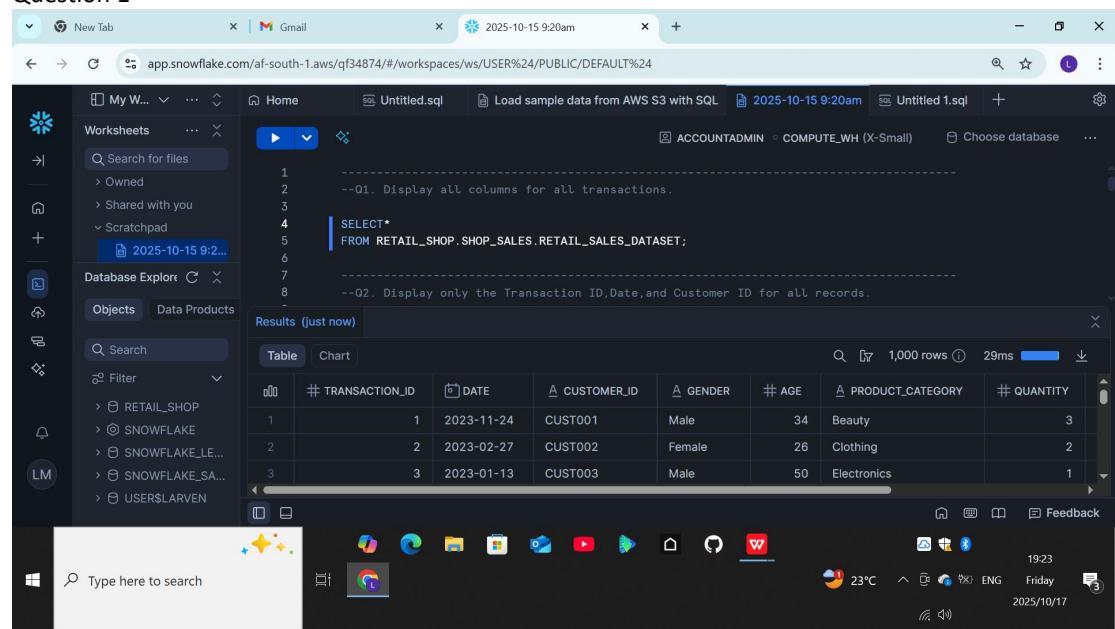


PRATCICAL 1 :Sql basic syntax

Brenda PL Moyo

Question 1



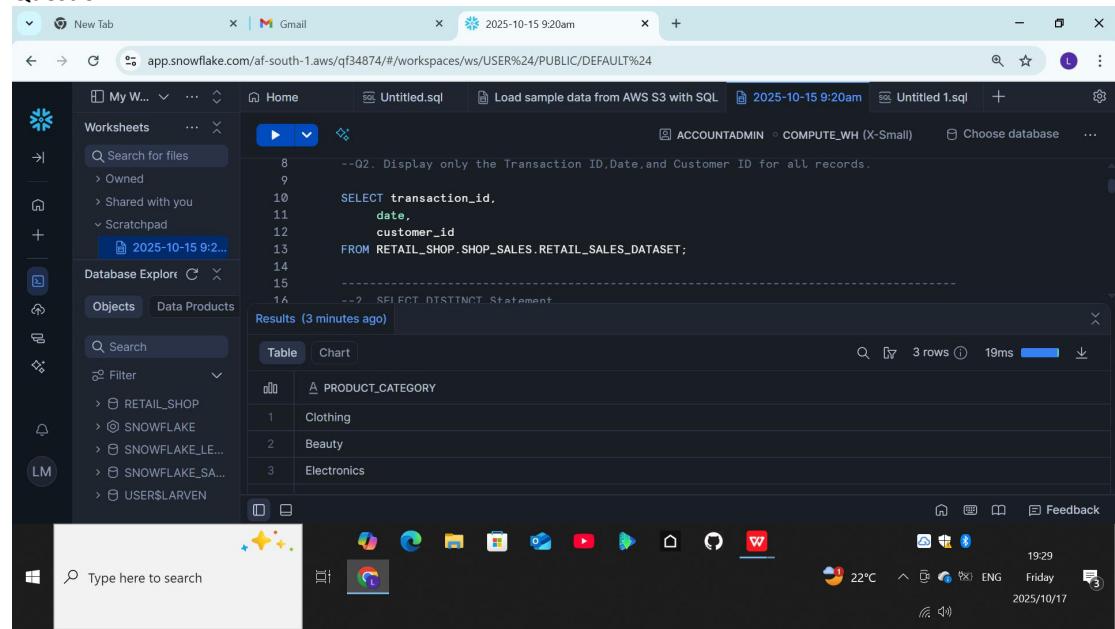
The screenshot shows the Snowflake SQL interface with the following details:

- Top Bar:** Shows tabs for "New Tab", "Untitled.sql", "Load sample data from AWS S3 with SQL", "2025-10-15 9:20am", "Untitled 1.sql", and a "+" button.
- Left Sidebar:** Includes sections for "Worksheets", "Database Explorer", and "Objects".
- SQL Editor:** Contains the following SQL code:

```
1 --Q1. Display all columns for all transactions.
2
3
4 SELECT*
5   FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET;
6
7 --Q2. Display only the Transaction ID, Date, and Customer ID for all records.
```
- Results Panel:** Titled "Results (just now)", it shows a table with 3 rows of data:

#	TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY
1	1	2023-11-24	CUST001	Male	34	Beauty	3
2	2	2023-02-27	CUST002	Female	26	Clothing	2
3	3	2023-01-13	CUST003	Male	50	Electronics	1
- System Bar:** Shows system status including temperature (23°C), date (2025/10/17), and time (19:23).

Question 2



The screenshot shows the Snowflake SQL interface with the following details:

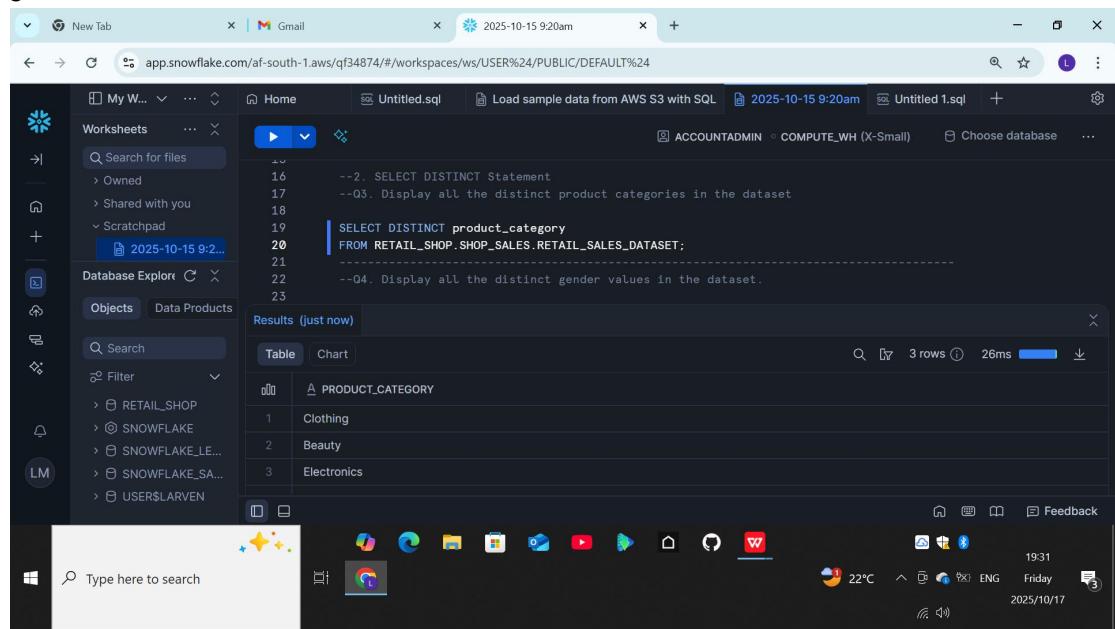
- Top Bar:** Shows tabs for "New Tab", "Untitled.sql", "Load sample data from AWS S3 with SQL", "2025-10-15 9:20am", "Untitled 1.sql", and a "+" button.
- Left Sidebar:** Includes sections for "Worksheets", "Database Explorer", and "Objects".
- SQL Editor:** Contains the following SQL code:

```
8 --Q2. Display only the Transaction ID, Date, and Customer ID for all records.
9
10 SELECT transaction_id,
11       date,
12       customer_id
13  FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET;
14
15 --?_SEI_ECT_DTTTNCT_Statement
```
- Results Panel:** Titled "Results (3 minutes ago)", it shows a table with 3 rows of data:

#	PRODUCT_CATEGORY
1	Clothing
2	Beauty
3	Electronics
- System Bar:** Shows system status including temperature (22°C), date (2025/10/17), and time (19:29).

Question

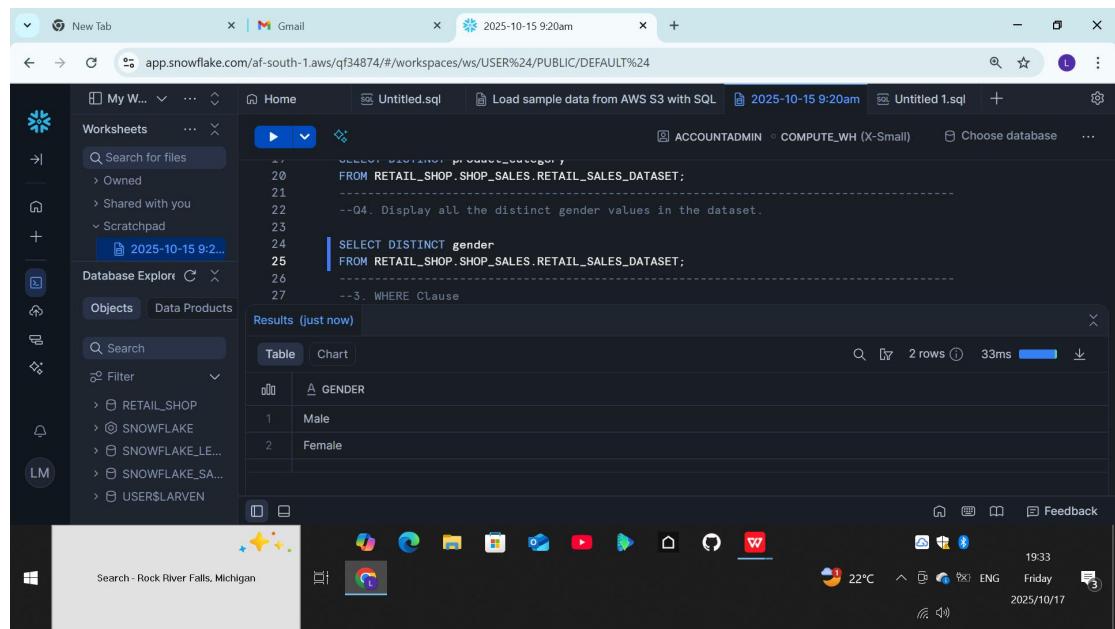
3



```
--2. SELECT DISTINCT Statement
--Q3. Display all the distinct product categories in the dataset
SELECT DISTINCT product_category
FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET;
```

PRODUCT_CATEGORY
Clothing
Beauty
Electronics

Question 4



```
--3. WHERE Clause
SELECT DISTINCT gender
FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET;
```

GENDER
Male
Female

Question 5

New Tab | Gmail | 2025-10-15 9:20am | app.snowflake.com/af-south-1.aws/qf34874/#/workspaces/ws/USER%24/PUBLIC/DEFAULT%24

Worksheets | Database Explorer | Objects

```

27 --3. WHERE Clause
28 --Q5. Display all transactions where the Age is greater than 40.
29
30 SELECT*
31 FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET
32 WHERE AGE>40;
33
34 --Q6. Display all transactions where the Price per Unit is between 100 and 500.

```

Results (just now)

# TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY
1	2023-01-13	CUST003	Male	50	Electronics	1
2	2023-04-25	CUST006	Female	45	Beauty	1
3	2023-03-13	CUST007	Male	46	Clothing	2

Type here to search

Question 6

New Tab | Gmail | 2025-10-15 9:20am | app.snowflake.com/af-south-1.aws/qf34874/#/workspaces/ws/USER%24/PUBLIC/DEFAULT%24

Worksheets | Database Explorer | Objects

```

34 --Q6. Display all transactions where the Price per Unit is between 100 and 500.
35
36
37 SELECT*
38 FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET
39 WHERE price_per_unit BETWEEN 100 AND 500;
40
41 -- Q7. Display all transactions where the Product Category is either 'Beauty' or 'electronics'.
42
43 SELECT*

```

Results (just now)

# TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY
1	2023-02-27	CUST002	Female	26	Clothing	2
2	2023-05-21	CUST004	Male	37	Clothing	1
3	2023-12-13	CUST009	Male	63	Electronics	2

Type here to search

Question 7

The screenshot shows the Snowflake Data Cloud interface. The top navigation bar includes tabs for 'New Tab' and 'Gmail', and a date/time indicator '2025-10-15 9:20am'. The main window has a left sidebar with 'My W...' and 'Worksheets' sections, and a 'Database Explore' section showing objects and data products. The central area is a query editor with a code editor showing SQL queries related to product categories and transactions, and a results table below it. The bottom navigation bar includes icons for file operations, search, and feedback.

Question 8

The screenshot shows a Snowflake browser interface. The top navigation bar includes tabs for 'New Tab' and 'Gmail', and a date/time indicator '2025-10-15 9:20am'. The main content area has a sidebar with 'Worksheets' and 'Database Explorer' sections. The 'Worksheets' section contains a search bar and a list of owned, shared, and scratchpad worksheets, with one worksheet titled '2025-10-15 9:20...' currently selected. The main workspace displays a SQL query being run:

```
-- Q8. Display all transactions where the Product Category is not 'Clothing'.
46
47
48
49
50
51
52
53
```

SELECT*
FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET
WHERE product_category <> 'clothing';

-- Q9. Display all transactions where the Quantity is greater than or equal to 3.

The results of the query are shown in a table format:

TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY
1	2023-11-24	CUST001	Male	34	Beauty	3
2	2023-02-27	CUST002	Female	26	Clothing	2
3	2023-01-13	CUST003	Male	50	Electronics	1

Question 9

```
-- Q9. Display all transactions where the Quantity is greater than or equal to 3.  
SELECT*  
FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET  
WHERE quantity >= 3;  
-- 4. Aggregate Functions
```

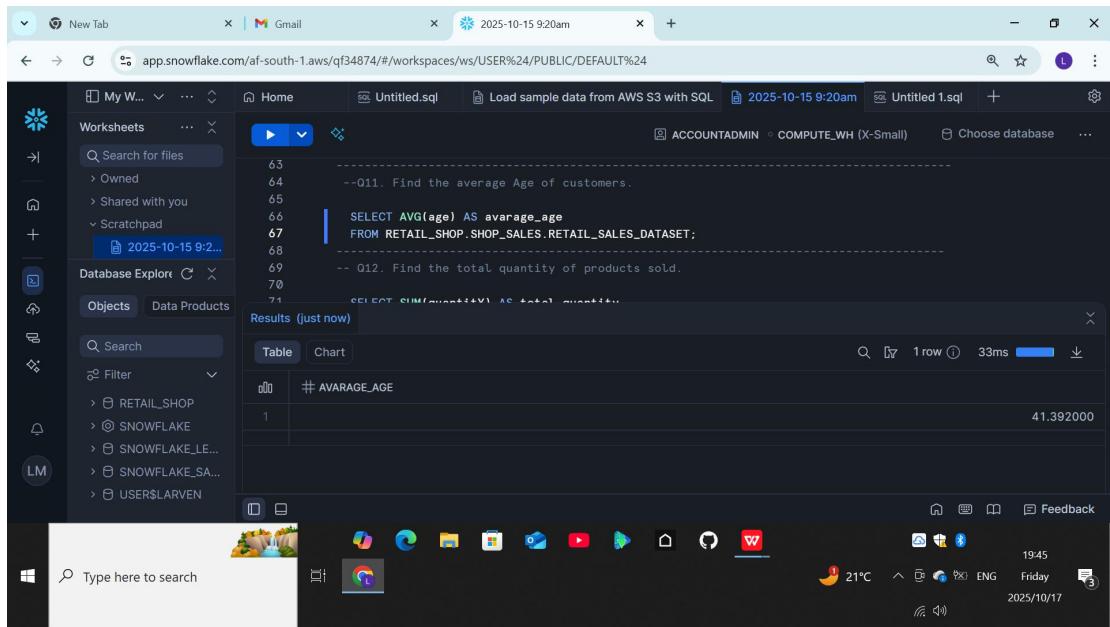
# TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY
1	2023-11-24	CUST001	Male	34	Beauty	3
2	2023-02-27	CUST002	Female	26	Clothing	2
3	2023-01-13	CUST003	Male	50	Electronics	1

Question 10

```
-- 4. Aggregate Functions  
--Q10. Count the total number of transactions.  
SELECT COUNT(*) AS total_transaction  
FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET;  
--Q11. Find the average Age of customers.
```

TOTAL_TRANSACTION
1000

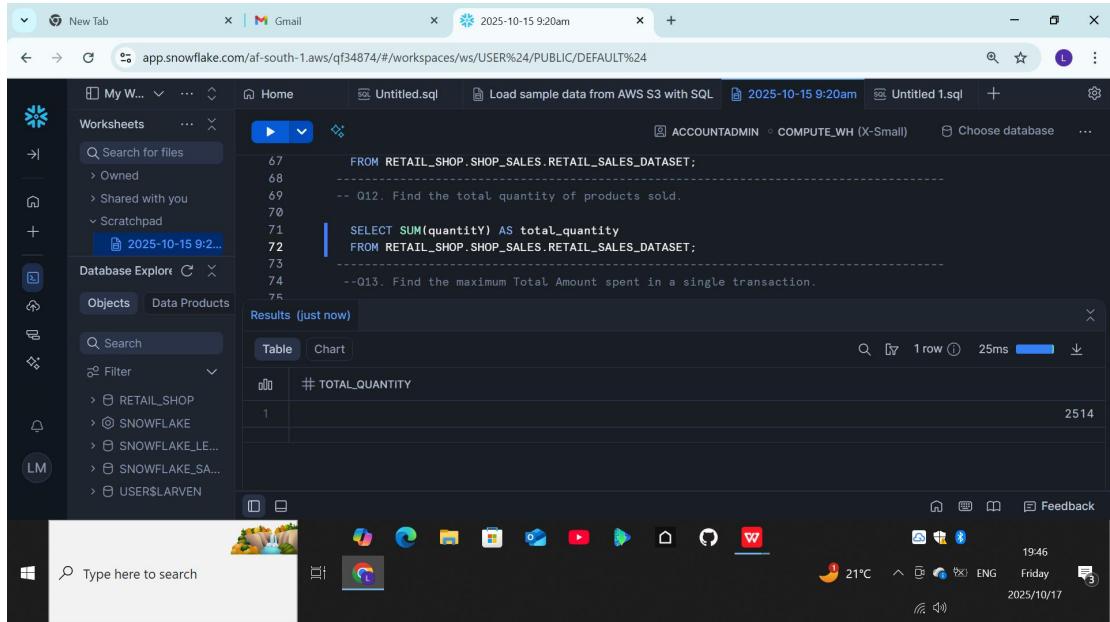
Question 11



```
--Q11. Find the average Age of customers.  
SELECT AVG(age) AS average_age  
FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET;  
-- Q12. Find the total quantity of products sold.  
SELECT SUM(quantity) AS total_quantity;
```

	# AVERAGE_AGE
1	41.392000

Question 12



```
FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET;  
-- Q12. Find the total quantity of products sold.  
SELECT SUM(quantity) AS total_quantity  
FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET;  
--Q13. Find the maximum Total Amount spent in a single transaction.
```

	# TOTAL_QUANTITY
1	2514

Question 13

2025-10-15 9:20am

```
71   SELECT SUM(quantity) AS total_quantity
72   FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET;
73
74   --Q13. Find the maximum Total Amount spent in a single transaction.
75
76   SELECT MAX(total_amount) AS max_total_amount
77   FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET;
78
79   --Q14. Find the minimum Price per Unit in the dataset
```

MAX_TOTAL_AMOUNT
2000

19:47 21°C ENG Friday 2025/10/17

Question 14

2025-10-15 9:20am

```
77   FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET;
78
79   --Q14. Find the minimum Price per Unit in the dataset.
80
81   SELECT MIN(price_per_unit) AS min_price_per_unit
82   FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET;
83
84   --5. GROUP BY Statement
85
86   --Q15. Find the number of transactions per Product Category
```

MIN_PRICE_PER_UNIT
25

19:49 21°C ENG Friday 2025/10/17

Question 15

The screenshot shows a Snowflake browser interface with the following details:

- URL:** app.snowflake.com/af-south-1.aws/qf34874/#/workspaces/ws/USER%24/PUBLIC/DEFAULT%24
- Database:** ACCOUNTADMIN COMPUTE_WH (X-Small)
- SQL Query (Line 89):**

```
SELECT product_category,
       COUNT(transaction_id) AS transaction_count
  FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET
 GROUP BY product_category;
```

- Results (just now):**

PRODUCT_CATEGORY	TRANSACTION_COUNT
Beauty	307
Clothing	351
Electronics	342

Question 16

The screenshot shows a Snowflake browser interface with the following details:

- URL:** app.snowflake.com/af-south-1.aws/qf34874/#/workspaces/ws/USER%24/PUBLIC/DEFAULT%24
- Database:** ACCOUNTADMIN COMPUTE_WH (X-Small)
- SQL Query (Line 95):**

```
--Q16. Find the total revenue (Total Amount) per gender.
SELECT gender,
       SUM(quantity * price_per_unit) total_revenue
  FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET
 GROUP BY gender;
```

- Results (just now):**

GENDER	TOTAL_REVENUE
Male	223160
Female	232840

Question 17

The screenshot shows the Snowflake SQL interface. The code entered is:

```
98 GROUP BY gender;
99 --Q17. Find the average Price per Unit per product category.
100
101 SELECT product_category,
102       AVG(price_per_unit)AS average_price
103  FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET
104 GROUP BY product_category;
105
```

The results table shows the average price for three categories:

PRODUCT_CATEGORY	AVERAGE_PRICE
Beauty	184.055375
Clothing	174.287749
Electronics	181.900585

Question 18

The screenshot shows the Snowflake SQL interface. The code entered is:

```
106 --6. HAVING Clause
107 --Q18. Find the total revenue per product category where total revenue is greater than
108
109 SELECT product_category,
110       SUM(quantity * price_per_unit)AS total_revenue
111  FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET
112 GROUP BY product_category
113 HAVING total_revenue >10000;
```

The results table shows the total revenue for three categories:

PRODUCT_CATEGORY	AVERAGE_PRICE
Beauty	184.055375
Clothing	174.287749
Electronics	181.900585

Question 19

New Tab | Gmail | 2025-10-15 9:20am | app.snowflake.com/af-south-1.aws/qf34874/#/workspaces/ws/USER%24/PUBLIC/DEFAULT%24

Home | Untitled.sql | Load sample data from AWS S3 with SQL | 2025-10-15 9:20am | Untitled 1.sql | + | Choose database ...

```

116
117 | SELECT product_category,
118 |     AVG(quantity)AS avaraga_quantity
119 |     FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET
120 |     GROUP BY product_category
121 |     HAVING AVG(quantity) >2;
122 |
123 --7. CASE Statement

```

Results (just now)

PRODUCT_CATEGORY	AVARAGA_QUANTITY
Beauty	2.511401
Clothing	2.547009
Electronics	2.482456

19:55 | 21°C | ENG | Friday | 2025/10/17

Question 20

New Tab | Gmail | 2025-10-15 9:20am | app.snowflake.com/af-south-1.aws/qf34874/#/workspaces/ws/USER%24/PUBLIC/DEFAULT%24

Home | Untitled.sql | Load sample data from AWS S3 with SQL | 2025-10-15 9:20am | Untitled 1.sql | + | Choose database ...

```

120 |
121 --Q20. Display a column called Spending_Level that shows 'High' if Total_Amount > 1000,otherwise 'Low'.
122
123 |
124 |     CASE
125 |         WHEN total_amount > 1000 THEN 'High'
126 |         ELSE 'Low'
127 |     END AS spending_level
128 |
129 |     FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET;
130 |
131 |
132 |
133

```

Results (just now)

TRANSACTION_ID	TOTAL_AMOUNT	SPENDING_LEVEL
1	150	Low
2	1000	Low
3	30	Low
4	500	Low

19:57 | 21°C | ENG | Friday | 2025/10/17

Question 21

The screenshot shows a Windows desktop environment. At the top, there is a taskbar with several open applications: a New Tab browser tab, Gmail, a calendar or reminder application, and the Snowflake browser window. The Snowflake window is the active application, displaying a SQL query in the editor and its results in a table format.

Snowflake Editor:

```
132    FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET;
133    --
134    --Q21. Display a new column called Age_Group that labels customers as:
135    --- 'Youth' if Age < 30
136    --- 'Youth' if Age < 30
137    --- 'Senior' if Age >= 60
138    Ctrl+T to generate
139    SELECT customer_id,
140        age,
141        CASE
142            WHEN age < 30 THEN 'Youth'
143            WHEN age BETWEEN 30 AND 59 THEN 'Adult'
144            WHEN age >= 60 THEN 'Senior'
145        END AS age_group
146    FROM RETAIL_SHOP.SHOP_SALES.RETAIL_SALES_DATASET;
```

Results (just now):

	CUSTOMER_ID	AGE	AGE_GROUP
1	CUST001	34	Adult

Taskbar:

- Windows Start button
- Type here to search
- Icons for File Explorer, Edge, Google Chrome, File Explorer, Task View, Task Manager, and File Explorer
- System tray icons: battery (21°C), network, volume, and date/time (19:59, Friday, 2025/10/17)