

# 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
```

#	CUSTOMER_ID	SIZE	# PURCHASE_AMOUNT	ITEM_PURCHASED
1	11	null	74.0	Handbag
2	15	null	54.0	Jeans
3	22	null	88.0	Shirt
4	32	null	54.0	Blouse
5	62	null	57.0	Blouse
6	73	null	65.0	Sandals
7	91	null	54.0	Shoes
8	97	null	56.0	Shoes
9	100	null	55.0	Sneakers

Query Details

Query duration 74ms

Rows 22

Query ID 01c0049c-000c-b31f...

Show more

CUSTOMER\_ID #

### Question 2:

```
10 --2. List the total number of purchases grouped by Season, treating NULL values a
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');
```

SEASON	# TOATAL_PURCHASES
Summer	65
Winter	80
Fall	55
Spring	73
Unknown Season	27

Query Details

Query duration 92ms

Rows 5

Query ID 01c004a3-000c-b31f...

Show more

SEASON

100% filled

## Question 3:

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

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: 2
- Query ID: 01c004ab-000c-b31f-...
- Show more

PAYMENT\_METHOD

100% filled

## Question 4:

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

# 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:

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

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: 2
- Query ID: 01c004d4-000c-b31f-...
- Show more

SHIPPING\_TYPE

86% filled 14% null

## Question 6:

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

→ Results Chart

LOCATION	# TOTAL_PURCHASES
Maine	41
Kentucky	30
null	24
New York	31
Oregon	30
Rhode Island	29
Florida	32
Massachusetts	31
Texas	22

Query Details

Query duration: 85ms

Rows: 9

Query ID: 01c004d8-000c-b31f-...

Show more

LOCATION: 89% filled, 11% null

## Question 7:

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

→ Results Chart

CUSTOMER_ID	PURCHASE_AMOUNT	SPENDER_CATEGORY
1	20.0	LOW
2	21.0	LOW
3	27.0	LOW
4	45.0	LOW
5	80.0	MEDIUM
6	82.0	HIGH
7	50.0	MEDIUM
8	29.0	LOW
9	100.0	HIGH
10	97.0	HIGH
11	74.0	MEDIUM
12	59.0	MEDIUM

Query Details

Query duration: 61ms

Rows: 300

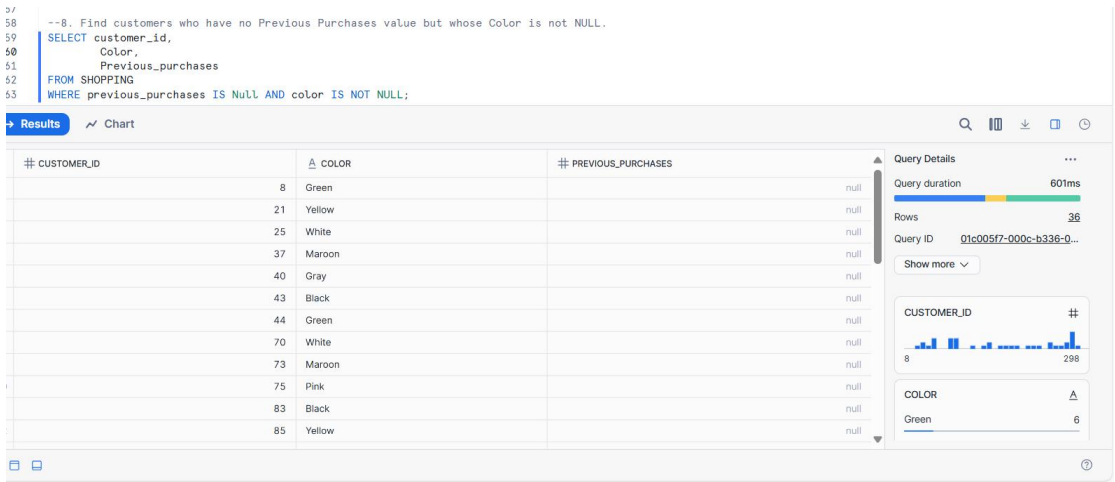
Query ID: 01c004e0-000c-b31f-0...

Show more

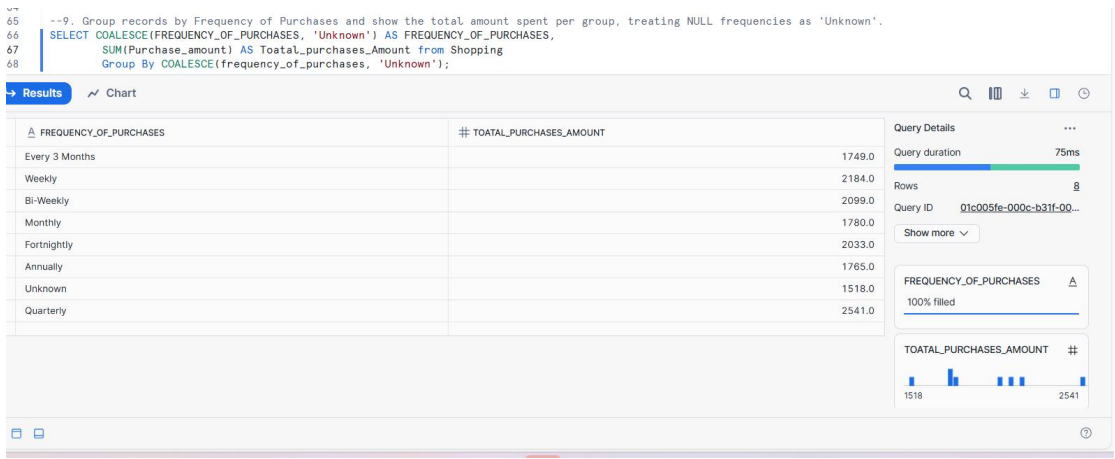
CUSTOMER\_ID: 1 to 300

PURCHASE\_AMOUNT: 0 to 100

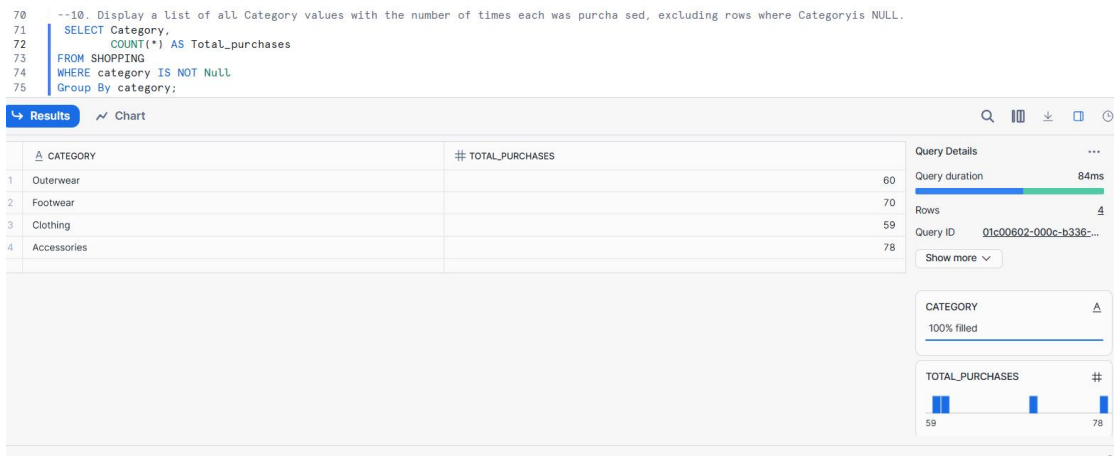
## Question 8:



## Question 9:



## Question 10:



# 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;

ResultsChart

LOCATION	TOTAL_PURCHASE_AMOUNT
Maine	2294.0
Florida	1980.0
Massachusetts	1899.0
Rhode Island	1876.0
Kentucky	1798.0

Query Details

Query duration84ms

Rows5

Query ID01c00608-000c-b31f-0...

Show more

LOCATION

100% filled

TOTAL\_PURCHASE\_AMOUNT

#

17982294

# 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;

ResultsChart

GENDER	SIZE	NULL_COLOR_COUNT
Male	M	69
Male	L	60
Male	XL	76
Male	S	60
Male	null	35

Query Details

Query duration82ms

Rows5

Query ID01c0060b-000c-b31f-0...

Show more

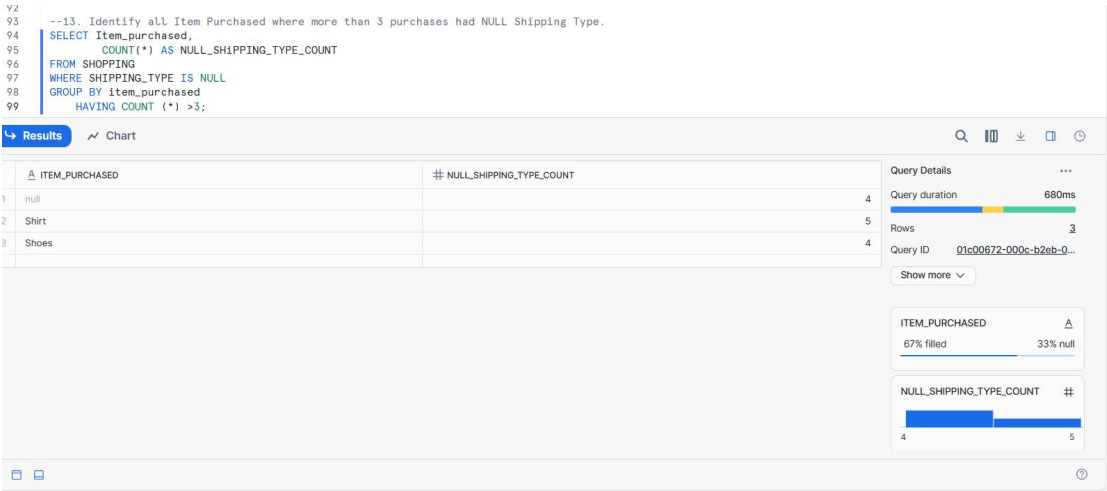
GENDER

Male5

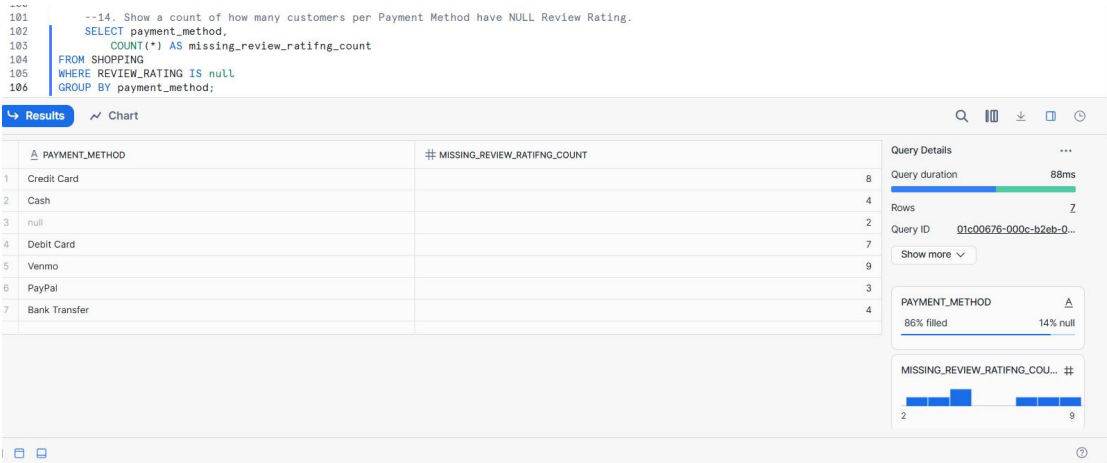
SIZE

80% filled20% null

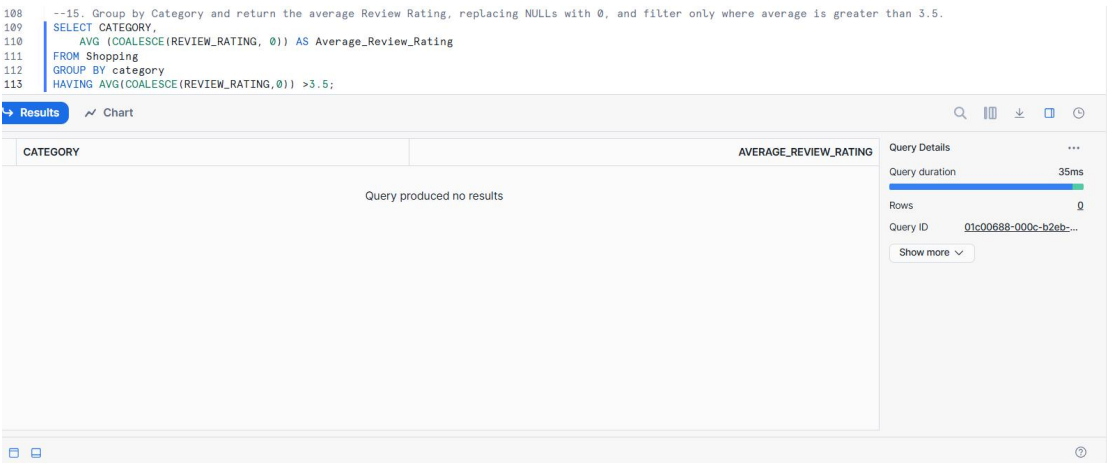
## Question 13:

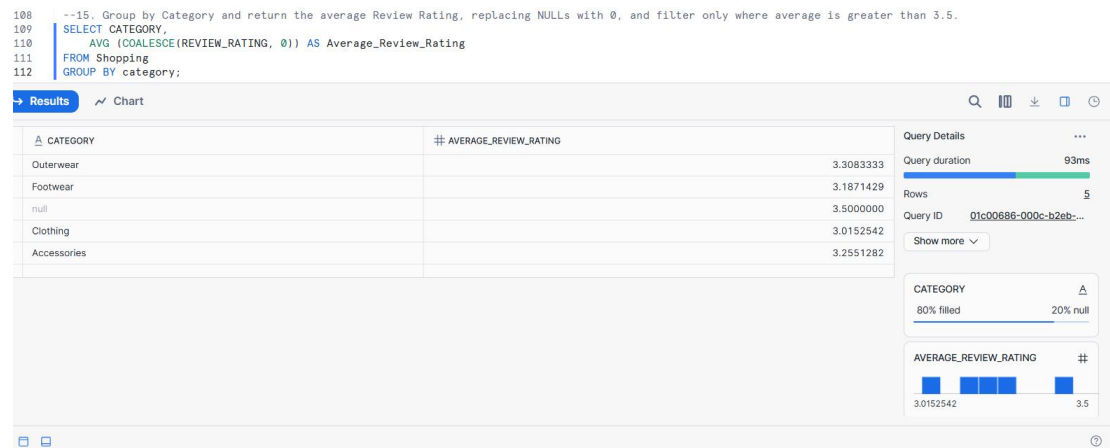


## Question 14:

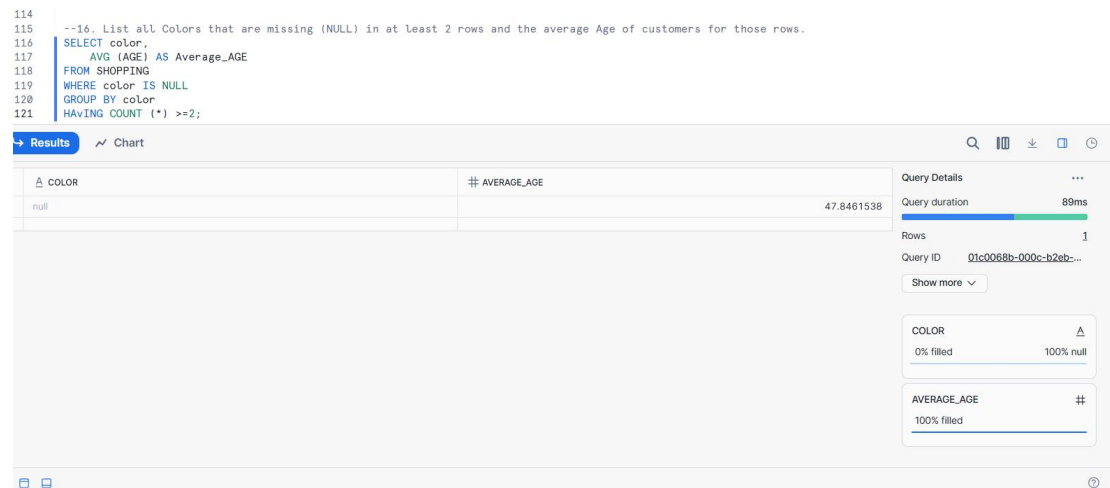


## Question 15:

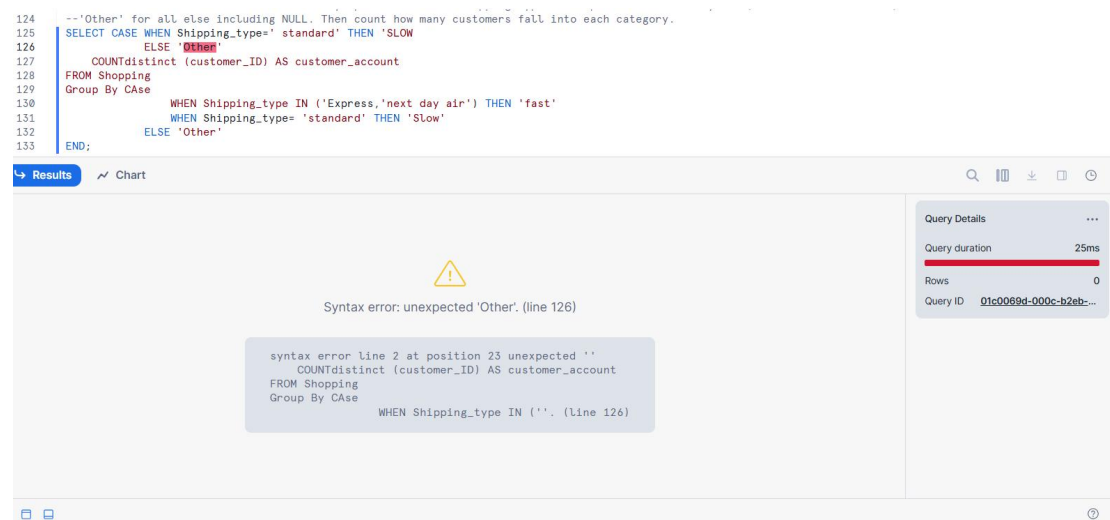




## Question 16:



## Question 17:



```

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 SELECT Delivery_speed,
126        COUNT(*) AS Customer_Count
127        CASE
128            WHEN Shipping_type IN ('Express', 'Next_Day_Air') 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
133 FROM SHOPPING
134 SELECT
135     Case
136         WHEN Shipping_type IN ('Express', 'Next Day Air') THEN 'FAST'
137         WHEN Shipping_Type = 'standard' THEN 'Slow'
138         ELSE 'Other'
139     END;

```

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 SELECT
126     CASE
127         WHEN shipping_type IN (' Next Day Air ', ' Express ') THEN ' Fast '
128         WHEN shipping_type = 'Standard' THEN 'Slow'
129         ELSE 'Other'
130     END AS delivery_speed,
131     COUNT(Distinct customer_id) AS customer_count

```

	DELIVERY_SPEED	# CUSTOMER_COUNT
1	Slow	45
2	Other	255

Query Details  
 Query duration 29ms  
 Rows 2  
 Query ID 01c00738-000c-b2eb-0-...  
 Show more

DELIVERY\_SPEED 100% filled

CUSTOMER\_COUNT

## Question 18:

```

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

```

	# CUSTOMER_ID	# PURCHASE_AMOUNT	01 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-9-...  
 Show more

CUSTOMER\_ID

PURCHASE\_AMOUNT



Question 19:

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;

ResultsChart

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-9...

Show more

LOCATION

89% filled

11% null

MAX\_PREVIOUS\_PURCHASES

#

Questzion 20:

151

--20. Show customers who have a NULL Shipping

152

--Type but made a purchase in the range of 30 to 70 USD.

153

SELECT Customer\_ID,

154

Shipping\_Type,

155

Purchase\_amount,

156

Item\_purchased

157

FROM SHOPPING

158

WHERE SHIPPING\_TYPE IS NULL

159

AND purchase\_amount BETWEEN 30 AND 70;

160

ResultsChart

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-9...

Show more

LOCATION

89% filled

11% null

MAX\_PREVIOUS\_PURCHASES

#