

Gugulethu Dlamini

Practical 1:

Question 1:

RETAIL_SALES.SALES ▾ Settings ▾

Open in Workspaces Code Versions ⚡

```
1 --1.Display all columns for all transactions.
2 SELECT
3 *
4 FROM
5 "SALES";
```

↳ Results ↵ Chart

#	TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY	PRICE_PER_UNIT	TOTAL_AMOUNT
1	1	2023-11-24	CUST001	Male	34	Beauty	3	50	150
2	2	2023-02-27	CUST002	Female	26	Clothing	2	500	1000
3	3	2023-01-13	CUST003	Male	50	Electronics	1	30	30
4	4	2023-05-21	CUST004	Male	37	Clothing	1	500	500
5	5	2023-05-06	CUST005	Male	30	Beauty	2	50	100
6	6	2023-04-25	CUST006	Female	45	Beauty	1	30	30
7	7	2023-03-13	CUST007	Male	46	Clothing	2	25	50
8	8	2023-02-22	CUST008	Male	30	Electronics	4	25	100
9	9	2023-12-13	CUST009	Male	63	Electronics	2	300	600
10	10	2023-10-07	CUST010	Female	52	Clothing	4	50	200
11	11	2023-02-14	CUST011	Male	23	Clothing	2	50	100
12	12	2023-10-30	CUST012	Male	35	Beauty	3	25	75

Query Details ...
Query duration 37ms
Rows 1K
Query ID 01bfc137-000c-b0ed-0...
Show more ↴

TRANSACTION_ID #

1 1000

DATE

2023-01-01 2024-01-01

Question 2:

6 --2.Display only the Transaction ID, Date, and Customer ID for all records.
7
8
9
10
11
12

```
SELECT 'Transaction_ID',
       Date,
       'Customer_ID'
  FROM Sales;
```

↳ Results ↵ Chart

#	'TRANSACTION_ID'	DATE	'CUSTOMER_ID'
1	Transaction_ID	2023-11-24	Customer_ID
2	Transaction_ID	2023-02-27	Customer_ID
3	Transaction_ID	2023-01-13	Customer_ID
4	Transaction_ID	2023-05-21	Customer_ID
5	Transaction_ID	2023-05-06	Customer_ID
6	Transaction_ID	2023-04-25	Customer_ID
7	Transaction_ID	2023-03-13	Customer_ID
8	Transaction_ID	2023-02-22	Customer_ID

Query Details ...
Query duration 28ms
Rows 1K
Query ID 01bfc14c-000c-b0ed-0...
Show more ↴

'TRANSACTION_ID' ▲

...

Question 3:

```
L4    --3. Display all the distinct product categories in the dataset.
L5    SELECT DISTINCT 'Product_Category'
L6    FROM Sales;
L7
```

Results Chart

The screenshot shows a table titled 'PRODUCT_CATEGORY' with one row: 'Product_Category'. To the right of the table, there is a 'Query Details' panel. It shows the following information:

- Query duration: 30ms
- Rows: 1
- Query ID: 01bfc158-000c-b0ed-0...
- Show more

Below the table, there is a search bar with the placeholder 'PRODUCT_CATEGORY'.

Question 4:

```
L4    --4. Display all the distinct gender values in the dataset.
L5    SELECT DISTINCT 'Gender'
L6    FROM Sales;
L7
```

Results Chart

The screenshot shows a table titled 'GENDER' with one row: 'Gender'. To the right of the table, there is a 'Query Details' panel. It shows the following information:

- Query duration: 59ms
- Rows: 1
- Query ID: 01bfc156-000c-b0ed-0...
- Show more

Below the table, there is a search bar with the placeholder 'GENDER'.

Question 5:

```
L7
18    --5. Display all transactions where the age is greater than 40
19    SELECT*
20    FROM Sales
21    WHERE Age >40;
```

Results Chart

The screenshot shows a table with the following columns: TRANSACTION_ID, DATE, CUSTOMER_ID, GENDER, AGE, PRODUCT_CATEGORY, QUANTITY, PRICE_PER_UNIT, and TOTAL_AMOUNT. There are 534 rows. To the right of the table, there is a 'Query Details' panel. It shows the following information:

- Query duration: 60ms
- Rows: 534
- Query ID: 01bfc15c-000c-b0ed-0...
- Show more

Below the table, there is a search bar with the placeholder 'TRANSACTION_ID'.

Question 6:

```
23    --6. Display all transactions where the price per unit is between 100 and 500.
24    SELECT*
25    FROM Sales
26    WHERE price_per_unit Between 100 AND 500;
```

Results Chart

The screenshot shows a table with the following columns: TRANSACTION_ID, DATE, CUSTOMER_ID, GENDER, AGE, PRODUCT_CATEGORY, QUANTITY, PRICE_PER_UNIT, and TOTAL_AMOUNT. There are 396 rows. To the right of the table, there is a 'Query Details' panel. It shows the following information:

- Query duration: 67ms
- Rows: 396
- Query ID: 01bfc165-000c-b0ed-0...
- Show more

Below the table, there is a search bar with the placeholder 'TRANSACTION_ID'.

Question 7:

```
--7. Display all transactions where the product Category is either 'Beauty' or 'electronics'.
28
29     SELECT*
30     FROM Sales
31     WHERE product_category IN ('Beauty','Electronic');
```

Results Chart

# TRANSACTION_ID	⌚ DATE	▲ CUSTOMER_ID	▲ GENDER	# AGE	▲ PRODUCT_CATEGORY	# QUANTITY	# PRICE_PER_UNIT	# TOTAL_AMOUNT	TRANSACTION_ID
1	2023-11-24	CUST001	Male	34	Beauty	3	50	150	
5	2023-05-06	CUST005	Male	30	Beauty	2	50	100	
6	2023-04-25	CUST006	Female	45	Beauty	1	30	30	
12	2023-10-30	CUST012	Male	35	Beauty	3	25	75	
21	2023-01-14	CUST021	Female	50	Beauty	1	500	500	
25	2023-12-26	CUST025	Female	64	Beauty	1	50	50	

Query Details
Query duration 65ms
Rows 307
Query ID 01bfc16b-000c-b0ed-0...
Show more

Question 8:

```
--8. Display all transactions where the product category is not 'Clothing'
32
33     SELECT*
34     FROM Sales
35     WHERE PRODUCT_CATEGORY !='Clothing';
36
```

Results Chart

# TRANSACTION_ID	⌚ DATE	▲ CUSTOMER_ID	▲ GENDER	# AGE	▲ PRODUCT_CATEGORY	# QUANTITY	# PRICE_PER_UNIT	# TOTAL_AMOUNT	TRANSACTION_ID
1	2023-11-24	CUST001	Male	34	Beauty	3	50	150	
2	2023-01-13	CUST003	Male	50	Electronics	1	30	30	
3	2023-05-06	CUST005	Male	30	Beauty	2	50	100	
4	2023-04-25	CUST006	Female	45	Beauty	1	30	30	
5	2023-02-22	CUST008	Male	30	Electronics	4	25	100	
6	2023-12-13	CUST009	Male	63	Electronics	2	300	600	

Query Details
Query duration 65ms
Rows 649
Query ID 01bfc16f-000c-b0ed-0...
Show more

Question 9:

```
--9. Display all transactions where the quantity is greater than or equal to 3
38
39     SELECT*
40     FROM Sales
41     WHERE QUANTITY >3;
```

Results Chart

# TRANSACTION_ID	⌚ DATE	▲ CUSTOMER_ID	▲ GENDER	# AGE	▲ PRODUCT_CATEGORY	# QUANTITY	# PRICE_PER_UNIT	# TOTAL_AMOUNT	TRANSACTION_ID
1	2023-02-22	CUST008	Male	30	Electronics	4	25	100	
2	2023-10-07	CUST010	Female	52	Clothing	4	50	200	
3	2023-01-17	CUST014	Male	64	Clothing	4	30	120	
4	2023-01-16	CUST015	Female	42	Electronics	4	500	2000	
5	2023-04-22	CUST017	Female	27	Clothing	4	25	100	
6	2023-04-12	CUST023	Female	35	Clothing	4	30	120	

Query Details
Query duration 66ms
Rows 263
Query ID 01bfc172-000c-b0ed-0...
Show more

Question 10:

```
--10. Count the total number of transactions
42
43     SELECT COUNT(*) AS Total_Transactions
44     FROM Sales;
45
```

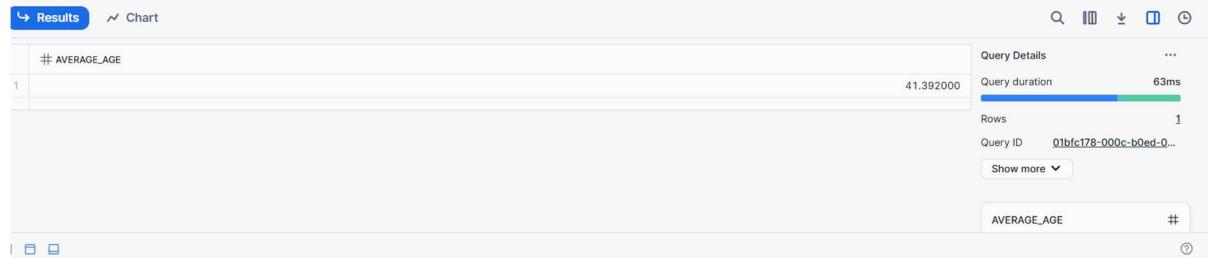
Results Chart

TOTAL_TRANSACTIONS
1

Query Details
Query duration 27ms
Rows 1
Query ID 01bfc174-000c-b0ed-0...
Show more

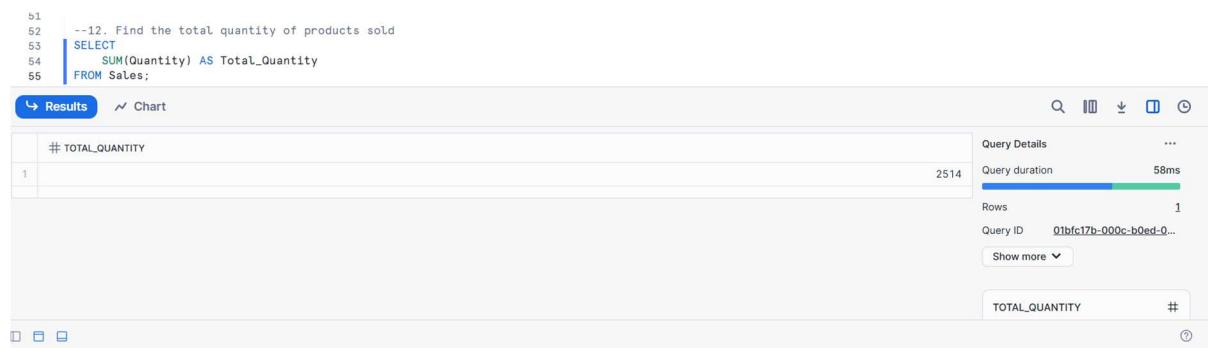
Question 11:

```
46
47      --11. Find the average Age of customers
48
49      SELECT
50          AVG(Age) AS Average_Age
      FROM Sales;
```



Question 12:

```
51
52      --12. Find the total quantity of products sold
53
54      SELECT
55          SUM(Quantity) AS Total_Quantity
      FROM Sales;
```



Question 13:

```
56
57      --13. Find the maximum total amount spent in a single transaction.
58
59      SELECT
60          MAX('Total Amount') AS Max_Total_Amount
      FROM Sales;
```



Question 14:

```

61      --14. Find the minimum Price per unit in the dataset
62      SELECT
63          MIN('Price per unit') AS Min_price_per_unit
64      FROM Sales;

```

Results

MIN_PRICE_PER_UNIT
Price per unit

Query Details

- Query duration 20ms
- Rows 1
- Query ID 01bfc184-000c-b0ed-0...

Show more ▾

MIN_PRICE_PER_UNIT ▾

Question 15:

```

66      --15. Find the number of transactions per product category
67      SELECT 'PRODUCT_CATEGORY',
68          COUNT(*) AS Transaction_Count
69      FROM Sales
70      GROUP BY 'Product category';
71

```

Results

'PRODUCT_CATEGORY'	# TRANSACTION_COUNT
PRODUCT_CATEGORY	1000

Query Details

- Query duration 396ms
- Rows 1
- Query ID 01bfc188-000c-b0ed-0...

Show more ▾

'PRODUCT_CATEGORY' ▾

Question 16:

```

73      --16. Find the total revenue (Total Amount) per gender
74      SELECT Gender,
75          SUM(Total_Amount) AS Total_Revenue
76      FROM Sales
77      GROUP BY GENDER;

```

Results

GENDER	# TOTAL_REVENUE
Male	223160
Female	232840

Query Details

- Query duration 109ms
- Rows 2
- Query ID 01bfc18f-000c-b0ed-0...

Show more ▾

GENDER ▾

Question 17:

```

78
79      --17. Find the average price per unit per product category.
80  SELECT 'Product Category',
81        AVG(PRICE_PER_UNIT) AS Average_Price
82  FROM Sales
83  GROUP BY 'Product Category';

```

Results

Δ 'PRODUCT CATEGORY'	# AVERAGE_PRICE
1 Product Category	179.890000

Query Details

- Query duration 60ms
- Rows 1
- Query ID 01bfc194-000c-b0ed-0...

Show more ▾

'PRODUCT CATEGORY' A

Question 18:

```

84
85      --18. Find the total revenue per product category where total revenue is greater than 10,000.
86  SELECT 'Product Category',
87        SUM(Total_Amount) AS Total_Revenue
88  FROM Sales
89  GROUP BY 'Product_Category' 'HAVING SUM(TOTAL_AMOUNT)>10000;

```

Results

Δ 'PRODUCT CATEGORY'	# TOTAL_REVENUE
1 Product Category	456000

Query Details

- Query duration 71ms
- Rows 1
- Query ID 01bfc19b-000c-b0ed-0...

Show more ▾

'PRODUCT CATEGORY' A

Question 19:

```

90
91      --19. Find the average quantity per product category where the average is more than 2.
92  SELECT Product_Category,
93        AVG(Quantity) AS Average_Quantity
94  FROM Sales
95  Group By PRODUCT_CATEGORY;

```

Results

Δ PRODUCT_CATEGORY	# AVERAGE_QUANTITY
1 Beauty	2.511401
2 Clothing	2.547009
3 Electronics	2.482456

Query Details

- Query duration 108ms
- Rows 3
- Query ID 01bfc19f-000c-b0ed-0...

Show more ▾

PRODUCT CATEGORY A

Question 20:

```

96      --20. Display a column called Spending_Level that shows 'High' if Total Amount >1000, otherwise 'Low'.
97      | SELECT
98          |     Transaction_ID,
99          |     Total_Amount,
100         |     CASE WHEN Total_Amount >1000 THEN 'High'
101         |     ELSE 'Low'
102         | END AS Spending_Level
103
104    | FROM Sales;

```

Results Chart

TRANSACTION_ID	TOTAL_AMOUNT	SPENDING_LEVEL
1	150	Low
2	1000	Low
3	30	Low
4	500	Low
5	100	Low
6	30	Low
7	50	Low

Query Details

- Query duration: 52ms
- Rows: 1K
- Query ID: 01bfc1a7-000c-b0ed-0...

Show more

Question 21:

```

105
106      --21. Display a new column called Age_Group that labels customers as Youth, Adult, Senior
107      | SELECT Customer_ID
108          |     Age,
109          |     CASE WHEN Age <30 THEN 'Youth'
110          |     WHEN Age BETWEEN 30 AND 59 THEN 'Adult'
111          |     WHEN Age >=60 THEN 'Senior'
112          | END AS Age_Group
113
114    | FROM Sales;

```

Results Chart

AGE	AGE_GROUP
CUST001	Adult
CUST002	Youth
CUST003	Adult
CUST004	Adult
CUST005	Adult
CUST006	Adult
CUST007	Adult

Query Details

- Query duration: 68ms
- Rows: 1K
- Query ID: 01bfc1ac-000c-b0ed-0...

Show more