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CSCI 3287  
Extra Credit Assignment #4  
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### Create New Data Warehouse Questions

1. Use the information schema to determine the dimension table names as well as the number of rows associated with each dimension table.

```
SELECT TABLE_NAME, TABLE_ROWS  
FROM INFORMATION_SCHEMA.TABLES  
WHERE TABLE_NAME LIKE 'dim%';
```

TABLE_NAME	TABLE_ROWS
Dim_Customer	5
Dim_Date	3598
Dim_Product	5
Dim_SalesPerson	6
Dim_Store	3

2. Group products by the amount of revenue they produced for each year.

```
SELECT FORMAT(SUM(F.SalesPrice * F.Quantity), 2) as Revenue, P.ProductName as  
Name, D.YEAR as year
```

```
FROM sales_dw.fact_productsales as F  
INNER JOIN sales_dw.dim_product as P  
ON F.ProductID = P.ProductKey  
INNER JOIN sales_dw.dim_date as D  
ON D.DateKey = F.SalesDateKey  
GROUP BY Name, year;
```

Revenue	Name	year
240.50	Wheat Flour 1kg	2010
331.50	Wheat Flour 1kg	2011
357.50	Wheat Flour 1kg	2012
78.00	Wheat Flour 1kg	2013
377.00	Wheat Flour 1kg	2016
318.50	Wheat Flour 1kg	2015
91.00	Wheat Flour 1kg	2017
1,306.50	Jasmine Rice 5kg	2010
2,328.00	Jasmine Rice 5kg	2011
2,232.00	Jasmine Rice 5kg	2012
384.00	Jasmine Rice 5kg	2013
2,064.00	Jasmine Rice 5kg	2016
1,632.00	Jasmine Rice 5kg	2015
600.00	Jasmine Rice 5kg	2017
2,522.50	SunFlower Oil 1 ltr	2010
4,350.00	SunFlower Oil 1 ltr	2011
3,828.00	SunFlower Oil 1 ltr	2012
609.00	SunFlower Oil 1 ltr	2013
4,611.00	SunFlower Oil 1 ltr	2016
2,349.00	SunFlower Oil 1 ltr	2015
1,653.00	SunFlower Oil 1 ltr	2017
1,480.00	Dawn Dish Soa...	2010
340.00	Dawn Dish Soa...	2011
440.00	Dawn Dish Soa...	2012
100.00	Dawn Dish Soa...	2013
320.00	Dawn Dish Soa...	2016
120.00	Dawn Dish Soa...	2015
260.00	Dawn Dish Soa...	2017
2,780.00	Tide Laundry De...	2010
3,892.00	Tide Laundry De...	2011
3,892.00	Tide Laundry De...	2012
1,807.00	Tide Laundry De...	2013
3,197.00	Tide Laundry De...	2016
2,363.00	Tide Laundry De...	2015
2,363.00	Tide Laundry De...	2017

3. Which salesperson made the most sales in 2013?

```
SELECT COUNT(F.SalesInvoiceNumber) as Sales, S.SalesPersonName as name
FROM sales_dw.fact_productsales as F
INNER JOIN sales_dw.dim_salesperson as S
ON F.SalesPersonID = S.SalesPersonID
INNER JOIN sales_dw.dim_date as D
ON D.DateKey = F.SalesDateKey
WHERE D.Year = '2013'
GROUP BY name
ORDER BY Sales DESC;
```

Sales	name
4	Julian Brand
3	John Paul Jones
3	Jasmin Farah
3	Jacob Leis

**Julian Brand made the most sales in 2013.**

4. What customer ordered the greatest total quantity of products in 2015?

```
SELECT SUM(F.Quantity) as quantity, C.CustomerName as name
FROM sales_dw.fact_productsales as F
INNER JOIN sales_dw.Dim_Customer as C
ON F.customerID = C.customerID
INNER JOIN sales_dw.dim_date as D
ON D.DateKey = F.SalesDateKey
WHERE D.YEAR = '2015'
GROUP BY name
ORDER BY quantity DESC;
```

quantity	name
54	Aldous Huxley
46	Melinda Gates
40	Elon Musk
31	Harrison Ford
23	Linda Ronstadt

**Aldous Huxley ordered the greatest total quantity of products in 2015.**

5. Which store yielded the least profit in 2015?

```
SELECT SUM((F.SalesPrice - F.ProductCost)*F.Quantity) as Profit, S.StoreName as store
      FROM sales_dw.fact_productsales as F
      INNER JOIN sales_dw.dim_store as S
      ON F.StoreID = S.StoreID
      INNER JOIN sales_dw.dim_date as D
      ON D.DateKey = F.SalesDateKey
      WHERE D.YEAR = '2015'
      GROUP BY store
      ORDER BY Profit ASC;
```

Profit	store
56.00	ValueMart Berthoud
60.00	ValueMart Lyons
196.00	ValueMart Boulder

**ValueMart Berthoud yielded the least profit in 2015.**