

Query Outputs

1. Find the Total revenue, quantities and Profit generated.

```
1 *  create database superstore;
2 *  use superstore;
3
4 *  SELECT ROUND(SUM(Sales),2) AS Total_Revenue,SUM(Quantity) AS Total_Quantity,
5    ROUND(SUM(Profit),2) AS Total_Profit FROM store_data;
```

The screenshot shows a database query results interface. At the top, there is a code editor window containing the SQL query. Below it is a results grid window titled 'Result Grid'. The results grid displays a single row of data with three columns: 'Total_Revenue', 'Total_Quantity', and 'Total_Profit'. The values are 1174336.64, 14452, and 134146.22 respectively. To the right of the results grid, there is a toolbar with icons for 'Result Grid' and 'Form Editor'. The 'Result Grid' icon is highlighted.

	Total_Revenue	Total_Quantity	Total_Profit
▶	1174336.64	14452	134146.22

2. Find the Segment wise distribution of the Sales.

```
5 *  SELECT Segment,ROUND(SUM(Sales),2) AS Total_Sales FROM store_data
6    GROUP BY Segment ORDER BY Total_Sales DESC;
7
```

The screenshot shows a database query results interface. At the top, there is a code editor window containing the SQL query. Below it is a results grid window titled 'Result Grid'. The results grid displays a table with two columns: 'Segment' and 'Total_Sales'. The data rows are Consumer (624094.85), Corporate (350747.62), and Home Office (199494.17). To the right of the results grid, there is a toolbar with icons for 'Result Grid', 'Form Editor', and 'Field Types'. The 'Result Grid' icon is highlighted.

Segment	Total_Sales
Consumer	624094.85
Corporate	350747.62
Home Office	199494.17

3. Find the top 3 most profitable Products.

```
8 *   SELECT Product_Name,ROUND(SUM(Profit),2) AS Total_Profit FROM store_data  
9     GROUP BY Product_Name ORDER BY Total_Profit DESC LIMIT 3;  
10
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:	Fetch rows:	
Product_Name	Total_Profit					
Sauder Classic Bookcase, Metal	2978.37					
Nokia Smart Phone, with Caller ID	2887.59					
Novimex Executive Leather Armchair, Adjustable	2523.55					

4. How many orders are placed after January 2016.

```
11 *  SELECT COUNT(DISTINCT Order_ID) AS Orders_After_Jan_2016 FROM store_data  
12    WHERE Order_Date > '2016-01-31';  
13
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:	Fetch rows:	
Orders_After_Jan_2016						
725						

5. which products and subcategories are most and least profitable ?

Profitable products using simple query.

```

17 *   SELECT Sub_Category,Product_Name,ROUND(SUM(Profit), 2) AS Total_Profit FROM store_data
18     GROUP BY Sub_Category, Product_Name ORDER BY Total_Profit DESC LIMIT 10;
19
20

```

The screenshot shows the MySQL Workbench interface with the 'Result Grid' tab selected. The results grid contains the following data:

Sub_Category	Product_Name	Total_Profit
Bookcases	Sauder Classic Bookcase, Metal	2978.37
Phones	Nokia Smart Phone, with Caller ID	2887.59
Chairs	Novimex Executive Leather Armchair, Adjustable	2523.55
Chairs	Hon Executive Leather Armchair, Adjustable	2410.27
Copiers	Brother Copy Machine, Color	1963.36
Copiers	Sharp Wireless Fax, Laser	1758.16
Phones	Apple Smart Phone, Cordless	1717.8
Chairs	Harbour Creations Executive Leather Armchair, ...	1657.51
Phones	Apple Smart Phone, with Caller ID	1648.39
Appliances	KitchenAid Stove, Silver	1644.03

Least valuable product obtained using Windows(RANK)

```

20 *   SELECT Sub_Category,Product_Name,Total_Profit,loss_rank
21   FROM (
22     SELECT Sub_Category,Product_Name,ROUND(SUM(Profit), 2) AS Total_Profit,
23           RANK() OVER (
24             PARTITION BY Sub_Category
25             ORDER BY SUM(Profit) ASC
26           ) AS loss_rank
27     FROM store_data
28     GROUP BY Sub_Category, Product_Name
29   ) ranked
30   WHERE loss_rank = 1
31   ORDER BY Total_Profit ASC;
32

```

The screenshot shows the MySQL Workbench interface with the 'Result Grid' tab selected. The results grid contains the following data:

Sub_Category	Product_Name	Total_Profit	loss_rank
Bookcases	Ikea Library with Doors, Traditional	-1748.17	1
Machines	Panasonic Inkjet, Red	-1410.19	1
Tables	Chromcraft Conference Table, with Bottom Stor...	-1335.29	1
Chairs	Office Star Executive Leather Armchair, Black	-813.49	1
Appliances	Cuisinart Stove, White	-536.45	1
Storage	Fellowes Lockers, Industrial	-498.85	1
Copiers	Canon Fax Machine, Digital	-489.77	1
Phones	Samsung Smart Phone, Full Size	-408.02	1
Art	BIC Canvas, Blue	-284.1	1
Furnishings	Advantus Frame, Black	-203.43	1
Accessories	Belkin Memory Card, USB	-197.84	1
Supplies	Kleencut Trimmer, Steel	-193.19	1
Paper	Green Bar Cards & Envelopes, Multicolor	-164.07	1
Envelopes	Ames Interoffice Envelope, Security-Tint	-121.1	1

6. Which customer segment contributes the most to the total revenue?

```
23 *   SELECT Segment,ROUND(SUM(Sales), 2) AS Total_Revenue FROM store_data  
24     GROUP BY Segment ORDER BY Total_Revenue DESC;  
25
```

Result Grid		
	Segment	Total_Revenue
▶	Consumer	624094.85
	Corporate	350747.62
	Home Office	199494.17

7. What is the year-over-year growth in sales and Profit?

```
26 •   SELECT YEAR(str_to_date(Order_Date,'%d-%m-%Y')) AS Year,ROUND(SUM(Sales),2) AS Total_Sales,  
27     ROUND(SUM(Profit),2) AS Total_Profit FROM store_data GROUP BY YEAR ORDER BY Year;  
28  
29
```

Result Grid			
	Year	Total_Sales	Total_Profit
▶	2014	191180.62	24989.55
	2015	253645.96	33521.23
	2016	331950.64	34228.8
	2017	397559.43	41406.65

8. Which countries and cities are driving the highest sales?

Using regular query,

```
29 *   SELECT Country,ROUND(SUM(Sales), 2) AS Total_Sales FROM store_data  
30     GROUP BY Country ORDER BY Total_Sales DESC;  
31
```

Result Grid		
	Country	Total_Sales
▶	Australia	925235.85
	Austria	92539.05
	Argentina	57511.78
	Algeria	36091.59
	Angola	25554
	Afghanistan	21673.32
	Azerbaijan	5631.51
	Bangladesh	5385.48
	Albania	3888.12
	Bahrain	669.18
	Armenia	156.75

Using Windows(RANK) method.

```
43 •   SELECT City, Total_Sales,sales_rank  
44     FROM (  
45       SELECT  
46         City,  
47         ROUND(SUM(Sales), 2) AS Total_Sales,  
48         RANK() OVER (ORDER BY SUM(Sales) DESC) AS sales_rank  
49     FROM store_data  
50     GROUP BY City  
51   ) ranked  
52   WHERE sales_rank <= 10;  
53
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

City	Total_Sales	sales_rank
Sydney	101945.52	1
Brisbane	75729.02	2
Melbourne	73843.55	3
Gold Coast	72626.92	4
Perth	64292.2	5
Vienna	62023.53	6
Adelaide	57896.71	7
Newcastle	46055.09	8
Wollongong	42247.18	9
Canberra	33162.81	10

9. What is the average delivery time from order to ship date across regions?

```
54 •   SELECT Region,ROUND(AVG(DATEDIFF(STR_TO_DATE(Ship_Date, '%d-%m-%Y'),STR_TO_DATE(Order_Date, '%d-%m-%Y'))),2)  
55   AS Avg_Delivery_Days FROM store_data GROUP BY Region;  
56  
57
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

Region	Avg_Delivery_Days
Southern Asia	4.52
Southern Europe	3.63
North Africa	3.85
Central Africa	4.20
South America	3.83
Western Asia	3.44
Oceania	3.95
Western Europe	3.98

10. what is the profit distribution across order priority?

```
57 •   SELECT Order_Priority,ROUND(SUM(Profit), 2) AS Total_Profit FROM store_data  
58   GROUP BY Order_Priority ORDER BY Total_Profit DESC;  
59
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

Order_Priority	Total_Profit
Medium	73509.69
High	46576.52
Critical	9776.81
Low	4283.19

Data-Driven Recommendations for improving profit and reducing losses.

1. Focus on High-Profit Products

- A small number of products in each sub-category generate most of the profits.
- Increasing promotion and stock availability for these products can significantly improve overall profits.

2. Address Loss-Making Products

- Some products consistently lose money.
- These items should be reviewed for pricing, supplier costs, or discontinued if changes are not feasible.

3. Strengthen High-Value Customer Segments

- The customer segment that brings in the most revenue should be prioritized through loyalty programs and targeted marketing.
- Keeping high-value customers is more cost-effective than finding new ones.

4. Optimize Regional Sales Strategy

- Sales are focused in a few countries and cities.
- Expanding operations and marketing efforts in these successful areas can maximize returns.

5. Improve Delivery Efficiency

- Regions with longer average delivery times may see lower customer satisfaction.
- Improving logistics and warehouse locations can reduce delivery times and cut costs.

6. Monitor Year-Over-Year Performance

- Tracking sales and profit growth each year can help spot early signs of decline or growth.
- This allows for proactive decision-making rather than making corrections after the fact.