

PRACTICAL 3 - FADZAI MAKANDA

The screenshot shows a Snowflake web interface with a query executed on the 'SHOPPING.RETAIL_SHOP' database. The query filters for items where the size is null and the purchase amount is greater than 50. The results table contains 7 rows of data.

```
7 SELECT CUSTOMER_ID,
8        ITEM_PURCHASED,
9        PURCHASE_AMOUNT,
10       SIZE
11 FROM shopping_trends_dataset
12 WHERE SIZE IS NULL
13 AND PURCHASE_AMOUNT > 50
```

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

Query Details: Query duration 64ms, Rows 22, Query ID 01b1fd6cb-000c-b142-0...

QUESTION I - FADZAI MAKANDA

The screenshot shows a Snowflake web interface with a query executed on the 'SHOPPING.RETAIL_SHOP' database. The query uses a CASE statement to categorize purchases by season and counts the total purchases for each season. The results table contains 5 rows of data.

```
24 SELECT
25     IFNULL(SEASON, 'Unknown Season') AS SEASON,
26     COUNT(*) AS TOTAL_PURCHASES
27 FROM SHOPPING_TRENDS_DATASET
28 GROUP BY IFNULL(SEASON, 'Unknown Season');
```

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

Query Details: Query duration 118ms, Rows 5, Query ID 01b1fd6e8-000c-b142-0...

QUESTION 2

app.snowflake.com/af-south-1.aws/tp56197/w1FJeBbB4aQs#query

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

SHOPPING.RETAIL_SHOP Settings

Open in Workspaces

```

26
27
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33
---3. Count how many customers used each Payment Method, treating NULLs as 'Not Provided'.
---Expected Columns: Payment Method, Customer Count.

SELECT COUNT(*) AS CUSTOMER_COUNT,
       IFNULL(PAYMENT_METHOD, 'NOT PROVIDED') AS PAYMENT_METHOD
FROM SHOPPING_TRENDS_DATASET
GROUP BY PAYMENT_METHOD;

```

Results Chart

#	CUSTOMER_COUNT	PAYMENT_METHOD
1	44	Credit Card
2	51	PayPal
3	42	Debit Card
4	42	Cash
5	30	NOT PROVIDED
6	38	Bank Transfer
7	53	Venmo

Query Details

Query duration 716ms

Rows 7

Query ID 01bfd71a-000c-b142-0...

Show more

CUSTOMER_COUNT #

18:58 2025/10/20

QUESTION 3 - FADZAI MAKANDA

app.snowflake.com/af-south-1.aws/tp56197/w1FJeBbB4aQs#query

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

SHOPPING.RETAIL_SHOP Settings

Open in Workspaces

```

37
38
39
40
41
42
43
---4. Show customers where Promo Code Used is NULL and Review Rating is below 3.0.
---Expected Columns: Customer ID, Promo Code Used, Review Rating, Item Purchased

SELECT CUSTOMER_ID,
       ITEM_PURCHASED,
       REVIEW_RATING,
       PROMO_CODE_USED

```

Results Chart

#	CUSTOMER_ID	ITEM_PURCHASED	REVIEW_RATING	PROMO_CODE_USED
1	21	Jeans	2.5	null
2	38	Jeans	2.6	null
3	61	Jeans	2.5	null
4	80	Sneakers	2.6	null
5	125	Sneakers	2.8	null
6	128	Shoes	2.5	null
7	180	Shorts	2.5	null

Query Details

Query duration 69ms

Rows 8

Query ID 01bfd722-000c-b142-0...

Show more

CUSTOMER_ID #

19:08 2025/10/20

QUESTION 4

app.snowflake.com/af-south-1.aws/tp56197/w1FJeBbB4aQs#query

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

SHOPPING.RETAIL_SHOP Settings

```

51 ---type, and return the average purchase_amount, creating missing values as 0.
52 ---Expected Columns: Shipping Type, Average purchase_amount
53
54 SELECT
55     SHIPPING_TYPE,
56     AVG(IFNULL(PURCHASE_AMOUNT, 0)) AS AVERAGE_PURCHASE_AMOUNT
57 FROM SHOPPING_TRENDS_DATASET
58 GROUP BY SHIPPING_TYPE;

```

Results Chart

	SHIPPING_TYPE	AVERAGE_PURCHASE_AMOUNT
1	Standard	47.6666667
2	Express	53.4545455
3	Store Pickup	55.3333333
4	null	52.7037037
5	Free Shipping	50.2142857
6	Next Day Air	54.8666667
7	2-Day Shipping	51.5576923

Query Details

Query duration 413ms

Rows 7

Query ID 01bfd735-000c-b142-0...

Show more

SHIPPING_TYPE

QUESTION 5

app.snowflake.com/af-south-1.aws/tp56197/w1FJeBbB4aQs#query

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

SHOPPING.RETAIL_SHOP Settings

```

62
63 SELECT COUNT(*) AS TOTAL_PURCHASES,
64        LOCATION
65 FROM SHOPPING_TRENDS_DATASET
66 WHERE PAYMENT_METHOD IS NOT NULL
67 GROUP BY LOCATION
68 HAVING COUNT(*) > 5;

```

Results Chart

	TOTAL_PURCHASES	LOCATION
1	41	Maine
2	30	Kentucky
3	24	null
4	31	New York
5	30	Oregon
6	29	Rhode Island
7	32	Florida

Query Details

Query duration 445ms

Rows 7

Query ID 01bfd743-000c-b142-0...

Show more

TOTAL_PURCHASES #

QUESTION 6 - FADZAI MAKANDA

Screenshot of a Snowflake query interface showing a SQL query and its results.

Query:

```
SELECT CUSTOMER_ID,
       IFNULL(PURCHASE_AMOUNT, 0) AS PURCHASE_AMOUNT,
       CASE WHEN PURCHASE_AMOUNT > 80 THEN 'High'
            WHEN PURCHASE_AMOUNT BETWEEN 50 AND 80 THEN 'Medium'
            ELSE 'Low'
       END AS SPENDER_CATEGORY
FROM SHOPPING_TRENDS_DATASET;
```

Results Table:

#	CUSTOMER_ID	PURCHASE_AMOUNT	SPENDER_CATEGORY
1	1	20.0	Low
2	2	21.0	Low
3	3	27.0	Low
4	4	45.0	Low
5	5	80.0	Medium
6	6	82.0	High
7	7	50.0	Medium

Query Details:

- Query duration: 414ms
- Rows: 300
- Query ID: 01b6d765-000c-b142-0...

QUESTION 7

Screenshot of a Snowflake query interface showing a SQL query and its results.

Query:

```
SELECT CUSTOMER_ID,
       COLOR,
       PREVIOUS_PURCHASES
FROM SHOPPING_TRENDS_DATASET
WHERE PREVIOUS_PURCHASES IS NULL AND COLOR IS NOT NULL;
```

Results Table:

#	CUSTOMER_ID	COLOR	PREVIOUS_PURCHASES
1	8	Green	null
2	21	Yellow	null
3	25	White	null
4	37	Maroon	null
5	40	Gray	null
6	43	Black	null
7	44	Green	null
8	70	White	null
9	73	Maroon	null

Query Details:

- Query duration: 1.1s
- Rows: 38
- Query ID: 01b6dc94-000c-b1ef-00...

QUESTION 8

app.snowflake.com/af-south-1.aws/tp56197/w1FJeBbB4aQs#query

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

SHOPPING.RETAIL_SHOP Settings

Open in Workspaces

```

98
99
100
101
102
103
104
SELECT COUNT(PURCHASE_AMOUNT) AS TOTAL_PURCHASE_AMOUNT,
      IFNULL (FREQUENCY_OF_PURCHASES, 'Unknown') AS FREQUENCY_OF_PURCHASES
FROM SHOPPING_TRENDS_DATASET

```

Results Chart

#	TOTAL_PURCHASE_AMOUNT	FREQUENCY_OF_PURCHASES
1	29	Every 3 Months
2	38	Weekly
3	36	Bi-Weekly
4	31	Monthly
5	35	Fortnightly
6	30	Annually
7	24	Unknown

Query Details

Query duration 472ms

Rows 8

Query ID 01bfd790-000c-b142-0...

Show more

TOTAL_PURCHASE_AMOUNT #

QUESTION 9

app.snowflake.com/af-south-1.aws/tp56197/w1FJeBbB4aQs#query

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

SHOPPING.RETAIL_SHOP Settings

Open in Workspaces

```

117
118
119
120
121
122
123
SELECT
  CATEGORY,
  COUNT(*) AS TOTAL_PURCHASES
FROM SHOPPING_TRENDS_DATASET
WHERE CATEGORY IS NOT NULL
GROUP BY CATEGORY;

```

Results Chart

#	CATEGORY	TOTAL_PURCHASES
1	Outerwear	60
2	Footwear	70
3	Clothing	59
4	Accessories	78

Query Details

Query duration 81ms

Rows 4

Query ID 01bfd799-000c-b142-0...

Show more

CATEGORY

QUESTION 10

app.snowflake.com/af-south-1.aws/tp56197/w1FJeBbB4aQs#query

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

```

129
130
131 SELECT
132     IFNULL(LOCATION, 'Unknown') AS LOCATION,
133     SUM(IFNULL(PURCHASE_AMOUNT, 0)) AS TOTAL_PURCHASE_AMOUNT
134 FROM SHOPPING_TRENDS_DATASET
135 GROUP BY IFNULL(LOCATION, 'Unknown')
136 ORDER BY TOTAL_PURCHASE_AMOUNT DESC
137 LIMIT 5;

```

Results Chart

	LOCATION	# TOTAL_PURCHASE_AMOUNT
1	Maine	2294.0
2	Florida	1980.0
3	Massachusetts	1899.0
4	Rhode Island	1876.0
5	Kentucky	1798.0

Query Details

- Query duration: 453ms
- Rows: 5
- Query ID: 01b6d7ae-000c-b142-0...

LOCATION

QUESTION 11 - FADZAI MAKANDA

app.snowflake.com/af-south-1.aws/tp56197/w1FJeBbB4aQs#query

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

```

144
145
146 GENDER,
147 SIZE,
148 COUNT(*) AS NULL_COLOR_COUNT
149 FROM SHOPPING_TRENDS_DATASET
150 WHERE COLOR IS NULL
151 GROUP BY GENDER, SIZE;

```

Results Chart

	GENDER	SIZE	# NULL_COLOR_COUNT
1	Male	null	6
2	Male	M	7
3	Male	L	6
4	Male	S	5
5	Male	XL	5

Query Details

- Query duration: 638ms
- Rows: 5
- Query ID: 01b6d7bb-000c-b142-0...

GENDER

QUESTION 12

2025-10-04 10:26am 2025-10-11 11:30am 2025-10-16 2:21pm 2025-10-16 5:23pm 2025-10-18 9:27am 2025-10-20 5:16pm

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

SHOPPING.RETAIL_SHOP Settings

```
149 SELECT ITEM_PURCHASED,
150 COUNT(*) AS NULL_SHIPPING_TYPE_COUNT
151 FROM SHOPPING_TRENDS_DATASET
152 GROUP BY ITEM_PURCHASED
153 HAVING NULL_SHIPPING_TYPE_COUNT > 3;
```

Results Chart

	ITEM_PURCHASED	# NULL_SHIPPING_TYPE_COUNT
1	Shirt	26
2	Jeans	25
3	Sweater	27
4	Coat	21
5	Sandals	32
6	Sneakers	39
7	Handbag	20
8	Shoes	26
9	Shorts	30

Query Details

Query duration 549ms

Rows 11

Query ID 01bfae1-000c-b142-0...

Show more

ITEM_PURCHASED

91% filled 9% null

11:05 2025/10/21

QUESTION 13 - FADZAI MAKANDA

2025-10-04 10:26am 2025-10-11 11:30am 2025-10-16 2:21pm 2025-10-16 5:23pm 2025-10-18 9:27am 2025-10-20 5:16pm

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

SHOPPING.RETAIL_SHOP Settings

```
160 SELECT COUNT(*) AS NULL_REVIEW_RATING_COUNT,
161 PAYMENT_METHOD
162 FROM SHOPPING_TRENDS_DATASET
163 GROUP BY PAYMENT_METHOD;
```

Results Chart

	# NULL_REVIEW_RATING_COUNT	PAYMENT_METHOD
1	42	Debit Card
2	53	Verimo
3	44	Credit Card
4	42	Cash
5	51	PayPal
6	30	null
7	38	Bank Transfer

Query Details

Query duration 493ms

Rows 7

Query ID 01bfa59-000c-b142-0...

Show more

NULL_REVIEW_RATING_COUNT

#

13:05 2025/10/21

QUESTION 14

app.snowflake.com/af-south-1.aws/tp56197/w1FJeBbB4aQs#query

2025-10-04 10:26am 2025-10-11 11:30am 2025-10-16 2:21pm 2025-10-16 5:23pm 2025-10-18 9:27am 2025-10-20 5:16pm

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

SHOPPING.RETAIL_SHOP Settings

Open in Workspaces Code Versions

```
SELECT
  IFNULL(CATEGORY, 'Unknown') AS CATEGORY,
  AVG(IFNULL(REVIEW_RATING, 0)) AS AVERAGE_REVIEW_RATING
FROM SHOPPING_TRENDS_DATASET
GROUP BY IFNULL(CATEGORY, 'Unknown');
```

Results Chart

	CATEGORY	# AVERAGE_REVIEW_RATING
1	Outerwear	3.3083333
2	Footwear	3.1871429
3	Clothing	3.0152542
4	Unknown	3.5000000
5	Accessories	3.2551282

Query Details

Query duration 71ms

Rows 5

Query ID 01b6db71-000c-b142-0...

Show more

CATEGORY 100% filled

QUESTION 15

app.snowflake.com/af-south-1.aws/tp56197/w1FJeBbB4aQs#query

2025-10-04 10:26am 2025-10-11 11:30am 2025-10-16 2:21pm 2025-10-16 5:23pm 2025-10-18 9:27am 2025-10-20 5:16pm

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

SHOPPING.RETAIL_SHOP Settings

Open in Workspaces Code Versions

```
SELECT
  IFNULL(CATEGORY, 'Unknown') AS CATEGORY,
  AVG(IFNULL(REVIEW_RATING, 0)) AS AVERAGE_REVIEW_RATING
FROM SHOPPING_TRENDS_DATASET
GROUP BY IFNULL(CATEGORY, 'Unknown');
```

Results Chart

	CATEGORY	# AVERAGE_REVIEW_RATING
1	Outerwear	4.3121212
2	Clothing	4.2045455
3	Accessories	4.1975610
4	Footwear	4.3129032
5	Unknown	4.2210526

Query Details

Query duration 81ms

Rows 5

Query ID 01b6db7a-000c-b142-0...

Show more

CATEGORY 100% filled

QUESTION 15

app.snowflake.com/af-south-1.aws/tp56197/w1FJeBbB4aQs#query

2025-10-04 10:26am 2025-10-11 11:30am 2025-10-16 2:21pm 2025-10-16 5:23pm 2025-10-18 9:27am 2025-10-20 5:16pm

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

```
188 COALESCE(COLOR, 'Missing') AS COLOR,
189 AVG(AGE) AS AVG_AGE
190 FROM SHOPPING_TRENDS_DATASET
191 WHERE COLOR IS NULL
192 GROUP BY COALESCE(COLOR, 'Missing')
```

Results Chart

COLOR	# AVG_AGE
Missing	47.8461538

Query Details

Query duration 432ms

Rows 1

Query ID 01b6db4c-000c-b142-0...

Show more

COLOR 100% filled

QUESTION 16 - FADZAI MAKANDA

app.snowflake.com/af-south-1.aws/tp56197/w1FJeBbB4aQs#query

2025-10-04 10:26am 2025-10-11 11:30am 2025-10-16 2:21pm 2025-10-16 5:23pm 2025-10-18 9:27am 2025-10-20 5:16pm

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

```
205 CASE
206 WHEN SHIPPING_TYPE IN ('Express', 'Next Day Air') THEN 'Fast'
207 WHEN SHIPPING_TYPE = 'Standard' THEN 'Slow'
208 ELSE 'Other'
209 END AS DELIVERY_SPEED,
210 COUNT(*) AS CUSTOMER_COUNT
```

Results Chart

DELIVERY_SPEED	# CUSTOMER_COUNT
Other	166
Fast	89
Slow	45

Query Details

Query duration 486ms

Rows 3

Query ID 01b6db4c-000c-b142-0...

Show more

DELIVERY_SPEED 100% filled

QUESTION 17 - FADZAI MAKANDA

app.snowflake.com/af-south-1.aws/tp56197/w1FJeBbB4aQs#query

2025-10-04 10:26am 2025-10-11 11:30am 2025-10-16 2:21pm 2025-10-16 5:23pm 2025-10-18 9:27am 2025-10-20 5:16pm

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

SHOPPING.RETAIL_SHOP Settings

```

219 PURCHASE_AMOUNT,
220 PROMO_CODE_USED
221 FROM SHOPPING_TRENDS_DATASET
222 WHERE PURCHASE_AMOUNT IS NULL
223 AND PROMO_CODE_USED = 'YES'

```

Results Chart

#	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

Query Details

Query duration 409ms

Rows 20

Query ID 01bfbdb2-000c-b142-0...

Show more

CUSTOMER_ID

QUESTION 18 - FADZAI MAKANDA

app.snowflake.com/af-south-1.aws/tp56197/w1FJeBbB4aQs#query

2025-10-04 10:26am 2025-10-11 11:30am 2025-10-16 2:21pm 2025-10-16 5:23pm 2025-10-18 9:27am 2025-10-20 5:16pm

ACCOUNTADMIN COMPUTE_WH (X-Small) Share

SHOPPING.RETAIL_SHOP Settings

```

229 SELECT AVG(REVIEW_RATING) AS AVERAGE_REVIEW_RATING,
230 IFNULL ( MAX(PREVIOUS_PURCHASES) , 0) AS MAX_REVIEW_RATING,
231 LOCATION
232 FROM SHOPPING_TRENDS_DATASET
233 GROUP BY LOCATION

```

Results Chart

#	AVERAGE_REVIEW_RATING	MAX_REVIEW_RATING	LOCATION
1	3.7428571	50.0	Rhode Island
2	3.7107143	46.0	Kentucky
3	3.5523810	47.0	Texas
4	3.6580645	47.0	Massachusetts
5	3.5956522	50.0	null
6	3.6133333	50.0	Oregon
7	3.9280000	49.0	New York
8	3.7815789	47.0	Maine
9	3.5312500	49.0	Florida

Query Details

Query duration 83ms

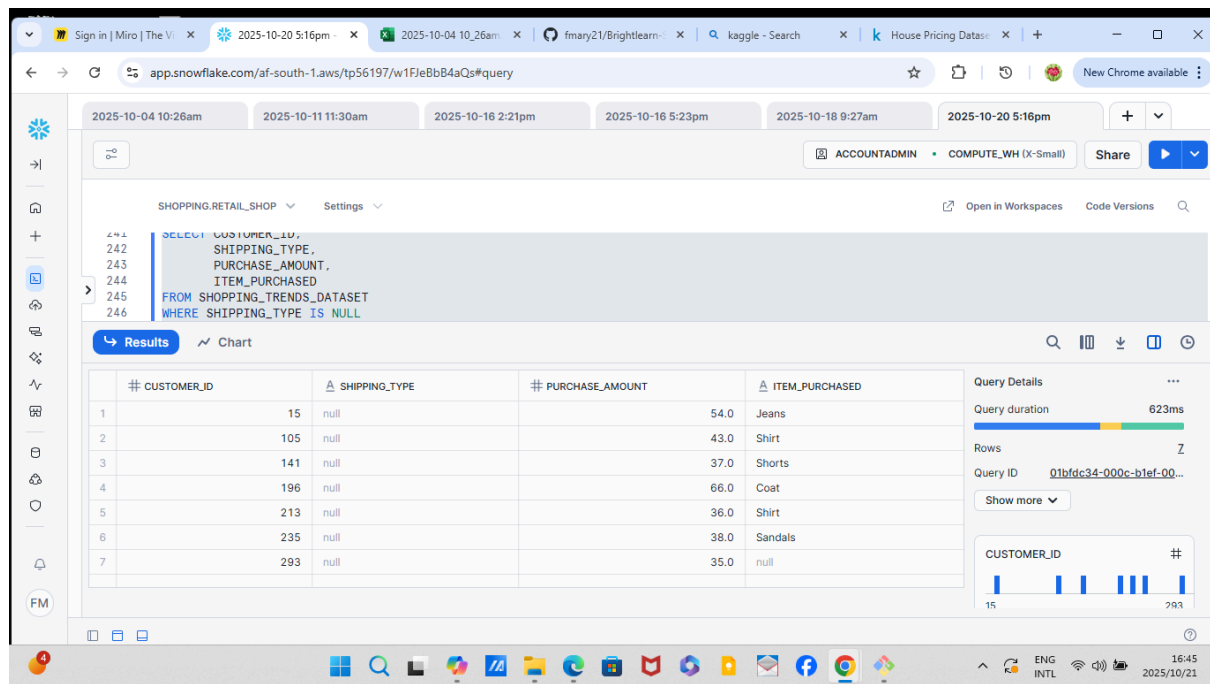
Rows 9

Query ID 01bfbdc03-000c-b142-0...

Show more

AVERAGE_REVIEW_RATING

QUESTION 19



QUESTION 20 - FADZAI MAKANDA

CODE

SELECT*
FROM SHOPPING_TRENDS_DATASET;

---1. Find all records where Size is missing and the purchase_amount is greater than 50.
---Expected Columns: Customer ID, Size, purchase_amount, Item Purchased.

```
SELECT CUSTOMER_ID,
       ITEM_PURCHASED,
       PURCHASE_AMOUNT,
       SIZE
FROM shopping_trends_dataset
WHERE SIZE IS NULL
AND PURCHASE_AMOUNT >50;
```

---2. List the total number of purchases grouped by Season, treating NULL values as 'Unknown Season'.
---Expected Columns: Season, Total Purchases.

```
SELECT
  IFNULL(SEASON, 'Unknown Season') AS SEASON,
  COUNT(*) AS TOTAL_PURCHASES
```

```
FROM SHOPPING_TRENDS_DATASET
GROUP BY IFNULL(SEASON, 'Unknown Season');
```

---3. Count how many customers used each Payment Method, treating NULLs as "Not Provided".

---Expected Columns: Payment Method, Customer Count.

```
SELECT COUNT(*) AS CUSTOMER_COUNT,
       IFNULL(PAYMENT_METHOD, 'NOT PROVIDED') AS PAYMENT_METHOD
FROM SHOPPING_TRENDS_DATASET
GROUP BY IFNULL(PAYMENT_METHOD, 'NOT PROVIDED');
```

---4. Show customers where Promo Code Used is NULL and Review Rating is below 3.0.

---Expected Columns: Customer ID, Promo Code Used, Review Rating, Item Purchased

```
SELECT CUSTOMER_ID,
       ITEM_PURCHASED,
       REVIEW_RATING,
       PROMO_CODE_USED
FROM SHOPPING_TRENDS_DATASET
WHERE PROMO_CODE_USED IS NULL
      AND REVIEW_RATING < 3.0
```

--- 5. Group customers by Shipping

---Type, and return the average purchase_amount, treating missing values as 0.

---Expected Columns: Shipping Type, Average purchase_amount

```
SELECT
       SHIPPING_TYPE,
       AVG(IFNULL(PURCHASE_AMOUNT, 0)) AS AVERAGE_PURCHASE_AMOUNT
FROM SHOPPING_TRENDS_DATASET
GROUP BY SHIPPING_TYPE;
```

---6. Display the number of purchases per Location only for those with more than 5 purchases and no NULL Payment Method.

---Expected Columns: Location, Total Purchases

```
SELECT COUNT(*) AS TOTAL_PURCHASES,
       LOCATION
FROM SHOPPING_TRENDS_DATASET
WHERE PAYMENT_METHOD IS NOT NULL
GROUP BY LOCATION
```

HAVING COUNT(*) >5;

---7. Create a column Spender Category that classifies customers using CASE:
---'High' if amount > 80, 'Medium' if BETWEEN 50 AND 80,
---'Low' otherwise. Replace NULLs in purchase_amount with 0.
---Expected Columns: Customer ID, purchase_amount, Spender Category

```
SELECT CUSTOMER_ID,  
IFNULL(PURCHASE_AMOUNT,0) AS PURCHASE_AMOUNT,  
CASE WHEN PURCHASE_AMOUNT >80 THEN 'High'  
      WHEN PURCHASE_AMOUNT BETWEEN 50 AND 80 THEN 'Medium'  
      ELSE 'Low'  
      END AS SPENDER_CATEGORY  
FROM SHOPPING_TRENDS_DATASET;
```

---8. Find customers who have no Previous
---Purchases value but whose Color is not NULL.
---Expected Columns: Customer ID, Color, Previous Purchases.

```
SELECT CUSTOMER_ID,  
       COLOR,  
       PREVIOUS_PURCHASES  
FROM SHOPPING_TRENDS_DATASET  
WHERE PREVIOUS_PURCHASES IS NOT NULL AND COLOR IS NOT NULL;
```

---9. Group records by Frequency of
---Purchases and show the total amount spent per group, treating NULL frequencies as
'Unknown'
---Expected Columns: Frequency of Purchases, Total purchase_amount

```
SELECT COUNT(PURCHASE_AMOUNT)AS TOTAL_PURCHASE_AMOUNT,  
       IFNULL (FREQUENCY_OF_PURCHASES,'Unknown')AS  
FREQUENCY_OF_PURCHASES  
FROM SHOPPING_TRENDS_DATASET  
GROUP BY IFNULL (FREQUENCY_OF_PURCHASES,'Unknown')
```

-

---10.Display a list of all Category values with the number of times each was purchased,
--- excluding rows where Category is NULL.
---Expected Columns: Category, Total Purchases

SELECT

```
CATEGORY,  
COUNT(*) AS TOTAL_PURCHASES  
FROM SHOPPING_TRENDS_DATASET  
WHERE CATEGORY IS NOT NULL  
GROUP BY CATEGORY;
```

--

---11.Return the top 5 Locations with the highest total purchase_amount, replacing NULLs in amount with 0.

---Expected Columns: Location, Total purchase_amount

```
SELECT  
  IFNULL(LOCATION, 'Unknown') AS LOCATION,  
  SUM(IFNULL(PURCHASE_AMOUNT, 0)) AS TOTAL_PURCHASE_AMOUNT  
FROM SHOPPING_TRENDS_DATASET  
GROUP BY IFNULL(LOCATION, 'Unknown')  
ORDER BY TOTAL_PURCHASE_AMOUNT DESC  
LIMIT 5;
```

---12.Group customers by Gender and Size, and count how many entries have a NULL Color.

---Expected Columns: Gender, Size, Null Color Count

```
SELECT  
  GENDER,  
  SIZE,  
  COUNT(*) AS NULL_COLOR_COUNT  
FROM SHOPPING_TRENDS_DATASET  
WHERE COLOR IS NULL  
GROUP BY GENDER, SIZE;
```

-

---13.Identify all Item Purchased where more than 3 purchases had NULL Shipping Type.

---Expected Columns: Item Purchased, NULL Shipping Type Count

```
SELECT ITEM_PURCHASED,  
  COUNT(*)AS NULL_SHIPPING_TYPE_COUNT  
FROM SHOPPING_TRENDS_DATASET  
GROUP BY ITEM_PURCHASED  
HAVING NULL_SHIPPING_TYPE_COUNT >3;
```

--

---14. Show a count of how many customers per Payment Method have NULL Review Rating.

---Expected Columns: Payment Method, Missing Review Rating Count

```
SELECT COUNT(*) AS NULL_REVIEW_RATING_COUNT,  
       PAYMENT_METHOD  
FROM SHOPPING_TRENDS_DATASET  
GROUP BY PAYMENT_METHOD;
```

--

---15. Group by Category and return the average Review Rating, replacing NULLs with 0, and filter only where average is greater than 3.5.

---Expected Columns: Category, Average Review Rating.

```
SELECT  
  IFNULL(CATEGORY, 'Unknown') AS CATEGORY,  
  AVG(IFNULL(REVIEW_RATING, 0)) AS AVERAGE_REVIEW_RATING  
FROM SHOPPING_TRENDS_DATASET  
WHERE REVIEW_RATING > 3.5  
GROUP BY IFNULL(CATEGORY, 'Unknown');
```

-

---16. List all Colors that are missing (NULL) in at least 2 rows and the average Age of those rows.

---Expected Columns: Color, Average Age

```
SELECT  
  COALESCE(COLOR, 'Missing') AS COLOR,  
  AVG(AGE) AS AVG_AGE  
FROM SHOPPING_TRENDS_DATASET  
WHERE COLOR IS NULL  
GROUP BY COALESCE(COLOR, 'Missing')  
HAVING COUNT(*) >= 2;
```

--

---17. Use CASE to create a column Delivery Speed: 'Fast' if Shipping Type is 'Express' or 'Next Day Air', 'Slow' if 'Standard', 'Other' for all else including NULL. Then count how many customers fall into each category.

---Expected Columns: Delivery Speed, Customer Count

```

SELECT
  CASE
    WHEN SHIPPING_TYPE IN ('Express', 'Next Day Air') THEN 'Fast'
    WHEN SHIPPING_TYPE = 'Standard' THEN 'Slow'
    ELSE 'Other'
  END AS DELIVERY_SPEED,
  COUNT(*) AS CUSTOMER_COUNT
FROM SHOPPING_TRENDS_DATASET
GROUP BY
  CASE
    WHEN SHIPPING_TYPE IN ('Express', 'Next Day Air') THEN 'Fast'
    WHEN SHIPPING_TYPE = 'Standard' THEN 'Slow'
    ELSE 'Other'
  END;

```

---18. Find customers whose purchase_amount is NULL and whose Promo Code Used is 'Yes'.

---Expected Columns: Customer ID, purchase_amount, Promo Code Used

```

SELECT CUSTOMER_ID,
  PURCHASE_AMOUNT,
  PROMO_CODE_USED
FROM SHOPPING_TRENDS_DATASET
WHERE PURCHASE_AMOUNT IS NULL
  AND PROMO_CODE_USED = 'YES';

```

---19. Group by Location and show the maximum Previous Purchases, replacing NULLs with 0, only where the average rating is above 4.0.

---Expected Columns: Location, Max Previous Purchases, Average Review Rating.

```

SELECT AVG(REVIEW_RATING) AS AVERAGE_REVIEW_RATING,
  IFNULL( MAX(PREVIOUS_PURCHASES),0) AS MAX_REVIEW_RATING,
  LOCATION
FROM SHOPPING_TRENDS_DATASET
GROUP BY LOCATION
HAVING AVERAGE_REVIEW_RATING > 4.0

```

---20. Show customers who have a NULL Shipping Type but made a purchase in the range of 30 to 70 USD.

---Expected Columns: Customer ID, Shipping Type, purchase_amount, Item Purchased

```
SELECT CUSTOMER_ID,  
       SHIPPING_TYPE,  
       PURCHASE_AMOUNT,  
       ITEM_PURCHASED  
FROM SHOPPING_TRENDS_DATASET  
WHERE SHIPPING_TYPE IS NULL  
       AND PURCHASE_AMOUNT BETWEEN 30 AND 70;
```
