

DATA WAREHOUSE

Jobsheet 4

Khuzaima Filla Januardha
2341760078

Studi Kasus

Pak Ozai merupakan staff di PT Indomarko Prismatama. PT Indomarko Prisma tama merupakan perusahaan retail yang memiliki usaha indomarti, superindi dan indigrosir. Pak ozai mempelajari proses bisnis dari perusahaan tersebut dan mencoba untuk membangun perusahaan sendiri dengan nama PT Ozai Enterprise dan membangun 3 cabang. Untuk dapat bersaing, pak ozai perlu melakukan analisa dari penjualan di ketiga cabang tersebut. 3 cabang tersebut mencatat penjualannya pada satu file excel. Berikut ketiga file tersebut:

Toko Azura : <https://github.com/dik4rizky/datasources/blob/main/tokoazura.xls>

Toko Zuko : <https://github.com/dik4rizky/datasources/blob/main/tokozuko.xls>

Toko Iroh : <https://github.com/dik4rizky/datasources/blob/main/tokoiroh.xls>

1. Create Database dw_OzaiEnterprise

```
✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0102 seconds.)

CREATE DATABASE dw_OzaiEnterprise;

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

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

use dw_OzaiEnterprise;

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

2. Create tabel staging pada database dw_OzaiEnterprise

```
✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0110 seconds.)

CREATE TABLE stagingPenjualan (Tanggal DATE, NamaProduk VARCHAR(100), Kategori VARCHAR(50), Harga DECIMAL(10,2), Jumlah INT, Total DECIMAL(12,2), Cabang VARCHAR(50));

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

3. Menyiapkan 3 elemn Microsoft Excel Input untuk menginputkan ketiga data pada toko azura, zuko dan iroh



Microsoft Excel input



Microsoft Excel input 2



Microsoft Excel input 3

4. Drag & drop Excel Input sebanyak 3 kali untuk
 - Tokoazura

Microsoft Excel input

Step name: Microsoft Excel input

Add sheet(s)

Files | Sheets | Content | Error Handling | Fields | Additional output fields

Spread sheet type (engine): Excel 97-2003 XLS (XLS)

File or directory: Add Browse...

Regular Expression:

Exclude Regular Expression:

Password:

Selected files:

#	File/Directory	Wildcard (RegExp)	Exclude wildcard	Req
1	\$(Internal.Entry.Current.Directory)/tokozura.xls			N

Accept filenames from previous steps

Accept filenames from previous step ☐

Step to read filenames from:

Field in the input to use as filename:

Show filename(s)...

Help OK Preview rows Cancel

Microsoft Excel input

Step name: Microsoft Excel input

Add sheet(s)

Files | Sheets | Content | Error Handling | Fields | Additional output fields

#	Name	Type	Length	Precision	Trim type	Repeat	Format	Currency	Decimal	Grouping
1	kode	Number	-1	-1	none	N				
2	nomor_penjualan	String	-1	-1	none	N				
3	username	String	-1	-1	none	N				
4	qty	Number	-1	-1	none	N				
5	total_nilai	Number	-1	-1	none	N				
6	tanggal	Date	-1	-1	none	N				
7	Nama	String	-1	-1	none	N				
8	Harga	Number	-1	-1	none	N				
9	Satuan	String	-1	-1	none	N				

Get fields from header row...

Help OK Preview rows Cancel

• Tokozuho

Microsoft Excel input

Step name: Microsoft Excel input 2

Add sheet(s)

Files | Sheets | Content | Error Handling | Fields | Additional output fields

Spread sheet type (engine): Excel 97-2003 XLS (XLS)

File or directory: Add Browse...

Regular Expression:

Exclude Regular Expression:

Password:

Selected files:

#	File/Directory	Wildcard (RegExp)	Exclude wildcard	Req
1	\$(Internal.Entry.Current.Directory)/tokozuko.xls			N

Accept filenames from previous steps

Accept filenames from previous step ☐

Step to read filenames from:

Field in the input to use as filename:

Show filename(s)...

Help OK Preview rows Cancel

Microsoft Excel input

Step name: Microsoft Excel input 2

Add sheet(s)

Files | Sheets | Content | Error Handling | Fields | Additional output fields

#	Name	Type	Length	Precision	Trim type	Repeat	Format	Currency	Decimal	Grouping
1	kode	Number	-1	-1	none	N				
2	nomor_penjualan	String	-1	-1	none	N				
3	username	String	-1	-1	none	N				
4	qty	Number	-1	-1	none	N				
5	total_nilai	Number	-1	-1	none	N				
6	tanggal	Date	-1	-1	none	N				
7	Nama	String	-1	-1	none	N				
8	Harga	Number	-1	-1	none	N				
9	Satuan	String	-1	-1	none	N				

Get fields from header row...

Help OK Preview rows Cancel

- Tokoiroh

Microsoft Excel input

Step name: Microsoft Excel input 3

Add sheet(s)

Files | Sheets | Content | Error Handling | Fields | Additional output fields

Spread sheet type (engine): Excel 97-2003 XLS (XLS)

File or directory: Add Browse...

Regular Expression:

Exclude Regular Expression:

Password:

Selected files:

#	File/Directory	Wildcard (RegExp)	Exclude wildcard	Require
1	\$(Internal.Entry.Current.Directory)/tokoiroh.xls			N

Delete Edit

Accept filenames from previous steps

Accept filenames from previous step: ☐

Step to read filenames from:

Field in the input to use as filename:

Show filename(s)...

Help OK Preview rows Cancel

Microsoft Excel input

Step name: Microsoft Excel input 3

Add sheet(s)

Files | Sheets | Content | Error Handling | Fields | Additional output fields

#	Name	Type	Length	Precision	Trim type	Repeat	Format	Currency	Decimal	Grouping
1	kode	Number	-1	-1	none	N				
2	nomor_penjualan	String	-1	-1	none	N				
3	username	String	-1	-1	none	N				
4	qty	Number	-1	-1	none	N				
5	total_nilai	Number	-1	-1	none	N				
6	tanggal	Date	-1	-1	none	N				
7	Nama	String	-1	-1	none	N				
8	Harga	Number	-1	-1	none	N				
9	Satuan	String	-1	-1	none	N				

Get fields from header row...

Help OK Preview rows Cancel

- Tambahkan kolom baru Cabang menggunakan step Add constants digunakan untuk menambahkan kolom baru berisi nilai tetap (konstan) sesuai dengan nama toko cabangnya.

- Azura: Cabang = "Azura"

Add constants

Step name: Add constants cabang Azura

Fields :

#	Name	Type	Format	Length	Precision	Currency	Decimal	Group	Value	Set empty string?
1	Cabang	String							Azura	N

Help OK Cancel

- Zuko: Cabang = "Zuko"

Add constants

Step name: Add constants cabang Zuko

Fields :

#	Name	Type	Format	Length	Precision	Currency	Decimal	Group	Value	Set empty string?
1	Cabang	String							Zuko	N

Help OK Cancel

- Iroh: Cabang = "Iroh"

Add constants

Step name: Add constants cabang Iroh

Fields :

#	Name	Type	Format	Length	Precision	Currency	Decimal	Group	Value	Set empty string?
1	Cabang	String							Iroh	N

Help OK Cancel

6. Gunakan step Append streams untuk menghubungkan 3 aliran data menjadi satu

- Append Stream 1

Append streams

Step name: Append streams

Head hop: Add constants cabang Zuko

Tail hop: Add constants cabang Iroh

Help OK Cancel

- Append Stream 2

Append streams

Step name: Append streams 2

Head hop: Append streams

Tail hop: Add constants cabang Azura

Help OK Cancel

7. Drag & drop **Table Output**:

- Koneksi: pilih conn_dw_destination (koneksi ke database).
- Table: stagingPenjualan
- Mapping: sesuai dengan field tabel.

Table output

Step name: Table output

Connection: conn_dw_destination [Edit...] [New...] [Wizard...]

Target schema: dw_ozaienterprise [Browse...]

Target table: stagingPenjualan [Browse...]

Commit size: 1000

Truncate table: ☐

Ignore insert errors: ☐

Specify database fields: ☒

Main options

Partition data over tables: ☐
 Partitioning field:

Partition data per month: ☒
 Partition data per day: ☐

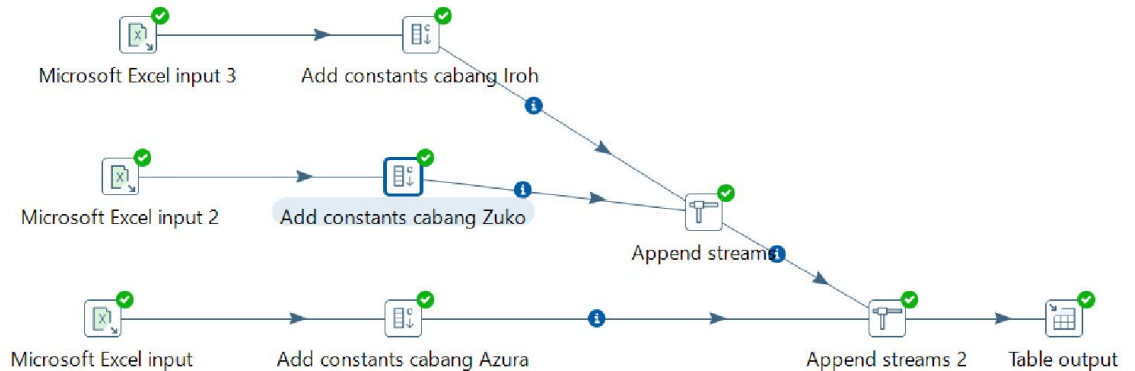
Use batch update for inserts: ☒

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]

8. Hasil transformation :



Execution Results

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

2025/04/18 22:33:33 - Spoon - Transformation opened.

2025/04/18 22:33:33 - Spoon - Launching transformation [stagingPenjualan]...

2025/04/18 22:33:33 - Spoon - Started the transformation execution.

2025/04/18 22:33:34 - stagingPenjualan - Dispatching started for transformation [stagingPenjualan]

2025/04/18 22:33:34 - Table output.0 - Connected to database [conn_dw_destination] (commit=1000)

2025/04/18 22:33:35 - Microsoft Excel input 2.0 - Finished processing (I=1078, O=0, R=0, W=1078, U=0, E=0)

2025/04/18 22:33:36 - Add constants cabang Zuko.0 - Finished processing (I=0, O=0, R=1078, W=1078, U=0, E=0)

2025/04/18 22:33:36 - Microsoft Excel input.0 - Finished processing (I=3862, O=0, R=0, W=3862, U=0, E=0)

2025/04/18 22:33:36 - Add constants cabang Azura.0 - Finished processing (I=0, O=0, R=3862, W=3862, U=0, E=0)

2025/04/18 22:33:36 - Microsoft Excel input 3.0 - Finished processing (I=13069, O=0, R=0, W=13069, U=0, E=0)

2025/04/18 22:33:36 - Add constants cabang Iroh.0 - Finished processing (I=0, O=0, R=13069, W=13069, U=0, E=0)

2025/04/18 22:33:36 - Append streams.0 - Finished processing (I=0, O=0, R=14147, W=14147, U=0, E=0)

2025/04/18 22:33:39 - Append streams 2.0 - Finished processing (I=0, O=0, R=18009, W=18009, U=0, E=0)

2025/04/18 22:33:42 - Table output.0 - Finished processing (I=0, O=18009, R=18009, W=18009, U=0, E=0)

2025/04/18 22:33:42 - Spoon - The transformation has finished!!

9. Output pada database maka semua cabang akan disimpan pada satu tabel :

Showing rows 0 - 24 (3862 total, Query took 0.0202 seconds.)

SELECT * FROM stagingpenjualan WHERE cabang = 'azura';

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

1 > >>

Number of rows: 25

Filter rows:

Extra options

Tanggal	NamaProduk	Kategori	Harga	Jumlah	Total	Cabang
2008-02-18	INDOCAFE CAPUCINO KTK 5X25G	PCS	6916.25	2	353700.00	Azura
2008-02-18	ALKALINE LR-03 (ISI 2)	LSN	7936.25	1	8250.00	Azura
2008-01-02	NUTRIJELL STRAW 15 GR	BOX	2667.50	1	33000.00	Azura
2008-01-02	NUTRIJELL ANGGUR 15 GR	BOX	2667.50	1	33000.00	Azura
2008-01-02	NUTRIJELL PLAIN 15 GR	BOX	2667.50	1	33000.00	Azura
2008-01-02	REJOICE FAMILY C 175	PCS	10890.00	1	187500.00	Azura
2008-01-02	WINGS BIRU 500 K 209G	DOS	2250.00	2	46050.00	Azura
2008-01-02	SOKLIN MATIC FRONT LOAD 1KG	DOS	20000.00	1	26650.00	Azura
2008-01-07	SOKLIN HIGINIS 900	DOS	15625.00	1	20250.00	Azura
2008-01-17	AJINOMOTO 50GR	PCS	1418.75	2	56500.00	Azura
2008-02-18	ABC SBL ASLI 135 ML	PCS	3537.50	1	154000.00	Azura
2008-02-18	KACANG SHANGHAI DK 450	PCS	12250.00	1	353700.00	Azura
2008-01-02	BATERAI ABC KECIL R-6	LSN	1450.00	4	18600.00	Azura
2008-01-17	ABC KCP ASIN 133 ML	PCS	2250.00	1	91325.00	Azura
2008-01-02	CARRERA POLES M 20GX6S	PCS	2800.00	2	70600.00	Azura
	MAY CREAMER 500 GR DUS	DOS	17490.00	1	112500.00	Azura

Showing rows 0 - 24 (1078 total, Query took 0.0008 seconds.)

SELECT * FROM stagingpenjualan WHERE cabang = 'zuko';

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

1 > >>

Number of rows: 25

Filter rows:

Extra options

Tanggal	NamaProduk	Kategori	Harga	Jumlah	Total	Cabang
2011-10-05	ABC KCP MANIS BTL 275M	PCS	6715.00	1	112500.00	Zuko
2015-06-29	SIDO MULIA KOPI KNG 250	KG	11875.00	1	31000.00	Zuko
2011-10-05	MAX CREAMER 500 GR DUS	DOS	17490.00	1	112500.00	Zuko
2011-10-05	SEDAP MIE AYAM BAWANG	DOS	1022.50	5	51800.00	Zuko
2015-06-29	SHINZU'I SAKURA 90	PCS	2763.75	1	45400.00	Zuko
2015-06-29	L'AGIE SAFARI COKLAT 100	PCS	2000.00	1	276000.00	Zuko
2009-10-26	MITU BABY REFILL BLUE	PCS	11287.50	1	110450.00	Zuko
2009-10-26	TARO NET POTATO 16	DOS	950.00	1	0.00	Zuko
2009-10-26	ABC KC HIJAU 200ML KHKS	DOS	2080.00	2	0.00	Zuko
2011-10-05	NUVO FAMILY KNG 80GR	PCS	1393.75	6	482100.00	Zuko
2011-10-05	LEM X-LIME 22ML	DOS	10368.75	3	568400.00	Zuko
2011-10-05	SEDAP MIE AYAM BAWANG	DOS	1022.50	20	482100.00	Zuko
2011-10-05	SOKLIN PRO/ POWER 900	DOS	15625.00	3	482100.00	Zuko
2011-10-05	FINNA SARDINES 425	PCS	6600.00	1	51800.00	Zuko
2011-10-05	NUVO FAMILY BIRU 80GR	PCS	1393.75	3	568400.00	Zuko
	AQUA 1500 ML	DOS	2672.50	2	7200.00	Zuko

Showing rows 0 - 24 (13069 total, Query took 0.0020 seconds.)

`SELECT * FROM stagingpenjualan WHERE cabang = 'iroh';`

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

1 > >> | Number of rows: 25 | Filter rows:

Extra options

Tanggal	NamaProduk	Kategori	Harga	Jumlah	Total	Cabang
2009-11-02	NUTRIJELL PLAIN 15 GR	BOX	2667.50	1	416925.00	Iroh
2009-11-02	ABC KC HIJAU 200ML KHKS	DOS	2080.00	3	28700.00	Iroh
2009-10-27	INDOCAFE COFFEMIX 30 X 20G	DOS	23773.75	1	98500.00	Iroh
2008-11-24	ALKALINE LR-03 (ISI 2)	LSN	7936.25	1	8250.00	Iroh
2008-11-24	POCARI SWEAT PET 500	DOS	5577.50	1	78100.00	Iroh
2008-11-24	ROMA SARI GANDUM ROLL 149	DOS	3951.25	2	78100.00	Iroh
2008-11-24	TARO NET POTATO 16	DOS	950.00	1	295250.00	Iroh
2009-11-03	COCA-COLA 1,5 LT	PCS	11125.00	1	194850.00	Iroh
2009-11-03	COCA-COLA 1,5 LT	PCS	11125.00	1	29950.00	Iroh
2008-01-02	PASEO BATROM 6 ROLL	PCS	22263.75	1	168750.00	Iroh
2009-10-22	PIATOS SAPI PGG 85	PCS	1087.50	1	39400.00	Iroh
2008-01-02	FRUIT TEA KLG BLACK	PCS	2916.25	1	59900.00	Iroh
2008-12-10	PANTENE AD 6X10 ML	STR	2970.00	1	20650.00	Iroh
2009-10-26	PANTENE HAIRFALL 70	PCS	9157.50	1	25450.00	Iroh
2009-11-06	NS SUPERO CRACKER 90	DOS	1875.00	1	70850.00	Iroh
2009-11-06	KEPALA JENGKOT TEH 10G	PCS	1375.00	1	69600.00	Iroh

Console

A. Dimensi Waktu

1. Buatlah sebuah database yang digunakan sebagai **OLAP** dengan nama **dw_OzaiEnterprise**

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

`use dw_OzaiEnterprise;`

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

2. Buatlah table untuk menyimpan data master waktu atau yang disebut dengan **tabel dimensi**. Beri nama table tersebut dengan nama **dimDate**.

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0234 seconds.)

`CREATE TABLE dimDate(id_dimDate int not null AUTO_INCREMENT PRIMARY KEY, date date, year int, month int, day int);`

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

Pada tahapan selanjutnya, untuk membuat tabel dimensi dimDate , maka diperlukan generate data tanggal. Data tanggal yang disiapkan pada tabel dimDate menyesuaikan dengan proses bisnis yang berjalan.

Proses bisnis pada LegendVehicle adalah 20 tahun. Sehingga data pada tabel dimdate yang harus tersedia adalah tanggal selama 15 tahun. Mulai dari 1 Januari 2005

1. Buka PDI Spoon. Buat Transformation baru -> **File - New - Transformation**.
2. Drag and Drop beberapa objek yaitu:
 - **Generate Rows:** digunakan untuk membuat baris data baru.
 - **Add Sequence:** digunakan untuk membuat sequence, dalam hal ini membuat data di setiap harinya.

- **Calculator:** digunakan untuk menjumlahkan hari dan mengambil data tahun, bulan dan hari.
- **Select Values:** digunakan untuk memilih field yang digunakan.
- **Database Lookup:** digunakan untuk melihat dan memastikan bahwa data yang akan dimasukkan kedalam tabel dimDate tidak kembar atau sama dengan data yang ada pada tabel dimDate itu sendiri.
- **Filter Rows:** digunakan untuk mengambil data yang belum ada pada table dimDate setelah dicek sebelumnya.
- **Table Output:** digunakan untuk menyimpan data pada tabel tujuan (dimDate).



1. Konfigurasi pada **Generate Rows** adalah merubah **limit** menjadi **1825** dimana memiliki arti bahwa data yang akan dibuat sebanyak 7300 data. 7300 merupakan jumlah hari dalam 20 tahun (365 hari x 20 tahun).
2. Membuat fields baru bernama **CurrentDate** dengan **type** data **Date** dan **format dd-MM-yyyy** serta **value** awal **01-01-2005**



Gambar konfigurasi generate rows

1. Hubungkan output dari **Generate Rows** menuju **Add Sequence**.



2. Konfigurasi pada **Add Sequences** adalah merubah **Name of value** menjadi **incrementDay** dengan **start value** bernilai **0** dan **increment by** bernilai **1**

Add sequence

Step name: Add sequence

Name of value: incrementDay

Use a database to generate the sequence

Use DB to get sequence? ☐

Connection: conn_dw_destination Edit... New... Wizard...

Schema name: Schemas...

Sequence name: SEQ_ Sequences...

Use a transformation counter to generate the sequence

Use counter to calculate sequence? ☒

Counter name (optional):

Start at value: 0

Increment by: 1

Maximum value: 999999999

OK Cancel

Gambar konfigurasi add sequences

1. Hubungkan output dari **add sequences** menuju **calculator**.



2. Konfigurasi pada calculator dengan membuat fields baru sebagai berikut:

- **streamDate** merupakan kalkulasi dari **CurrentDate + incrementDay**
- **streamYear** merupakan **Year** dari **streamDate**
- **streamMonth** merupakan **Month** dari **streamDate**
- **streamDay** merupakan **Day of month** dari **streamDate**

Calculator

Step name: Calculator

☒ Throw an error on non existing files

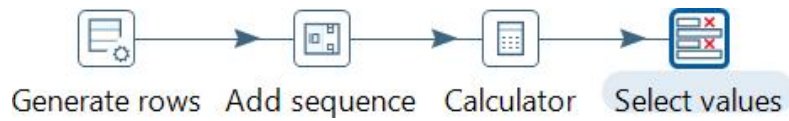
Fields:

#	New field	Calculation	Field A	Field B	Field C	Value type	Length	Precision	Remove	Conversion mask	Decimal symbol	Grouping symt
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			

Help OK Cancel

Gambar konfigurasi kalkulator

1. Hubungkan output dari **calculator** menuju **Select values**



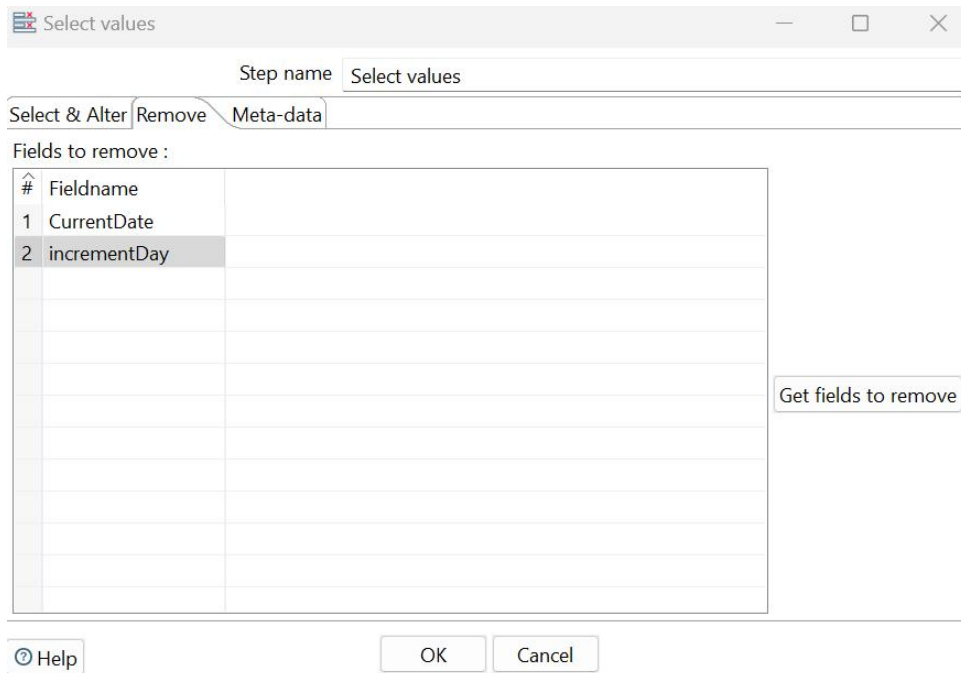
2. Konfigurasi pada **select values** adalah dengan menekan tombol **Get fields to select** pada tab **Select & Alter**. Secara otomatis semua fields dari data input akan muncul.
3. Dikarenakan tidak semua fields digunakan, maka pada tab **Remove** diisikan fields **CurrentDate** dan **incrementDay** dikarenakan kedua fields tersebut tidak digunakan.

The screenshot shows the 'Select values' dialog box with the 'Select & Alter' tab selected. The 'Step name' is 'Select values'. The 'Fields' table lists 6 fields: CurrentDate, incrementDay, streamDay, streamYear, streamMonth, and streamDate. The 'streamDay' row is highlighted. To the right of the table are buttons for 'Get fields to select' and 'Edit Mapping'. At the bottom, there is a checkbox for 'Include unspecified fields, ordered by' and 'OK'/'Cancel' buttons.

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

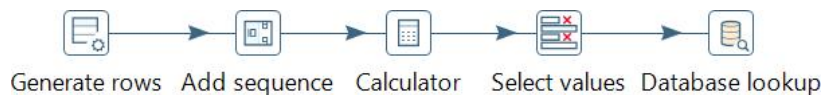
Include unspecified fields, ordered by ☐

Gambar konfigurasi tab select & alter pada select values

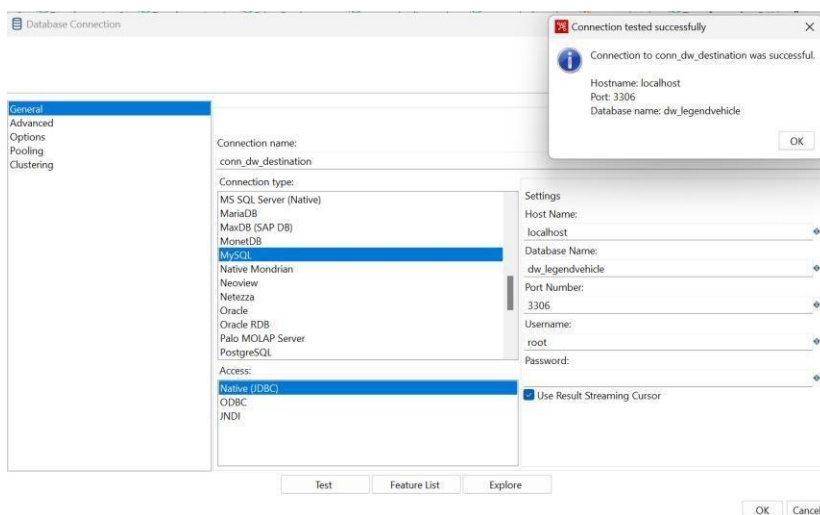


Gambar konfigurasi tab remove pada select values

1. Hubungkan output select values menuju database lookup.



2. Sebelum melakukan konfigurasi pada **database lookup**, buatlah koneksi terlebih dahulu pada database melalui **File - New - Database Connection**. Gunakan **Connection type MySQL** dengan **host name**, **database name**, **port number**, **username** dan **password** sesuai konfigurasi MySQL pada device masing-masing. beri nama **connection name** tersebut dengan nama **conn_dw_destination**.



Gambar konfigurasi database connection

1. Konfigurasi pada **database lookup** adalah dengan memberikan **connection** dengan koneksi yang sudah dibuat pada step sebelumnya. dengan **schema** nama database yang digunakan dan **tabel dimdate** yang telah dibuat pada langkah pertama.
2. Field yang akan dicek untuk melihat kesamaan isi datanya agar tidak kembar adalah:
 - field **date** pada table **dimdate** dengan field **streamDate**
 - field **year** pada table **dimdate** dengan field **streamYear**
 - field **month** pada table **dimdate** dengan field **streamMonth**
 - field **day** pada table **dimdate** dengan field **streamDay**
1. Field yang akan di **retrive** adalah field yang ada pada table **dimDate** yaitu **date, year, month, dan day**.

Database lookup

Step name: Database lookup

Connection: conn_dw_destination

Lookup schema: dw_ozaenterprise

Lookup table: dimdate

Enable cache? ☐

Cache size in rows (0=cache everything): 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 ☐

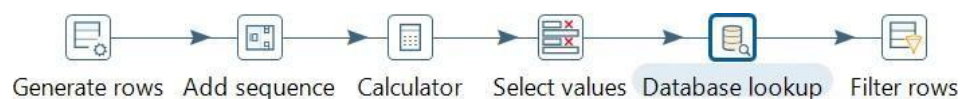
Fail on multiple results? ☐

Order by

Help OK Cancel Get Fields Get lookup fields

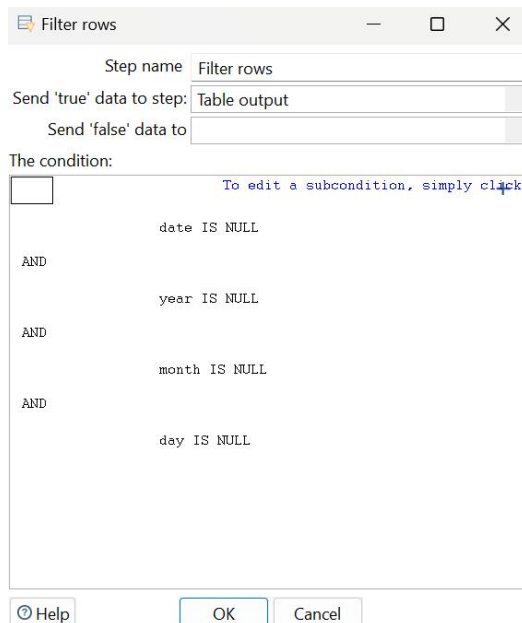
Gambar konfigurasi database lookup

1. Hubungkan output dari **database lookup** dengan **filter rows**



2. Konfigurasi pada **filter rows** adalah dengan melakukan konfigurasi **output true data** pada **table output**. Pada bagian ini data yang tidak memiliki kesamaan pada tahapan sebelumnya akan dicek dimana jika **fields Stream** tidak memiliki kesamaan dengan

field dimDate, maka **field dimDate** tersebut akan bernilai **null**. Pada pernyataan kondisi tuliskan (**date is null and year is null and month is null and day is null**)



Gambar konfigurasi filter rows

1. Hubungkan output dari **filter rows** menuju **table output**.



2. Konfigurasi pada **table output** adalah memberikan koneksi pada **conn_dw_destination** dengan **schema dw_legendvehicle** dan table **dimdate**.
3. Aktifkan **specify database fields**.
4. Pada tab **Database fields**, mapping data input **streamDate**, **streamYear**, **streamMonth** dan **streamDay** dengan fields yang ada pada **dimDate**. Pada tahapan ini akan dilakukan insert data menuju tabel **dimDate**.

Table output

Step name: **Table output**

Connection: **conn_dw_destination** [Edit...] [New...] [Wizard...]

Target schema: **dw_ozaienterprise** [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]

Execution Results


























































Logging [X] Execution History [X] Step Metrics [X] Performance Graph [X] Metrics [X] Preview data [X]

First rows [X] Last rows [X] Off [X]

#	streamDate	streamYear	streamMonth	streamDay	date	year	month	day
7	2003/01/07 00:00:00.000	2003	1	7	<null>	<null>	<null>	<null>
8	2003/01/08 00:00:00.000	2003	1	8	<null>	<null>	<null>	<null>
9	2003/01/09 00:00:00.000	2003	1	9	<null>	<null>	<null>	<null>
1.	2003/01/10 00:00:00.000	2003	1	10	<null>	<null>	<null>	<null>
1.	2003/01/11 00:00:00.000	2003	1	11	<null>	<null>	<null>	<null>
1.	2003/01/12 00:00:00.000	2003	1	12	<null>	<null>	<null>	<null>
1.	2003/01/13 00:00:00.000	2003	1	13	<null>	<null>	<null>	<null>
1.	2003/01/14 00:00:00.000	2003	1	14	<null>	<null>	<null>	<null>
1.	2003/01/15 00:00:00.000	2003	1	15	<null>	<null>	<null>	<null>

Gambar Konfigurasi table output

- cek isi table dimdate pada database. Jika sukses maka pada table dimdate akan terisi 1825 data.

<div><div><div></div><div></div><div></div></div></div>				id_dimDate	date	year	month	day
<input type="checkbox"/>	 Edit	 Copy	 Delete	1	2003-01-01	2003	1	1
<input type="checkbox"/>	 Edit	 Copy	 Delete	2	2003-01-02	2003	1	2
<input type="checkbox"/>	 Edit	 Copy	 Delete	3	2003-01-03	2003	1	3
<input type="checkbox"/>	 Edit	 Copy	 Delete	4	2003-01-04	2003	1	4
<input type="checkbox"/>	 Edit	 Copy	 Delete	5	2003-01-05	2003	1	5
<input type="checkbox"/>	 Edit	 Copy	 Delete	6	2003-01-06	2003	1	6
<input type="checkbox"/>	 Edit	 Copy	 Delete	7	2003-01-07	2003	1	7
<input type="checkbox"/>	 Edit	 Copy	 Delete	8	2003-01-08	2003	1	8
<input type="checkbox"/>	 Edit	 Copy	 Delete	9	2003-01-09	2003	1	9
<input type="checkbox"/>	 Edit	 Copy	 Delete	10	2003-01-10	2003	1	10
<input type="checkbox"/>	 Edit	 Copy	 Delete	11	2003-01-11	2003	1	11
<input type="checkbox"/>	 Edit	 Copy	 Delete	12	2003-01-12	2003	1	12
<input type="checkbox"/>	 Edit	 Copy	 Delete	13	2003-01-13	2003	1	13
<input type="checkbox"/>	 Edit	 Copy	 Delete	14	2003-01-14	2003	1	14
<input type="checkbox"/>	 Edit	 Copy	 Delete	15	2003-01-15	2003	1	15
<input type="checkbox"/>	 Edit	 Copy	 Delete	16	2003-01-16	2003	1	16
<input type="checkbox"/>	 Edit	 Copy	 Delete	17	2003-01-17	2003	1	17
<input type="checkbox"/>	 Edit	 Copy	 Delete	18	2003-01-18	2003	1	18
<div>Console</div> <input type="checkbox"/>	 Edit	 Copy	 Delete	19	2003-01-19	2003	1	19

Gambar isi tabel dimDate

TUGAS 1

1. Buka preview tab pada execution result area di setiap proses object. amati input dan output data yang ada. bandingkan di setiap prosesnya. jelaskan perbedaan di setiap prosesnya.

Proses Objek	SS Data Input	SS Data Output	Keterangan
Generate rows	-		Menghasilkan kolom CurrentDate.
Add sequences			Kolom baru yang ditambahkan adalah incrementDay dengan nilai mulai dari 0 dan bertambah 1

			setiap barisnya.																																																																																																																																																																		
Calculator	<div><div>Execution Results</div><div><div>Logging</div><div>Execution History</div><div>Step Metrics</div><div>Performance Graph</div><div>Metrics</div><div>Preview data</div></div><div><div>First rows</div><div>Last rows</div><div>Off</div></div><table><thead><tr><th>#</th><th>CurrentDate</th><th>incrementDay</th></tr></thead><tbody><tr><td>1</td><td>01-01-2003</td><td>0</td></tr><tr><td>2</td><td>01-01-2003</td><td>1</td></tr><tr><td>3</td><td>01-01-2003</td><td>2</td></tr><tr><td>4</td><td>01-01-2003</td><td>3</td></tr><tr><td>5</td><td>01-01-2003</td><td>4</td></tr><tr><td>6</td><td>01-01-2003</td><td>5</td></tr><tr><td>7</td><td>01-01-2003</td><td>6</td></tr><tr><td>8</td><td>01-01-2003</td><td>7</td></tr></tbody></table></div>	#	CurrentDate	incrementDay	1	01-01-2003	0	2	01-01-2003	1	3	01-01-2003	2	4	01-01-2003	3	5	01-01-2003	4	6	01-01-2003	5	7	01-01-2003	6	8	01-01-2003	7	<div><div>Execution Results</div><div><div>Logging</div><div>Execution History</div><div>Step Metrics</div><div>Performance Graph</div><div>Metrics</div><div>Preview data</div></div><div><div>First rows</div><div>Last rows</div><div>Off</div></div><table><thead><tr><th>#</th><th>CurrentDate</th><th>incrementDay</th><th>streamDate</th><th>streamYear</th><th>streamMonth</th><th>streamDay</th></tr></thead><tbody><tr><td>1</td><td>01-01-2003</td><td>0</td><td>2003/01/01 00:00:00.000</td><td>2003</td><td>1</td><td>1</td></tr><tr><td>2</td><td>01-01-2003</td><td>1</td><td>2003/01/02 00:00:00.000</td><td>2003</td><td>1</td><td>2</td></tr><tr><td>3</td><td>01-01-2003</td><td>2</td><td>2003/01/03 00:00:00.000</td><td>2003</td><td>1</td><td>3</td></tr><tr><td>4</td><td>01-01-2003</td><td>3</td><td>2003/01/04 00:00:00.000</td><td>2003</td><td>1</td><td>4</td></tr><tr><td>5</td><td>01-01-2003</td><td>4</td><td>2003/01/05 00:00:00.000</td><td>2003</td><td>1</td><td>5</td></tr><tr><td>6</td><td>01-01-2003</td><td>5</td><td>2003/01/06 00:00:00.000</td><td>2003</td><td>1</td><td>6</td></tr><tr><td>7</td><td>01-01-2003</td><td>6</td><td>2003/01/07 00:00:00.000</td><td>2003</td><td>1</td><td>7</td></tr><tr><td>8</td><td>01-01-2003</td><td>7</td><td>2003/01/08 00:00:00.000</td><td>2003</td><td>1</td><td>8</td></tr></tbody></table></div>	#	CurrentDate	incrementDay	streamDate	streamYear	streamMonth	streamDay	1	01-01-2003	0	2003/01/01 00:00:00.000	2003	1	1	2	01-01-2003	1	2003/01/02 00:00:00.000	2003	1	2	3	01-01-2003	2	2003/01/03 00:00:00.000	2003	1	3	4	01-01-2003	3	2003/01/04 00:00:00.000	2003	1	4	5	01-01-2003	4	2003/01/05 00:00:00.000	2003	1	5	6	01-01-2003	5	2003/01/06 00:00:00.000	2003	1	6	7	01-01-2003	6	2003/01/07 00:00:00.000	2003	1	7	8	01-01-2003	7	2003/01/08 00:00:00.000	2003	1	8	incrementDay digunakan untuk menghitung streamDate dengan cara menambahkan hari ke tanggal awal (CurrentDate). Kemudian, streamDate dipecah menjadi beberapa kolom: streamYear, streamMonth, dan streamDay.																																																																								
#	CurrentDate	incrementDay																																																																																																																																																																			
1	01-01-2003	0																																																																																																																																																																			
2	01-01-2003	1																																																																																																																																																																			
3	01-01-2003	2																																																																																																																																																																			
4	01-01-2003	3																																																																																																																																																																			
5	01-01-2003	4																																																																																																																																																																			
6	01-01-2003	5																																																																																																																																																																			
7	01-01-2003	6																																																																																																																																																																			
8	01-01-2003	7																																																																																																																																																																			
#	CurrentDate	incrementDay	streamDate	streamYear	streamMonth	streamDay																																																																																																																																																															
1	01-01-2003	0	2003/01/01 00:00:00.000	2003	1	1																																																																																																																																																															
2	01-01-2003	1	2003/01/02 00:00:00.000	2003	1	2																																																																																																																																																															
3	01-01-2003	2	2003/01/03 00:00:00.000	2003	1	3																																																																																																																																																															
4	01-01-2003	3	2003/01/04 00:00:00.000	2003	1	4																																																																																																																																																															
5	01-01-2003	4	2003/01/05 00:00:00.000	2003	1	5																																																																																																																																																															
6	01-01-2003	5	2003/01/06 00:00:00.000	2003	1	6																																																																																																																																																															
7	01-01-2003	6	2003/01/07 00:00:00.000	2003	1	7																																																																																																																																																															
8	01-01-2003	7	2003/01/08 00:00:00.000	2003	1	8																																																																																																																																																															
Select values	<div><div>Execution Results</div><div><div>Logging</div><div>Execution History</div><div>Step Metrics</div><div>Performance Graph</div><div>Metrics</div><div>Preview data</div></div><div><div>First rows</div><div>Last rows</div><div>Off</div></div><table><thead><tr><th>#</th><th>CurrentDate</th><th>incrementDay</th><th>streamDate</th><th>streamYear</th><th>streamMonth</th><th>streamDay</th></tr></thead><tbody><tr><td>1</td><td>01-01-2003</td><td>0</td><td>2003/01/01 00:00:00.000</td><td>2003</td><td>1</td><td>1</td></tr><tr><td>2</td><td>01-01-2003</td><td>1</td><td>2003/01/02 00:00:00.000</td><td>2003</td><td>1</td><td>2</td></tr><tr><td>3</td><td>01-01-2003</td><td>2</td><td>2003/01/03 00:00:00.000</td><td>2003</td><td>1</td><td>3</td></tr><tr><td>4</td><td>01-01-2003</td><td>3</td><td>2003/01/04 00:00:00.000</td><td>2003</td><td>1</td><td>4</td></tr><tr><td>5</td><td>01-01-2003</td><td>4</td><td>2003/01/05 00:00:00.000</td><td>2003</td><td>1</td><td>5</td></tr><tr><td>6</td><td>01-01-2003</td><td>5</td><td>2003/01/06 00:00:00.000</td><td>2003</td><td>1</td><td>6</td></tr><tr><td>7</td><td>01-01-2003</td><td>6</td><td>2003/01/07 00:00:00.000</td><td>2003</td><td>1</td><td>7</td></tr><tr><td>8</td><td>01-01-2003</td><td>7</td><td>2003/01/08 00:00:00.000</td><td>2003</td><td>1</td><td>8</td></tr></tbody></table></div>	#	CurrentDate	incrementDay	streamDate	streamYear	streamMonth	streamDay	1	01-01-2003	0	2003/01/01 00:00:00.000	2003	1	1	2	01-01-2003	1	2003/01/02 00:00:00.000	2003	1	2	3	01-01-2003	2	2003/01/03 00:00:00.000	2003	1	3	4	01-01-2003	3	2003/01/04 00:00:00.000	2003	1	4	5	01-01-2003	4	2003/01/05 00:00:00.000	2003	1	5	6	01-01-2003	5	2003/01/06 00:00:00.000	2003	1	6	7	01-01-2003	6	2003/01/07 00:00:00.000	2003	1	7	8	01-01-2003	7	2003/01/08 00:00:00.000	2003	1	8	<div><div>Execution Results</div><div><div>Logging</div><div>Execution History</div><div>Step Metrics</div><div>Performance Graph</div><div>Metrics</div><div>Preview data</div></div><div><div>First rows</div><div>Last rows</div><div>Off</div></div><table><thead><tr><th>#</th><th>streamDate</th><th>streamYear</th><th>streamMonth</th><th>streamDay</th></tr></thead><tbody><tr><td>1</td><td>2003/01/01 00:00:00.000</td><td>2003</td><td>1</td><td>1</td></tr><tr><td>2</td><td>2003/01/02 00:00:00.000</td><td>2003</td><td>1</td><td>2</td></tr><tr><td>3</td><td>2003/01/03 00:00:00.000</td><td>2003</td><td>1</td><td>3</td></tr><tr><td>4</td><td>2003/01/04 00:00:00.000</td><td>2003</td><td>1</td><td>4</td></tr><tr><td>5</td><td>2003/01/05 00:00:00.000</td><td>2003</td><td>1</td><td>5</td></tr><tr><td>6</td><td>2003/01/06 00:00:00.000</td><td>2003</td><td>1</td><td>6</td></tr><tr><td>7</td><td>2003/01/07 00:00:00.000</td><td>2003</td><td>1</td><td>7</td></tr><tr><td>8</td><td>2003/01/08 00:00:00.000</td><td>2003</td><td>1</td><td>8</td></tr></tbody></table></div>	#	streamDate	streamYear	streamMonth	streamDay	1	2003/01/01 00:00:00.000	2003	1	1	2	2003/01/02 00:00:00.000	2003	1	2	3	2003/01/03 00:00:00.000	2003	1	3	4	2003/01/04 00:00:00.000	2003	1	4	5	2003/01/05 00:00:00.000	2003	1	5	6	2003/01/06 00:00:00.000	2003	1	6	7	2003/01/07 00:00:00.000	2003	1	7	8	2003/01/08 00:00:00.000	2003	1	8	kolom yang dipilih adalah streamDate, streamYear, streamMonth, dan streamDay. Kolom lainnya diabaikan agar fokus pada data yang dibutuhkan saja.																																																						
#	CurrentDate	incrementDay	streamDate	streamYear	streamMonth	streamDay																																																																																																																																																															
1	01-01-2003	0	2003/01/01 00:00:00.000	2003	1	1																																																																																																																																																															
2	01-01-2003	1	2003/01/02 00:00:00.000	2003	1	2																																																																																																																																																															
3	01-01-2003	2	2003/01/03 00:00:00.000	2003	1	3																																																																																																																																																															
4	01-01-2003	3	2003/01/04 00:00:00.000	2003	1	4																																																																																																																																																															
5	01-01-2003	4	2003/01/05 00:00:00.000	2003	1	5																																																																																																																																																															
6	01-01-2003	5	2003/01/06 00:00:00.000	2003	1	6																																																																																																																																																															
7	01-01-2003	6	2003/01/07 00:00:00.000	2003	1	7																																																																																																																																																															
8	01-01-2003	7	2003/01/08 00:00:00.000	2003	1	8																																																																																																																																																															
#	streamDate	streamYear	streamMonth	streamDay																																																																																																																																																																	
1	2003/01/01 00:00:00.000	2003	1	1																																																																																																																																																																	
2	2003/01/02 00:00:00.000	2003	1	2																																																																																																																																																																	
3	2003/01/03 00:00:00.000	2003	1	3																																																																																																																																																																	
4	2003/01/04 00:00:00.000	2003	1	4																																																																																																																																																																	
5	2003/01/05 00:00:00.000	2003	1	5																																																																																																																																																																	
6	2003/01/06 00:00:00.000	2003	1	6																																																																																																																																																																	
7	2003/01/07 00:00:00.000	2003	1	7																																																																																																																																																																	
8	2003/01/08 00:00:00.000	2003	1	8																																																																																																																																																																	
Database lookup	<div><div>Execution Results</div><div><div>Logging</div><div>Execution History</div><div>Step Metrics</div><div>Performance Graph</div><div>Metrics</div><div>Preview data</div></div><div><div>First rows</div><div>Last rows</div><div>Off</div></div><table><thead><tr><th>#</th><th>streamDate</th><th>streamYear</th><th>streamMonth</th><th>streamDay</th></tr></thead><tbody><tr><td>1</td><td>2003/01/01 00:00:00.000</td><td>2003</td><td>1</td><td>1</td></tr><tr><td>2</td><td>2003/01/02 00:00:00.000</td><td>2003</td><td>1</td><td>2</td></tr><tr><td>3</td><td>2003/01/03 00:00:00.000</td><td>2003</td><td>1</td><td>3</td></tr><tr><td>4</td><td>2003/01/04 00:00:00.000</td><td>2003</td><td>1</td><td>4</td></tr><tr><td>5</td><td>2003/01/05 00:00:00.000</td><td>2003</td><td>1</td><td>5</td></tr><tr><td>6</td><td>2003/01/06 00:00:00.000</td><td>2003</td><td>1</td><td>6</td></tr><tr><td>7</td><td>2003/01/07 00:00:00.000</td><td>2003</td><td>1</td><td>7</td></tr><tr><td>8</td><td>2003/01/08 00:00:00.000</td><td>2003</td><td>1</td><td>8</td></tr></tbody></table></div>	#	streamDate	streamYear	streamMonth	streamDay	1	2003/01/01 00:00:00.000	2003	1	1	2	2003/01/02 00:00:00.000	2003	1	2	3	2003/01/03 00:00:00.000	2003	1	3	4	2003/01/04 00:00:00.000	2003	1	4	5	2003/01/05 00:00:00.000	2003	1	5	6	2003/01/06 00:00:00.000	2003	1	6	7	2003/01/07 00:00:00.000	2003	1	7	8	2003/01/08 00:00:00.000	2003	1	8	<div><div>Execution Results</div><div><div>Logging</div><div>Execution History</div><div>Step Metrics</div><div>Performance Graph</div><div>Metrics</div><div>Preview data</div></div><div><div>First rows</div><div>Last rows</div><div>Off</div></div><table><thead><tr><th>#</th><th>streamDate</th><th>streamYear</th><th>streamMonth</th><th>streamDay</th><th>date</th><th>year</th><th>month</th><th>day</th></tr></thead><tbody><tr><td>1</td><td>2003/01/01 00:00:00.000</td><td>2003</td><td>1</td><td>1</td><td>1</td><td>2003</td><td>1</td><td>1</td></tr><tr><td>2</td><td>2003/01/02 00:00:00.000</td><td>2003</td><td>1</td><td>2</td><td>2</td><td>2003</td><td>1</td><td>2</td></tr><tr><td>3</td><td>2003/01/03 00:00:00.000</td><td>2003</td><td>1</td><td>3</td><td>3</td><td>2003</td><td>1</td><td>3</td></tr><tr><td>4</td><td>2003/01/04 00:00:00.000</td><td>2003</td><td>1</td><td>4</td><td>4</td><td>2003</td><td>1</td><td>4</td></tr><tr><td>5</td><td>2003/01/05 00:00:00.000</td><td>2003</td><td>1</td><td>5</td><td>5</td><td>2003</td><td>1</td><td>5</td></tr><tr><td>6</td><td>2003/01/06 00:00:00.000</td><td>2003</td><td>1</td><td>6</td><td>6</td><td>2003</td><td>1</td><td>6</td></tr><tr><td>7</td><td>2003/01/07 00:00:00.000</td><td>2003</td><td>1</td><td>7</td><td>7</td><td>2003</td><td>1</td><td>7</td></tr><tr><td>8</td><td>2003/01/08 00:00:00.000</td><td>2003</td><td>1</td><td>8</td><td>8</td><td>2003</td><td>1</td><td>8</td></tr></tbody></table></div>	#	streamDate	streamYear	streamMonth	streamDay	date	year	month	day	1	2003/01/01 00:00:00.000	2003	1	1	1	2003	1	1	2	2003/01/02 00:00:00.000	2003	1	2	2	2003	1	2	3	2003/01/03 00:00:00.000	2003	1	3	3	2003	1	3	4	2003/01/04 00:00:00.000	2003	1	4	4	2003	1	4	5	2003/01/05 00:00:00.000	2003	1	5	5	2003	1	5	6	2003/01/06 00:00:00.000	2003	1	6	6	2003	1	6	7	2003/01/07 00:00:00.000	2003	1	7	7	2003	1	7	8	2003/01/08 00:00:00.000	2003	1	8	8	2003	1	8	terlihat kolom tambahan seperti date, year, month, dan day yang dicoba untuk diambil.																																				
#	streamDate	streamYear	streamMonth	streamDay																																																																																																																																																																	
1	2003/01/01 00:00:00.000	2003	1	1																																																																																																																																																																	
2	2003/01/02 00:00:00.000	2003	1	2																																																																																																																																																																	
3	2003/01/03 00:00:00.000	2003	1	3																																																																																																																																																																	
4	2003/01/04 00:00:00.000	2003	1	4																																																																																																																																																																	
5	2003/01/05 00:00:00.000	2003	1	5																																																																																																																																																																	
6	2003/01/06 00:00:00.000	2003	1	6																																																																																																																																																																	
7	2003/01/07 00:00:00.000	2003	1	7																																																																																																																																																																	
8	2003/01/08 00:00:00.000	2003	1	8																																																																																																																																																																	
#	streamDate	streamYear	streamMonth	streamDay	date	year	month	day																																																																																																																																																													
1	2003/01/01 00:00:00.000	2003	1	1	1	2003	1	1																																																																																																																																																													
2	2003/01/02 00:00:00.000	2003	1	2	2	2003	1	2																																																																																																																																																													
3	2003/01/03 00:00:00.000	2003	1	3	3	2003	1	3																																																																																																																																																													
4	2003/01/04 00:00:00.000	2003	1	4	4	2003	1	4																																																																																																																																																													
5	2003/01/05 00:00:00.000	2003	1	5	5	2003	1	5																																																																																																																																																													
6	2003/01/06 00:00:00.000	2003	1	6	6	2003	1	6																																																																																																																																																													
7	2003/01/07 00:00:00.000	2003	1	7	7	2003	1	7																																																																																																																																																													
8	2003/01/08 00:00:00.000	2003	1	8	8	2003	1	8																																																																																																																																																													
Filter rows	<div><div>Execution Results</div><div><div>Logging</div><div>Execution History</div><div>Step Metrics</div><div>Performance Graph</div><div>Metrics</div><div>Preview data</div></div><div><div>First rows</div><div>Last rows</div><div>Off</div></div><table><thead><tr><th>#</th><th>streamDate</th><th>streamYear</th><th>streamMonth</th><th>streamDay</th><th>date</th><th>year</th><th>month</th><th>day</th></tr></thead><tbody><tr><td>1</td><td>2003/01/01 00:00:00.000</td><td>2003</td><td>1</td><td>1</td><td>1</td><td>2003</td><td>1</td><td>1</td></tr><tr><td>2</td><td>2003/01/02 00:00:00.000</td><td>2003</td><td>1</td><td>2</td><td>2</td><td>2003</td><td>1</td><td>2</td></tr><tr><td>3</td><td>2003/01/03 00:00:00.000</td><td>2003</td><td>1</td><td>3</td><td>3</td><td>2003</td><td>1</td><td>3</td></tr><tr><td>4</td><td>2003/01/04 00:00:00.000</td><td>2003</td><td>1</td><td>4</td><td>4</td><td>2003</td><td>1</td><td>4</td></tr><tr><td>5</td><td>2003/01/05 00:00:00.000</td><td>2003</td><td>1</td><td>5</td><td>5</td><td>2003</td><td>1</td><td>5</td></tr><tr><td>6</td><td>2003/01/06 00:00:00.000</td><td>2003</td><td>1</td><td>6</td><td>6</td><td>2003</td><td>1</td><td>6</td></tr><tr><td>7</td><td>2003/01/07 00:00:00.000</td><td>2003</td><td>1</td><td>7</td><td>7</td><td>2003</td><td>1</td><td>7</td></tr><tr><td>8</td><td>2003/01/08 00:00:00.000</td><td>2003</td><td>1</td><td>8</td><td>8</td><td>2003</td><td>1</td><td>8</td></tr></tbody></table></div>	#	streamDate	streamYear	streamMonth	streamDay	date	year	month	day	1	2003/01/01 00:00:00.000	2003	1	1	1	2003	1	1	2	2003/01/02 00:00:00.000	2003	1	2	2	2003	1	2	3	2003/01/03 00:00:00.000	2003	1	3	3	2003	1	3	4	2003/01/04 00:00:00.000	2003	1	4	4	2003	1	4	5	2003/01/05 00:00:00.000	2003	1	5	5	2003	1	5	6	2003/01/06 00:00:00.000	2003	1	6	6	2003	1	6	7	2003/01/07 00:00:00.000	2003	1	7	7	2003	1	7	8	2003/01/08 00:00:00.000	2003	1	8	8	2003	1	8	<div><div>Execution Results</div><div><div>Logging</div><div>Execution History</div><div>Step Metrics</div><div>Performance Graph</div><div>Metrics</div><div>Preview data</div></div><div><div>First rows</div><div>Last rows</div><div>Off</div></div><table><thead><tr><th>#</th><th>streamDate</th><th>streamYear</th><th>streamMonth</th><th>streamDay</th><th>date</th><th>year</th><th>month</th><th>day</th></tr></thead><tbody><tr><td>1</td><td>2003/01/01 00:00:00.000</td><td>2003</td><td>1</td><td>1</td><td>1</td><td>2003</td><td>1</td><td>1</td></tr><tr><td>2</td><td>2003/01/02 00:00:00.000</td><td>2003</td><td>1</td><td>2</td><td>2</td><td>2003</td><td>1</td><td>2</td></tr><tr><td>3</td><td>2003/01/03 00:00:00.000</td><td>2003</td><td>1</td><td>3</td><td>3</td><td>2003</td><td>1</td><td>3</td></tr><tr><td>4</td><td>2003/01/04 00:00:00.000</td><td>2003</td><td>1</td><td>4</td><td>4</td><td>2003</td><td>1</td><td>4</td></tr><tr><td>5</td><td>2003/01/05 00:00:00.000</td><td>2003</td><td>1</td><td>5</td><td>5</td><td>2003</td><td>1</td><td>5</td></tr><tr><td>6</td><td>2003/01/06 00:00:00.000</td><td>2003</td><td>1</td><td>6</td><td>6</td><td>2003</td><td>1</td><td>6</td></tr><tr><td>7</td><td>2003/01/07 00:00:00.000</td><td>2003</td><td>1</td><td>7</td><td>7</td><td>2003</td><td>1</td><td>7</td></tr><tr><td>8</td><td>2003/01/08 00:00:00.000</td><td>2003</td><td>1</td><td>8</td><td>8</td><td>2003</td><td>1</td><td>8</td></tr></tbody></table></div>	#	streamDate	streamYear	streamMonth	streamDay	date	year	month	day	1	2003/01/01 00:00:00.000	2003	1	1	1	2003	1	1	2	2003/01/02 00:00:00.000	2003	1	2	2	2003	1	2	3	2003/01/03 00:00:00.000	2003	1	3	3	2003	1	3	4	2003/01/04 00:00:00.000	2003	1	4	4	2003	1	4	5	2003/01/05 00:00:00.000	2003	1	5	5	2003	1	5	6	2003/01/06 00:00:00.000	2003	1	6	6	2003	1	6	7	2003/01/07 00:00:00.000	2003	1	7	7	2003	1	7	8	2003/01/08 00:00:00.000	2003	1	8	8	2003	1	8	menyaring berdasarkan date, year, month dan day yang bernilai null
#	streamDate	streamYear	streamMonth	streamDay	date	year	month	day																																																																																																																																																													
1	2003/01/01 00:00:00.000	2003	1	1	1	2003	1	1																																																																																																																																																													
2	2003/01/02 00:00:00.000	2003	1	2	2	2003	1	2																																																																																																																																																													
3	2003/01/03 00:00:00.000	2003	1	3	3	2003	1	3																																																																																																																																																													
4	2003/01/04 00:00:00.000	2003	1	4	4	2003	1	4																																																																																																																																																													
5	2003/01/05 00:00:00.000	2003	1	5	5	2003	1	5																																																																																																																																																													
6	2003/01/06 00:00:00.000	2003	1	6	6	2003	1	6																																																																																																																																																													
7	2003/01/07 00:00:00.000	2003	1	7	7	2003	1	7																																																																																																																																																													
8	2003/01/08 00:00:00.000	2003	1	8	8	2003	1	8																																																																																																																																																													
#	streamDate	streamYear	streamMonth	streamDay	date	year	month	day																																																																																																																																																													
1	2003/01/01 00:00:00.000	2003	1	1	1	2003	1	1																																																																																																																																																													
2	2003/01/02 00:00:00.000	2003	1	2	2	2003	1	2																																																																																																																																																													
3	2003/01/03 00:00:00.000	2003	1	3	3	2003	1	3																																																																																																																																																													
4	2003/01/04 00:00:00.000	2003	1	4	4	2003	1	4																																																																																																																																																													
5	2003/01/05 00:00:00.000	2003	1	5	5	2003	1	5																																																																																																																																																													
6	2003/01/06 00:00:00.000	2003	1	6	6	2003	1	6																																																																																																																																																													
7	2003/01/07 00:00:00.000	2003	1	7	7	2003	1	7																																																																																																																																																													
8	2003/01/08 00:00:00.000	2003	1	8	8	2003	1	8																																																																																																																																																													

Table output

Execution Results									
Logging Execution History Step Metrics L2 Performance Graph 3 Metrics Preview data									
First rows Last rows Off									
#	streamDate	streamYear	streamMonth	streamDay	date	year	month	day	
1	2003/01/01 00:00:00.000	2003	1	1	null	null	null	null	
2	2003/01/02 00:00:00.000	2003	1	2	null	null	null	null	
3	2003/01/03 00:00:00.000	2003	1	3	null	null	null	null	
4	2003/01/04 00:00:00.000	2003	1	4	null	null	null	null	
5	2003/01/05 00:00:00.000	2003	1	5	null	null	null	null	
6	2003/01/06 00:00:00.000	2003	1	6	null	null	null	null	
7	2003/01/07 00:00:00.000	2003	1	7	null	null	null	null	
8	2003/01/08 00:00:00.000	2003	1	8	null	null	null	null	

Execution Results									
Logging Execution History Step Metrics L2 Performance Graph 3 Metrics Preview data									
First rows Last rows Off									
#	streamDate	streamYear	streamMonth	streamDay	date	year	month	day	
1	2003/01/01 00:00:00.000	2003	1	1	null	null	null	null	
2	2003/01/02 00:00:00.000	2003	1	2	null	null	null	null	
3	2003/01/03 00:00:00.000	2003	1	3	null	null	null	null	
4	2003/01/04 00:00:00.000	2003	1	4	null	null	null	null	
5	2003/01/05 00:00:00.000	2003	1	5	null	null	null	null	
6	2003/01/06 00:00:00.000	2003	1	6	null	null	null	null	
7	2003/01/07 00:00:00.000	2003	1	7	null	null	null	null	
8	2003/01/08 00:00:00.000	2003	1	8	null	null	null	null	

Kolom yang disimpan di antaranya: streamDate, streamYear, streamMonth, streamDay, dan kemungkinan kolom hasil lookup seperti date,year, month, day