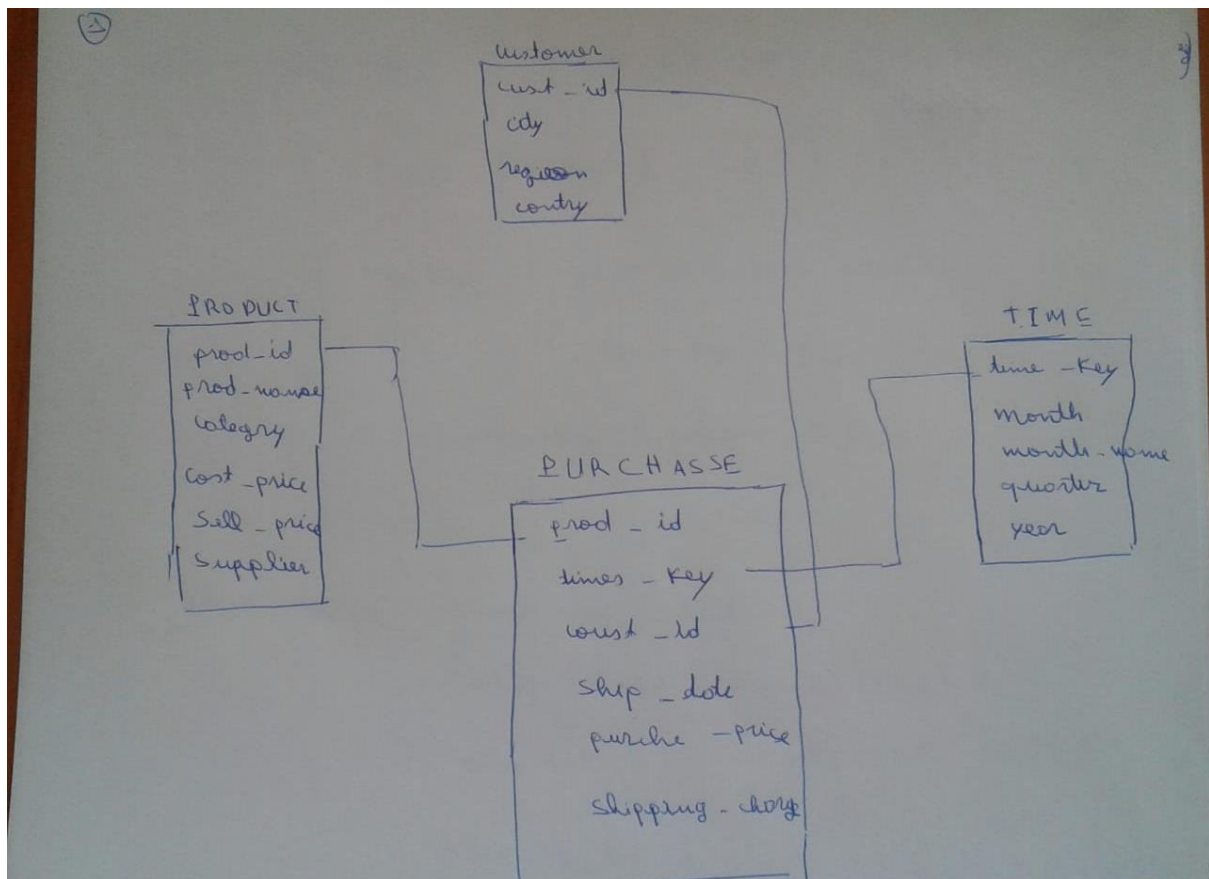


## 1. Exercice 1 : théorique :

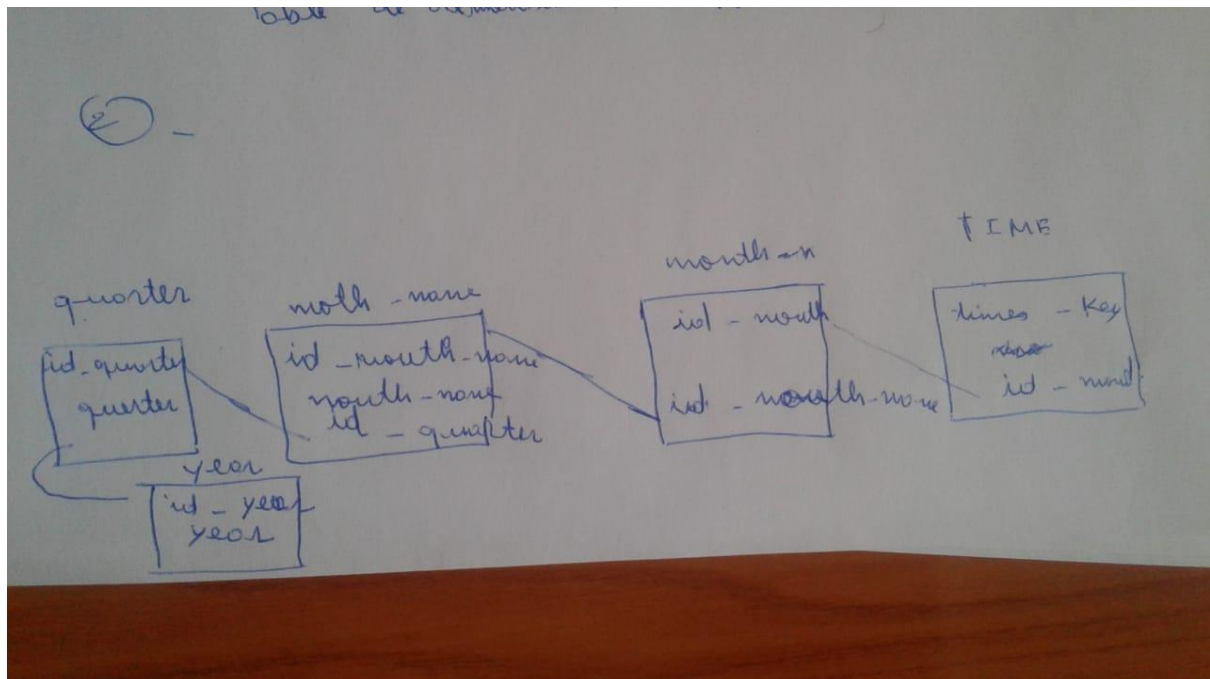
### 1. Q1 :

Table de dimension : Customer, Time, Production.

Table de fait : Purchase



## 2. Q2:



## 3. Q3:

Select P.category, T.year, Avg(pu. shipping\_charge)

Form Product P, Time T, Purchases Pu

Where p.prod\_id=pu.prod\_id and

T.time\_Key= Pu.time\_key

Groupe by p.category, Tyear;

#### 4. Q4:

(9) - ~~pour~~ pour le calcul:

$$\text{rollup}(a, b) = (a, b) \cup (a) \cup ()$$

$$\text{cube}(a, b) = (a, b) \cup (a), (b), ()$$

$$\text{rollup}(a, b, c) = (a, b, c) \cup (a, b) \cup (a), (c)$$

$$\text{cube}(a, b, c) = (a, b, c) \cup (a, b) \cup (a, c) \cup (b, c) \cup (a) \cup (b) \cup (c) \cup ()$$

EX

voté	année	région	valeur
C1	a1	R1	10
C1	a1	R2	10
C1	a2	R2	10

Roll up

Roll up

cat	année	Région	Sum(vente)
C1	a. 1	A1	10
C1	a. 1	A2	20
C1	a. 2	A1	20
C1	a. 1	Null	20
C1	<del>Null</del> 2	Null	10
C1	Null	Null	30
Null	Null	Null	30

coude up

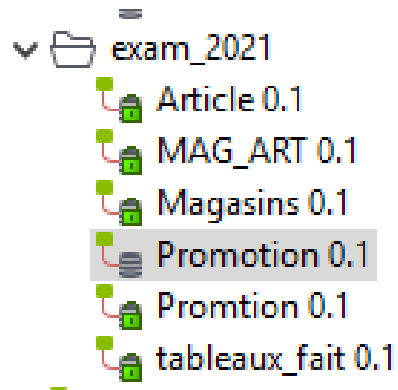
ot	oude	Region	Sm (vente)
C 1	a 1	R 1	10
C 1	a 1	R 2	10
C 1	a 2	R 1	10
<del>C 1</del>	a 1	Null	20
C 1	NULL	R 1	20
C 1	NULL	R 2	10
Null	a 1	R 1	10
Null	a 1	R 2	10
NULL	a 2	R 1	10
C 1	NULL	NULL	30
NULL	a 1	NULL	10
NULL	<del>NULL</del> 2	<del>NULL</del>	10
NULL	NULL	R 1	20
NULL	NULL	R 2	10
NULL	NULL	NULL	30

## 5. Q5:

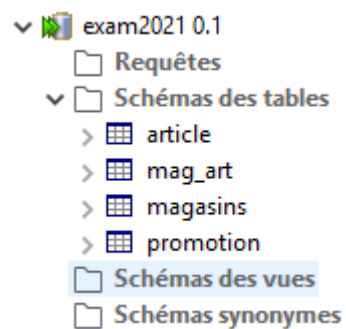
Donne plus de détails surtout pour Group By CUBE.

## 2. Exercice 2 : pratique

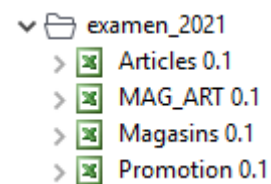
Je construis un 5 Project :



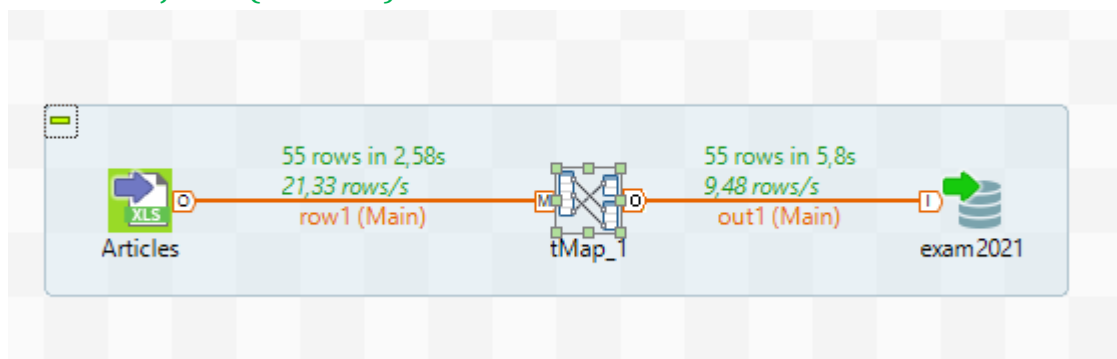
Je construis une Base de Donner:



Après l'importance de de fichier Excel:



## 1. Project 1(Articles) :



**row1**

Column

- Article\_code
- Article\_nom
- Categorie
- Prix
- Famille

**Var**

**out1**

Expression	Column
row1.Article_code	Article_code
row1.Article_nom	Article_nom
StringHandling.UPCASE(row1.Categorie)	Categorie
row1.Prix	Prix
row1.Famille	Famille

row1

Colonne	Clé	Type	✓	N.	Modèle de da...	Length	Precision	Défaut	Comm...
Article_code	<input checked="" type="checkbox"/>	Integer	<input checked="" type="checkbox"/>			6	0		
Article_nom	<input type="checkbox"/>	String	<input checked="" type="checkbox"/>			29	0		
Categorie	<input type="checkbox"/>	String	<input checked="" type="checkbox"/>			30	0		
Prix	<input type="checkbox"/>	Float	<input checked="" type="checkbox"/>				0		

out1

Colonne	Clé	Type	✓	N.	Modèle de dat...	Length	Precision	Défaut	Comm...
Article_code	<input checked="" type="checkbox"/>	Integer	<input checked="" type="checkbox"/>			50	0		
Article_nom	<input type="checkbox"/>	String	<input checked="" type="checkbox"/>			50	0		
Categorie	<input type="checkbox"/>	String	<input checked="" type="checkbox"/>			50	0		
Prix	<input type="checkbox"/>	Float	<input checked="" type="checkbox"/>			50	0		

## Exécution

```

[statistics] connecting to socket on port 3783
[statistics] connected
[statistics] disconnected

Job Article ended at 13:39 05/07/2021. [exit c
  
```

New

database

exam2021

New

article

magasins

mag\_art

promotion

tableau\_fait

exam\_2020

information\_schema

myblog

mysql

performance\_schema

shop

test

tp\_bi

1

Show all > >>

Number of rows: 25

Sort by key: None

+ Options

Article\_code

Article\_nom

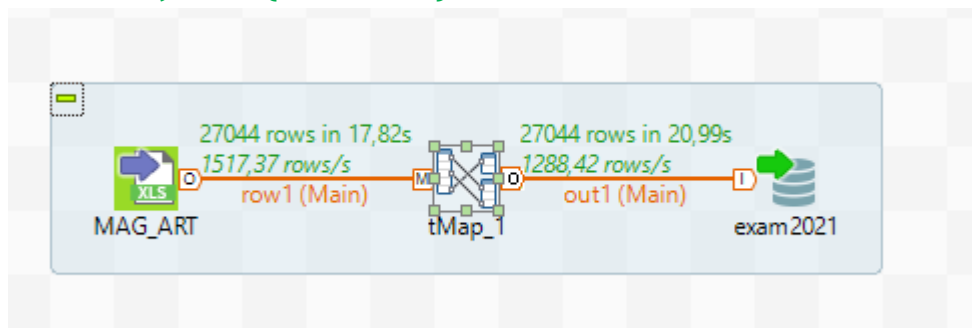
Categorie

Prix

Famille

<input type="checkbox"/>				119427	Parrure plaquée or	BIJOUX	35	Accessoires
<input type="checkbox"/>				120114	Ceinturon cuir	CEINTURES, SACS, PORTE-MONNAIE	70	Accessoires
<input type="checkbox"/>				121764	Ras du cou	BIJOUX	76	Accessoires
<input type="checkbox"/>				122709	Boucles d'oreilles marguerite	BIJOUX	30	Accessoires
<input type="checkbox"/>				129925	Bague fantaisie	BIJOUX	34	Accessoires
<input type="checkbox"/>				137638	Chemise en maille résine	CHEMISES	61	Vêtements de ville
<input type="checkbox"/>				137838	Gilet veste	MANTEAUX, BLOUSONS, IMPER	100	Vêtements de ville
<input type="checkbox"/>				138627	Ceinture croco	CEINTURES, SACS, PORTE-MONNAIE	91	Accessoires
<input type="checkbox"/>				139590	Duffle coat	MANTEAUX, BLOUSONS, IMPER	136	Vêtements de ville
<input type="checkbox"/>				141401	Gants cuir véritable	CHAPEAUX, GANTS, ECHARPES	42	Accessoires
<input type="checkbox"/>				142905	Pantalon flanelle	PANTALONS	59	Vêtements de ville
<input type="checkbox"/>				144940	Jupe droite	ROBES, JUPES	44	Vêtements de ville
<input type="checkbox"/>				144944	T-shirt motif fleurs	T-SHIRTS	22	Sous-vêtements
<input type="checkbox"/>				145404	Broche coquille	BIJOUX	36	Accessoires
<input type="checkbox"/>				146334	Mittaines laine grises	CHAPEAUX, GANTS, ECHARPES	21	Accessoires

## 2. Project 2 (MAG\_ART):



row1	Var	out1
Column		Expression
Id		row1.Id
Article_code		row1.Article_code
Magasin_Code		row1.Magasin_Code
Quantite		row1.Quantite
Datee		row1.Datee
		Column
		Id
		Article_code
		Magasin_Code
		Quantite
		Datee

Exécution



```

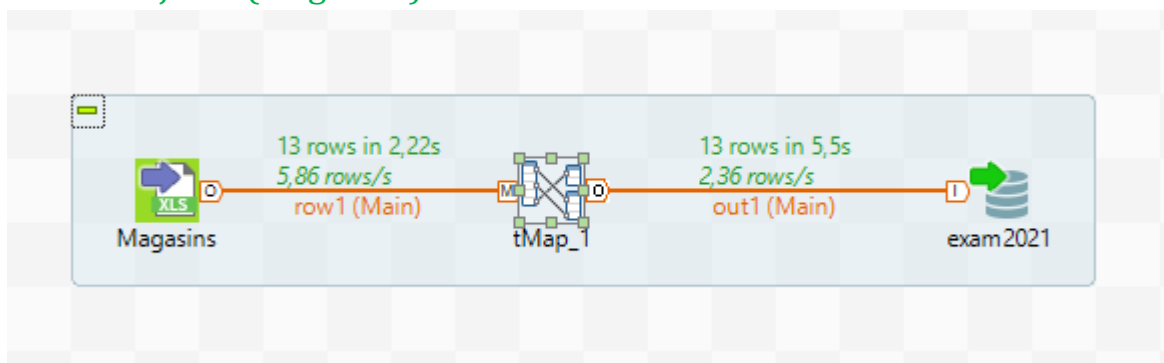
Starting job MAG_ART at 13:42 05/07/2021.
[statistics] connecting to socket on port 3877
[statistics] connected
[statistics] disconnected

Job MAG_ART ended at 13:43 05/07/2021. [exit c

```

	Options		Id	Article_code	Magasin_Code	Quantite	Datee
<input type="checkbox"/>	Edit Copy Delete		115	144940	64	1	Fri Jan 02 00:00:00 WET 2009
<input type="checkbox"/>	Edit Copy Delete		116	144940	110	3	Fri Jan 02 00:00:00 WET 2009
<input type="checkbox"/>	Edit Copy Delete		117	144940	137	3	Fri Jan 02 00:00:00 WET 2009
<input type="checkbox"/>	Edit Copy Delete		118	144940	149	6	Fri Jan 02 00:00:00 WET 2009
<input type="checkbox"/>	Edit Copy Delete		119	144940	185	1	Fri Jan 02 00:00:00 WET 2009
<input type="checkbox"/>	Edit Copy Delete		120	144940	197	2	Fri Jan 02 00:00:00 WET 2009
<input type="checkbox"/>	Edit Copy Delete		121	144940	203	2	Fri Jan 02 00:00:00 WET 2009
<input type="checkbox"/>	Edit Copy Delete		122	144940	261	1	Fri Jan 02 00:00:00 WET 2009
<input type="checkbox"/>	Edit Copy Delete		123	144940	268	2	Fri Jan 02 00:00:00 WET 2009
<input type="checkbox"/>	Edit Copy Delete		124	144940	277	1	Fri Jan 02 00:00:00 WET 2009
<input type="checkbox"/>	Edit Copy Delete		125	144940	3	6	Fri Jan 02 00:00:00 WET 2009
<input type="checkbox"/>	Edit Copy Delete		126	144940	64	2	Fri Jan 02 00:00:00 WET 2009
<input type="checkbox"/>	Edit Copy Delete		127	144940	110	3	Fri Jan 02 00:00:00 WET 2009
<input type="checkbox"/>	Edit Copy Delete		128	144940	137	2	Fri Jan 02 00:00:00 WET 2009
<input type="checkbox"/>	Edit Copy Delete		129	144940	149	5	Fri Jan 02 00:00:00 WET 2009
<input type="checkbox"/>	Edit Copy Delete		130	144940	185	1	Fri Jan 02 00:00:00 WET 2009
<input type="checkbox"/>	Edit Copy Delete		131	144940	197	7	Fri Jan 02 00:00:00 WET 2009

### 3. Project 3(Magasins) :



row1	Var	out1
Column		Expression
Magasin_Code		row1.Magasin_Code
Magasin_Nom		row1.Magasin_Nom
Adresse		row1.Adresse
Manager		row1.Manager
Date_Ouv		row1.Date_Ouv
Ouvert_		row1.Ouvert_
Surface		row1.Surface
CP		row1.CP
Ville		StringHandling.UPCASE( ... row1.Ville )
Region		StringHandling.UPCASE(row1.Region )
Pays		StringHandling.UPCASE(row1.Pays )
Nationalite_Manager		row1.Nationalite_Manager

StringHandling.UPCASE(  
row1.Ville )

StringHandling.UPCASE(row1.Region )

StringHandling.UPCASE(row1.Pays )

## Exécution

```
Starting job Magasins at 13:49 05/07/2021.
[statistics] connecting to socket on port 3431
[statistics] connected
[statistics] disconnected
Job Magasins ended at 13:49 05/07/2021. [exit
```



New

- article
- magasins
- mag\_art
- promotion
- tableau\_fait
- exam\_2020
- information\_schema
- myblog
- mysql
- performance\_schema
- shop
- test
- tp\_bi

`SELECT * FROM promotion`

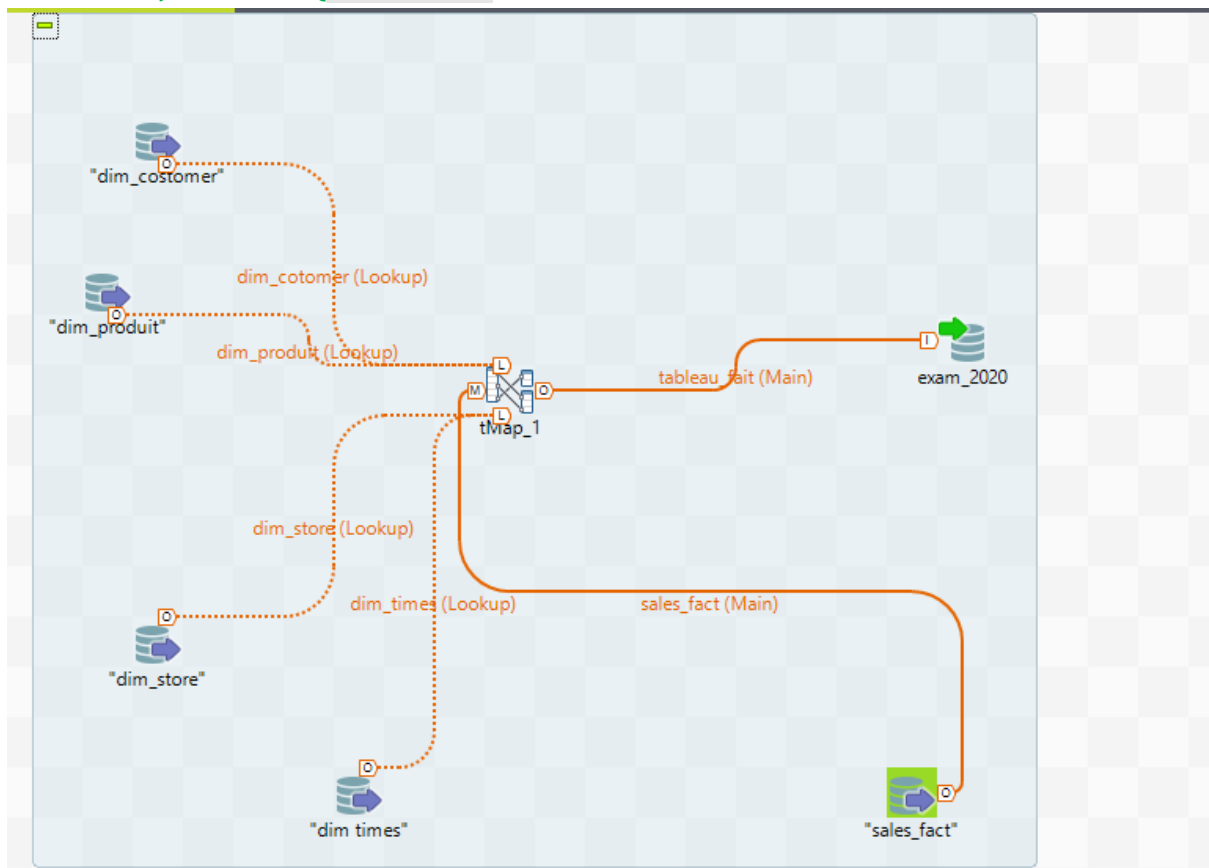
Number of rows: 25

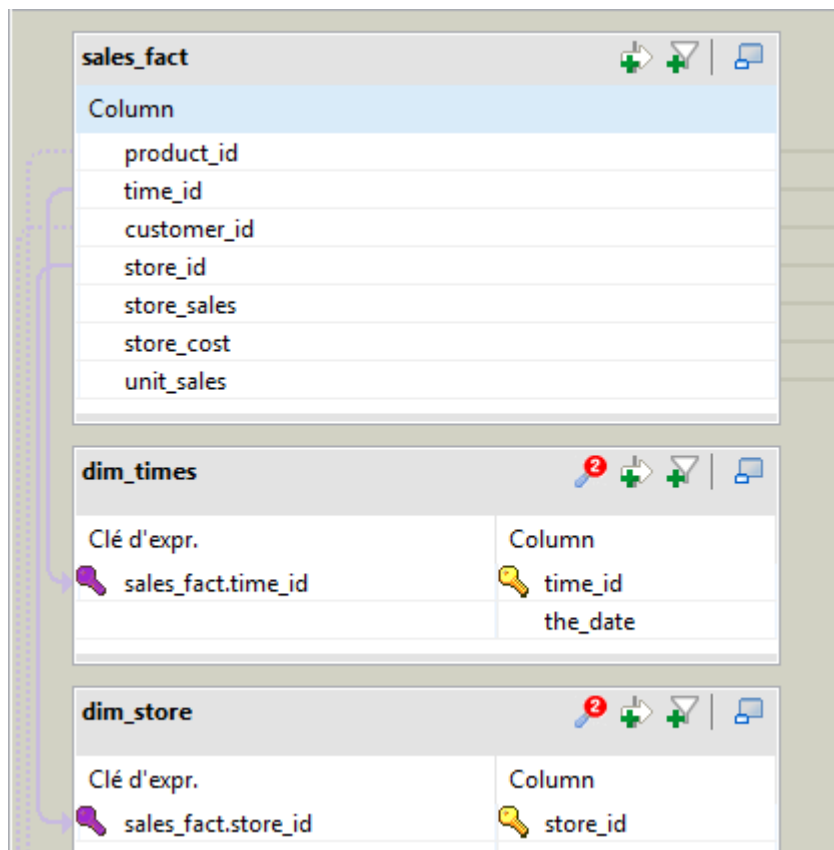
Sort by key: None



+ Options

		id	Article_code	Duree	Promo_Id	Promo_Cout	Datee
<input type="checkbox"/>	Edit Copy Delete	1	145404	3	4	1448,26	Thu Jul 30 00:00:00 WEST 2009
<input type="checkbox"/>	Edit Copy Delete	2	163490	4	2	182,93	Mon Aug 03 00:00:00 WEST 2009
<input type="checkbox"/>	Edit Copy Delete	3	166544	2	4	304,89	Wed Jul 29 00:00:00 WEST 2009
<input type="checkbox"/>	Edit Copy Delete	4	166579	4	5	1448,26	Fri Feb 06 00:00:00 WET 2009
<input type="checkbox"/>	Edit Copy Delete	5	166583	2	3	99,09	Sun Aug 02 00:00:00 WEST 2009
<input type="checkbox"/>	Edit Copy Delete	6	167727	2	5	1829,38	Sun Dec 20 00:00:00 WET 2009
<input type="checkbox"/>	Edit Copy Delete	7	168230	6	6	1981,83	Thu Jul 30 00:00:00 WEST 2009
<input type="checkbox"/>	Edit Copy Delete	8	169254	4	2	1227,21	Mon Aug 03 00:00:00 WEST 2009
<input type="checkbox"/>	Edit Copy Delete	9	169432	2	5	133,39	Mon Aug 03 00:00:00 WEST 2009
<input type="checkbox"/>	Edit Copy Delete	10	169476	5	2	640,28	Sun Nov 15 00:00:00 WET 2009

## 5. Project final (tableau\_fait) :





the_date	
<b>dim_store</b>	
Clé d'expr.	Column
 sales_fact.store_id	 store_id
	store_type
	region_id
	store_name
	store_number
	store_street_address
	store_city
	store_state
	store_postal_code
	store_country
	store_manager
	store_phone
	store_fax
	first_opened_date
	last_remodel_date
	coffee_bar
	video_store

	last_remodel_date
	coffee_bar
	video_store
	salad_bar
	prepared_food
	florist
	sales_city
	sales_state_province
	sales_district
	sales_region
	sales_country
	sales_district_id

#### dim\_produit



Clé d'expr.	Column
	product_class_id
sales_fact.product_id	product_id
	brand_name
	product_name
	SKU
	SRP

	net_weight
	recyclable_package
	low_fat
	units_per_case
	cases_per_pallet
	shelf_width
	shelf_height
	shelf_depth

#### dim\_cotomer



Clé d'expr.	Column
sales_fact.customer_id	customer_id
	account_num
	lname
	fname
	address1
	city
	state_province
	postal_code
	country
	customer_region_id

	state_province
	postal_code
	country
	customer_region_id
	phone1
	phone2
	birthdate
	marital_status
	yearly_income
	gender
	total_children
	num_children_at...
	education
	date_accnt_opened
	member_card
	occupation
	houseowner
	num_cars_owned

Avec :

tableau_fait	
Expression	Column
sales_fact.product_id	product_id
sales_fact.time_id	time_id
sales_fact.customer_id	customer_id
sales_fact.store_id	store_id
sales_fact.store_sales	store_sales
sales_fact.store_cost	store_cost
sales_fact.unit_sales	unit_sales

## Exécution

```
Starting job tableau_fait at 13:59 05/07/2021.
[statistics] connecting to socket on port 3623
[statistics] connected
[statistics] disconnected
Job tableau_fait ended at 14:00 05/07/2021. [exit code = 0]
```

tableau_fait								
Number of rows: 25								
+ Options								
marg_art_id	article_id	promotion_id	margasion_id	Duree	Promo_Cout	Datee	Pris_DHS	chiffre_affaire
73767	145404	1	64	3	1448,26	Thu Jul 30 00:00:00 WEST 2009	360	36
74056	163490	2	197	4	182,93	Mon Aug 03 00:00:00 WEST 2009	410	41
74918	166544	3	261	2	304,89	Wed Jul 29 00:00:00 WEST 2009	140	14
75156	166579	4	351	4	1448,26	Fri Feb 06 00:00:00 WET 2009	320	32
75267	166583	5	261	2	99,09	Sun Aug 02 00:00:00 WEST 2009	290	29
76140	167727	6	268	2	1829,38	Sun Dec 20 00:00:00 WET 2009	5950	595
76273	168230	7	197	6	1981,83	Thu Jul 30 00:00:00 WEST 2009	530	53
76525	169254	8	261	4	1227,21	Mon Aug 03 00:00:00 WEST 2009	490	49
76695	169432	9	197	2	133,39	Mon Aug 03 00:00:00 WEST 2009	4250	425
76702	169476	10	197	5	640,28	Sun Nov 15 00:00:00 WET 2009	1070	107