



# THIẾT KẾ KHO & PHÂN TÍCH DỮ LIỆU BÁN THỨC UỐNG CỦA CÁC CỬA HÀNG TẠI MỸ

Thực hành Thiết kế Kho & Phân tích dữ liệu kinh doanh  
GVHD: Đặng Quốc Viện  
Nhóm 8 - 46K21.2

# THÀNH VIÊN NHÓM 8

- Trần Quốc Hải (leader)
- Dương Thị Kim Cúc
- Nguyễn Thị Thúy Hằng
- Hoàng Thị Ngọc Oanh
- Nguyễn Thị Diễm Quỳnh
- Phạm Thị Vân

# NỘI DUNG

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05 Pivot Table

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# GIẢI THÍCH DỮ LIỆU

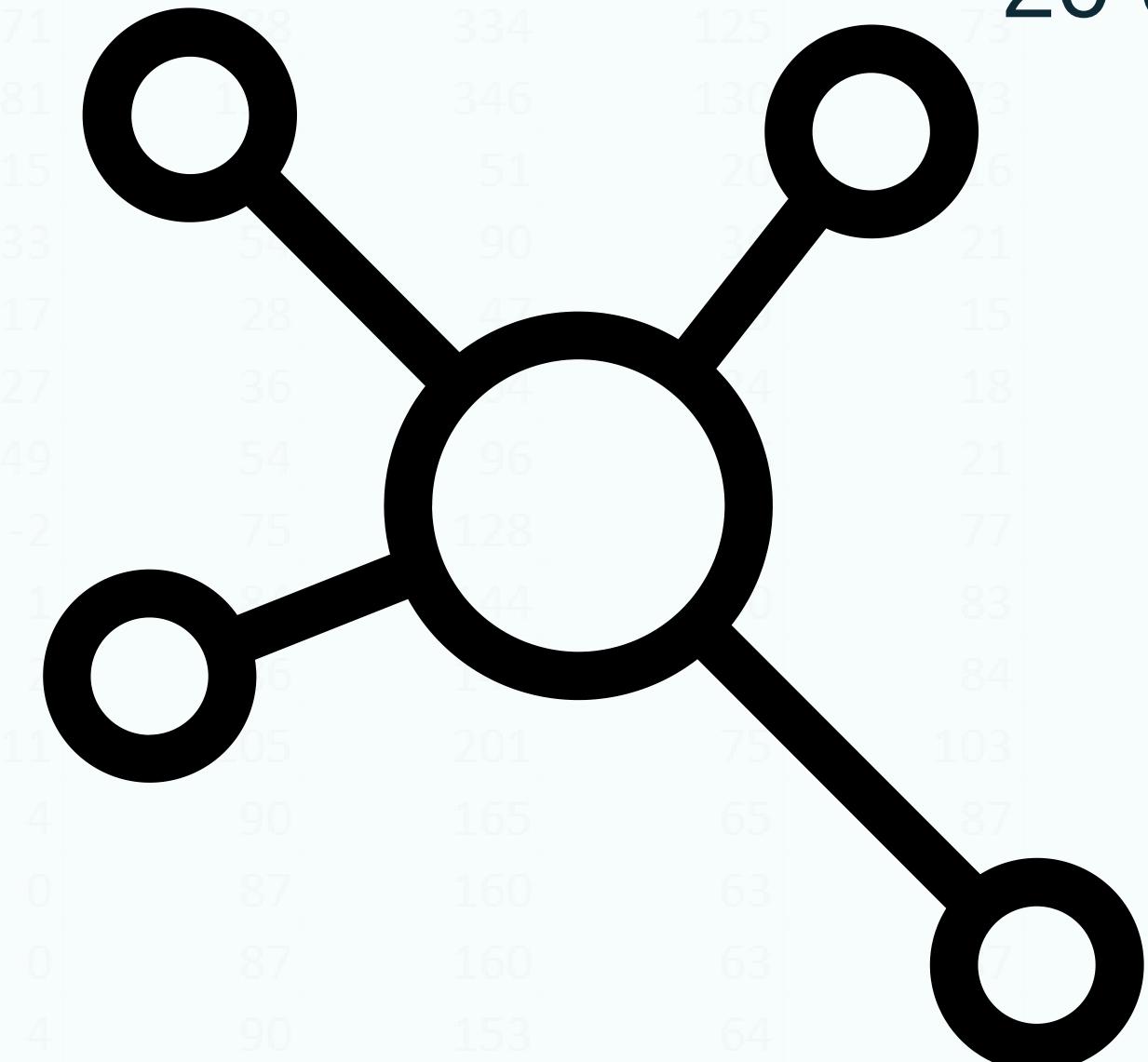


# DATA

203	Connecticut	East	Small Marl	105	174	289	115	69	37	1166	110	100	160
203	Connecticut	East	Small Marl	104	135	223	90	56	29	1148	90	80	130
203	Connecticut	East	Small Marl	104	135	223	90	56	29	1139	90	80	130
203	Connecticut	East	Small Marl	135	155	275	103	64	31	1130	110	90	150
203	Connecticut	East	Small Marl	171	334	125	133	11	11	1119	130	100	160
203	Connecticut	East	Small Marl	181	346	130	133	42	1134	130	110	180	
203	Connecticut	East	Small Marl	15	51	26	26	5	804	20	20	30	
203	Connecticut	East	Small Marl	33	90	24	21	10	809	40	30	60	
203	Connecticut	East	Small Marl	17	28	47	15	5	811	20	20	30	
203	Connecticut	East	Small Marl	27	36	49	18	6	806	40	20	40	
203	Connecticut	East	Small Marl	49	54	96	21	10	809	40	30	60	
203	Connecticut	East	Small Marl	-2	75	128	77	48	597	10	50	70	
203	Connecticut	East	Small Marl	1	24	44	14	83	54	606	40	40	90
203	Connecticut	East	Small Marl	1	26	41	84	55	613	10	60	80	
203	Connecticut	East	Small Marl	11	95	201	75	103	68	522	20	70	100
Connecticut	East	Small Marl	4	90	165	65	87	58	513	20	60	90	
necticut	East	Small Marl	0	87	160	63	57	57	506	10	60	80	
cticut	East	Small Marl	0	87	160	63	77	57	521	10	60	80	
ut	East	Small Marl	4	90	153	64	59	58	555	20	60	90	
East	Small Marl	3	87	159	62	85	58	512	20	50	90		
East	Small Marl	-3	76	140	55	78	49	627	10	50	70		
Small Marl	29	75	130	55	46	18	305	40	50	70			
Small Marl	22	65	113	48	43	15	334	40	40	70			
Small Marl	47	57	100	83	83	18	299	20	40	50			

Dữ liệu  
bán hàng

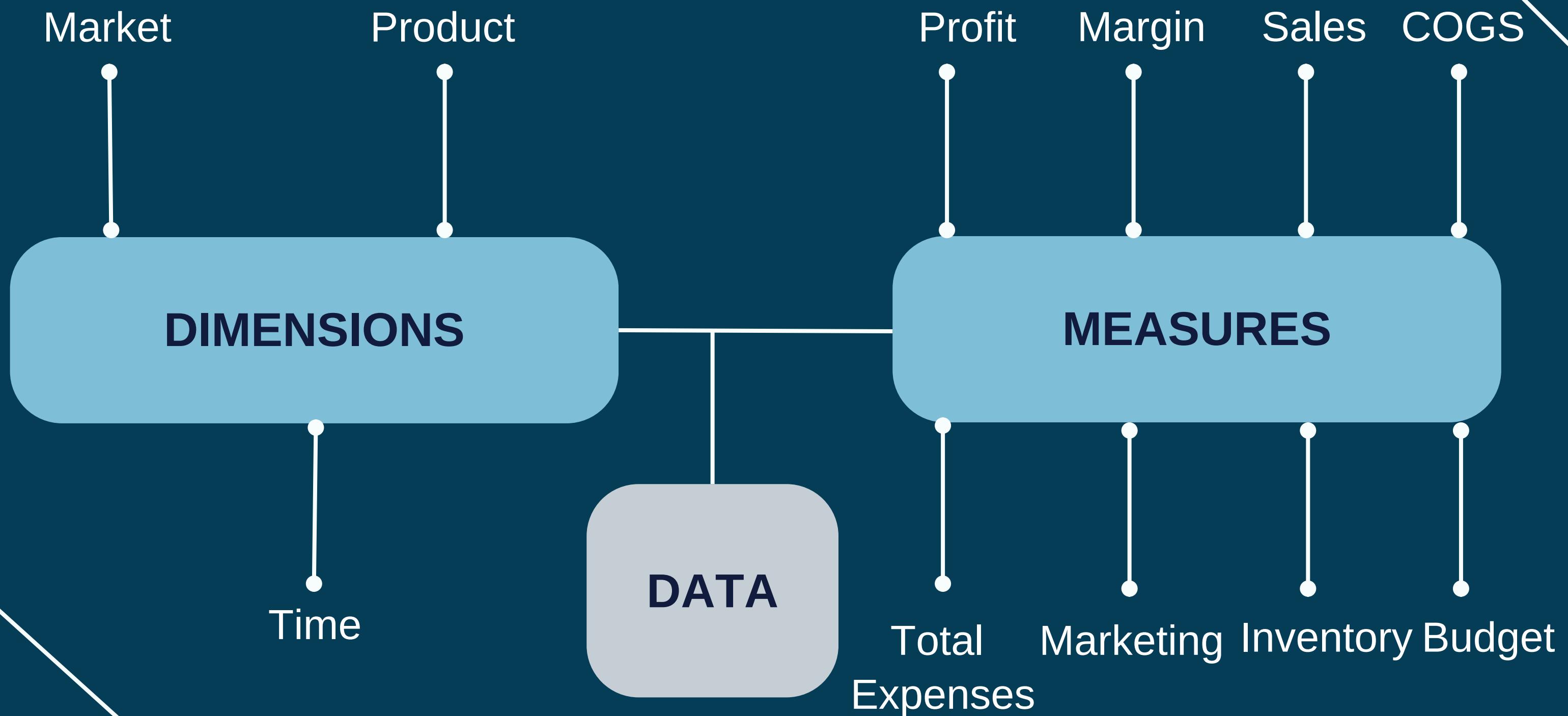
2010-2011



20 cột

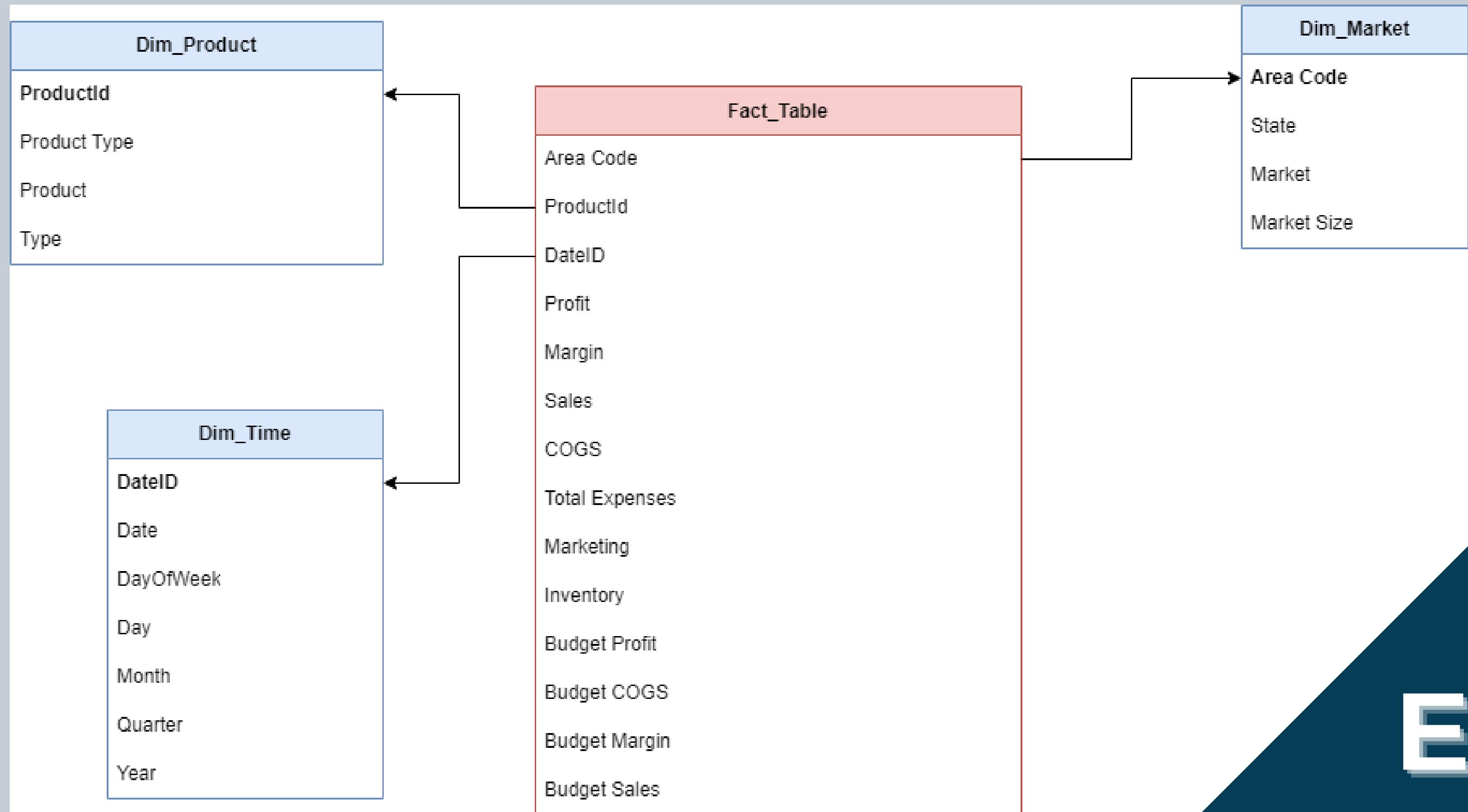
4248 dòng

# TỔNG QUAN DỮ LIỆU



Tên dữ liệu	Kiểu dữ liệu	Ý nghĩa
Area Code	int	Mã cửa hàng
State	varchar(50)	Tiểu bang
Market	varchar(50)	Khu vực
Market size	varchar(50)	Quy mô thị trường
Date	datetime	Ngày tháng
Profit	money	Lợi nhuận
Margin	money	$\text{Lãi suất} = \text{Lợi nhuận} + \text{Tổng chi phí HOẶC Doanh thu} - \text{COGS}$
Sales	money	Doanh thu bán hàng
COGS	money	Gía vốn hàng bán
Total Expense	money	Tổng chi phí có được sản phẩm để bán hàng

Tên dữ liệu	Kiểu dữ liệu	Ý nghĩa
Marketing	money	Chi phí quảng cáo/tiếp thị
Inventory	int	Hàng tồn kho của sản phẩm tại thời điểm giảm giá
Budget Profit	money	Lợi nhuận dự kiến
Budget COGS	money	Gía vốn hàng bán dự kiến
Budget Margin	money	Biên ngân sách = Lợi nhuận dự kiến + Tổng chi phí dự kiến HOẶC Doanh thu dự kiến - Giá vốn dự kiến
Budget Sales	money	Doanh số bán hàng dự kiến
ProductID	int	Mã sản phẩm
Product	varchar(50)	Sản phẩm
Product Type	varchar(50)	Danh mục sản phẩm
Type	varchar(50)	Loại sản phẩm



**ERD**

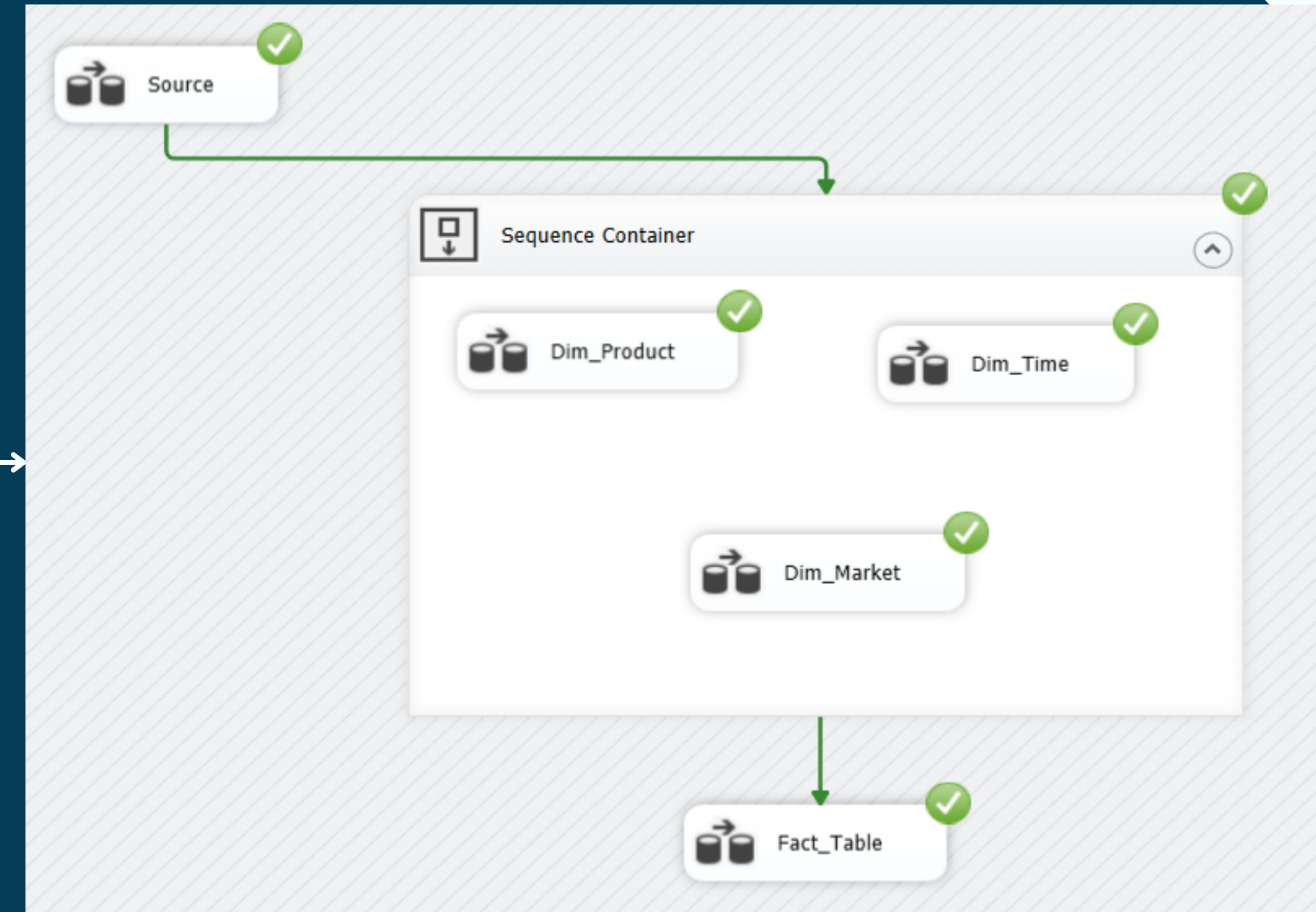
# ETL PROJECT

Extract, Transform

ETL

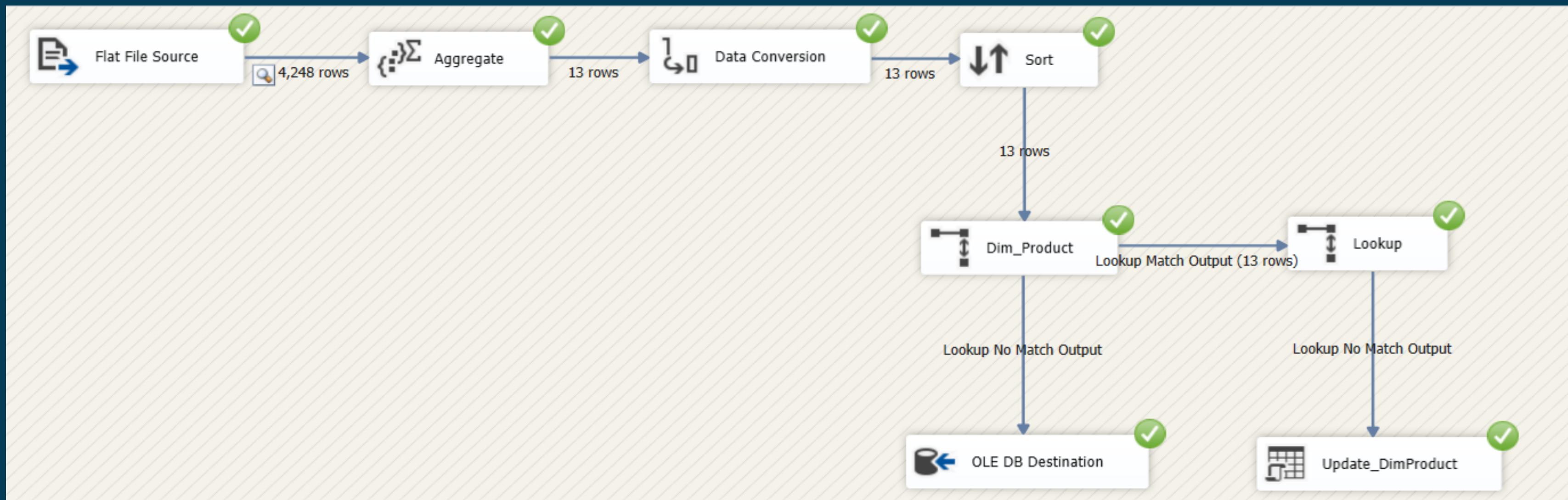


# MÔ HÌNH ETL TỔNG HỢP



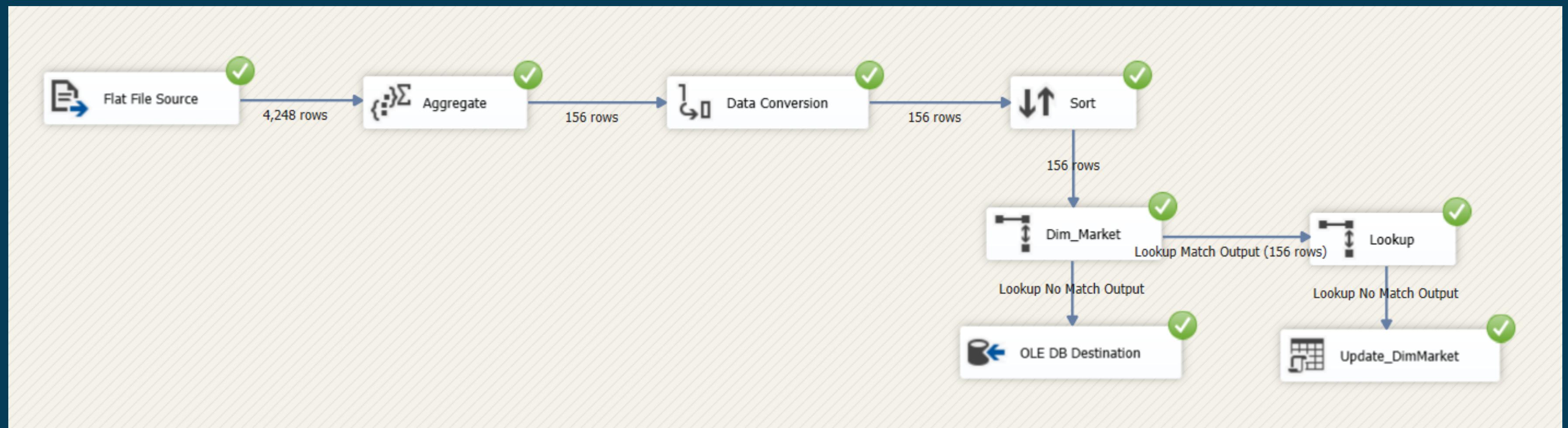
# TẠO DIMENSION

## DIM\_PRODUCT



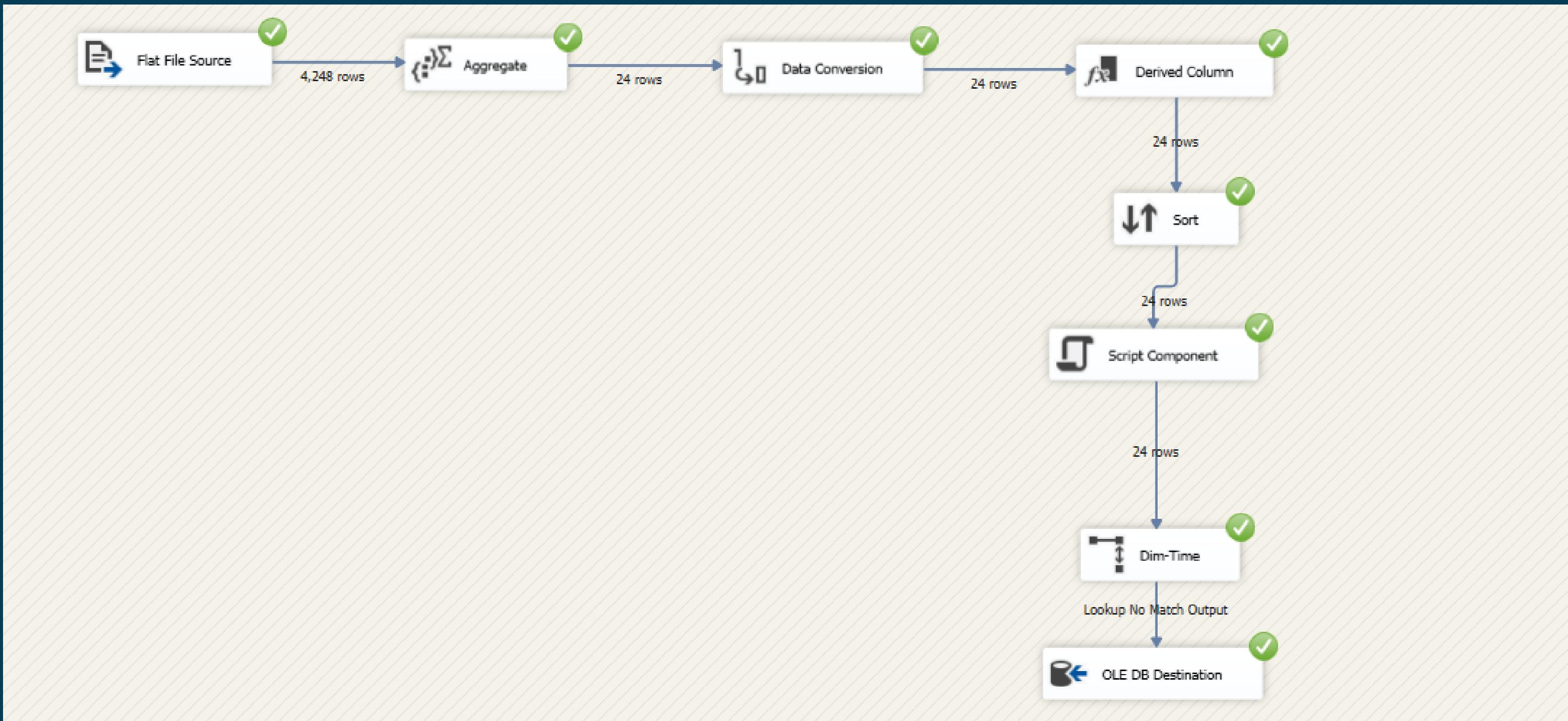
# TẠO DIMENSION

DIM\_MARKET

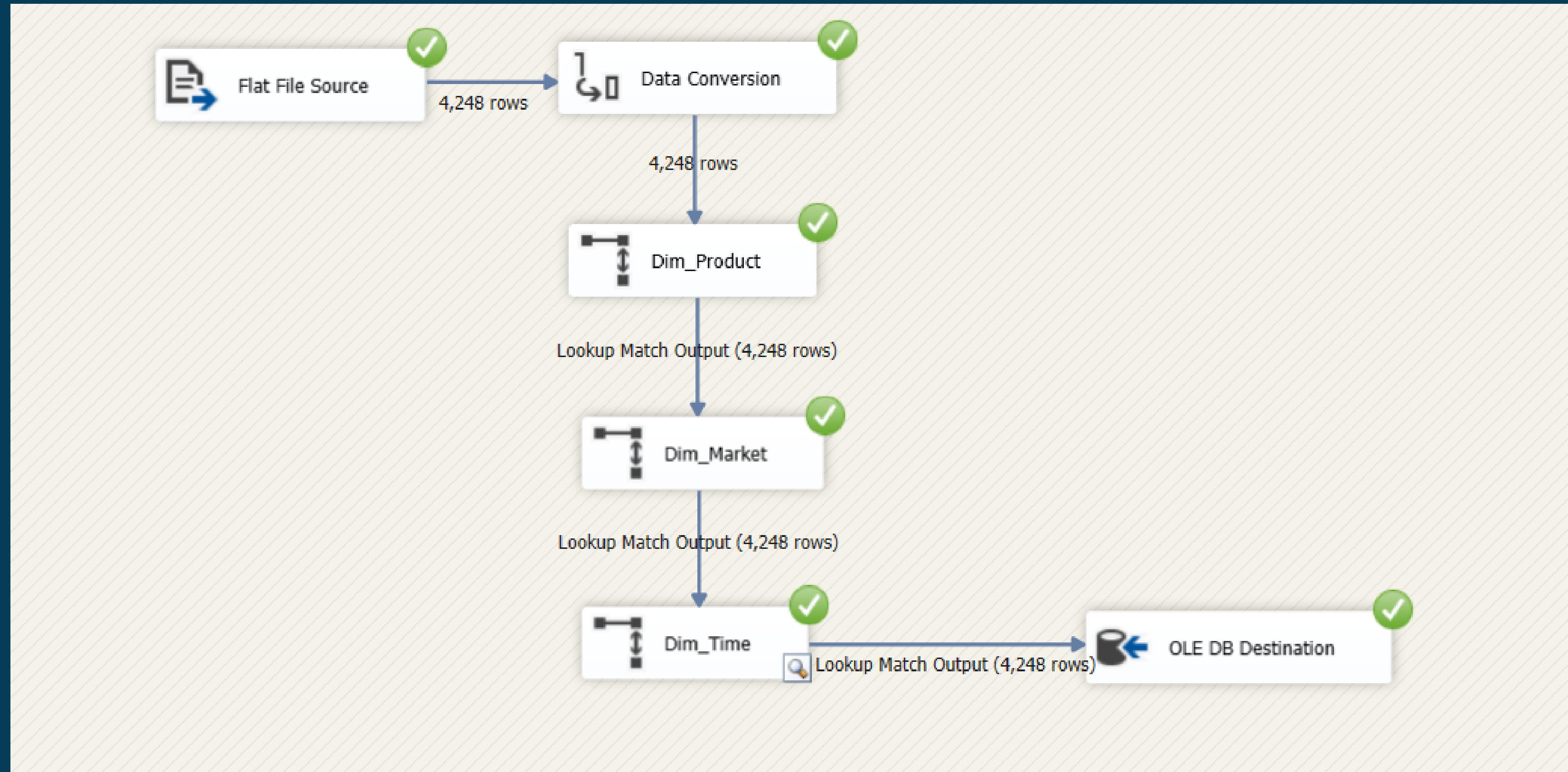


# TẠO DIMENSION

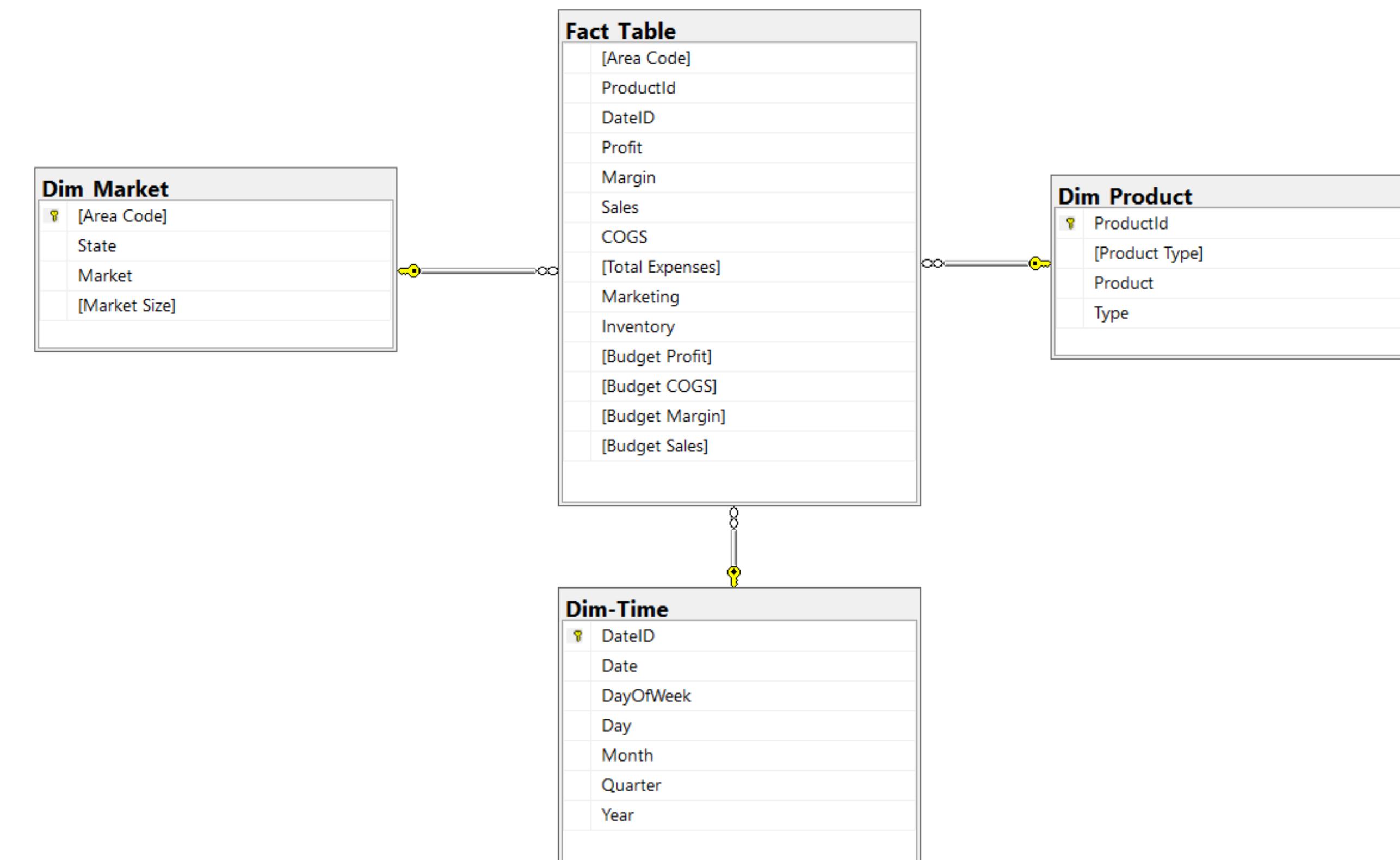
## DIM\_TIME



# TAO FACT\_TABLE



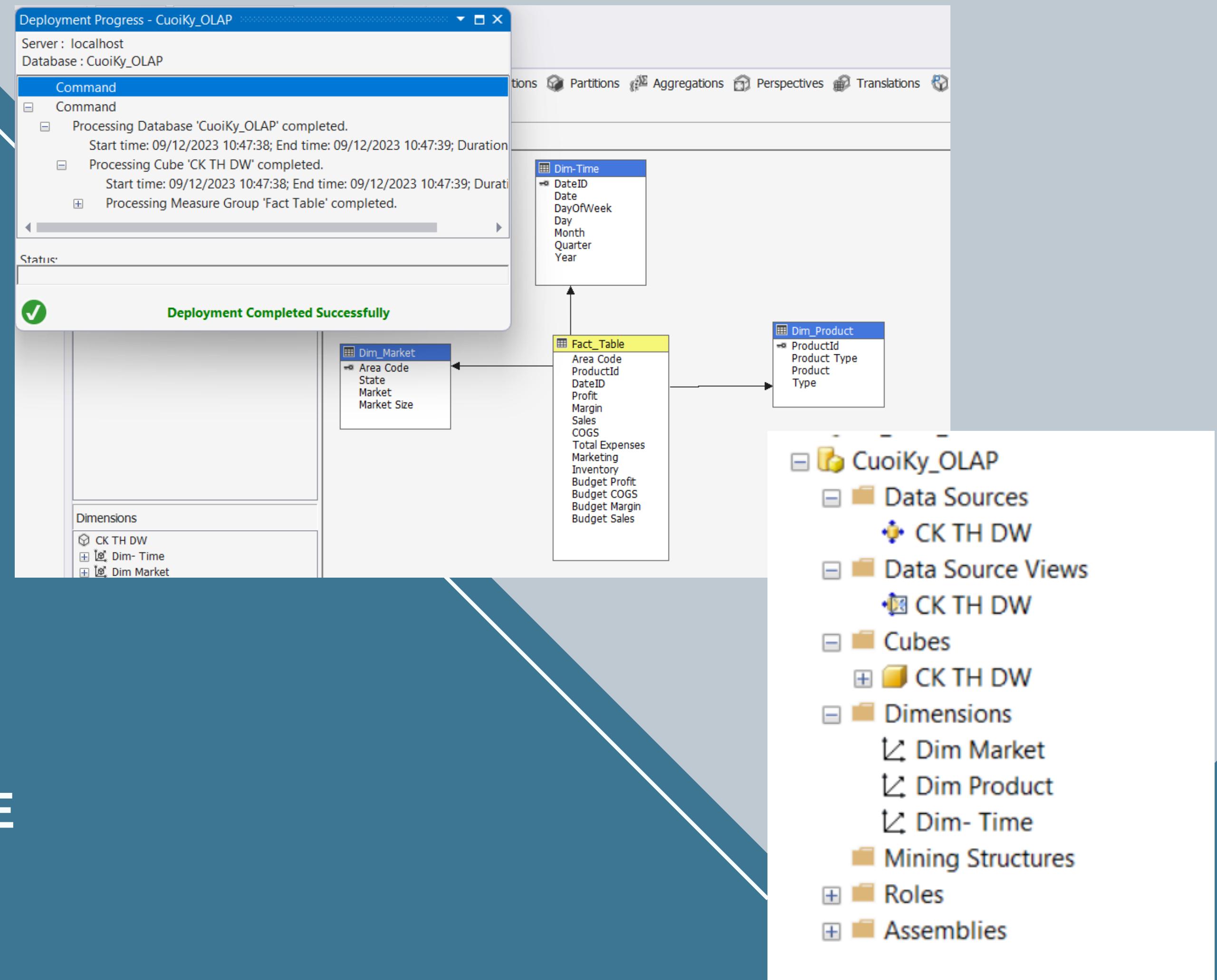
# MÔ HÌNH DIAGRAM TRONG CSDL ĐÍCH



# OLAP PROJECT

## OLAP MODEL

## OLAP CUBE



# MDX

```
33  /***1. Top 3 sp có lợi nhuận nhiều nhất trong các năm ***/
34  select {[Measures].[Profit]} on columns,
35  Topcount ([Dim Product].[Product].children, 3,[Measures].[Profit]) on rows
36  from[CK TH DW]
```

146 %

Messages Results

Profit	
Columbian	334824
Lemon	179214
Decaf Espresso	177012

```
39  /***2. Top 3 khu vực có doanh thu bán hàng cao nhất ***/
40  select {[Measures].[Sales]} on columns,
41  Topcount ([Dim Market].[Market].children, 3,[Measures].[Sales]) on rows
42  from[CK TH DW]
```

146 %

Messages Results

Sales	
West	1633584
Central	1590270
East	1071456

```
17  /*** 4. Total Sales by State and Quarter ***/
18  select NONEMPTY ([Dim- Time].[Quarter].[Quarter]) on columns,
19      NONEMPTY ([Dim Market].[State].[State]) on rows
20  from [CK TH DW]
21  where [Measures].[Sales];
```

146 %

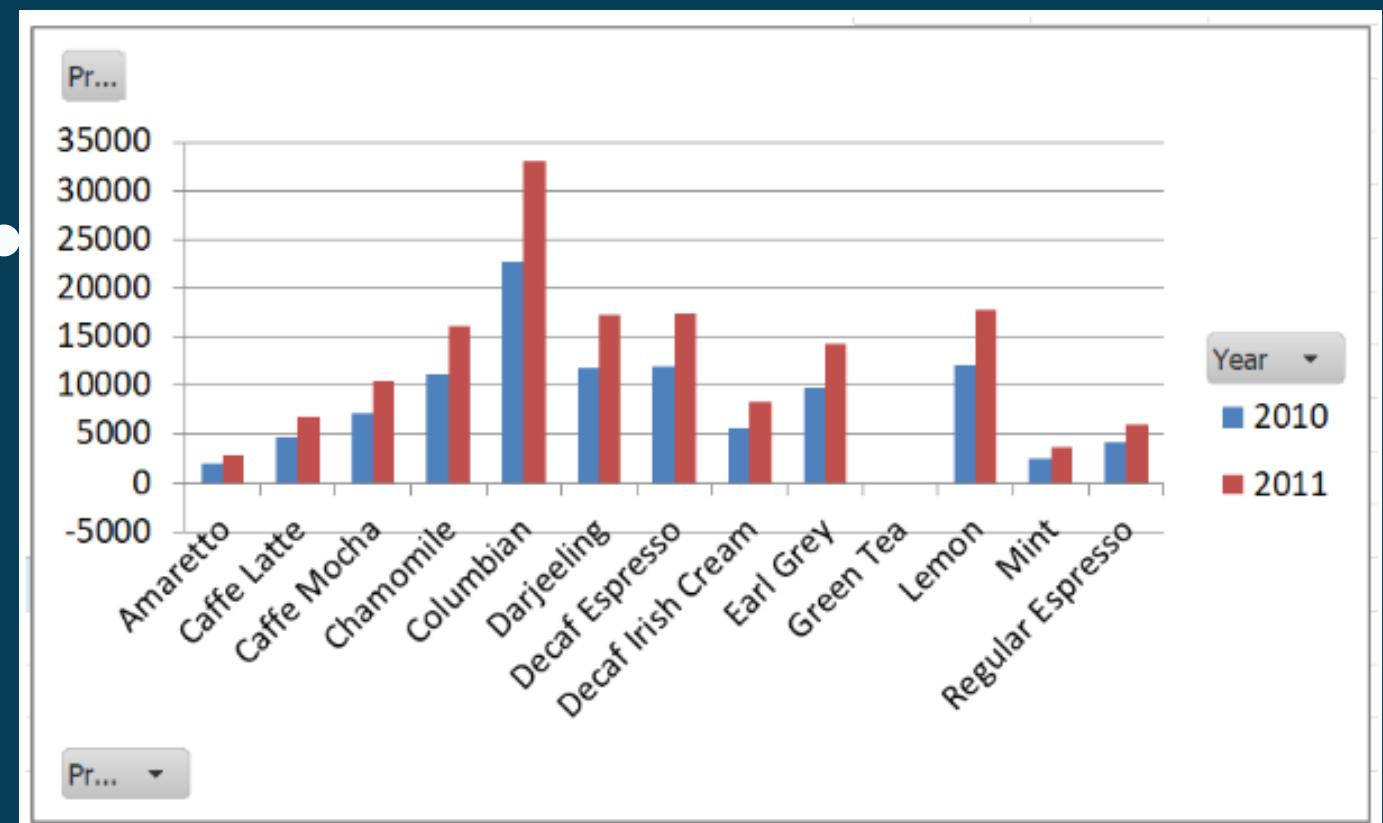
Messages Results

1	
California	581352
Colorado	289074
Connecticut	152574
Florida	224658
Illinois	419298
Iowa	328500
Louisiana	138966
Massachusetts	179790
Missouri	147882
Nevada	360954
New Hampshire	89322
New Mexico	95352
New York	425112

# PIVOT TABLE VÀ ĐỒ THỊ

Profit	Column Labels		
	2010	2011	Grand Total
Row Labels			
Amaretto	1983	2907	4890
Caffe Latte	4636	6739	11375
Caffe Mocha	7201	10477	17678
Chamomile	11093	16138	27231
Columbian	22777	33027	55804
Darjeeling	11844	17209	29053
Decaf Espresso	12025	17477	29502
Decaf Irish Cream	5708	8281	13989
Earl Grey	9851	14313	24164
Green Tea	-90	-141	-231
Lemon	12195	17674	29869
Mint	2511	3643	6154
Regular Espresso	4092	5973	10065
Grand Total	105826	153717	259543

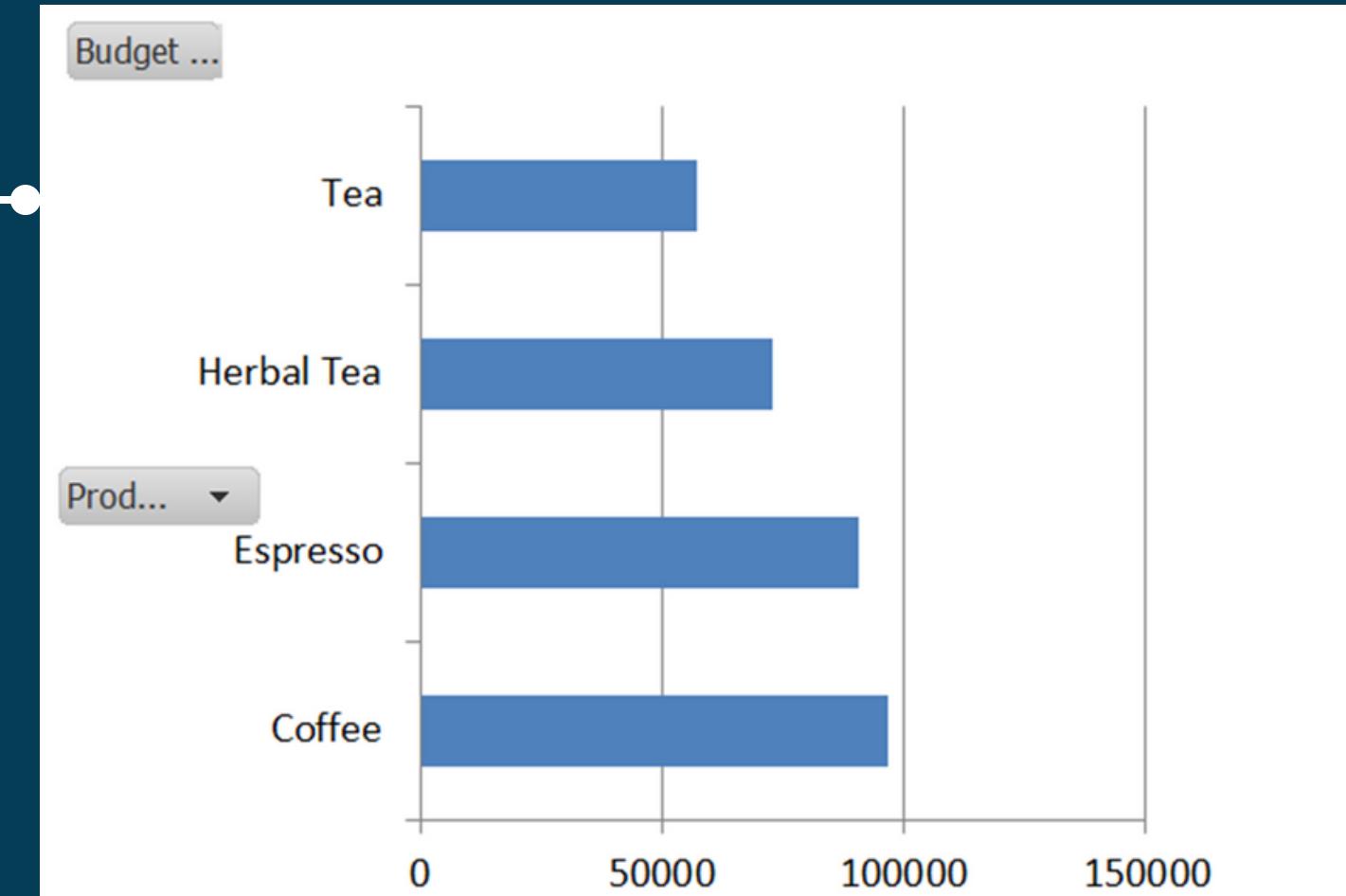
PIVOT  
TABLE



# PIVOT TABLE VÀ ĐỒ THỊ

Row Labels	Budget COGS
Coffee	96880
Espresso	90800
Herbal Tea	73060
Tea	57140
<b>Grand Total</b>	<b>317880</b>

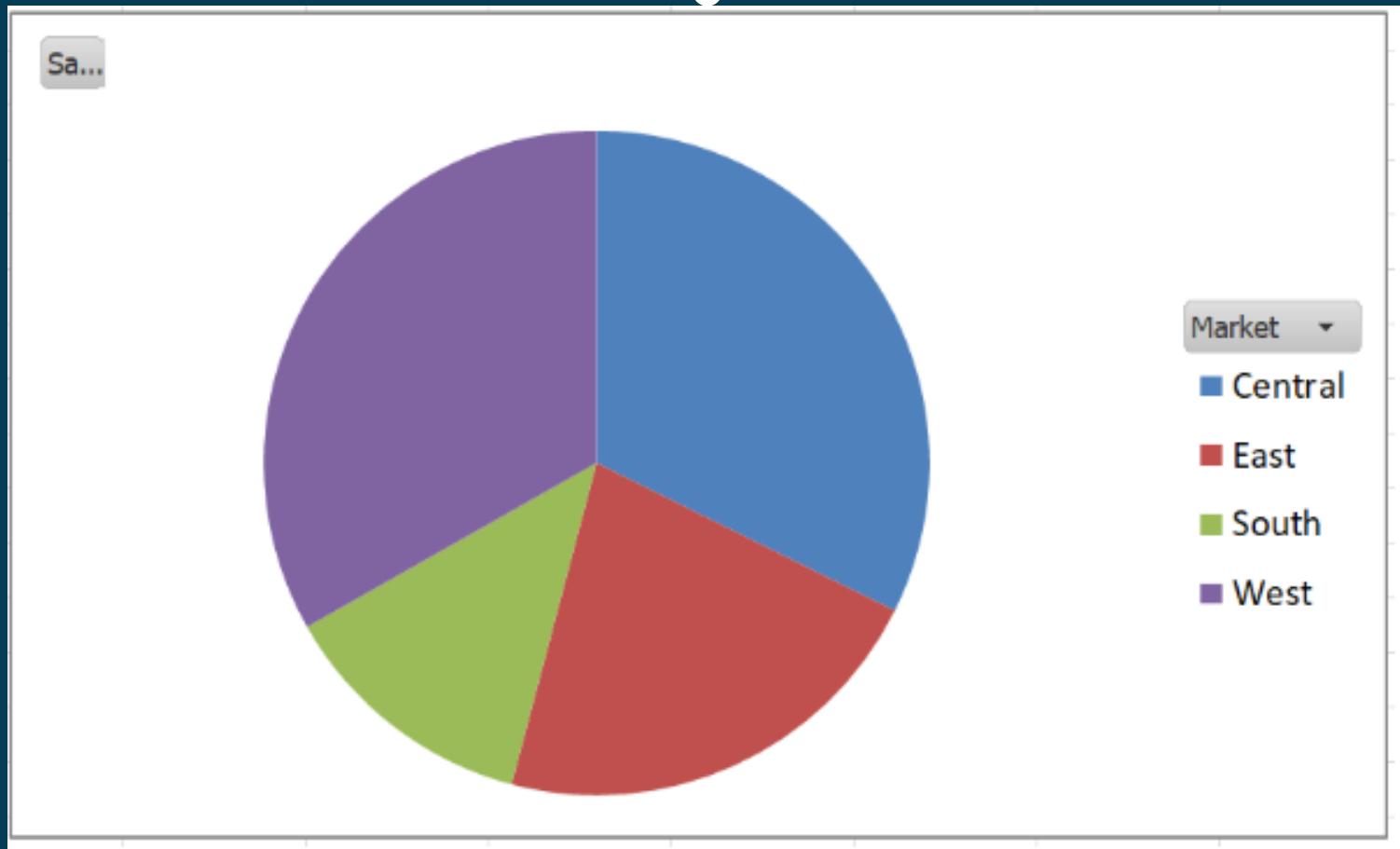
PIVOT  
TABLE



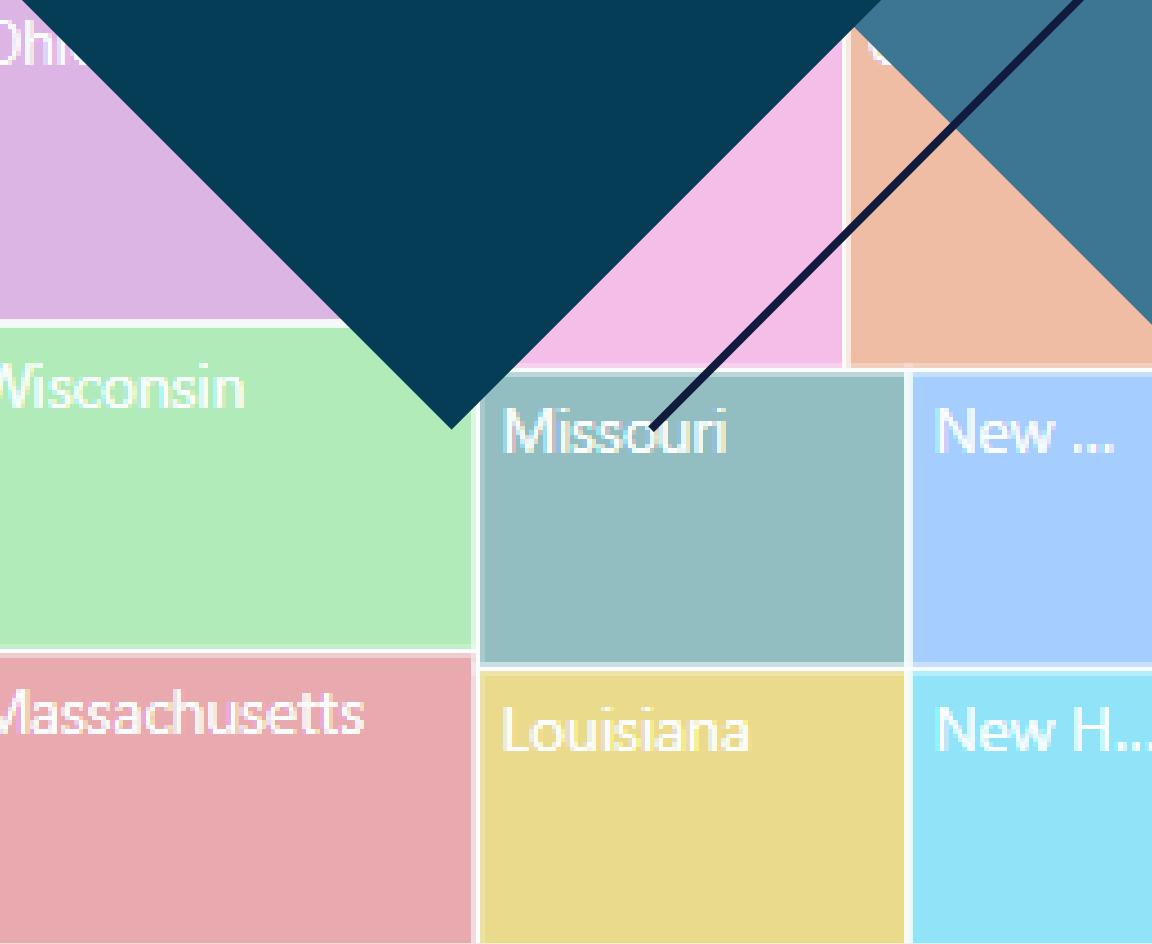
# PIVOT TABLE VÀ ĐỒ THỊ

Row Labels		Sales
Central		265045
East		178576
South		103926
West		272264
<b>Grand Total</b>		<b>819811</b>

PIVOT  
TABLE



# DASHBOARD



## Sum of Total Expenses and Sum of Profit by State

● Sum of Total Expenses ● Sum of Profit

140K

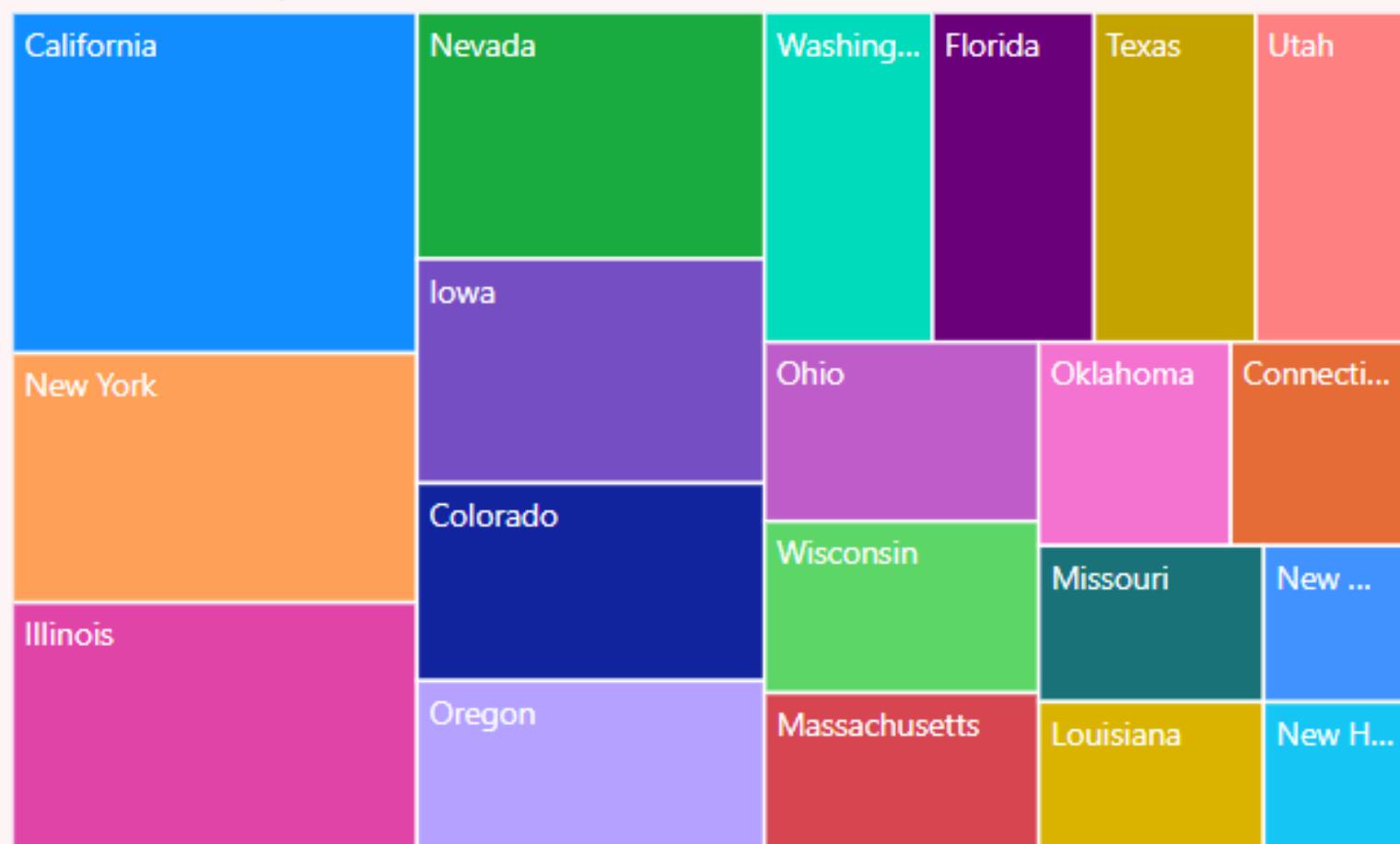
120K



# THỊ TRƯỜNG

## DỮ LIỆU BÁN HÀNG CỦA CÁC CỬA HÀNG TẠI MỸ

Sum of Sales by State



Sum of Sales

\$1.64M

Count of Market

4

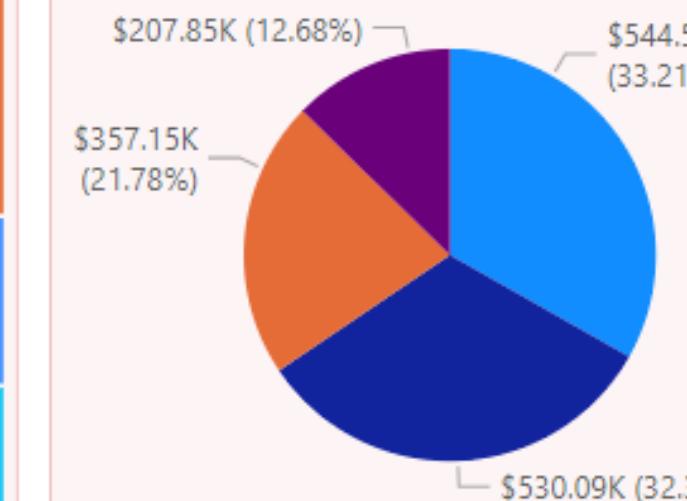
Count of Product Type

4

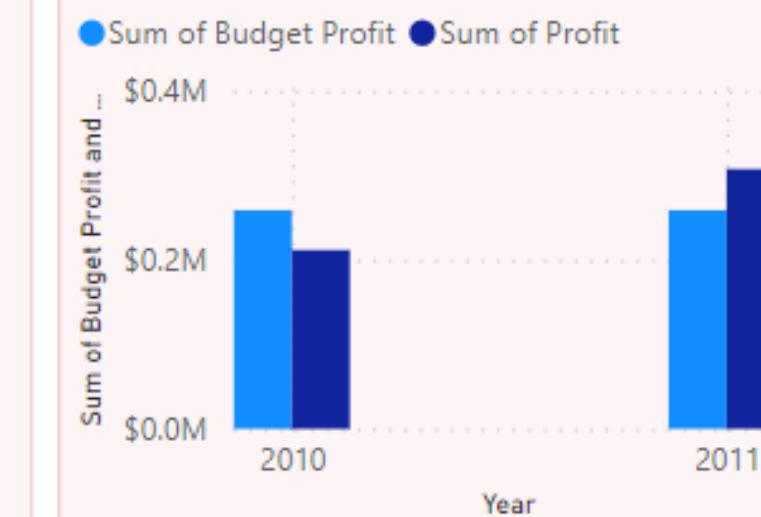
Count of Product

13

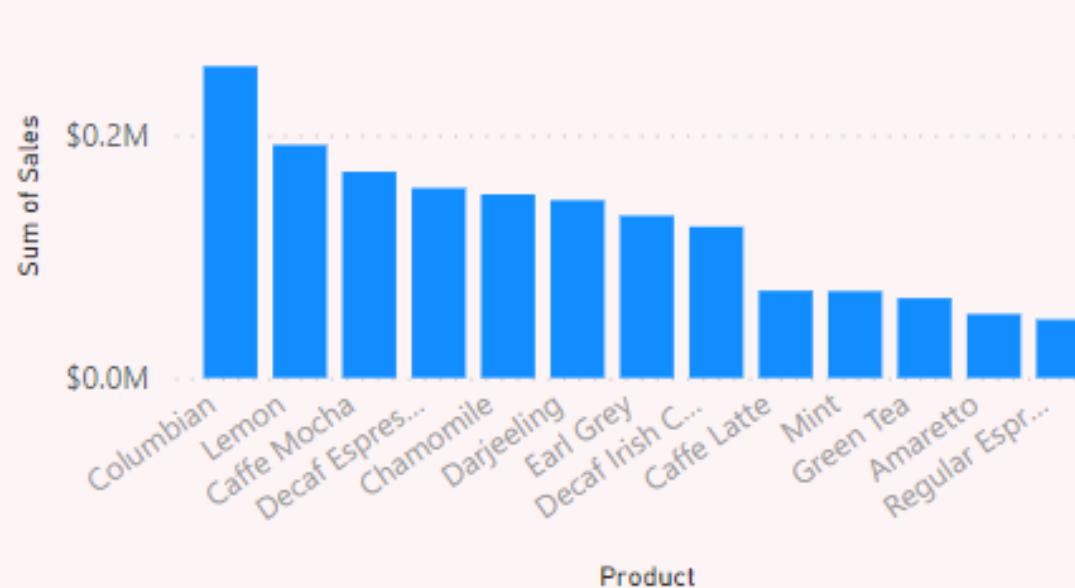
Sum of Sales by Market



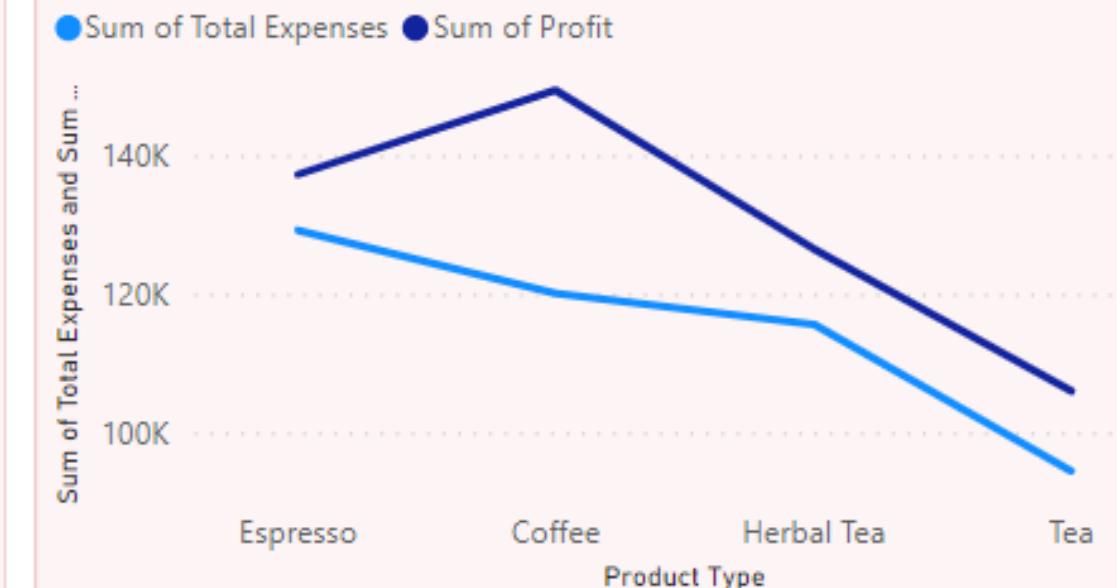
Sum of Budget Profit and Sum of Profit by Year



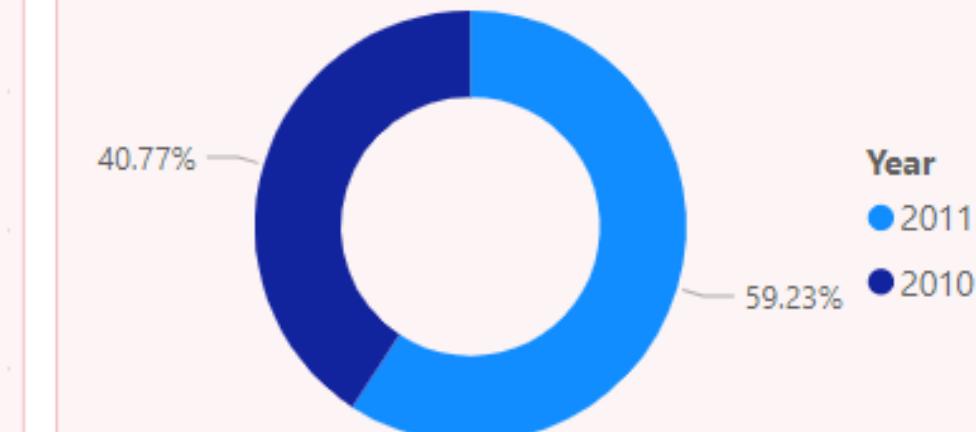
Sum of Sales by Product



Sum of Total Expenses and Sum of Profit by Product Type



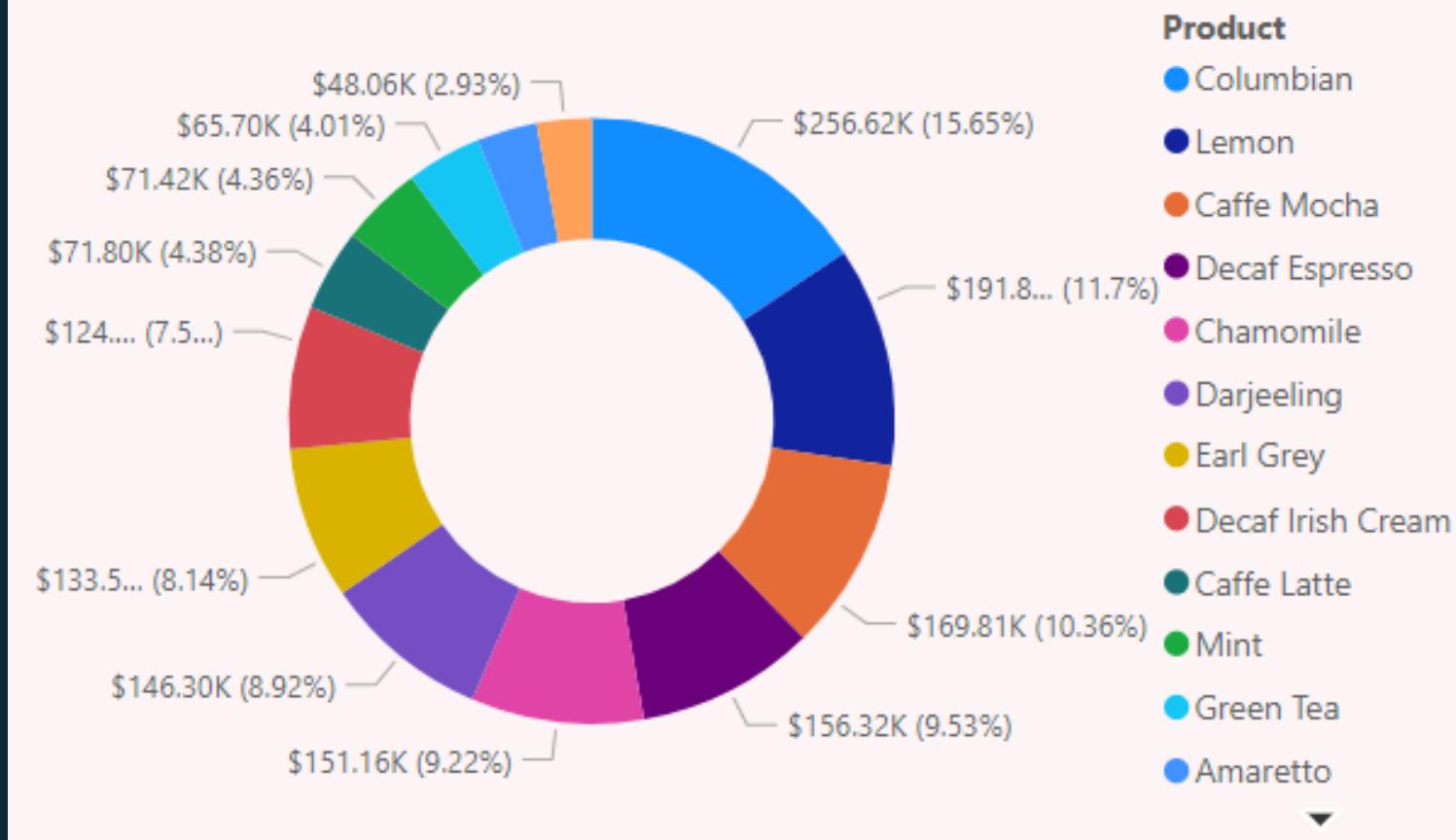
Sum of Profit by Year



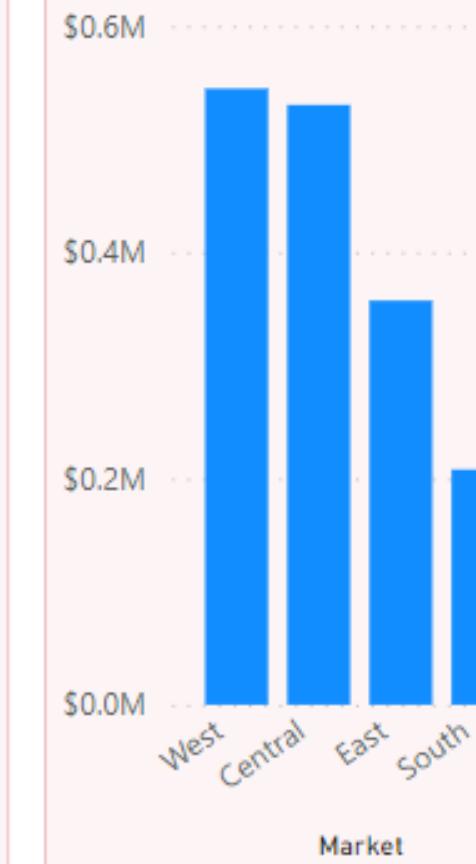
# DOANH THU

## DOANH THU CỦA CÁC CỬA HÀNG TẠI

Sum of Sales by Product



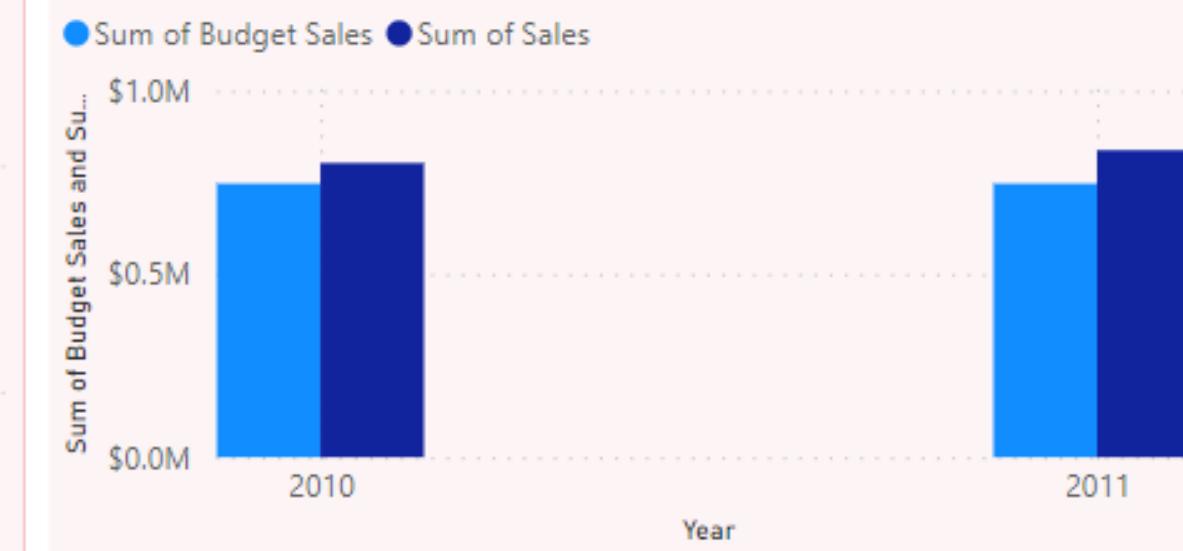
Sum of Sales by Market



**\$1.64M**

Sum of Sales

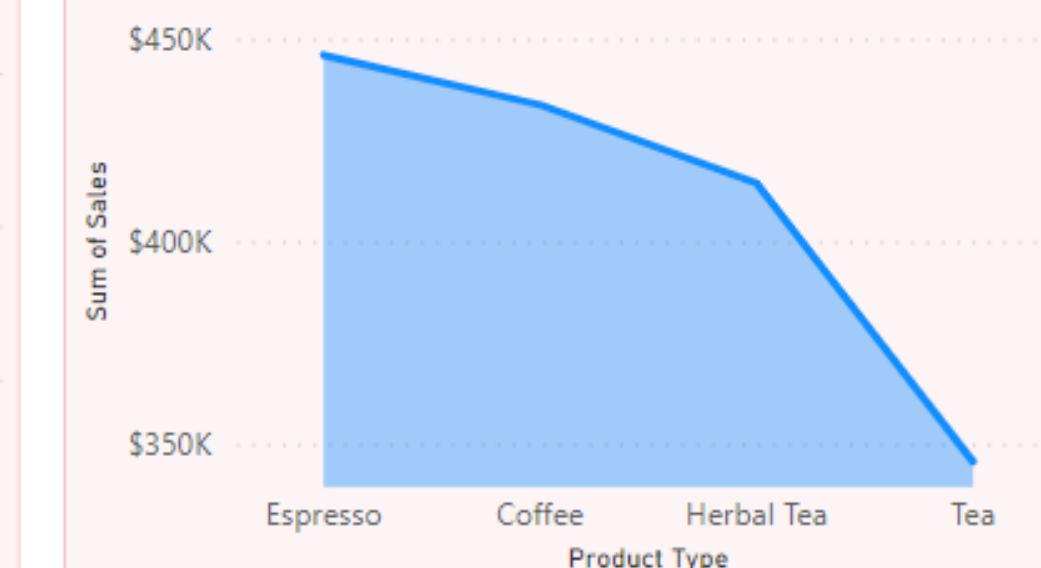
Sum of Budget Sales and Sum of Sales by Year



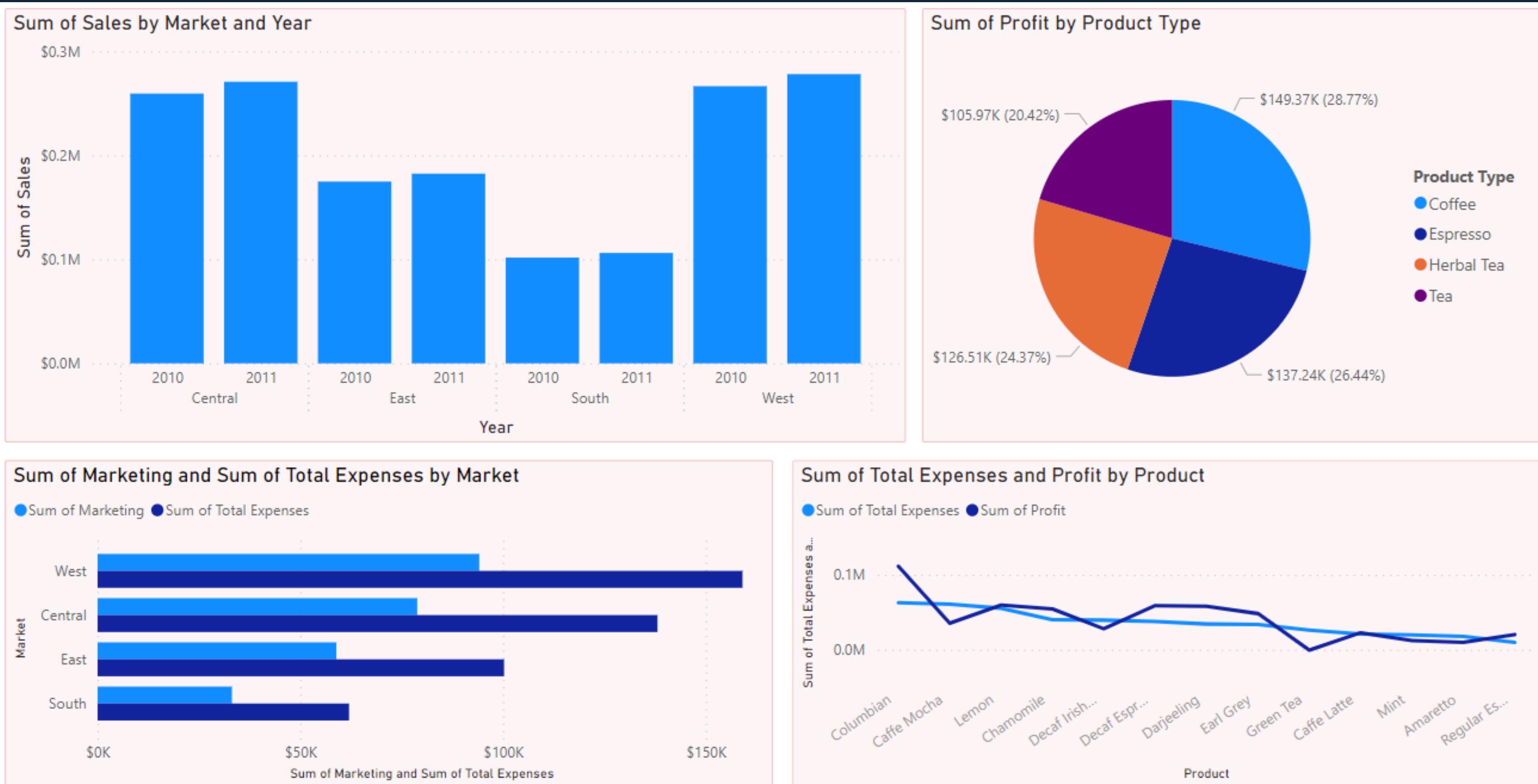
Sum of Sales and Sum of Budget Sales by State



Sum of Sales by Product Type



# HIỆU SUẤT





# THANK YOU !

