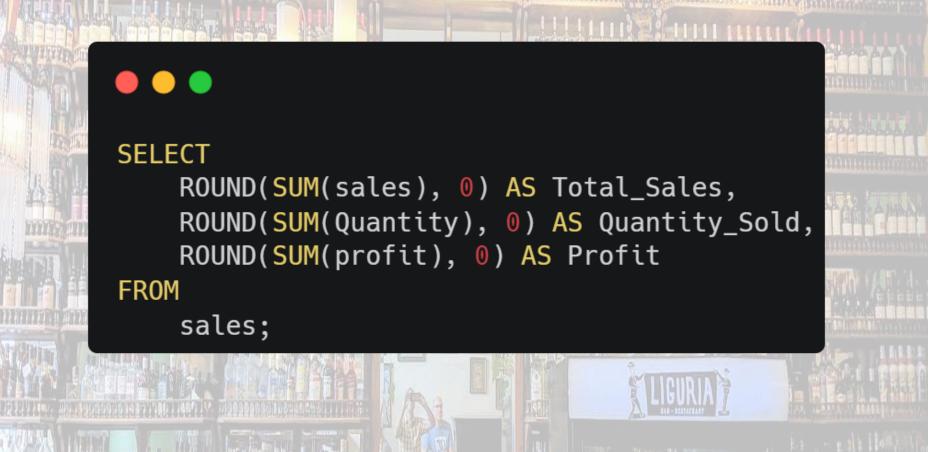
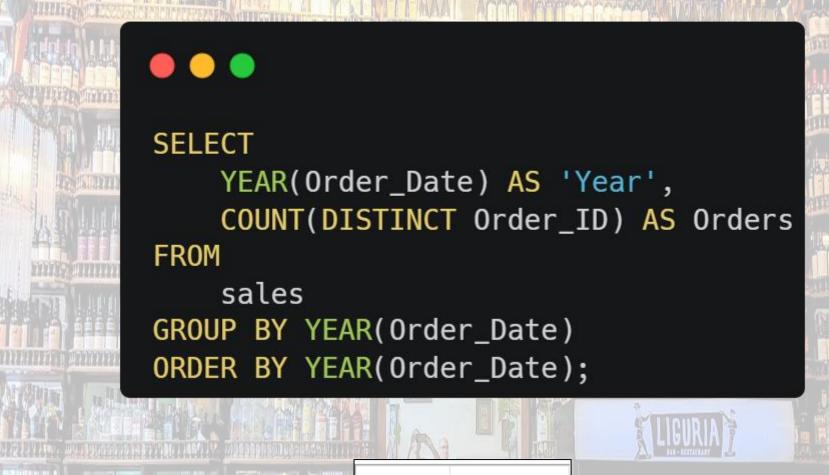


What is the overall total sales, quantity sold, and profit?



	Total_Sales	Quantity_Sold	Profit
•	2272450	36749	282858





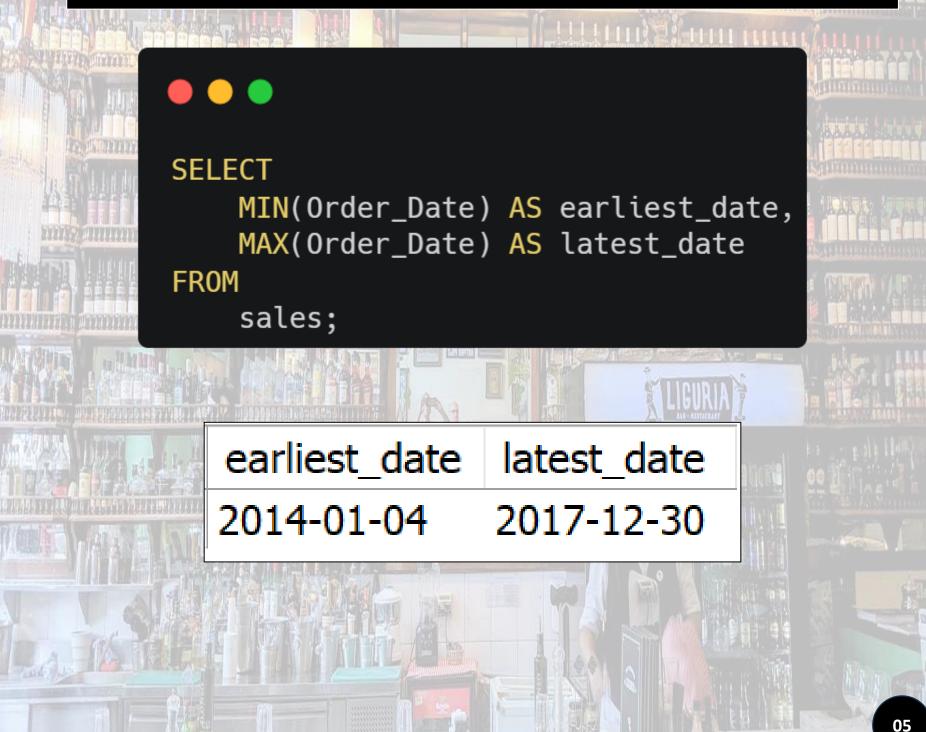
	Year	Orders
111	2014	958
1	2015	1020
40	2016	1293
	2017	1660
M.		CD 11.0

What is the average sales per month?

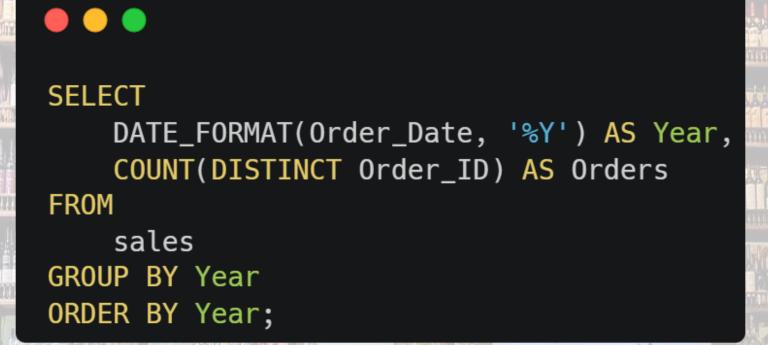
```
SELECT
    DATE_FORMAT(Order_Date, '%Y-%m') AS Month,
    ROUND(AVG(sales), 0) AS Average_Sales
FROM
    sales
GROUP BY Month
ORDER BY Month;
SET GLOBAL sql_mode = 'ANSI_QUOTES';
```

Month	Average_Sales	
2014-01	191	
2014-02	96	
2014-03	361	
2014-04	213	Y
2014-05	195	
2014-06	259	800
2014-07	245	
2014-08	184	



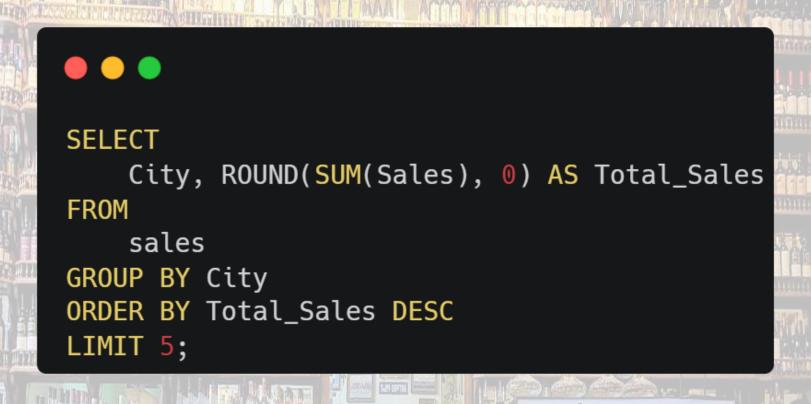






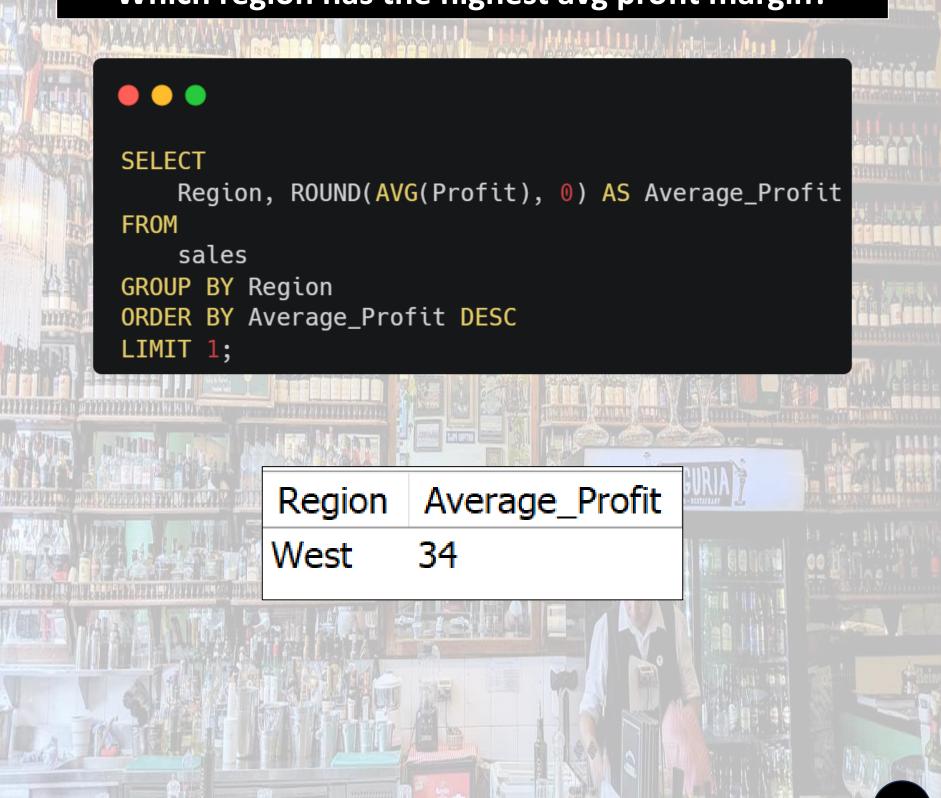
Year	Orders
2014	958
2015	1020
2016	1293
2017	1660

What are the top 5 cities with highest sales?



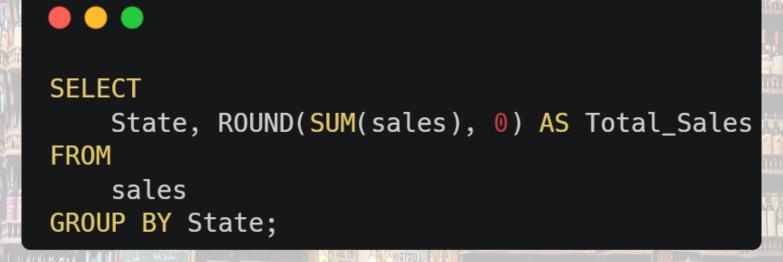
City	Total_Sales
New York City	255249
Los Angeles	173169
Seattle	117773
San Francisco	110917
Philadelphia	107486

Which region has the highest avg profit margin?



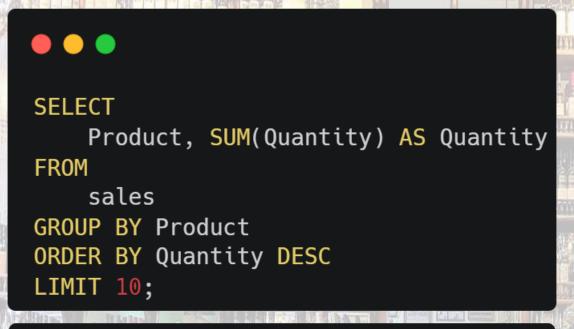
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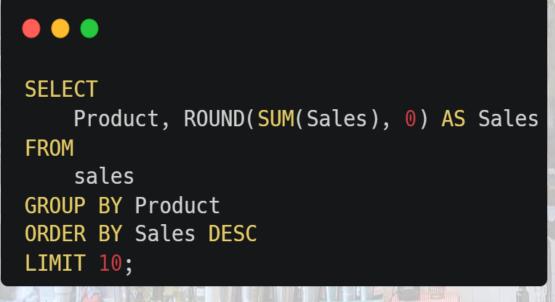


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State	Total_Sales
Kentucky	36592
California	450568
Florida	88877
North Carolina	55548
Washington	136590
Texas	169554
Wisconsin	32092

Identify the top 10 best-selling products by quantity and sales.

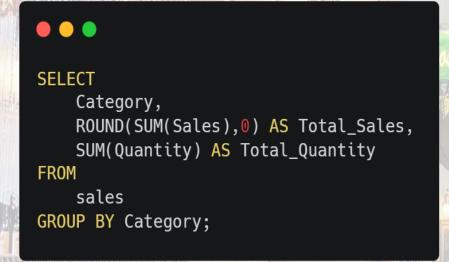


*	Product	Quantity
	Staples	215
91	Staple envelope	170
	Easy-staple paper	150
	Staples in misc. colors	86
- 0	KI Adjustable-Height Table	74
N.	Storex Dura Pro Binders	71
1	Avery Non-Stick Binders	71

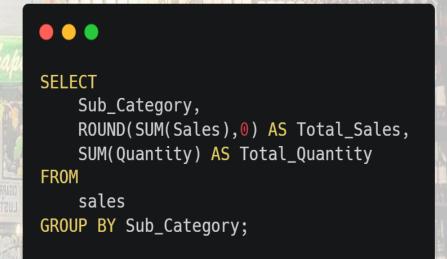


	0.00
Product	Sales
Canon imageCLASS 2200 Advanced Copier	61600
Fellowes PB500 Electric Punch Plastic Comb Binding Machine	27453
Cisco TelePresence System EX90 Videoconferencing Unit	22638
HON 5400 Series Task Chairs for Big and Tall	21871
GBC DocuBind TL300 Electric Binding System	19823
GBC Ibimaster 500 Manual ProClick Binding System	19024
Hewlett Packard LaserJet 3310 Copier	18840

What is the total sales and quantity sold for each product category and sub-category?

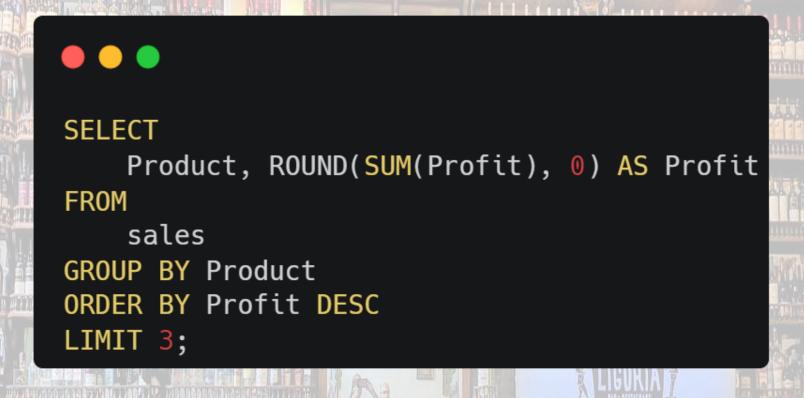


		N THE PERSON NO.
Category	Total_Sales	Total_Quantity
Furniture	733047	7855
Office Supplies	703503	21990
Technology	835900	6904



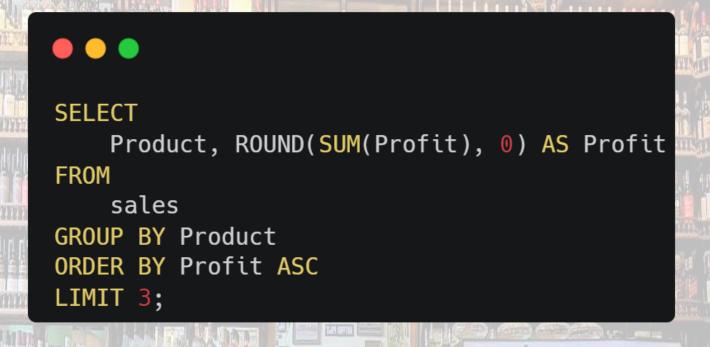
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Sub_Category	Total_Sales	Total_Quantity
Bookcases	114880	868
Chairs	328449	2356
Labels	12486	1400
Tables	206966	1241
Storage	216803	3065
Furnishings	82752	3390
Art	27119	3000

Determine the products with the highest profit margins.



7	Product	Profit
H	Canon imageCLASS 2200 Advanced Copier	25200
	Fellowes PB500 Electric Punch Plastic Comb Binding Machine with Manual Bind	7753
	Hewlett Packard LaserJet 3310 Copier	6984

Determine the products with the lowest profit margins.



Product	Profit
Cubify CubeX 3D Printer Double Head Print	-8880
Lexmark MX611dhe Monochrome Laser Printer	-4590
Cubify CubeX 3D Printer Triple Head Print	-3840

Who are the top 10 customers based on total sales?



SELECT

Customer, ROUND(SUM(Sales), 0) AS Sales
FROM

sales

GROUP BY Customer

ORDER BY Sales DESC

LIMIT 10;

Customer	Sales
Sean Miller	25043
Tamara Chand	19018
Raymond Buch	15117
Tom Ashbrook	14596
Adrian Barton	14356
Sanjit Chand	14142
Ken Lonsdale	14072
Hunter Lopez	12873
Sanjit Engle	12209
Christopher Conant	12129

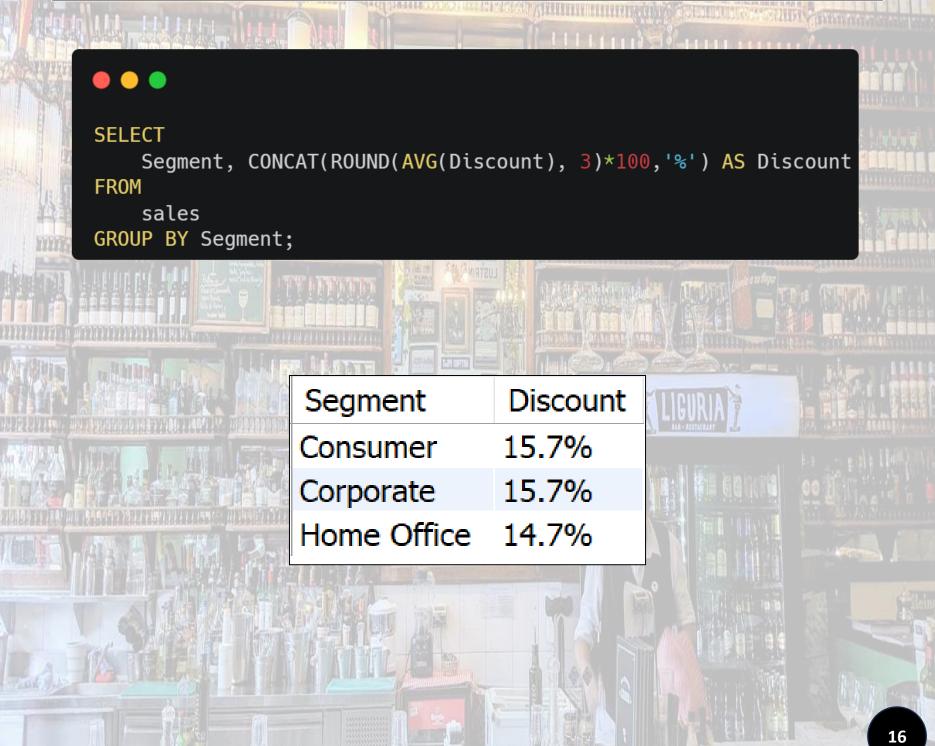
Identify the customers who made the most and least purchases.



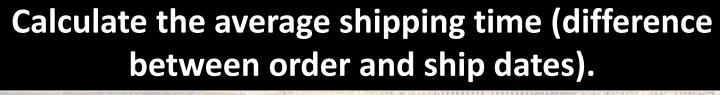
Customer Most_Purchases
John Lee 138

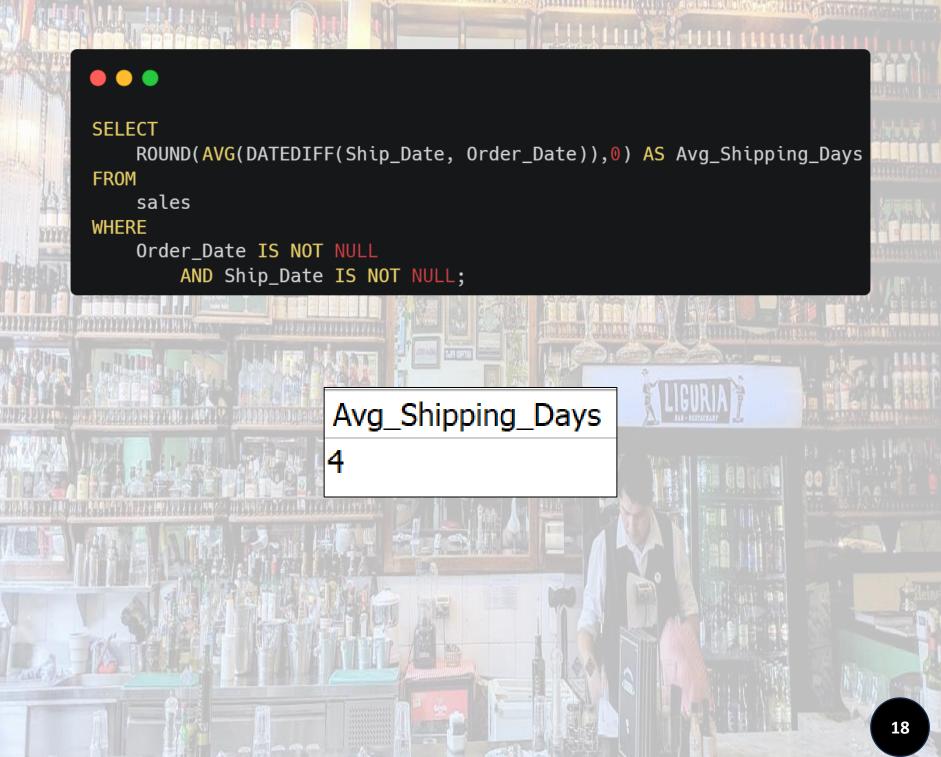
Customer Least_Purchases
Anthony O'Donnell 2



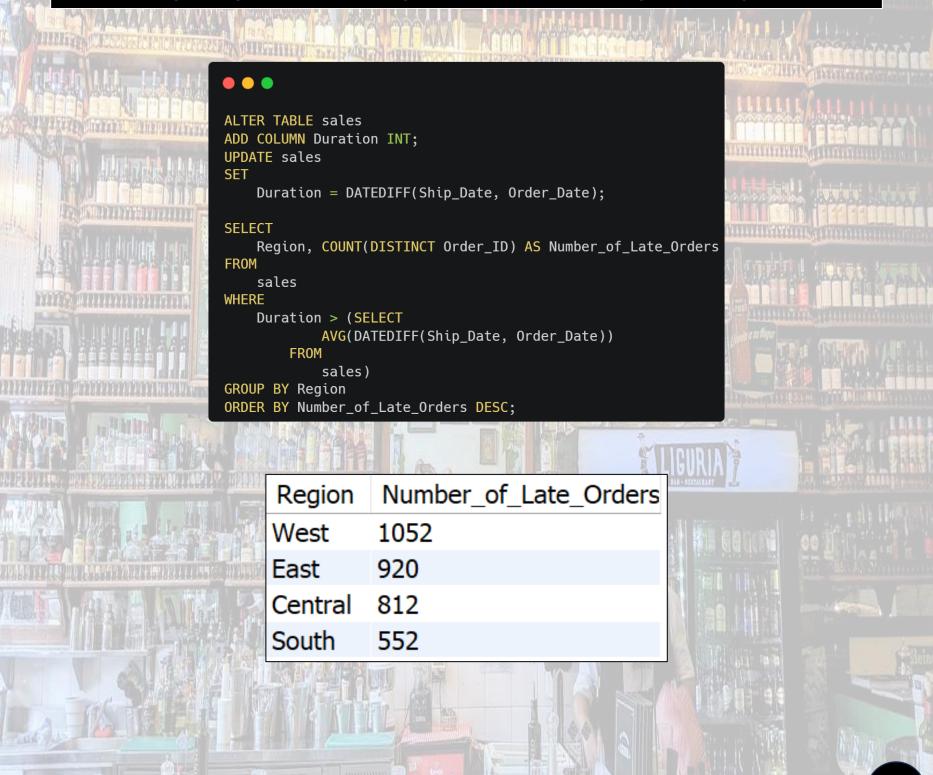




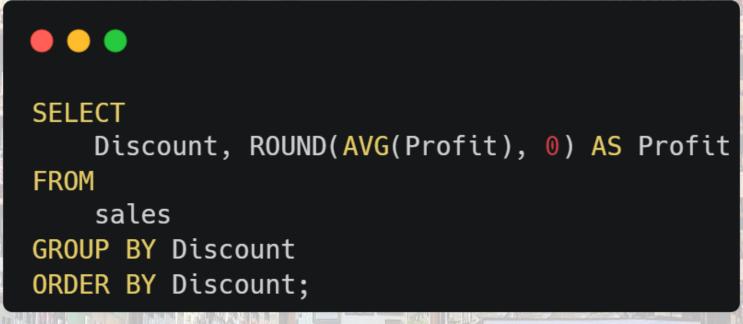




Identify any trends or patterns in delayed shipments.



Investigate the relationship between discounts and profit.

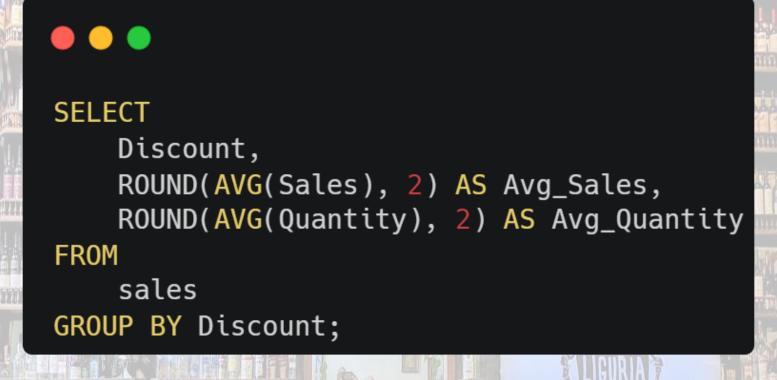


1910		
	Discount	Profit
	0	68
	0.1	96
	0.15	27
4	0.2	25
i.	0.3	-46
40000	0.32	-89
	0.4	-113
	0.45	-227
1	0.5	-311
	0.6	-42



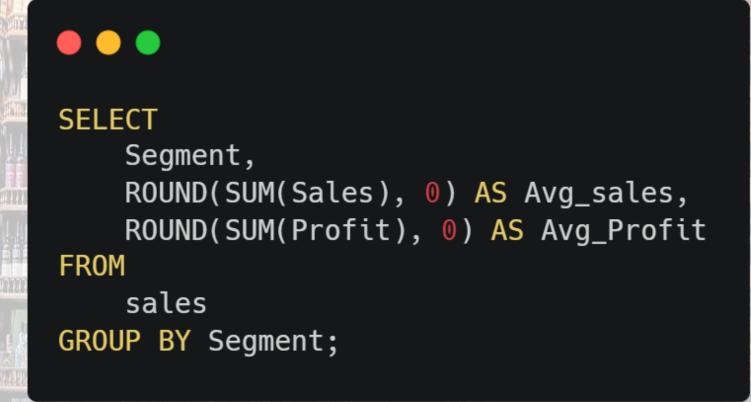
20

Determine the impact of discounts on sales and quantity.



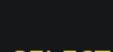
Discount	Avg_Sales	Avg_Quantity
0	230.36	3.81
0.1	578.4	3.97
0.15	529.97	3.81
0.2	213.22	3.74
0.3	454.74	3.74
0.32	536.79	3.89
0.4	567.54	3.78
0.45	498.63	4.09
0.5	892.71	3.65

What is the distribution of sales and profit across different segments?



Segment	Avg_sales	Avg_Profit
Consumer	1150166	132670
Corporate	696605	90366
Home Office	425679	59822

What is the distribution of sales and profit across different segments?



SELECT

Segment,
ROUND(AVG(Sales), 0) AS Avg_sales,
ROUND(AVG(Profit), 0) AS Avg_Profit

FROM

sales

GROUP BY Segment;

Segment	Avg_sales	Avg_Profit
Consumer	228	26
Corporate	239	31
Home Office	246	35

Calculate the correlation between sales, quantity, discount, and profit.

```
SELECT

ROUND((COUNT(*) * SUM(Sales * Profit) - SUM(Sales) * SUM(Profit)) / (SQRT((COUNT(*) * SUM(Sales * Sales) - POW(SUM(Sales), 2)) * (COUNT(*) * SUM(Profit * Profit) - POW(SUM(Profit), 2)))),

2) AS Sales_Profit_Correlation FROM sales;
```

Sales_Profit_Correlation

0.48

• • •

SELECT
 ROUND((COUNT(*) * SUM(Quantity * Profit) - SUM(Quantity) * SUM(Profit)) / (SQRT((COUNT(*) *
SUM(Quantity * Quantity) - POW(SUM(Quantity), 2)) * (COUNT(*) * SUM(Profit * Profit) - POW(SUM(Profit),
2)))),

2) AS Quantity_Profit_Correlation FROM sales;

Quantity_Profit_Correlati
0.07

• • •

SELECT

ROUND((COUNT(*) * SUM(Discount * Profit) - SUM(Discount) * SUM(Profit)) / (SQRT((COUNT(*) *
SUM(Discount * Discount) - POW(SUM(Discount), 2)) * (COUNT(*) * SUM(Profit * Profit) - POW(SUM(Profit),
2)))),

2) AS Discount_Profit_Correlation FROM sales;

Quantity_Profit_Correlation 0.07