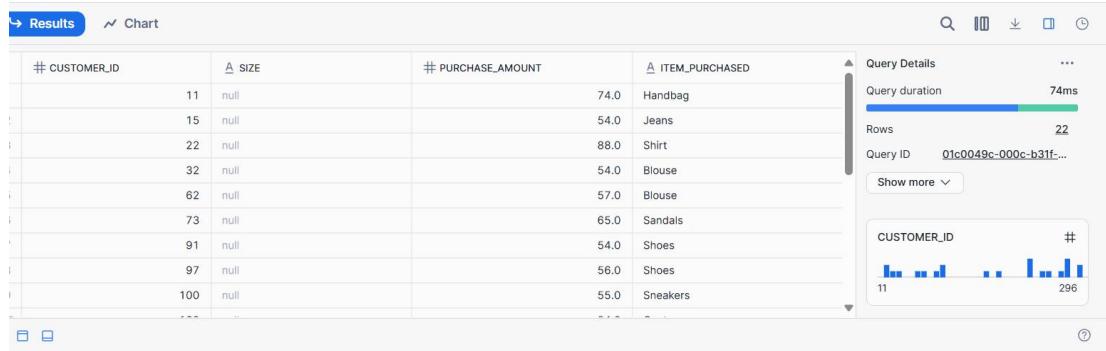


Gugulethu Dlamini

Practical 3:

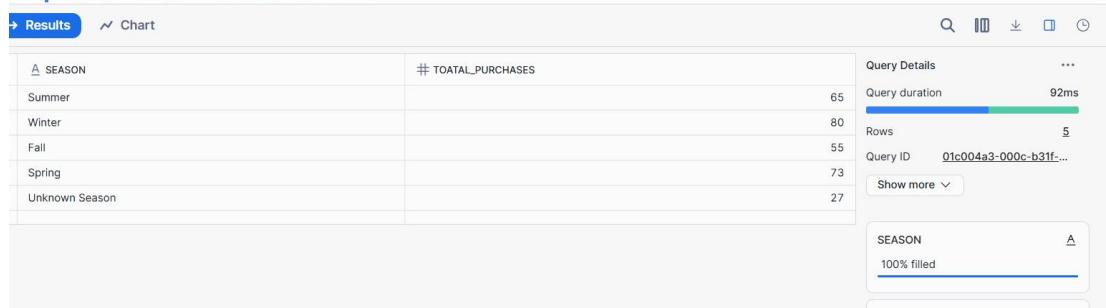
Question 1:

```
1  -- Find all records where Size is missing and the purchase_amount is greater than
2  -- 50.
3  SELECT CUSTOMER_ID,
4      Size,
5      purchase_amount,
6      item_purchased
7  FROM Shopping
8  WHERE Size is Null AND purchase_amount >50;
9
```



Question 2:

```
10  --2. List the total number of purchases grouped by Season, treating NULL values as
11  -- s 'Unknown Season'.
12  SELECT COALESCE (Season, 'Unknown Season') AS Season,
13      COUNT(*) AS Total_Purchases
14  FROM SHOPPING
15  GROUP BY COALESCE(Season, 'Unknown Season');
```



Question 3:

```
--  
17    --3. Count how many customers used each Payment Method, treating NULLS as  
18    --'Not Provided'.  
19    SELECT COALESCE(Payment_Method, 'Not Provided') AS Payment_Method,  
20          COUNT(DISTINCT Customer_Id) AS Customer_Count  
21     FROM Shopping  
22    GROUP BY COALESCE(Payment_Method, 'Not Provided');
```

Results Chart

PAYMENT_METHOD	CUSTOMER_COUNT
PayPal	51
Bank Transfer	38
Debit Card	42
Venmo	53
Not Provided	30
Cash	42
Credit Card	44

Query Details

Query duration 103ms

Rows 7

Query ID 01c004ab-000c-b31f...

Show more

PAYOUT_METHOD

100% filled

Questdion 4:

```
--  
24    --4. Show customers where Promo Code Used is NULL and Review Rating is below  
25    --3.0.  
26    SELECT Customer_ID,  
27        Promo_Code_Used,  
28        Review_Rating,  
29        Item_Purchased  
30     FROM Shopping  
31    WHERE PROMO_CODE_USED IS NULL AND REVIEW_RATING < 3.0;
```

Results Chart

CUSTOMER_ID	PROMO_CODE_USED	REVIEW_RATING	ITEM_PURCHASED
21	null	2.5	Jeans
38	null	2.6	Jeans
61	null	2.5	Jeans
80	null	2.6	Sneakers
125	null	2.8	Sneakers
128	null	2.5	Shoes
180	null	2.5	Shorts
285	null	2.9	Blouse

Query Details

Query duration 78ms

Rows 8

Query ID 01c004b2-000c-b31f...

Show more

CUSTOMER_ID

21 285

Question 5:

```
--  
33    --5. Group customers by Shipping Type, and return the average purchase_amount, treating missing values as 0.  
34    SELECT Shipping_Type,  
35        AVG(COALESCE(purchase_amount, 0)) AS Average_purchase_amount  
36     FROM shopping  
37    Group By Shipping_Type;
```

Results Chart

SHIPPING_TYPE	AVERAGE_PURCHASE_AMOUNT
Standard	47.6666667
Express	53.4545455
Store Pickup	55.3333333
null	52.7037037
Free Shipping	50.2142857
Next Day Air	54.8666667
2-Day Shipping	51.5576923

Query Details

Query duration 51ms

Rows 7

Query ID 01c004d4-000c-b31f...

Show more

SHIPPING_TYPE

86% filled 14% null

Question 6:

```
--6. Display the number of purchases per Location only for those with more than 5 purchases and no NULL Payment Method.  
39  SELECT location,  
40    COUNT(*) AS Total_purchases  
41  FROM shopping  
42  WHERE Payment_Method IS NOT NULL  
43  GROUP BY location  
44  HAVING COUNT(*) >5;  
45  
46
```

Results Chart

LOCATION	TOTAL_PURCHASES	Query Details
Maine	41	Query duration 85ms
Kentucky	30	Rows 9
null	24	Query ID 01c004d8-000c-b31f...
New York	31	Show more ▾
Oregon	30	LOCATION A
Rhode Island	29	89% filled
Florida	32	11% null
Massachusetts	31	
Texas	22	

Question 7:

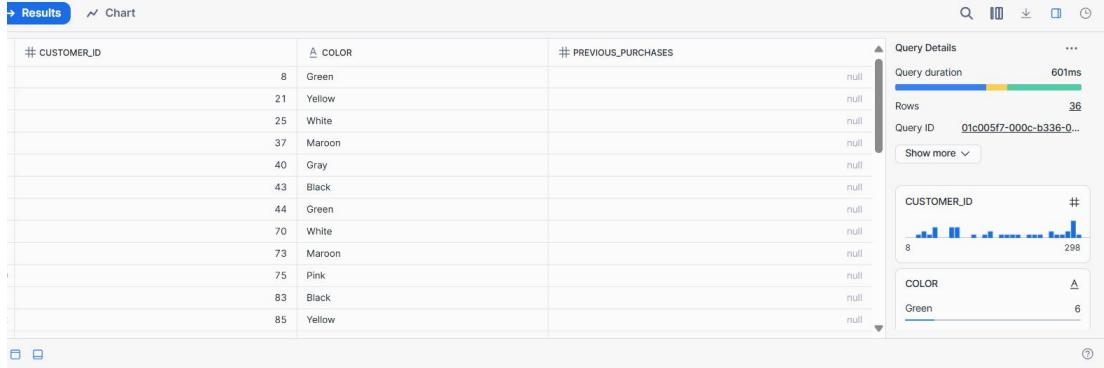
```
--7. Create a column Spender Category that classifies customers using CASE:  
17  --'High' if amount > 80, 'Medium' if BETWEEN 50 AND 80,  
18  --'Low' otherwise. Replace NULLs in purchase_amount with 0.  
19  SELECT CUSTOMER_ID,  
20    COALESCE(purchase_amount,0) AS purchase_amount,  
21    CASE WHEN COALESCE (purchase_amount,0) >80 THEN 'HIGH'  
22    WHEN COALESCE(purchase_amount,0) BETWEEN 50 AND 80 THEN 'MEDIUM'  
23    ELSE 'LOW'  
24  end AS Spender_Category  
25  FROM shopping;
```

Results Chart

CUSTOMER_ID	PURCHASE_AMOUNT	SPENDER_CATEGORY	Query Details
1	20.0	LOW	Query duration 61ms
2	21.0	LOW	Rows 300
3	27.0	LOW	Query ID 01c004e0-000c-b31f-0...
4	45.0	LOW	Show more ▾
5	80.0	MEDIUM	CUSTOMER_ID #
6	82.0	HIGH	1 300
7	50.0	MEDIUM	PURCHASE_AMOUNT #
8	29.0	LOW	~
9	100.0	HIGH	^
10	97.0	HIGH	^
11	74.0	MEDIUM	^
12	59.0	MEDIUM	^

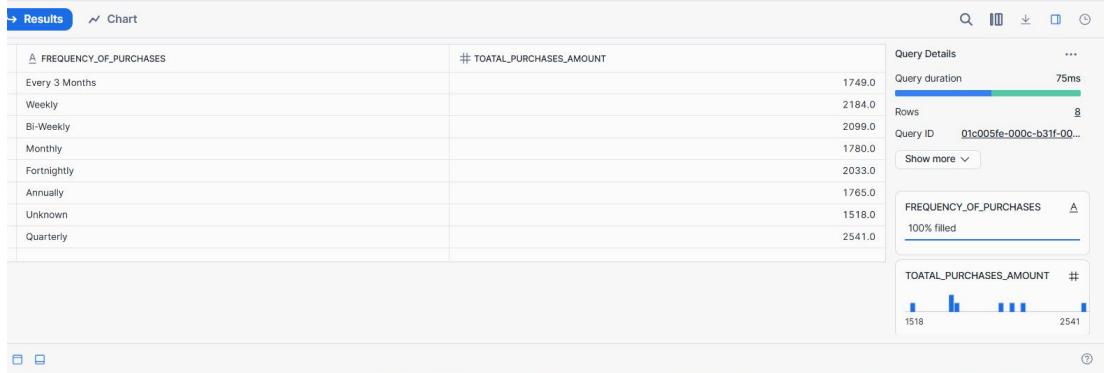
Question 8:

```
58  --8. Find customers who have no Previous Purchases value but whose Color is not NULL.  
59  SELECT customer_id,  
60    Color,  
61    Previous_purchases  
62  FROM SHOPPING  
63  WHERE previous_purchases IS NULL AND color IS NOT NULL;
```



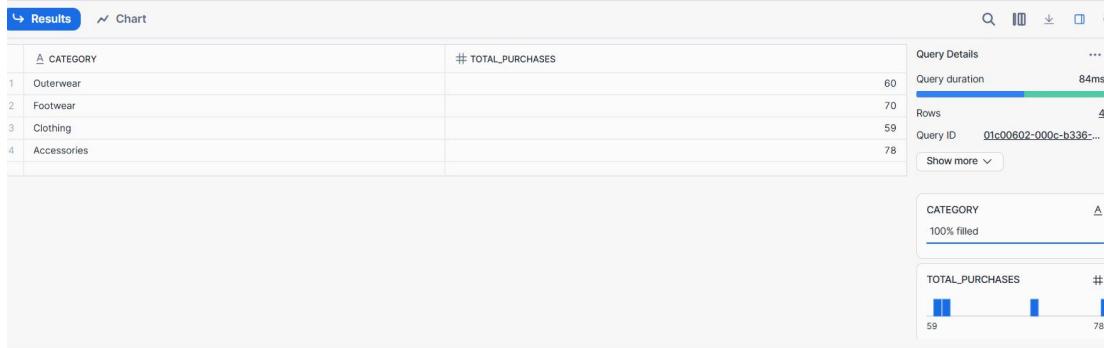
Question 9:

```
65  --9. Group records by Frequency of Purchases and show the total amount spent per group, treating NULL frequencies as 'Unknown'.  
66  SELECT COALESCE(FREQUENCY_OF_PURCHASES, 'Unknown') AS FREQUENCY_OF_PURCHASES,  
67    SUM(Purchase_amount) AS Total_purchases_Amount from Shopping  
68  Group By COALESCE(FREQUENCY_OF_PURCHASES, 'Unknown');
```



Question 10:

```
70  --10. Display a list of all Category values with the number of times each was purchased, excluding rows where Category is NULL.  
71  SELECT Category,  
72    COUNT(*) AS Total_purchases  
73  FROM SHOPPING  
74  WHERE category IS NOT NULL  
75  Group By category;
```



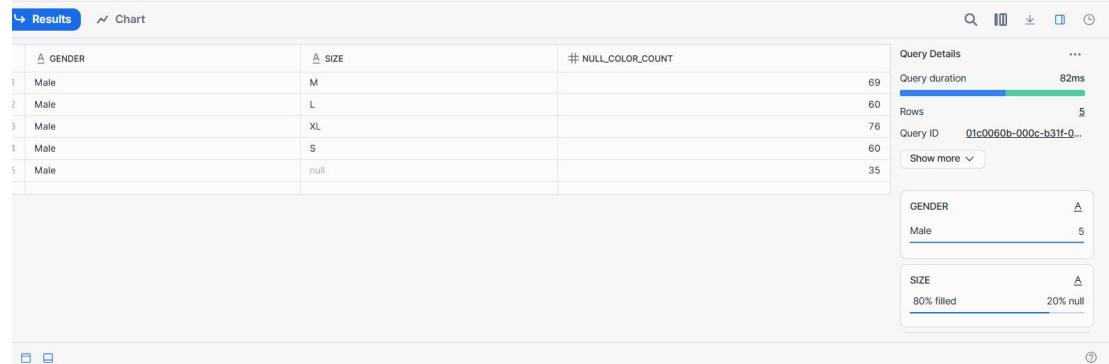
Question 11:

```
76
77      --11. Return the top 5 Locations with the highest total purchase_amount, replacing NULLs in amount with 0.
78  SELECT Location,
79        SUM(COALESCE(Purchase_Amount,0)) AS Total_purchase_amount
80  FROM SHOPPING
81  Group by location
82  Order By total_purchase_amount
83  DESC Limit 5;
```

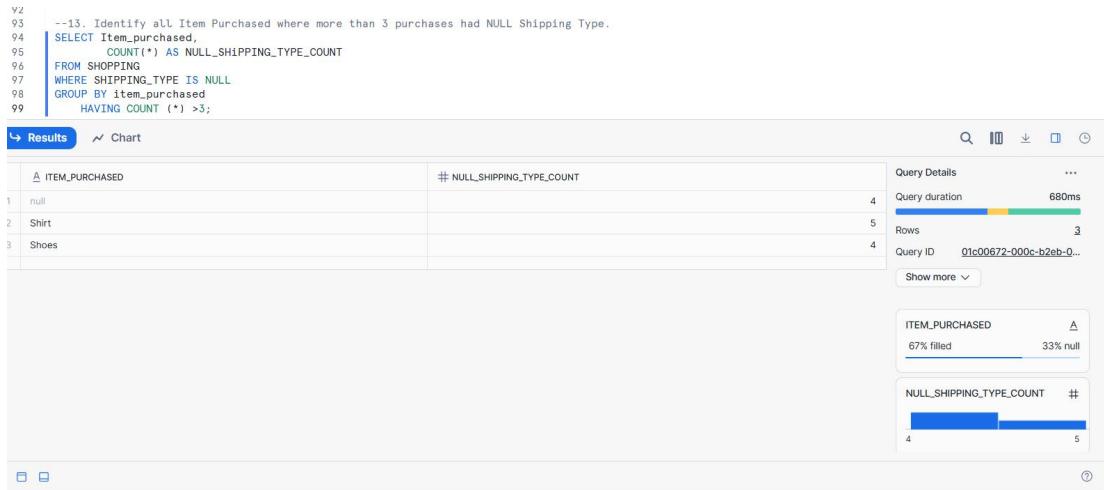


Question 12:

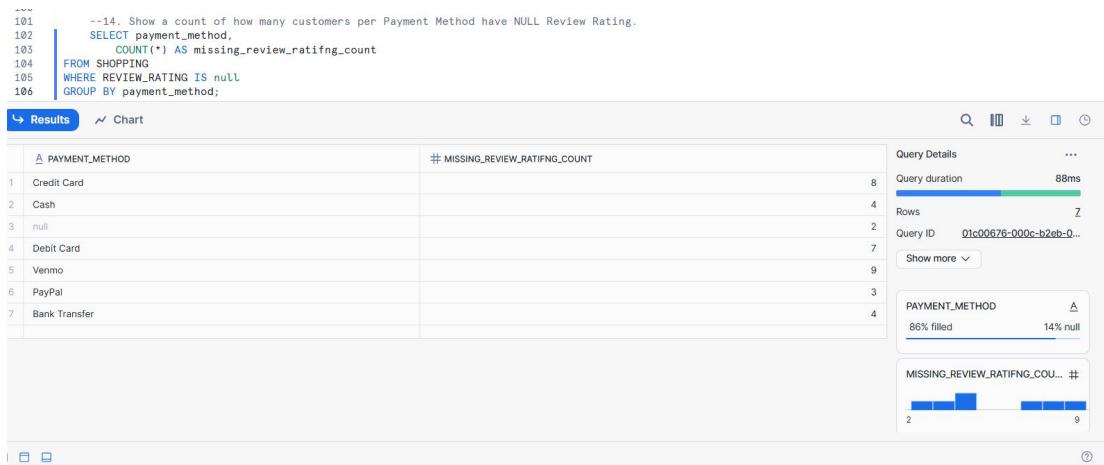
```
84
85      --12. Group customers by Gender and Size, and count how many entries have a NULL Color.
86  SELECT Gender,
87        Size,
88        COUNT(*) AS NULL_COLOR_count
89  FROM Shopping
90  GROUP BY gender,
91        Size;
```



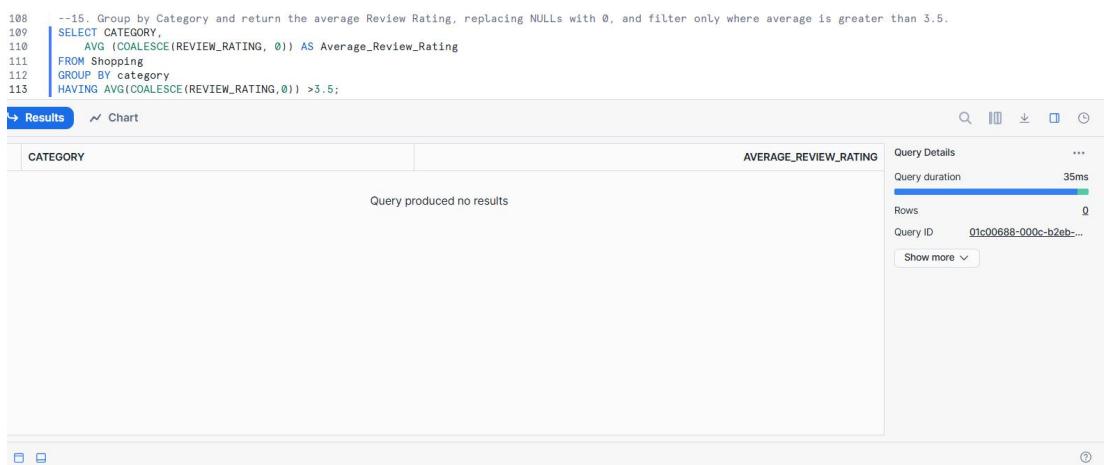
Question 13:



Question 14:



Question 15:



```

108    --15. Group by Category and return the average Review Rating, replacing NULLs with 0, and filter only where average is greater than 3.5.
109    SELECT CATEGORY,
110        AVG (COALESCE(REVIEW_RATING, 0)) AS Average_Review_Rating
111    FROM Shopping
112    GROUP BY category;

```

Results

CATEGORY	AVERAGE REVIEW RATING
Outerwear	3.3083333
Footwear	3.1871429
null	3.5000000
Clothing	3.0152542
Accessories	3.2551282

Query Details

- Query duration: 93ms
- Rows: 5
- Query ID: 01c00686-000c-b2eb-...

Category: 80% filled, 20% null

Average_Review_Rating: 3.0152542, 3.5

Question 16:

```

114
115    --16. List all Colors that are missing (NULL) in at least 2 rows and the average Age of customers for those rows.
116    SELECT color,
117        AVG (AGE) AS Average_Age
118    FROM SHOPPING
119    WHERE color IS NULL
120    GROUP BY color
121    HAVING COUNT (*) >=2;

```

Results

COLOR	AVERAGE AGE
null	47.8461538

Query Details

- Query duration: 89ms
- Rows: 1
- Query ID: 01c0068b-000c-b2eb-...

Color: 0% filled, 100% null

Average_Age: 100% filled

Question 17:

```

124    --'Other' for all else including NULL. Then count how many customers fall into each category.
125    SELECT CASE WHEN Shipping_type='standard' THEN 'Slow'
126        ELSE 'Other'
127        COUNTdistinct (customer_ID) AS customer_account
128    FROM Shopping
129    Group By Case
130        WHEN Shipping_type IN ('Express,'next day air') THEN 'fast'
131        WHEN Shipping_type= 'standard' THEN 'Slow'
132        ELSE 'Other'
133    END;

```

Results

Syntax error: unexpected 'Other'. (line 126)

syntax error Line 2 at position 23 unexpected ''
COUNTdistinct (customer_ID) AS customer_account
FROM Shopping
Group By Case
WHEN Shipping_type IN (''. (line 126)

Query Details

- Query duration: 25ms
- Rows: 0
- Query ID: 01c0069d-000c-b2eb-...

```

123 --17. Use CASE to create a column Delivery Speed: 'Fast' if Shipping Type is 'Express' or 'Next Day Air', 'Slow' if 'Standard',
124 --'Other' for all else including NULL. Then count how many customers fall into each category.
125
126     SELECT Delivery_Speed,
127             COUNT(*) AS Customer_Count
128         CASE
129             WHEN Shipping_type IN ('Express', 'Next_DAY_AIR') THEN 'FAST'
130                 WHEN Shipping_type = 'Standard' THEN 'Slow'
131                 ELSE 'other'
132             END AS Delivery_Speed,
133             COUNT(DISTINCT CUSTOMER_ID) AS Customer_Count
134     FROM SHOPPING
135     SELECT
136         CASE
137             WHEN Shipping_type IN ('Express', 'Next DAY Air') THEN 'FAST'
138                 WHEN Shipping_Type = 'standard' THEN 'Slow'
139                 ELSE 'Other'
140             END;

```

Results

Syntax error: unexpected 'CASE'. (line 127)

Query Details

- Query duration: 36ms
- Rows: 0
- Query ID: 01c006b0-000c-b2eb-...

```

123 --17. Use CASE to create a column Delivery Speed: 'Fast' if Shipping Type is 'Express' or 'Next Day Air', 'Slow' if 'Standard',
124 --'Other' for all else including NULL. Then count how many customers fall into each category.
125
126     SELECT
127         CASE
128             WHEN shipping_type IN (' Next Day Air ', ' Express ') THEN ' Fast '
129                 WHEN shipping_type = 'Standard' THEN 'Slow'
130                 ELSE 'Other'
131             END AS delivery_speed,
132             COUNT(DISTINCT customer_id) AS customer_count

```

Results

DELIVERY_SPEED	CUSTOMER_COUNT
Slow	45
Other	255

Query Details

- Query duration: 29ms
- Rows: 2
- Query ID: 01c00738-000c-b2eb-0...

Show more ▾

DELIVERY_SPEED

CUSTOMER_COUNT

Question 18:

```

135 --18. Find customers whose purchase_amount is NULL and whose Promo Code Used is 'Yes'.
136
137     SELECT Customer_ID,
138             Purchase_amount,
139             PROMO_CODE_USED
140     FROM Shopping
141     WHERE purchase_amount IS null AND PROMO_CODE_USED= ' Yes';

```

Results

CUSTOMER_ID	PURCHASE_AMOUNT	PROMO_CODE_USED
1	13	null TRUE
2	30	null TRUE
3	78	null TRUE
4	95	null TRUE
5	124	null TRUE
6	129	null TRUE
7	130	null TRUE
8	138	null TRUE
9	153	null TRUE
10	168	null TRUE
11	177	null TRUE

Query Details

- Query duration: 95ms
- Rows: 20
- Query ID: 01c00712-000c-b2eb-0...

Show more ▾

CUSTOMER_ID

PURCHASE_AMOUNT

Question 19:

```
142  
143    --19. Group by Location and show the maximum Previous  
144    --Purchases, replacing NULLs with 0, only where the average rating is above 4.0.  
145    SELECT  
146        LOCATION,  
147        MAX(COALESCE(Previous_purchases,0)) AS MAX_Previous_purchases,  
148        AVG(Review_rating) AS Average_Review  
149    FROM Shopping  
150    GROUP BY location;
```

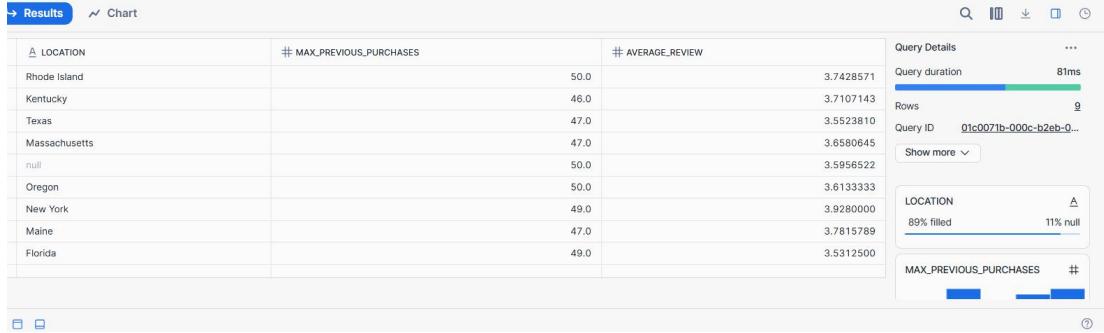
→ Results ↵ Chart

LOCATION	MAX_PREVIOUS_PURCHASES	AVERAGE REVIEW
Rhode Island	50.0	3.7428571
Kentucky	46.0	3.7107143
Texas	47.0	3.5523810
Massachusetts	47.0	3.6580645
null	50.0	3.5956522
Oregon	50.0	3.6133333
New York	49.0	3.9280000
Maine	47.0	3.7815789
Florida	49.0	3.5312500

Query Details ...
Query duration 81ms
Rows 9
Query ID 01c0071b-000c-b2eb-0...
Show more ▾

LOCATION ▲
89% filled 11% null

MAX_PREVIOUS_PURCHASES #



Question 20:

```
151  
152    --20. Show customers who have a NULL Shipping  
153    --Type but made a purchase in the range of 30 to 70 USD.  
154    SELECT Customer_ID,  
155        Shipping_Type,  
156        Purchase_amount,  
157        Item_purchased  
158    FROM SHOPPING  
159    WHERE SHIPPING_TYPE IS NULL  
160    AND purchase_amount BETWEEN 30 AND 70;
```

→ Results ↵ Chart

LOCATION	MAX_PREVIOUS_PURCHASES	AVERAGE REVIEW
Rhode Island	50.0	3.7428571
Kentucky	46.0	3.7107143
Texas	47.0	3.5523810
Massachusetts	47.0	3.6580645
null	50.0	3.5956522
Oregon	50.0	3.6133333
New York	49.0	3.9280000
Maine	47.0	3.7815789
Florida	49.0	3.5312500

Query Details ...
Query duration 81ms
Rows 9
Query ID 01c0071b-000c-b2eb-0...
Show more ▾

LOCATION ▲
89% filled 11% null

MAX_PREVIOUS_PURCHASES #

