00
ENERGEN CHOCO BAG 10	1057268.00
NESCAFE 3/1 CREME 25X16GR	999361.00
GOOD DAY CAPPU GRANUL 25	965708.00
ABC KCP MNS REF 520	903925.00
BUMBU PECEL KELUD BESAR	862750.00
KACANG OVEN UWENAK 200	828843.00
PANTENE ANTI D 170ML	784520.00
AQUA 1500 ML	742816.00

d. Pelanggan yang paling sering beli

```
SELECT dp.username,  
       SUM(f.qty) AS total_qty  
FROM factpenjualan f  
JOIN dimpembeli dp ON f.id_member = dp.id_member  
GROUP BY dp.username  
ORDER BY total_qty DESC  
LIMIT 1;
```

username	total_qty
RIANTI	16011

e. Jumlah transaksi per pembeli

```
SELECT  
  dp.username,  
  COUNT(f.kode_transaksi) AS jumlah_transaksi  
FROM factpenjualan f  
JOIN dimpembeli dp ON f.id_member = dp.id_member  
GROUP BY dp.username  
ORDER BY jumlah_transaksi DESC;
```

username	jumlah_transaksi
RIANTI	8912
DEWI	3395
ETIK	760
ARIF	2

- **Link youtube penjelasan :**  
[https://youtu.be/zqt\\_WhoRao?feature=shared](https://youtu.be/zqt_WhoRao?feature=shared)