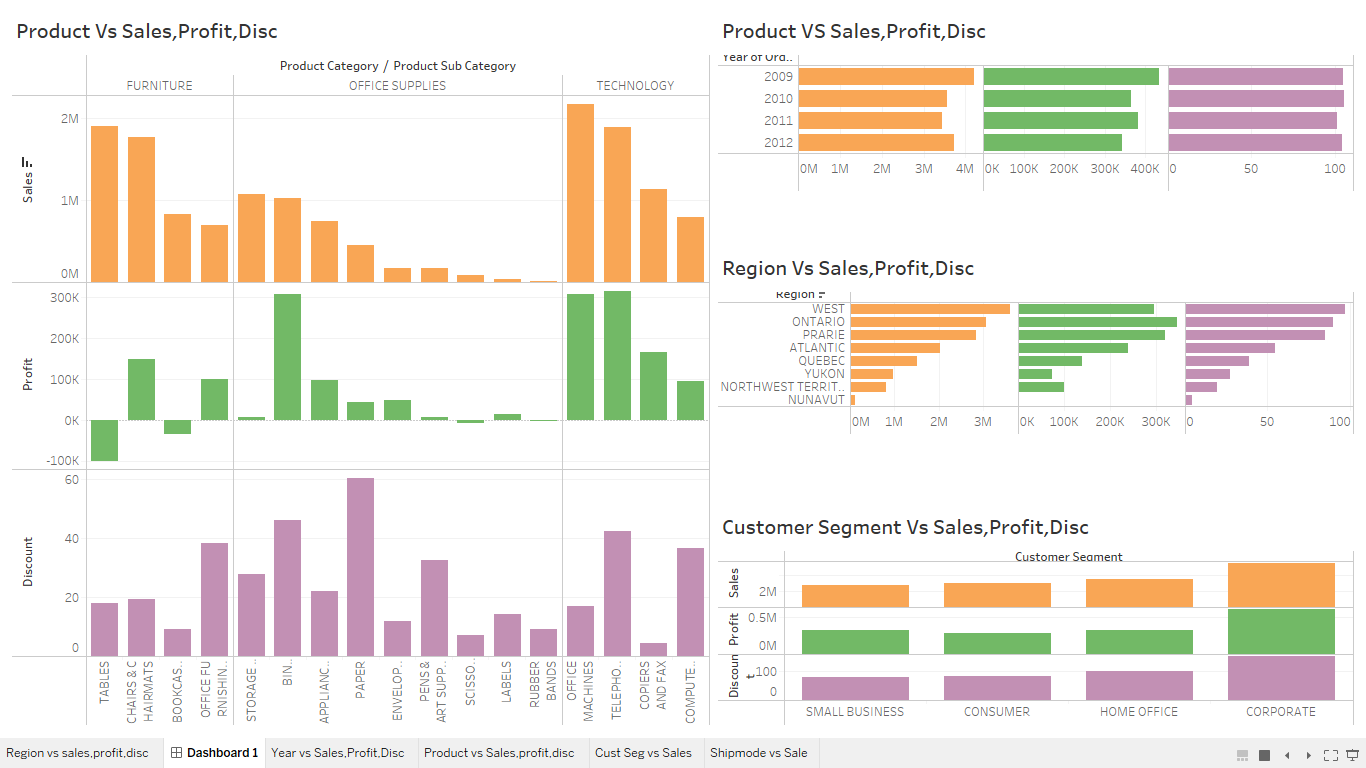
# **SQL Assignment – 2**

# **Task 1:- Understanding the Data**

# **Describe the data in hand in your own words.**

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* **Comparing to all the years 2009 have the Highest Sales -> 4,209,139**
* **Comparing to all the years 2009 have the Highest Profit -> 4,34,539**
* **Comparing to all the years 2010 have the Highest Discount -> 105.780**
* **Comparing that 2011 year have recorded as the Lowest Sales -> 3,436,817**
* **Comparing that 2009 year have recorded as the Lowest Profit -> 4,31,902**
* **Comparing that 2009 year have recorded as the Lowest Discount -> 101.740**
* **Sub-Category Corporate Have the Highest Sales – 5,498,905**
* **Sub-Category Small Business have the Lowest Sales – 2,788,321**
* **Sub-Category Corporate have the highest Profit – 5,99,746**
* **Sub-Category Consumer have the Lowest Profit – 2,87,960**
* **Sub-Category Corporate have the Highest Discount – 153.31**
* **Sub-Category Small Business have the Lowest Discount – 81.12**

**LINK** [SQL Project Data | Tableau Public](https://public.tableau.com/app/profile/mantha.govardhan.gopi/viz/SQLProjectData/Dashboard1?publish=yes)

# **2.Identify and list the primary keys and Foreign Keys for this Dataset**

**1. Cust\_dimen**

**Primary Key** :- Cust\_id

**Foreign Key** :- NA

**2. market\_fact**

**Primary Key** :- NA

**Foreign Key** :- Ord\_id.Prod\_id,Ship\_id,Cust\_id

**3. Orders\_dimen**

**Primary Key** :- Ord\_id

**Foreign Key** :- NA

**4. Prod\_dimen**

**Primary Key** :- Prod\_id,Product\_sub\_category.

**Foreign Key** :- NA

**5. Shipping\_dimen**

**Primary Key** :- Ship\_id

**Foreign Key** :- NA

1. Write a query to display the Customer\_Name and Customer Segment using alias name “Customer Name", "Customer Segment" from table Cust\_dimen.

SELECT

Customer\_Name AS 'Customer Name',

Customer\_Segment AS 'Customer Segment'

FROM

superstores.cust\_dimen;

1. Write a query to find all the details of the customer from the table cust\_dimen order by desc.

SELECT

\*

FROM

superstores.cust\_dimen

ORDER BY Customer\_Name DESC;

1. Write a query to get the Order ID, Order date from table orders\_dimen where ‘Order Priority’ is high.

SELECT

Order\_ID, Order\_Date

FROM

superstores.orders\_dimen

WHERE

Order\_Priority = 'HIGH';

1. Find the total and the average sales (display total\_sales and avg\_sales)

SELECT

ROUND(SUM(sales), 4) AS total\_sales,

ROUND(AVG(sales), 4) AS avg\_sales

FROM

superstores.market\_fact;

1. Write a query to get the maximum and minimum sales from maket\_fact table.

SELECT

MAX(sales) AS 'Maximum\_sales', MIN(sales) AS 'Minimum\_sales'

FROM

superstores.market\_fact;

1. Display the number of customers in each region in decreasing order of no\_of\_customers. The result should contain columns Region, no\_of\_customers.

SELECT

region, COUNT(Cust\_id) no\_of\_customers

FROM

superstores.cust\_dimen

GROUP BY region

ORDER BY no\_of\_customers DESC;

1. Find the region having maximum customers (display the region name and max(no\_of\_customers)

SELECT

region, (COUNT(Cust\_id)) 'max\_no\_of\_customers'

FROM

superstores.cust\_dimen

GROUP BY region

ORDER BY max\_no\_of\_customers DESC

LIMIT 1;

1. Find all the customers from Atlantic region who have ever purchased ‘TABLES’ and the number of tables purchased (display the customer name, no\_of\_tables purchased)

SELECT

CD.Customer\_name, COUNT(\*) number\_of\_tables\_purchased

FROM

superstores.market\_fact AS MF

JOIN

superstores.cust\_dimen AS CD ON MF.cust\_id = CD.cust\_id

WHERE

CD.Region = 'Atlantic'

AND MF.Prod\_id = (SELECT

prod\_id

FROM

superstores.prod\_dimen

WHERE

product\_sub\_category = 'tables')

GROUP BY MF.Cust\_id , CD.Customer\_Name;

1. Find all the customers from Ontario province who own Small Business. (display the customer name, no of small business owners)

SELECT

customer\_name, COUNT(Customer\_Name)

FROM

superstores.cust\_dimen

WHERE

Province = 'Ontario'

AND Customer\_Segment = 'SMALL BUSINESS';

1. Find the number and id of products sold in decreasing order of products sold (display product id, no\_of\_products sold)

SELECT

Prod\_id AS product\_id, COUNT(\*) AS no\_of\_products\_sold

FROM

superstores.market\_fact

GROUP BY Prod\_id

ORDER BY no\_of\_products\_sold DESC;

1. Display product Id and product sub category whose produt category belongs to Furniture and Technlogy. The result should contain columns product id, product sub category.

SELECT

prod\_id AS product\_id,

Product\_Sub\_Category AS product\_Sub\_category

FROM

superstores.prod\_dimen

WHERE

Product\_Category = 'FURNITURE'

AND product\_category = 'TECHNOLOGY';

1. Display the product categories in descending order of profits (display the product category wise profits i.e. product\_category, profits)?

SELECT

PD.Product\_Category, SUM(MF.Profit) AS profits

FROM

superstores.prod\_dimen AS PD

JOIN

superstores.market\_fact AS MF ON PD.prod\_id = MF.prod\_id

GROUP BY PD.Product\_Category

ORDER BY Profits DESC;

1. Display the product category, product sub-category and the profit within each subcategory in three columns.

SELECT

PD.product\_category, PD.Product\_Sub\_Category, SUM(MF.Profit)

FROM

superstores.prod\_dimen AS PD

JOIN

superstores.market\_fact AS MF ON PD.prod\_id = MF.prod\_id

GROUP BY PD.Product\_Category , PD.Product\_Sub\_Category;

1. Display the order date, order quantity and the sales for the order.

SELECT

OD.Ord\_id,

OD.order\_date,

MF.Order\_Quantity,

SUM(MF.Sales) AS sales

FROM

superstores.orders\_dimen AS OD

JOIN

superstores.market\_fact AS MF ON OD.ord\_id = MF.ord\_id

GROUP BY OD.ord\_id;

1. Display the names of the customers whose name contains the i) Second letter as ‘R’ ii) Fourth letter as ‘D’

SELECT

\*

FROM

superstores.cust\_dimen

WHERE

SUBSTR(customer\_name, 2, 1) = 'R'

AND SUBSTR(customer\_name, 4, 1) = 'D';

1. Write a SQL query to to make a list with Cust\_Id, Sales, Customer Name and their region where sales are between 1000 and 5000.

SELECT

CD.Cust\_id, sum(MF.Sales), CD.Customer\_Name, CD.Region

FROM

superstores.cust\_dimen AS CD

JOIN

superstores.market\_fact AS MF ON CD.Cust\_id = MF.Cust\_id

WHERE

sales BETWEEN 1000 AND 5000

group by cust\_id;

1. Write a SQL query to find the 3rd highest sales.

SELECT

\*

FROM

superstores.market\_fact

ORDER BY sales DESC

LIMIT 1 OFFSET 2;

1. Where is the least profitable product subcategory shipped the most? For the least profitable product sub-category, display the region-wise no\_of\_shipments and the

profit made in each region in decreasing order of profits (i.e. region, no\_of\_shipments, profit\_in\_each\_region)

→ Note: You can hardcode the name of the least profitable product subcategory

SELECT

c.region,

COUNT(DISTINCT s.ship\_id) AS no\_of\_shipments,

SUM(m.profit) AS profit\_in\_each\_region

FROM

superstores.market\_fact m

INNER JOIN

superstores.cust\_dimen c ON m.cust\_id = c.cust\_id

INNER JOIN

superstores.shipping\_dimen s ON m.ship\_id = s.ship\_id

INNER JOIN

superstores.prod\_dimen p ON m.prod\_id = p.prod\_id

WHERE

p.product\_sub\_category IN (SELECT

p.product\_sub\_category

FROM

superstores.market\_fact m

INNER JOIN

superstores.prod\_dimen p ON m.prod\_id = p.prod\_id

GROUP BY p.product\_sub\_category

HAVING SUM(m.profit) <= ALL (SELECT

SUM(m.profit) AS profits

FROM

superstores.market\_fact m

INNER JOIN

superstores.prod\_dimen p ON m.prod\_id = p.prod\_id

GROUP BY p.product\_sub\_category))

GROUP BY c.region

ORDER BY profit\_in\_each\_region DESC;