Laporan Praktikum
Jobsheet 3: Database Analytical

Mata Kuliah: Data Warehouse

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POLITEKNIK NEGERI MALANG

Laporan Proses Transformasi Data di Pentaho

A. Dimensi Waktu

Step Metrikmya

#	Stepname	Copynr	Read	Written	Input	Output	Updated	Rejected	Errors	Active	Time	Speed (r/s)
3	Calculator	0	1825	1825	0	0	0	0	0	Finished	0.0s	70,192
4	Select values	0	1825	1825	0	0	0	0	0	Finished	0.0s	50,694
5	Database lookup	0	1825	1825	0	0	0	0	0	Finished	0.8s	2,395
6	Filter rows	0	1825	1825	0	0	0	0	0	Finished	0.8s	2,343
7	Table output	0	1825	1825	0	1825	0	0	0	Finished	1.0s	1,911

Proses Objectnya

Proses Object	Field Input	Field Output	Keterangan Perubahan
Generate Rows	(kosong)	Step fields and their origin — Step name: Generate Rows. Fields: (1) CurrentDate, Type Date, Length -, Precision -, Step origin Generate Rows, Storage normal, Mask dd-MM-yyyy	Membuat data awal tanggal 01-01-2003
Add Sequence	Step name: Add sequence. Fields: (1) CurrentDate, Type Date, Length -, Precision -, Step origin Generate Rows, Storage normal, Mask dd-MM-yyyy	Step name: Add sequence. Fields: (1) CurrentDate, Type Date, Length -, Precision -, Step origin Generate Rows, Storage normal, Mask dd-MM-yyy; (2) incrementDay, Type Integer, Length -, Precision 0, Step origin Add sequence, Storage normal, Mask #;-#	Menambahkan angka berurutan 0-1824 sebagai offset hari

A. (lanjutan)

Calculator

Menghitung tanggal hasil penambahan dan memecah menjadi tahun, bulan, hari

Step name: Calculator (Fields)

#	Fieldname	Type	Length	Precision	Step origin	Storage	Mask
1	CurrentDate	Date	-	-	Generate Rows	normal	dd-MM-yyyy
2	incrementDay	Integer	-	0	Add sequence	normal	#;-#

Step name: Calculator (Fields)

#	Fieldname	Type	Length	Precision	Step origin	Storage	Mask	Decimal	Group	Trim	Comments
1	CurrentDate	Date	-	-	Generate Rows	normal	dd-MM-yyyy			none	
2	incrementDay	Integer	-	0	Add sequence	normal	#;-#			none	
3	streamDate	Date	-	-	Calculator	normal				none	ADD_DAYS
4	streamYear	Integer	-	0	Calculator	normal				none	YEAR_OF_DATE
5	streamMonth	Integer	-	0	Calculator	normal				none	MONTH_OF_DATE
6	streamDay	Integer	-	0	Calculator	normal				none	DAY_OF_MONTH

Select Values

Menghapus field bantu: CurrentDate dan incrementDay

Step name: Select values (Fields)

#	Fieldname	Type	Length	Precision	Step origin	Storage	Mask	Decimal	Group	Trim	Comments
1	CurrentDate	Date	-	-	Generate Rows	normal	dd-MM-yyyy			none	
2	incrementDay	Integer	-	0	Add sequence	normal	#;-#			none	
3	streamDate	Date	-	-	Calculator	normal				none	ADD_DAYS
4	streamYear	Integer	-	0	Calculator	normal				none	YEAR_OF_DATE
5	streamMonth	Integer	-	0	Calculator	normal				none	MONTH_OF_DATE
6	streamDay	Integer	-	0	Calculator	normal				none	DAY_OF_MONTH

Step name: Select values (Fields)

#	Fieldname	Type	Length	Precision	Step origin	Storage	Mask	Decimal	Group	Trim	Comments
1	streamDate	Date	-	-	Calculator	normal				none	ADD_DAYS
2	streamYear	Integer	-	0	Calculator	normal				none	YEAR_OF_DATE
3	streamMonth	Integer	-	0	Calculator	normal				none	MONTH_OF_DATE
4	streamDay	Integer	-	0	Calculator	normal				none	DAY_OF_MONTH

Database Lookup

Mencocokkan dengan data di tabel dimdate

Step name: Database lookup (Fields)

#	Fieldname	Type	Length	Precision	Step origin	Storage	Mask	Decimal	Group	Trim	Comments
1	streamDate	Date	-	-	Calculator	normal				none	ADD_DAYS
2	streamYear	Integer	-	0	Calculator	normal				none	YEAR_OF_DATE
3	streamMonth	Integer	-	0	Calculator	normal				none	MONTH_OF_DATE
4	streamDay	Integer	-	0	Calculator	normal				none	DAY_OF_MONTH

Step name: Database lookup (Fields)

#	Fieldname	Type	Length	Precision	Step origin	Storage	Mask	Decimal	Group	Trim	Comments
1	streamDate	Date	-	-	Calculator	normal				none	ADD_DAYS
2	streamYear	Integer	-	0	Calculator	normal				none	YEAR_OF_DATE
3	streamMonth	Integer	-	0	Calculator	normal				none	MONTH_OF_D
4	streamDay	Integer	-	0	Calculator	normal				none	DAY_OF_MON
5	date	Date	-	-	Database lookup	normal				none	date
6	year	Integer	9	0	Database lookup	normal	#;-#			none	year
7	month	Integer	9	0	Database lookup	normal	#;-#			none	month
8	day	Integer	9	0	Database lookup	normal	#;-#			none	day

Filter Rows

Menyaring data berdasarkan kondisi tertentu (misalnya hanya data tahun tertentu saja).

Step name: Filter rows (Fields)

#	Fieldname	Type	Length	Precision	Step origin	Storage	Mask	Decimal	Group	Trim	Comments
1	streamDate	Date	-	-	Calculator	normal				none	ADD_DAYS
2	streamYear	Integer	-	0	Calculator	normal				none	YEAR_OF_DATE
3	streamMonth	Integer	-	0	Calculator	normal				none	MONTH_OF_DATE
4	streamDay	Integer	-	0	Calculator	normal				none	DAY_OF_MONTH
5	date	Date	-	-	Database lookup	normal				none	date
6	year	Integer	9	0	Database lookup	normal	#;-#			none	year
7	month	Integer	9	0	Database lookup	normal	#;-#			none	month
8	day	Integer	9	0	Database lookup	normal	#;-#			none	day

Step name: Filter rows (Fields)

#	Fieldname	Type	Length	Precision	Step origin	Storage	Mask	Decimal	Group	Trim	Comments
1	streamDate	Date	-	-	Calculator	normal				none	ADD_DAYS
2	streamYear	Integer	-	0	Calculator	normal				none	YEAR_OF_DATE
3	streamMonth	Integer	-	0	Calculator	normal				none	MONTH_OF_DATE
4	streamDay	Integer	-	0	Calculator	normal				none	DAY_OF_DA
5	date	Date	-	-	Database lookup	normal				none	date
6	year	Integer	9	0	Database lookup	normal	#;-#			none	year
7	month	Integer	9	0	Database lookup	normal	#;-#			none	month
8	day	Integer	9	0	Database lookup	normal	#;-#			none	day

Table Output

Menyimpan hasil akhir transformasi ke database tujuan.

Step name: Table output (Fields)

#	Fieldname	Type	Length	Precision	Step origin	Storage	Mask	Decimal	Group	Trim	Comments
1	streamDate	Date	-	-	Calculator	normal				none	ADD_DAYS
2	streamYear	Integer	-	0	Calculator	normal				none	YEAR_OF_DATE
3	streamMonth	Integer	-	0	Calculator	normal				none	MONTH_OF_DATE
4	streamDay	Integer	-	0	Calculator	normal				none	DAY_OF_MONTH
5	date	Date	-	-	Database lookup	normal				none	date
6	year	Integer	9	0	Database lookup	normal	#;-#			none	year
7	month	Integer	9	0	Database lookup	normal	#;-#			none	month
8	day	Integer	9	0	Database lookup	normal	#;-#			none	day

Step name: Table output (Fields)

#	Fieldname	Type	Length	Precision	Step origin	Storage	Mask	Decimal	Group	Trim	Comments
1	streamDate	Date	-	-	Calculator	normal				none	ADD_DAYS
2	streamYear	Integer	-	0	Calculator	normal				none	YEAR_OF_DAT
3	streamMonth	Integer	-	0	Calculator	normal				none	MONTH_OF_D
4	streamDay	Integer	-	0	Calculator	normal				none	DAY_OF_MON
5	date	Date	-	-	Database lookup	normal				none	date
6	year	Integer	9	0	Database lookup	normal	#;-#			none	year
7	month	Integer	9	0	Database lookup	normal	#;-#			none	month
8	day	Integer	9	0	Database lookup	normal	#;-#			none	day

B. Dimensi Pegawai

Execution Results

#	Stepname	Copynr	Read	Written	Input	Output	Updated	Rejected	Errors	Active	Time	Speed (r/s)
1	Table input	0	0	23	23	0	0	0	0	Finished	0.0s	3,286
2	Select values	0	23	23	0	0	0	0	0	Finished	0.0s	958
3	Database lookup	0	23	23	0	0	0	0	0	Finished	0.0s	605
4	Filter rows	0	23	23	0	0	0	0	0	Finished	0.0s	535
5	Table output	0	23	23	0	23	0	0	0	Finished	0.1s	371

- Jika proses itu di ulangi (di run kembali) apakah data akan redudant?
  tidak akan terjadi duplikasi. Karena kita pakai **Database Lookup + Filter Rows** untuk mengecek apakah datar **sudah ada di tabel dimEmployees** apa belum.
- Tambahkan nama anda pada table employee di OLTP. jalankan kembali transformasi ini. Amati hasilnya, apa yang terjadi?

  Muncul
  Dan data tidak terduplikasi

☐	Edit ☷ Copy ⊖ Delete	24	9999	Yusra	Yusuf	Staff	Murphy	Diane	2025-03-13 02:46:04