

# **SUPERSTORE ANALYSIS USING SQL**

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DONE BY

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BESANT TECHNOLOGIES,BTM LAYOUT

# SUPERSTORE

## COLUMN OVERVIEW

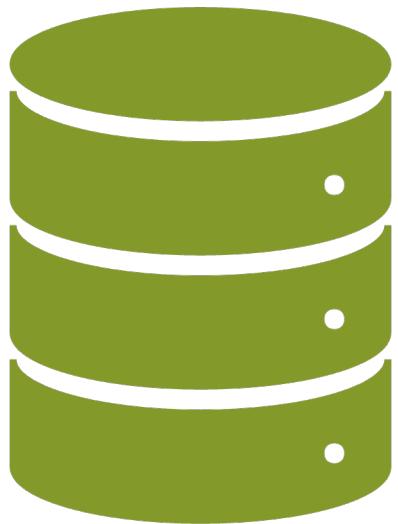
- **Ship Mode** → Type of delivery (e.g., Standard Class, First Class, Same Day).
- **Segment** → Customer type (Consumer, Corporate, Home Office).
- **Country** → Country of the order (usually "United States" in Superstore dataset).
- **City** → City where the order was placed.
- **State** → State of the customer.
- **Postal Code** → ZIP code of the customer.
- **Region** → Geographic region (West, East, South, Central).
- **Category** → Product category (Furniture, Office Supplies, Technology).
- **Sub-Category** → More detailed product type (Chairs, Phones, Binders, etc.).
- **Sales** → Revenue generated from the order.
- **Quantity** → Number of units sold.
- **Discount** → Discount applied to the order.
- **Profit** → Net profit after costs.

# Project overview

Exploring customer segments, regional performance, and profitability through SQL aggregations, subqueries, projections.

## SAMPLE DATA

ship_mode	Segment	Country	City	State	Postal Code	Region	Category	sub_category	Sales	Quantity	Discount	Profit
First Class	Corporate	United States	Richardson	Texas	75080	Central	Technology	Phones	1097.544	7	0.2	123.4737
First Class	Corporate	United States	Richardson	Texas	75080	Central	Furniture	Furnishings	190.92	5	0.6	-147.963
First Class	Corporate	United States	Eagan	Minnesota	55122	Central	Technology	Accessories	45.98	2	0	19.7714
First Class	Corporate	United States	Eagan	Minnesota	55122	Central	Office Supplies	Binders	17.46	2	0	8.2062
First Class	Consumer	United States	Troy	New York	12180	East	Storage	Storage	208.56	6	0	52.14
First Class	Consumer	United States	Troy	New York	12180	East	Office Supplies	Paper	32.4	5	0	15.552
First Class	Consumer	United States	Troy	New York	12180	East	Furniture	Chairs	319.41	5	0.1	7.098
First Class	Consumer	United States	Troy	New York	12180	East	Office Supplies	Paper	14.56	2	0	6.9888
First Class	Consumer	United States	Troy	New York	12180	East	Technology	Accessories	30	2	0	3.3
First Class	Consumer	United States	Troy	New York	12180	East	Office Supplies	Binders	48.48	4	0.2	16.362
First Class	Consumer	United States	Troy	New York	12180	East	Office Supplies	Art	1.68	1	0	0.84
First Class	Consumer	United States	Springfield	Virginia	22153	South	Office Supplies	Paper	75.88	2	0	35.6636
First Class	Corporate	United States	Houston	Texas	77041	Central	Office Supplies	Binders	1.248	3	0.8	-1.9344
First Class	Corporate	United States	Houston	Texas	77041	Central	Furniture	Furnishings	9.708	3	0.6	-5.8248
First Class	Corporate	United States	Houston	Texas	77041	Central	Office Supplies	Storage	27.24	3	0.2	2.724
First Class	Corporate	United States	Decatur	Alabama	35601	South	Office Supplies	Appliances	208.16	1	0	56.2032
First Class	Corporate	United States	Decatur	Alabama	35601	South	Office Supplies	Binders	16.74	3	0	8.0352
First Class	Home Of...	United States	Chicago	Illinois	60623	Central	Office Supplies	Storage	230.376	3	0.2	-48.9549
First Class	Consumer	United States	San Francisco	California	94122	West	Office Supplies	Binders	51.312	3	0.2	17.9592
First Class	Consumer	United States	Wilmington	Delaware	19805	East	Furniture	Furnishings	47.04	3	0	18.3456
First Class	Consumer	United States	Wilmington	Delaware	19805	East	Office Supplies	Binders	30.84	4	0	13.878
First Class	Consumer	United States	Wilmington	Delaware	19805	East	Office Supplies	Storage	226.56	6	0	63.4368
First Class	Consumer	United States	Wilmington	Delaware	19805	East	Office Supplies	Envelopes	115.02	9	0	51.759
First Class	Consumer	United States	Wilmington	Delaware	19805	East	Technology	Phones	68.04	7	0	19.7316
First Class	Corporate	United States	Columbus	Ohio	43229	East	Technology	Phones	59.97	5	0.4	-11.994
First Class	Corporate	United States	Columbus	Ohio	43229	East	Office Supplies	Paper	78.304	2	0.2	29.364
First Class	Corporate	United States	Columbus	Ohio	43229	East	Office Supplies	Fasteners	21.456	9	0.2	6.9732
First Class	Home Of...	United States	Scottsdale	Arizona	85254	West	Office Supplies	Appliances	157.92	5	0.2	17.766
First Class	Home Of...	United States	Scottsdale	Arizona	85254	West	Technology	Phones	203.184	2	0.2	15.2388
First Class	Corporate	United States	San Jose	California	95123	West	Office Supplies	Paper	58.38	7	0	26.271
First Class	Corporate	United States	San Jose	California	95123	West	Office Supplies	Paper	105.52	4	0	48.5392
First Class	Corporate	United States	San Jose	California	95123	West	Office Supplies	Storage	80.88	6	0	21.0288
First Class	Consumer	United States	Los Angeles	California	90045	West	Office Supplies	Paper	5.98	1	0	2.691
First Class	Home Of...	United States	New York	New York	10035	East	Furniture	Bookcases	899.136	4	0.2	112.392
First Class	Home Of...	United States	New York	New York	10035	East	Technology	Phones	71.76	6	0	20.0928
First Class	Home Of...	United States	New York	New York	10035	East	Office Supplies	Paper	51.84	8	0	24.8832
First Class	Home Of...	United States	New York	New York	10035	East	Furniture	Bookcases	626.352	3	0.2	46.9764
First Class	Home Of...	United States	New York	New York	10035	East	Office Supplies	Art	19.9	5	0	6.567
First Class	Consumer	United States	Denver	Colorado	80219	West	Furniture	Tables	218.75	2	0.5	-161.875
First Class	Consumer	United States	Denver	Colorado	80219	West	Office Supplies	Appliances	2.6	1	0.2	0.2925
First Class	Consumer	United States	Dublin	Ohio	43017	East	Office Supplies	Fasteners	5.584	2	0.2	1.8148
First Class	Consumer	United States	Dublin	Ohio	43017	East	Office Supplies	Paper	22.704	6	0.2	8.2302



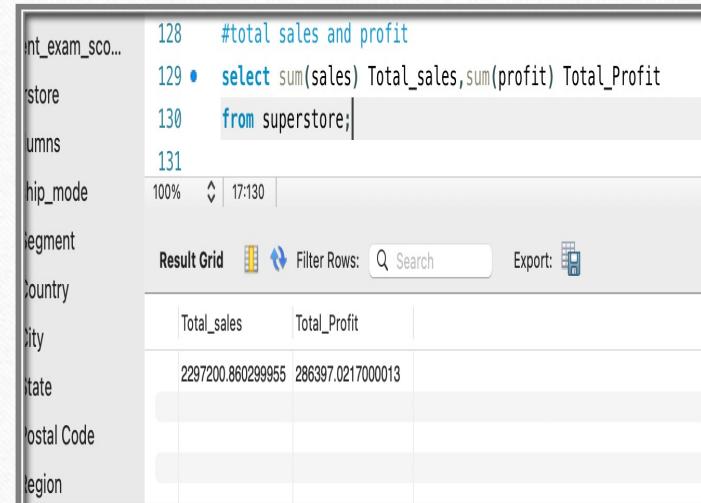
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- SQL QUERIES BASED ON THIS SUPERSTORE DATASET

# 1.Find Total Sales and Total Profit.

- Query :

```
Select sum(sales) Total_sales,  
sum(profit) Total_Profit  
From superstore;
```

- This query returns total sales and total profit



The screenshot shows a database query interface with the following details:

- Code area:

```
128 #total sales and profit
129 • select sum(sales) Total_sales,sum(profit) Total_Profit
130 from superstore;
131
```
- Table area:

Total_sales	Total_Profit
2297200.860299955	286397.021700013
- Bottom status bar: 100% 17:130
- Buttons: Result Grid, Filter Rows, Search, Export

ship_mode	Segment	Country	City	State	Postal Code	Region	Category	sub_category	Sales	Quantity	Discount	Profit
First Class	Corporate	United States	Richar...	Texas	75080	Central	Technology	Phones	1097.544	7	0.2	123.4737
First Class	Corporate	United States	Richar...	Texas	75080	Central	Furniture	Furnishings	190.92	5	0.6	-147.963
First Class	Corporate	United States	Eagan	Minnesota	55122	Central	Technology	Accessories	45.98	2	0	19.7714
First Class	Corporate	United States	Eagan	Minnesota	55122	Central	Office Su...	Binders	17.46	2	0	8.2062
First Class	Consumer	United States	Troy	New York	12180	East	Office Su...	Storage	208.56	6	0	52.14
First Class	Consumer	United States	Troy	New York	12180	East	Office Su...	Paper	32.4	5	0	15.552
First Class	Consumer	United States	Troy	New York	12180	East	Furniture	Chairs	319.41	5	0.1	7.098
First Class	Consumer	United States	Troy	New York	12180	East	Office Su...	Paper	14.56	2	0	6.9888
First Class	Consumer	United States	Troy	New York	12180	East	Technology	Accessories	30	2	0	3.3
First Class	Consumer	United States	Troy	New York	12180	East	Office Su...	Binders	48.48	4	0.2	16.362
First Class	Consumer	United States	Troy	New York	12180	East	Office Su...	Art	1.68	1	0	0.84
First Class	Consumer	United States	Spring...	Virginia	22153	South	Office Su...	Paper	75.88	2	0	35.6636
First Class	Corporate	United States	Houston	Texas	77041	Central	Office Su...	Binders	1.248	3	0.8	-1.9344
First Class	Corporate	United States	Houston	Texas	77041	Central	Furniture	Furnishings	9.708	3	0.6	-5.8248
First Class	Corporate	United States	Houston	Texas	77041	Central	Office Su...	Storage	27.24	3	0.2	2.724
First Class	Corporate	United States	Decatur	Alabama	35601	South	Office Su...	Appliances	208.16	1	0	56.2032
First Class	Corporate	United States	Decatur	Alabama	35601	South	Office Su...	Binders	16.74	3	0	8.0352
First Class	Home Of...	United States	Chicago	Illinois	60623	Central	Office Su...	Storage	230.376	3	0.2	-48.9549
First Class	Consumer	United States	San F...	California	94122	West	Office Su...	Binders	51.312	3	0.2	17.9592
First Class	Consumer	United States	Wilmin...	Delaware	19805	East	Furniture	Furnishings	47.04	3	0	18.3456
First Class	Consumer	United States	Wilmin...	Delaware	19805	East	Office Su...	Binders	30.84	4	0	13.878
First Class	Consumer	United States	Wilmin...	Delaware	19805	East	Office Su...	Storage	226.56	6	0	63.4368
First Class	Consumer	United States	Wilmin...	Delaware	19805	East	Office Su...	Envelopes	115.02	9	0	51.759
First Class	Consumer	United States	Wilmin...	Delaware	19805	East	Technology	Phones	68.04	7	0	19.7316
First Class	Corporate	United States	Colum...	Ohio	43229	East	Technology	Phones	59.97	5	0.4	-11.994

superstore 14

2.Retrieve all records where Ship Mode is "First Class".

This query returns all records in ship\_mode having first class

•Query :

select \* from superstore

where ship\_mode='First Class';

100% 29:7

Result Grid Filter Rows: Search Export: Fetch rows:

ship_mode	Segment	Country	City	State	Postal Code	Region	Category	sub_category	Sales	Quantity	Discount	Profit
Standard Class	Consumer	United States	Los A...	California	90032	West	Technology	Phones	907.152	6	0.2	90.7152
Standard Class	Consumer	United States	Los A...	California	90032	West	Technology	Phones	911.424	4	0.2	68.3568
Second Class	Consumer	United States	San F...	California	94109	West	Technology	Phones	213.48	3	0.2	16.011
Second Class	Consumer	United States	Los A...	California	90049	West	Technology	Accessories	90.57	3	0	11.7741
First Class	Corporate	United States	Richar...	Texas	77080	Central	Technology	Phones	1097.544	7	0.2	123.4737
Standard Class	Home Office	United States	Houston	Texas	77041	Central	Technology	Phones	371.168	4	0.2	41.7564
Standard Class	Corporate	United States	Naper...	Illinois	60540	Central	Technology	Phones	147.168	4	0.2	16.5564
First Class	Corporate	United States	Eagan	Minnesota	55122	Central	Technology	Accessories	45.98	2	0	9.7714
Standard Class	Consumer	United States	Dover	Delaware	19901	East	Technology	Accessories	45	3	0	4.95
Standard Class	Consumer	United States	Dover	Delaware	19901	East	Technology	Phones	21.8	2	0	6.104
Standard Class	Corporate	United States	New Y...	New York	10024	East	Technology	Phones	1029.95	5	0	298.6855
First Class	Consumer	United States	Troy	New York	12180	East	Technology	Accessories	30	2	0	3.3
Standard Class	Consumer	United States	Los A...	California	90004	West	Technology	Accessories	13.98	2	0	6.1512
Standard Class	Corporate	United States	Gilbert	Arizona	85234	West	Technology	Phones	167.968	4	0.2	62.988
Standard Class	Consumer	United States	Roche...	Minnesota	55901	Central	Technology	Accessories	19.99	1	0	6.7966
Standard Class	Corporate	United States	Los A...	California	90036	West	Technology	Phones	73.584	2	0.2	8.2782
Standard Class	Home Office	United States	Chicago	Illinois	60610	Central	Technology	Accessories	95.976	3	0.2	-10.7973
Standard Class	Consumer	United States	Aurora	Colorado	80013	West	Technology	Accessories	238.896	6	0.2	-26.8758
Standard Class	Consumer	United States	Charlo...	North Ca...	28205	South	Technology	Accessories	74.112	8	0.2	17.6016
Standard Class	Consumer	United States	Charlo...	North Ca...	28205	South	Technology	Phones	27.992	1	0.2	2.0994
Standard Class	Home Office	United States	Orlan...	Illinois	60462	Central	Technology	Accessories	339.96	5	0.2	67.992
First Class	Consumer	United States	Wilmin...	Delaware	19805	East	Technology	Phones	68.04	7	0	19.7316
First Class	Corporate	United States	Colum...	Ohio	43229	East	Technology	Phones	59.97	5	0.4	-11.994
Standard Class	Corporate	United States	Franklin	Wisconsin	53132	Central	Technology	Phones	384.45	11	0	103.8015
Standard Class	Corporate	United States	Franklin	Wisconsin	53132	Central	Technology	Phones	149.97	3	0	5.9988

Action Output

Time	Action	Response	Duration
18 10:54:30	select * from superstore where category='technology' LIMIT 0, 1000	1000 row(s) returned	0.0031 s

3. Show all orders from the "Technology" category.

---

•Query :

select \* from superstore

where category='technology';

This query returns all orders which is under technology category.

hip\_mode 100% 2/13

segment Result Grid Filter Rows: Q Search Export: Fetch rows:

	ship_mode	Segment	Country	City	State	Postal Code	Region	Category	sub_category	Sales	Quantity	Discount	Profit
country	Second Class	Consumer	United States	San F...	California	94122	West	Office Su...	Supplies	8187.65	5	0	327.506
city	Standard Class	Corporate	United States	Sacra...	California	95823	West	Office Su...	Binders	5083.96	5	0.2	1906.485
state	Second Class	Corporate	United States	San F...	California	94109	West	Office Su...	Supplies	4912.39	3	0	196.5036
Postal Code	First Class	Corporate	United States	San F...	California	94110	West	Technology	Machines	4799.984	2	0.2	359.988
region	Second Class	Consumer	United States	San D...	California	92037	West	Technology	Machines	4476.8	4	0.2	503.64
category	First Class	Home Office	United States	Los Angeles	Florida	90008	West	Technology	Phones	4158.912	8	0.2	363.9048
sub_category	Second Class	Consumer	United States	Fresno	California	93727	West	Furniture	Tables	3610.848	12	0.2	135.4068
sales	Standard Class	Consumer	United States	Los A...	California	90045	West	Furniture	Bookcases	3406.664	8	0.15	160.3136
quantity	Standard Class	Home Office	United States	Los A...	California	90032	West	Technology	Copiers	3359.952	6	0.2	104.985
discount	First Class	Home Office	United States	Los A...	California	90045	West	Technology	Machines	3357.6	3	0.2	377.73
profit	Standard Class	Consumer	United States	San D...	California	92037	West	Technology	Accessories	3347.37	13	0	636.0003
exes	Standard Class	Home Office	United States	Santa...	California	93101	West	Technology	Phones	3023.929	9	0.2	226.7946
sign Keys	Standard Class	Consumer	United States	Los A...	California	90045	West	Technology	Machines	2973.32	7	0.2	334.4985
Session	Standard Class	Corporate	United States	Los A...	California	90004	West	Furniture	Tables	2887.056	9	0.2	180.441
superstore 16	First Class	Home Office	United States	Los A...	California	90049	West	Technology	Copiers	2879.952	6	0.2	1007.98...
Action Output	Time	Action					Response		Durati				
	19	10:59:22	select * from superstore where state='California' order by sales desc LIMIT 0, 1000				1000 row(s) returned		0.023				

4. Display orders from the state "California" sorted by Sales descending.

---

•Query :

select \* from superstore

where state='California'

order by sales desc;

This query returns all orders which is under California.

## 5.Find average Profit per Category.

•Query :

```
select Category ,  
       avg(profit) AVG_PROFIT  
  from superstore  
 group by category;
```

•This query returns average profit with category.

The screenshot shows a database query editor interface. On the left, there is a sidebar with various database schema names listed. The main area displays a code editor with the following SQL queries:

```
21  #7. Find average Profit per Category.  
22 • select Category,avg(profit) AVG_PROFIT  
23   from superstore  
24   group by category;  
25  #8. Show maximum Sales value for each Sub-Category.
```

Below the code editor is a "Result Grid" table. The table has two columns: "Category" and "AVG\_PROFIT". The data is as follows:

Category	AVG_PROFIT
Furniture	8.699327109853842
Office Supplies	20.327049585131117
Technology	78.75200221981586

## 6. Show maximum Sales value for each Sub-Category.

- Query :

```
SELECT  
SUB_CATEGORY,  
MAX(SALES) MAX_SALES  
FROM SUPERSTORE  
GROUP BY  
SUB_CATEGORY;
```

- This query returns maximum sales with sub-category.

The screenshot shows a database interface with a sidebar navigation and a main query editor and results grid.

**Navigation:**

- > sales2
- > student\_exam\_sco...
- superstore
  - Columns
    - ship\_mode
    - Segment
    - Country
    - City
    - State
    - Postal Code
    - Region
    - Category
    - sub\_category
    - Sales
    - Quantity
    - Discount
    - Profit
  - Indexes
  - > Foreign Keys
  - Triggers

**Query Editor:**

```
25 #8. Show maximum Sales value for each Sub-C  
26 • SELECT SUB_CATEGORY,MAX(SALES) MAX_SALES  
27 FROM SUPERSTORE  
28 GROUP BY SUB_CATEGORY;  
29 #9. Count the number of orders per Segment.
```

**Result Grid:**

SUB_CATEGORY	MAX_SALES
Bookcases	4404.9
Chairs	4416.174
Labels	786.48
Tables	4297.644
Storage	2934.33
Furnishings	1336.44
Art	1113.024
Phones	4548.81
Binders	9892.74
Appliances	2625.12
Paper	733.95
Accessories	3347.37
Envelopes	604.656
Fasteners	93.36
Supplies	8187.65
Machines	22638.48
Copiers	17499.95

## 07. Count the number of orders per Segment.

•Query :

```
SELECT SEGMENT,COUNT(*)  
FROM SUPERSTORE  
GROUP BY SEGMENT;
```

•This query returns count of orders per segment.

The screenshot shows a database interface with a sidebar on the left containing tables: sales2, student\_exam\_sco..., superstore, and a expanded 'Columns' section with various dimensions like ship\_mode, Segment, Country, City, State, Postal Code, Region, Category, sub\_category, and Sales. The main area displays two numbered queries:

```
29  #9. Count the number of orders per Segment.  
30 •  SELECT SEGMENT,COUNT(*)  
31   FROM SUPERSTORE  
32   GROUP BY SEGMENT;  
33  #10. Find total Quantity sold in each State.
```

Below the queries is a result grid showing the count of orders per segment:

SEGMENT	COUNT(*)
Consumer	5191
Corporate	3020
Home Office	1783

## 08. Calculate average Discount per Ship Mode.

- Query :

```
SELECT SHIP_MODE,  
AVG(DISCOUNT)  
AVG_DISCOUNT  
FROM SUPERSTORE  
GROUP BY SHIP_MODE;
```

- This query returns average discount of orders per ship mode.

The screenshot shows a database interface with a sidebar on the left containing a tree view of tables: sales1, sales2, student\_exam\_sco..., superstore, Columns (with sub-items: ship\_mode, Segment, Country, City, State, Postal Code, Region, Category, sub\_category), and a search bar. The main area has two tabs: 'Editor' and 'Result Grid'. The 'Editor' tab displays the following SQL code:

```
42 #12. Calculate average Discount per Ship Mode.  
43 • SELECT SHIP_MODE, AVG(DISCOUNT) AVG_DISCOUNT  
44 FROM SUPERSTORE  
45 GROUP BY SHIP_MODE;  
46 #13. Find orders with Sales greater than the average sales across all orders.  
47 • select * from superstore
```

The 'Result Grid' tab shows the output of the query:

SHIP_MODE	AVG_DISCOUNT
Second Class	0.13889460154241506
Standard Class	0.16002345844504628
First Class	0.16460988296488774
Same Day	0.15239410681399693

## 09. Find total Quantity sold in each State.

•Query :

```
SELECT STATE,SUM(QUANTITY)  
FROM SUPERSTORE  
GROUP BY STATE;
```

•This query returns average discount of orders per ship mode.

The screenshot shows a database interface with a sidebar containing object navigation (sales2, student\_exam\_s..., superstore) and a detailed tree view of the superstore schema (Columns, Indexes, Foreign Keys, Triggers). The main area displays a query editor with the following code:

```
33  #10. Find total Quantity sold in each State.  
34 • SELECT STATE,SUM(QUANTITY)  
35 FROM SUPERSTORE  
36 GROUP BY STATE;#
```

The results grid shows the total quantity sold for each state:

STATE	SUM(QUANTITY)
Kentucky	523
California	7667
Florida	1379
North Carolina	983
Washington	1883
Texas	3724
Wisconsin	463
Utah	219
Nebraska	136
Pennsylvania	2153
Illinois	1445
Minnesota	331
Michigan	946
Delaware	367
Indiana	578
New York	4224
Arizona	862
Virginia	893
Tennessee	681
Alabama	256
South Carolina	172
Oregon	499
Colorado	693

The action output shows two queries executed:

Action	Time	Response
SELECT SHIP_MODE,AVG(DISCOUNT) AVG_DISCOUNT FROM SUPERSTORE GROUP BY SHIP_MODE LIMIT 0, 1000	12:14:40	4 row(s) return
SELECT STATE,SUM(QUANTITY) FROM SUPERSTORE GROUP BY STATE LIMIT 0, 1000	12:18:38	49 row(s) return

## 10. Display Region and its total Profit, but only for regions with profit > 10,000.

•Query :

```
SELECT REGION ,SUM(PROPIT) SUM  
FROM SUPERSTORE  
GROUP BY REGION  
HAVING SUM>10000;
```

•This query returns region and its total profit having more than 10000.

REGION	SUM
South	46749.430300000065
West	108418.44890000018
Central	39706.36249999998
East	91522.78000000026
Sales	

## 11. List States where total Profit is higher than the average profit of all states.

- Query :

```
select state from superstore  
group by state  
having  
sum(profit)>avg(profit);
```

- This query returns states having profit is higher than average profit.

The screenshot shows a database interface with a sidebar containing navigation links like 'Result Grid', 'Form Editor', 'Field Types', 'Query Stats', and 'Execution Plan'. The main area displays a query editor with the following code:

```
50 • select state from superstore  
51 group by state  
52 having sum(profit)>avg(profit);  
53 #15. Retrieve orders belonging to the Category that has the highest total sales.  
54 • select category  
55
```

The results are displayed in a table titled 'state' with the following data:

state
Kentucky
California
Washington
Wisconsin
Utah
Nebraska
Minnesota
Michigan
Delaware
Indiana
New York
Virginia
Alabama
South Carolina
Iowa
Missouri
Oklahoma
New Mexico
Louisiana
Connecticut
New Jersey
Massachusetts
Georgia
Nevada

At the bottom, there is an 'Action Output' section showing the query details:

Time	Action	Response	Duration / Fetch Time
28 12:27:26	select state from superstore group by state having sum(profit)>avg(profit) LIMIT 0, 1000	38 row(s) returned	0.023 sec / 0.00012...

The screenshot shows a database interface with a sidebar on the left containing a list of tables: ipl\_ball\_by\_ball\_..., sales1, sales2, student\_exam\_s..., superstore, Columns, ship\_mode, Segment, Country, City, State, Postal Code, Region, and Category. The main area displays a query editor with the following code:

```
53  #15. Retrieve orders belonging to the category  
54 • select category  
55 from superstore  
56 group by category  
57 having max(sales);  
58 #16. Find customers (by City)  
59 •
```

The Result Grid shows the output of the query:

category
Furniture
Office Supplies
Technology

## 12. Retrieve orders belonging to the Category that has the highest total sales.

•Query :

select category

from superstore

group by category

having max(sales);

•This query returns category having maximum sales.

### 13. Display City and its total sales, but only for cities with sales > 50,000.

•Query :

```
SELECT City, SUM(Sales) AS Total_Sales  
FROM superstore  
GROUP BY City  
HAVING SUM(Sales) > 50000;
```

•This query returns city names having total sales is greater than 50000.

The screenshot shows a database query results grid. On the left, there is a sidebar with a tree view of schema objects: Segment, Country, City, State, Postal Code, Region, Category, sub\_category, and Sales. The main area is a 'Result Grid' with the following data:

City	Total_Sales
Los Angeles	175851.341
Seattle	119540.742
San Francisco	112669.09199999992
Philadelphia	109077.0130000008
Houston	64504.76039999994
New York City	256368.161

## 14. Find Sub-Category with average profit greater than 100.

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- Query :

```
SELECT Sub_Category, AVG(Profit) AS Avg_Profit  
FROM superstore  
GROUP BY Sub_Category  
HAVING AVG(Profit) > 100;
```

The screenshot shows a database interface with a sidebar on the left containing a 'Columns' section with several dropdown menus. The main area is a 'Result Grid' showing one row of data:

Sub_Category	Avg_Profit
Copiers	817.9091897058825

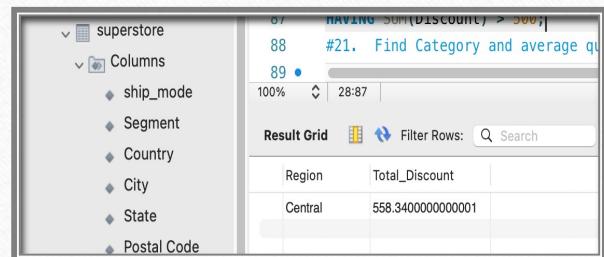
- This query returns sub category with average profit is greater than 100.

## 15. Show Region and total discount given, but only for regions with discount sum > 500.

- Query :

```
SELECT Region, SUM(DiscOUNT) AS Total_DisCount  
FROM superstore  
GROUP BY Region  
HAVING SUM(DiscOUNT) > 500;
```

- This query returns regions and total discount who gave more than 500.



Region	Total_DisCount
Central	558.340000000001

# Management table data

100% | 26:135 |

**Result Grid** Filter Rows: Search Export:

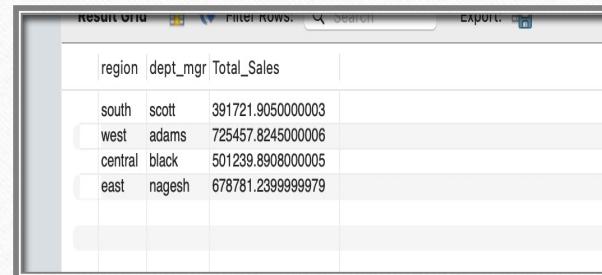
	region	dept_mgr	director
	south	scott	adams
	west	adams	john
	central	black	king
	east	nagesh	nikitha

## 16. List each region with its department manager and total sales.

---

- Query :

```
SELECT m.region, m.dept_mgr, SUM(s.Sales) AS Total_Sales  
FROM superstore s  
JOIN management m  
ON s.Region = m.region  
GROUP BY m.region, m.dept_mgr;
```



region	dept_mgr	Total_Sales
south	scott	391721.9050000003
west	adams	725457.8245000006
central	black	501239.8908000005
east	nagesh	678781.2399999979

## 17. Show director names along with total profit in their regions.

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- Query :

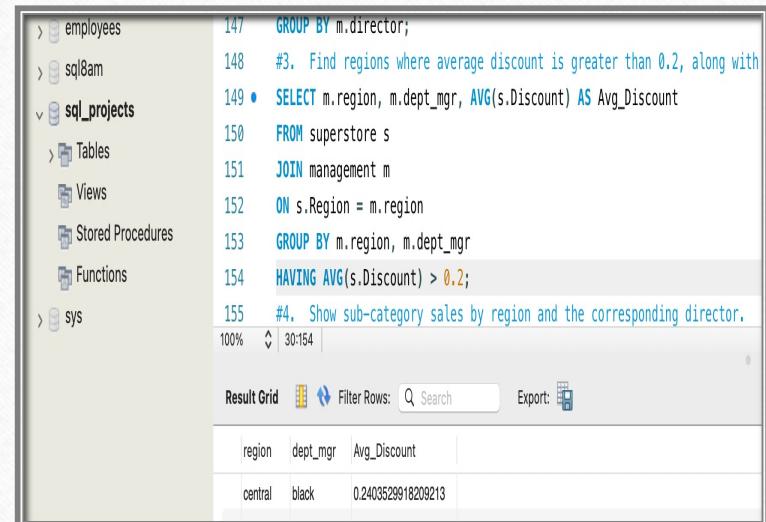
```
SELECT m.director, SUM(s.Profit) AS Total_Profit  
FROM superstore s  
JOIN management m  
ON s.Region = m.region  
GROUP BY m.director;
```

director	Total_Profit
adams	46749.430300000065
john	108418.44890000018
king	39706.36249999998
nikitha	91522.78000000026

## 18. Find regions where average discount is greater than 0.2, along with manager names.

- Query :

```
SELECT m.region, m.dept_mngr, AVG(s.Discount) AS  
Avg_Discount  
  
FROM superstore s  
  
JOIN management m  
  
ON s.Region = m.region  
  
GROUP BY m.region, m.dept_mngr  
  
HAVING AVG(s.Discount) > 0.2;
```



The screenshot shows a SQL editor interface with a tree view of database objects on the left and a code editor on the right. The code editor contains the following SQL query:

```
147 GROUP BY m.director;  
148 #3. Find regions where average discount is greater than 0.2, along with  
149 • SELECT m.region, m.dept_mngr, AVG(s.Discount) AS Avg_Discount  
150 FROM superstore s  
151 JOIN management m  
152 ON s.Region = m.region  
153 GROUP BY m.region, m.dept_mngr  
154 HAVING AVG(s.Discount) > 0.2;  
155 #4. Show sub-category sales by region and the corresponding director.  
100% 30:154
```

Below the code editor is a result grid table:

region	dept_mngr	Avg_Discount
central	black	0.2403529918209213

## 19. Show sub-category sales by region and the corresponding director.

- Query :

```
SELECT m.director, s.Region, s.Sub_Category, SUM(s.Sales) AS Total_Sales
```

```
FROM superstore s
```

```
JOIN management m
```

```
ON s.Region = m.region
```

```
GROUP BY m.director, s.Region, s.Sub_Category;
```

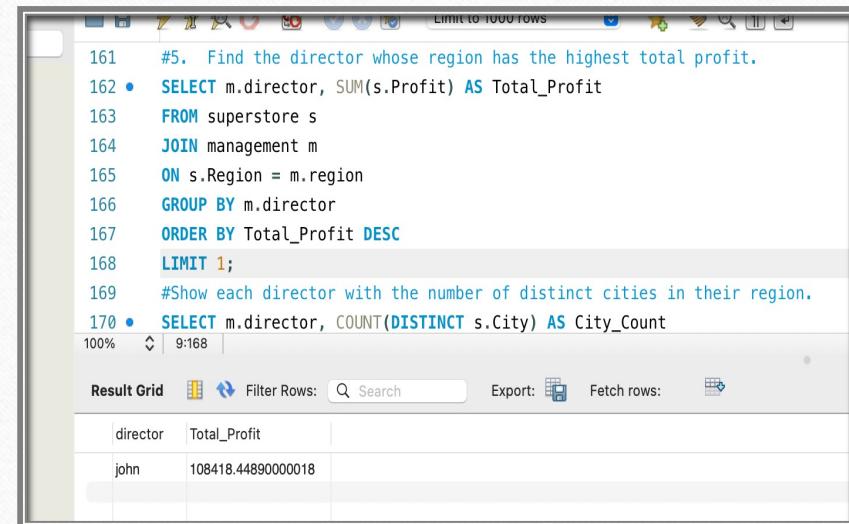
The screenshot shows the SSMS interface with the following details:

- Object Explorer:** Shows a tree view with nodes: Tables, Views, Stored Procedures, Functions, and sys.
- Script pane:** Displays the T-SQL code for the query, including line numbers 156 through 161.
- Results pane:** Shows the output grid with columns: director, Region, Sub\_Category, and Total\_Sales. The data includes rows for various directors (adams, john, king, nikitha) across different regions (South, West, Central, East) and sub-categories (Bookcases, Chairs, Labels, Tables, Storage, Furnishings, Art, Phones, Binders, Appliances, Paper, Binders, Storage, Art, Envelopes, Art, Paper). The total sales values range from 4375.874 to 10899.362.
- Status bar:** Shows "Query Completed" at the bottom.

## 20. Find the director whose region has the highest total profit.

- Query :

```
SELECT m.director, SUM(s.Profit) AS Total_Profit  
FROM superstore s  
JOIN management m  
ON s.Region = m.region  
GROUP BY m.director  
ORDER BY Total_Profit DESC  
LIMIT 1;
```



The screenshot shows a MySQL query editor window. The SQL code is displayed in the top half, and the results are shown in a grid below. The results grid has two columns: 'director' and 'Total\_Profit'. The single row shows 'john' with a 'Total\_Profit' of '108418.44890000018'.

director	Total_Profit
john	108418.44890000018

## 21. Show each director with the number of distinct cities in their region.

- Query :

```
SELECT m.director, COUNT(DISTINCT s.City) AS City_Count  
FROM superstore s  
JOIN management m  
ON s.Region = m.region  
GROUP BY m.director;
```

The screenshot shows a SQL query editor interface. On the left, there's a tree view of database objects: employees, sql8am, sql\_projects (selected), Tables, Views, Stored Procedures, Functions, and sys. The main area contains the following SQL code:

```
168  LIMIT 1;  
169  #Show each director with the number of distinct cities in their region.  
170 • SELECT m.director, COUNT(DISTINCT s.City) AS City_Count  
171  FROM superstore s  
172  JOIN management m  
173  ON s.Region = m.region  
174  GROUP BY m.director;  
175  #Find department managers whose regions have total sales greater than 100,000.  
176 • SELECT m.dept_mngr, SUM(s.Sales) AS Total_Sales
```

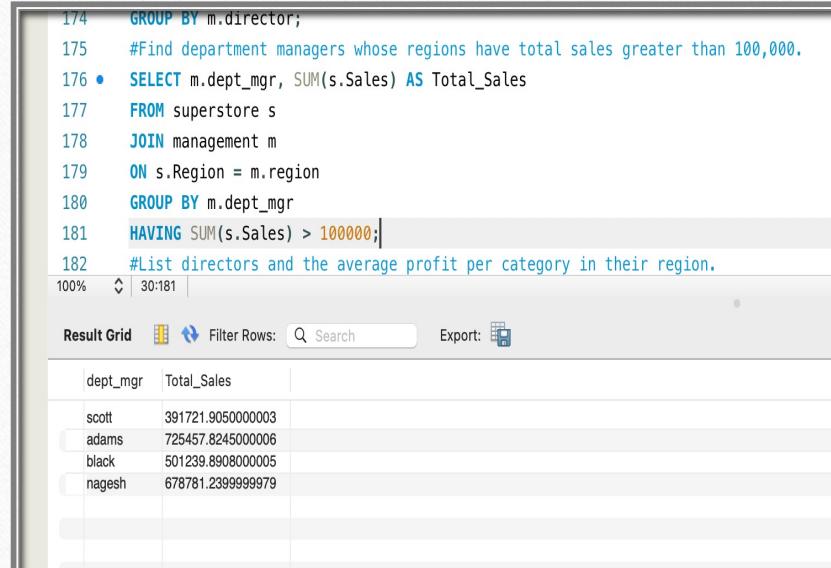
The status bar at the bottom right indicates "100% 21/174". Below the code, there's a "Result Grid" section with a table:

director	City_Count
adams	125
john	169
king	181
nikitha	108

## 22.Find department managers whose regions have total sales greater than 100,000.

- Query :

```
SELECT m.dept_mngr, SUM(s.Sales) AS Total_Sales  
FROM superstore s  
JOIN management m  
ON s.Region = m.region  
GROUP BY m.dept_mngr  
HAVING SUM(s.Sales) > 100000;
```



The screenshot shows a code editor with a SQL query and its results. The code is as follows:

```
174 GROUP BY m.director;  
175 #Find department managers whose regions have total sales greater than 100,000.  
176 • SELECT m.dept_mngr, SUM(s.Sales) AS Total_Sales  
177 FROM superstore s  
178 JOIN management m  
179 ON s.Region = m.region  
180 GROUP BY m.dept_mngr  
181 HAVING SUM(s.Sales) > 100000;  
182 #List directors and the average profit per category in their region.
```

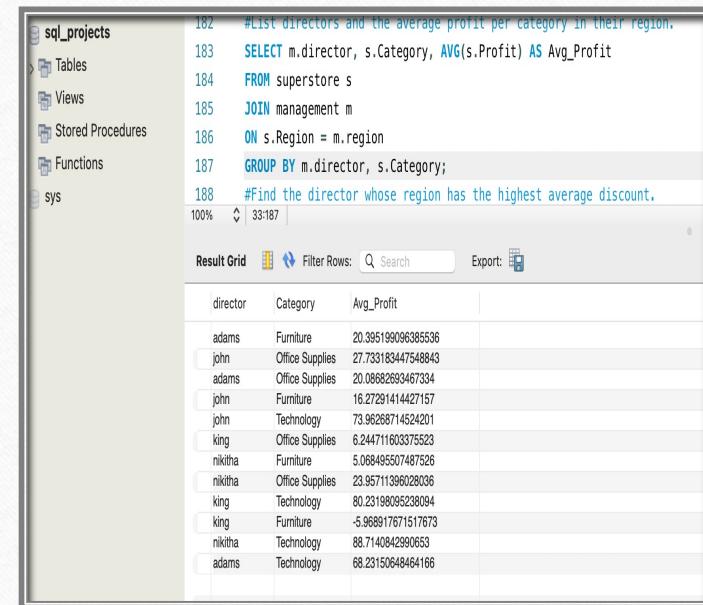
The results table has two columns: dept\_mngr and Total\_Sales. The data is:

dept_mngr	Total_Sales
scott	391721.9050000003
adams	725457.8245000006
black	501239.8908000005
nagesh	678781.2399999979

## 23.List directors and the average profit per category in their region.

- Query :

```
SELECT m.director, s.Category, AVG(s.Profit) AS Avg_Profit  
FROM superstore s  
JOIN management m  
ON s.Region = m.region  
GROUP BY m.director, s.Category;
```



The screenshot shows a SQL query being run in a database environment. The code is as follows:

```
182 #List directors and the average profit per category in their region.  
183 SELECT m.director, s.Category, AVG(s.Profit) AS Avg_Profit  
184 FROM superstore s  
185 JOIN management m  
186 ON s.Region = m.region  
187 GROUP BY m.director, s.Category;  
188 #Find the director whose region has the highest average discount.
```

The results grid displays the following data:

director	Category	Avg_Profit
adams	Furniture	20.395199096385536
john	Office Supplies	27.733183447546843
adams	Office Supplies	20.08682693467334
john	Furniture	16.27291414427157
john	Technology	73.962687148524201
king	Office Supplies	6.244711603375523
nikitha	Furniture	5.068495507487526
nikitha	Office Supplies	23.9571139628636
king	Technology	80.23198095238094
king	Furniture	-5.968917671517673
nikitha	Technology	88.7140842900653
adams	Technology	68.23150848464166

## 24.Find the director whose region has the highest average discount.

•Query :

```
SELECT m.director, AVG(s.Discount) AS Avg_Discount
FROM superstore s
JOIN management m
ON s.Region = m.region
GROUP BY m.director
ORDER BY Avg_Discount DESC
LIMIT 1;
```

director	Avg_Discount
king	0.2403529918209213

## 25. Show each department manager with total profit and sales-to-profit ratio in their region.

•Query :

```
SELECT m.dept_mgr,  
       SUM(s.Sales) AS Total_Sales,  
       SUM(s.Profit) AS Total_Profit,  
       SUM(s.Sales) / NULLIF(SUM(s.Profit), 0)  
AS Sales_Profit_Ratio  
FROM superstore s  
JOIN management m  
ON s.Region = m.region  
GROUP BY m.dept_mgr;
```

The screenshot shows a database query results grid titled "Result Grid". The grid has four columns: "dept\_mgr", "Total\_Sales", "Total\_Profit", and "Sales\_Profit\_Ratio". The data is as follows:

dept_mgr	Total_Sales	Total_Profit	Sales_Profit_Ratio
scott	391721.9050000003	46749.430300000065	8.379180291315759
adams	725457.8245000006	108418.44890000018	6.69127654804513
black	501239.8908000005	39706.36249999998	12.623666819140151
nagesh	678781.2399999979	91522.78000000026	7.416527775926343

THANK YOU

