TUMMY MABUZA

Practical Exercise (Goggle BigQuery)

1.

```
SELECT *
FROM `retail-479016.Sales.Data`
WHERE date>='2023-01-01' AND date <='2023-12-31';
```

Query completed

Using on-demand processing quota

Query results

Save results | Open in

Job information | Results | Visualization | JSON | Execution details

Row	Transaction ID	Date	Customer ID	Gender
1	191	2023-10-18	CUST191	Male
2	204	2023-09-28	CUST204	Male
3	230	2023-04-23	CUST230	Male
4	232	2023-02-06	CUST232	Female
5	309	2023-12-23	CUST309	Female

2.

```
SELECT
  *
FROM
  `retail-479016`.Sales.Data
WHERE
  `Total Amount` > (
    SELECT
      AVG(`Total Amount`)
    FROM
      `retail-479016`.Sales.Data
```

Query completed

Using on-demand processing quota

Query results

Save results | Open in

Job information | Results | Visualization | JSON | Execution details | Execution graph

	Product Category	Quantity	Price per Unit	Total Amount
50	Beauty	1	500	500
43	Beauty	1	500	500

3.

```
12  SELECT SUM(`Total Amount`) AS Total_revenue
13  FROM `retail-479016.Sales.Data`;
14
```

This query will process 7.81 KB when run.

Using on-demand processing quota

Query results

Save results

Job information | Results | Visualization | JSON | Execution details | Execution graph

Row	Total_revenue
1	456000

4.

```
14
15  SELECT DISTINCT`Product Category`
16  FROM `retail-479016.Sales.Data`;
17
```

Query completed

Using on-demand processing quota

Query results

Job information | Results | Visualization | JSON | Execution details

Row	Product Category
1	Beauty
2	Clothing
3	Electronics

5.

```
18  SELECT `Product Category`,
19         SUM(`Quantity`) AS Total_quantity
20  FROM `retail-479016.Sales.Data`
21  GROUP BY `Product Category`;
```

Query completed

Using on-demand processing quota

Query results

Job information | Results | Visualization | JSON

Row	Product Category	Total_quantity
1	Beauty	771
2	Clothing	894
3	Electronics	849

6.

```
24  SELECT `Customer ID`,
25         `Age`,
26         CASE
27         WHEN Age <30 THEN 'Youth'
28         WHEN Age BETWEEN 30 AND 59 THEN 'Adult'
29         WHEN Age >=60 THEN 'Senior'
30         ELSE 'Unkown'
31         END AS Age_group
32    FROM `retail-479016.Sales.Data`;
```

This script will process 125.25 KB when run.

Using on-demand processing quota

Query results

Job information | Results | Visualization | JSON | Execution detail

Row	Customer ID	Age	Age_group
1	CUST191	64	Senior
2	CUST204	39	Adult

7.

```
33
34  SELECT `Gender`,
35         COUNT(CASE WHEN `Total Amount`>=500 THEN 1 END) AS High_value_transactions
36         FROM `retail-479016.Sales.Data`
37         GROUP BY `Gender`;
38
```

Query completed

Using on-demand processing quota

Query results

Job information | Results | Visualization | JSON | Execution details | Execution

Row	Gender	High_value_trans...
1	Male	171
2	Female	179

8.

```
39  SELECT `Product Category`,
40         SUM(`Total Amount`) AS Total_revenue
41    FROM `retail-479016.Sales.Data`
42     GROUP BY `Product Category`
43     HAVING SUM(`Total Amount`)>5000;
44
```

Query completed

Query results

Job information | Results | Visualization | JSON

Row	Product Category	Total_revenue
1	Beauty	143515
2	Clothing	155580
3	Electronics	156905

9.

```
46          Price per unit ,
47          CASE
48            WHEN `Price per unit`<60 THEN 'Cheap'
49            WHEN `Price per unit` BETWEEN 60 AND 200 THEN 'Moderat
50            WHEN `Price per unit`>200 THEN 'Expensive'
51              ELSE 'Unknown'
52            END AS Unit_cost_category
53      FROM `retail-479016.Sales.Data`;
```

Query completed

Using on-demand processing quota

Query results

Job information | Results | Visualization | JSON | Executi

Row	Transaction ID	Price per unit	Unit_cost_category
1	191	25	Cheap
2	204	25	Cheap
3	230	25	Cheap
4	232	25	Cheap

10.

```
57          `Total Amount`,
58          CASE
59          WHEN `Total Amount`>=1000 THEN 'High'
60          ELSE 'Low'
61          END AS Standard_level
62      FROM `retail-479016.Sales.Data`
63      WHERE Age>=40;
```

This script will process 197.94 KB when run.

Using on-demand processing quota

Query results

Job information | Results | Visualization | JSON | Execution details | E

Row	Customer ID	Age	Total Amount	Standard_level
1	CUST191	64	25	Low
2	CUST230	54	25	Low
3	CUST232	43	25	Low