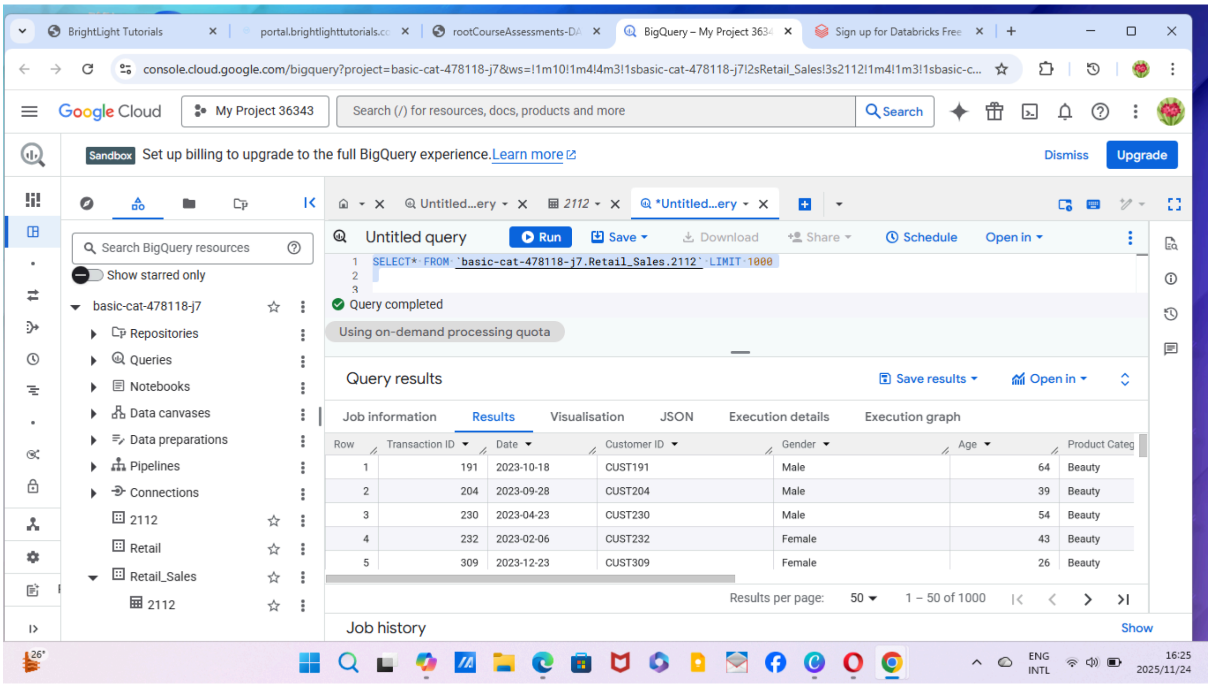
BigQuery Exercise



```sql
SELECT* FROM `basic-cat-478118-j7.Retail_Sales.2112` LIMIT 1000
```

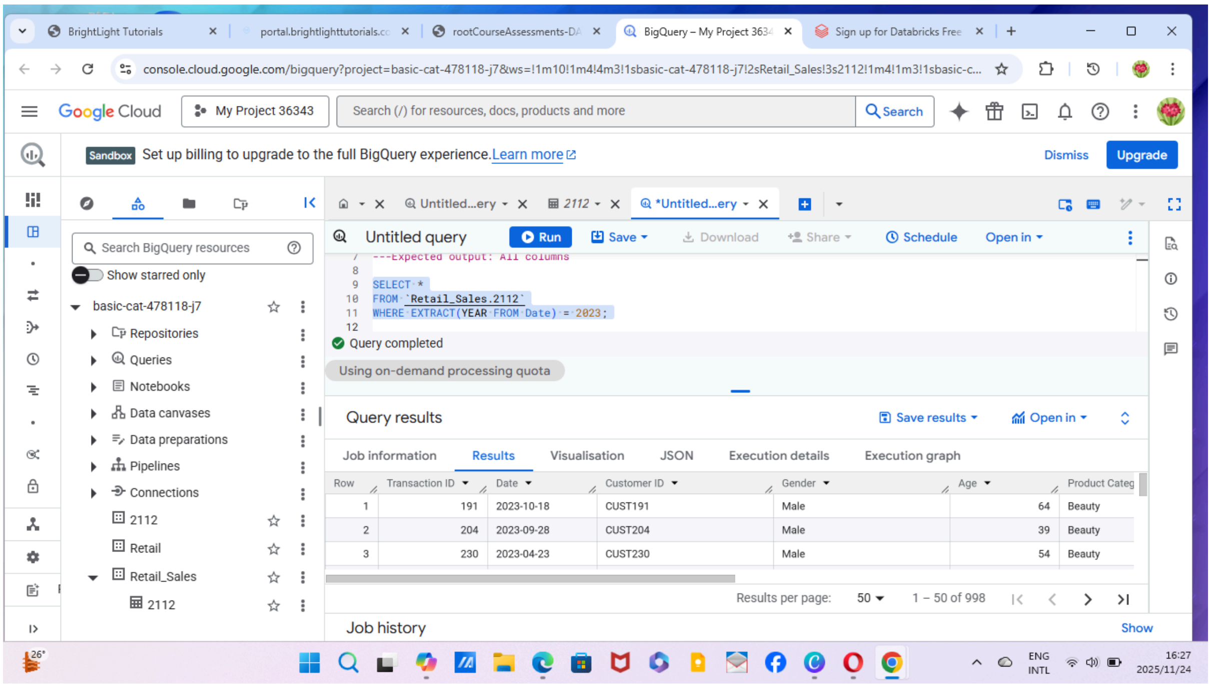
Query completed

Using on-demand processing quota

Row	Transaction ID	Date	Customer ID	Gender	Age	Product Categ
1	191	2023-10-18	CUST191	Male	64	Beauty
2	204	2023-09-28	CUST204	Male	39	Beauty
3	230	2023-04-23	CUST230	Male	54	Beauty
4	232	2023-02-06	CUST232	Female	43	Beauty
5	309	2023-12-23	CUST309	Female	26	Beauty

Results per page: 50 1 – 50 of 1000

Table



```sql
---Expected output: All columns

SELECT *
FROM `Retail_Sales.2112`
WHERE EXTRACT(YEAR FROM Date) = 2023;

```

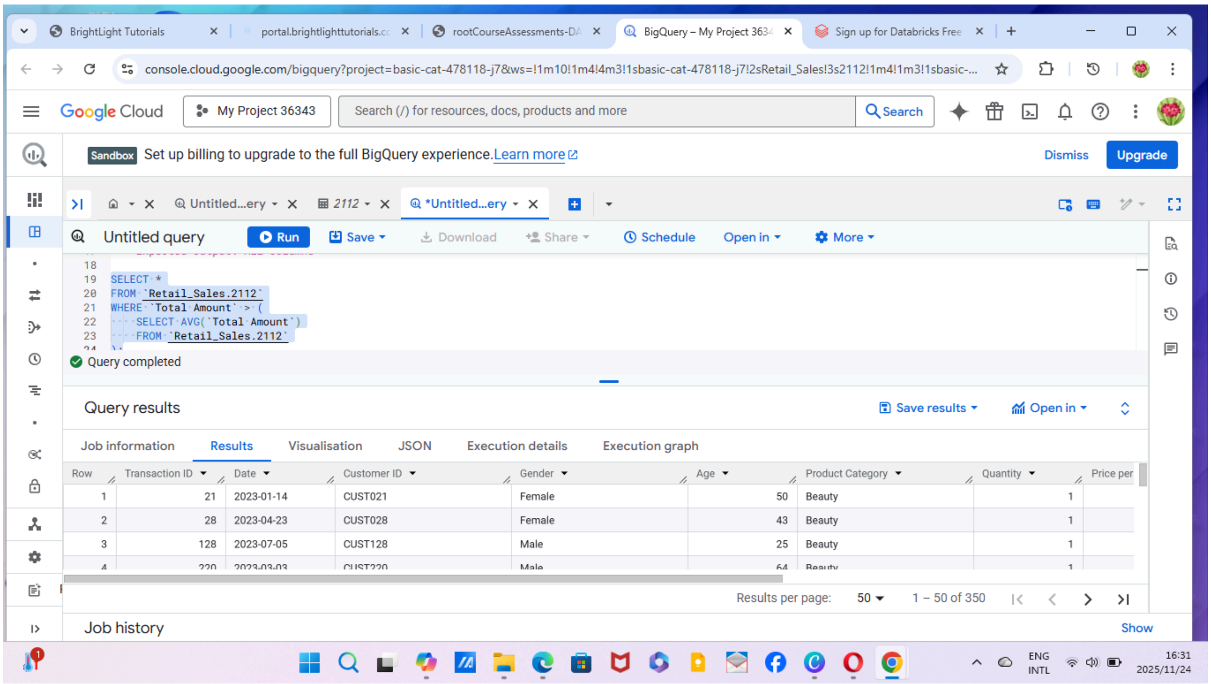
Query completed

Using on-demand processing quota

Row	Transaction ID	Date	Customer ID	Gender	Age	Product Categ
1	191	2023-10-18	CUST191	Male	64	Beauty
2	204	2023-09-28	CUST204	Male	39	Beauty
3	230	2023-04-23	CUST230	Male	54	Beauty

Results per page: 50 1 – 50 of 998

Question 1



Sandbox Set up billing to upgrade to the full BigQuery experience.Learn more

Untitled query

```
SELECT *
FROM `Retail_Sales.2112`
WHERE `Total Amount` > (
    SELECT AVG(`Total Amount`)
    FROM `Retail_Sales.2112`
);
```

Query completed

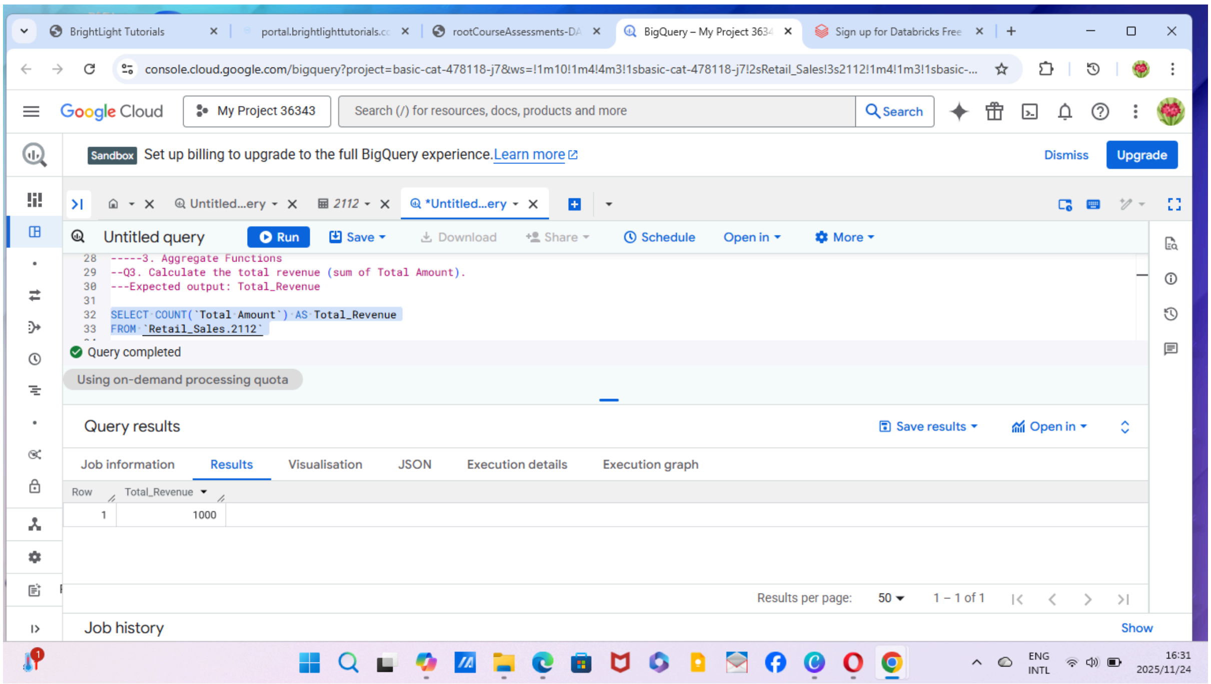
Query results

Row	Transaction ID	Date	Customer ID	Gender	Age	Product Category	Quantity	Price per
1	21	2023-01-14	CUST021	Female	50	Beauty	1	
2	28	2023-04-23	CUST028	Female	43	Beauty	1	
3	128	2023-07-05	CUST128	Male	25	Beauty	1	
4	220	2023-03-03	CUST220	Male	64	Beauty	1	

Results per page: 50   1 – 50 of 350

Job history

Question 2



Sandbox Set up billing to upgrade to the full BigQuery experience.Learn more

Untitled query

```
-----3. Aggregate Functions
--Q3. Calculate the total revenue (sum of Total Amount).
---Expected output: Total_Revenue

SELECT COUNT(`Total Amount`) AS Total_Revenue
FROM `Retail_Sales.2112`
```

Query completed

Using on-demand processing quota

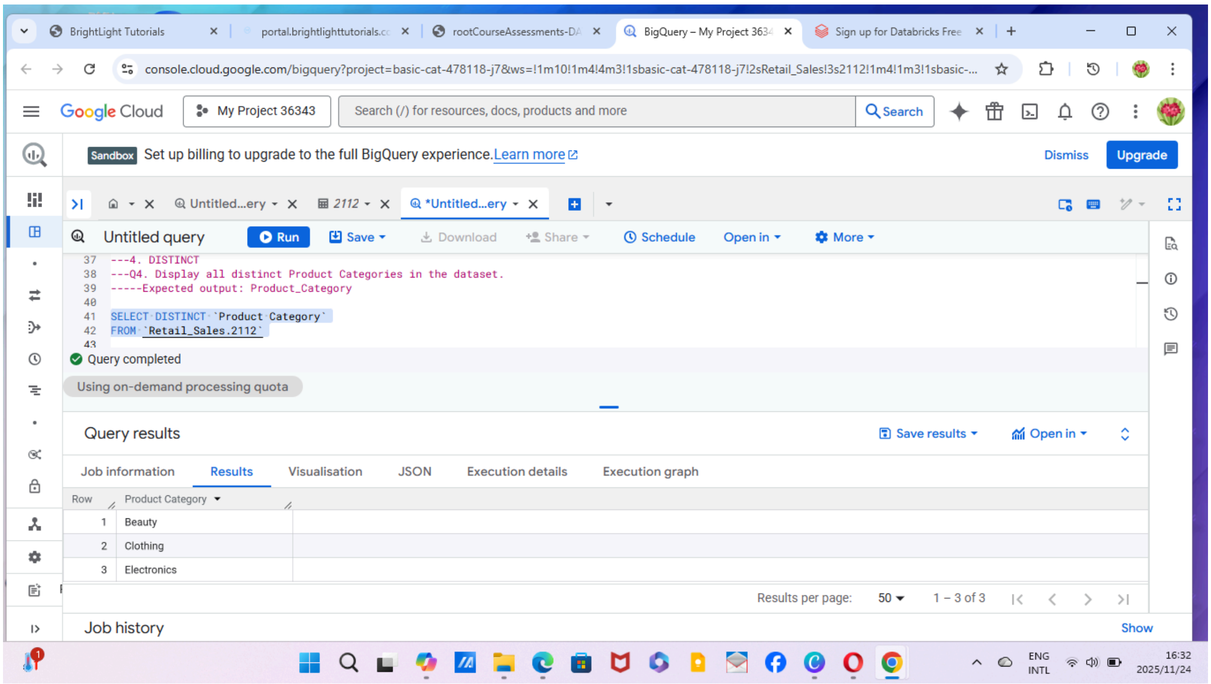
Query results

Row	Total_Revenue
1	1000

Results per page: 50   1 – 1 of 1

Job history

Question 3


BigQuery – My Project 3634
console.cloud.google.com/bigquery?project=basic-cat-478118-j7&ws=!1m10!1m4!4m3!1sbasic-cat-478118-j7!2sRetail_Sales!3s2112!1m4!1m3!1sbasic-...
Google Cloud
My Project 36343
Sandbox Set up billing to upgrade to the full BigQuery experience. Learn more
Untitled query
Run
Save
Download
Share
Schedule
Open in
More

```
---4. DISTINCT
---Q4. Display all distinct Product Categories in the dataset.
-----Expected output: Product_Category

SELECT DISTINCT `Product Category`
FROM `Retail_Sales.2112`
```

Query completed

Using on-demand processing quota

Query results

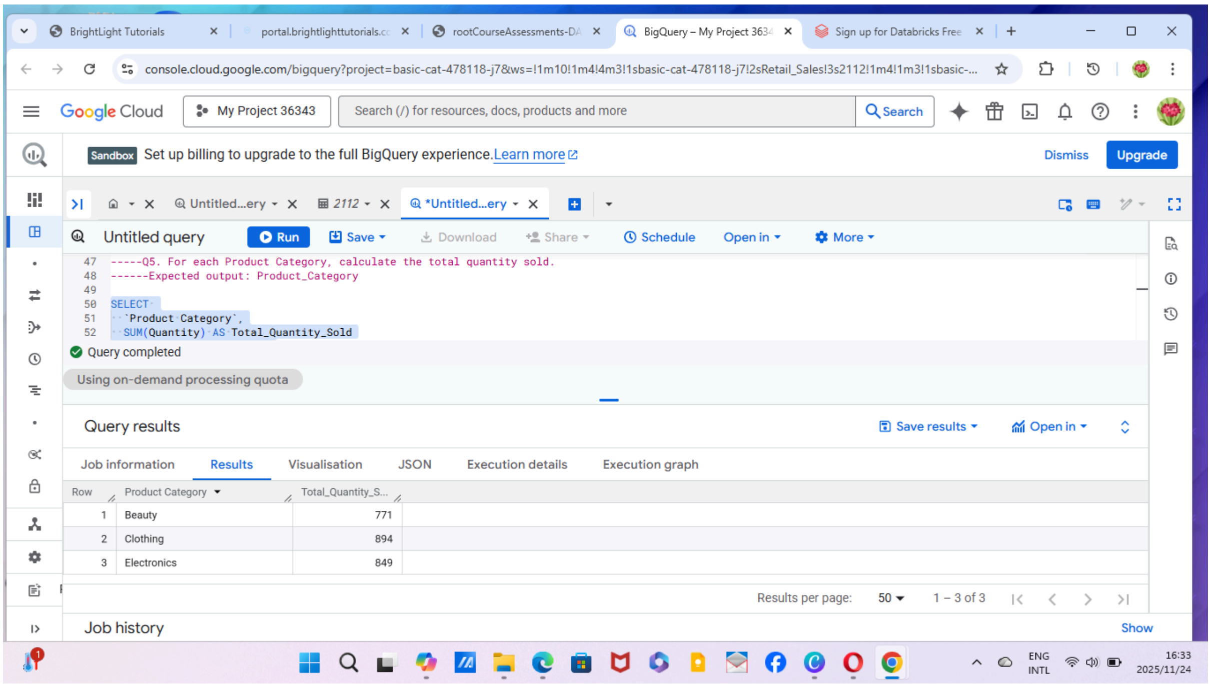
Job information
Results
Visualisation
JSON
Execution details
Execution graph

Row	Product Category
1	Beauty
2	Clothing
3	Electronics

Results per page: 50 1 – 3 of 3

Job history
Show
ENG INTL
16:32
2025/11/24

Question 4


BigQuery – My Project 3634
console.cloud.google.com/bigquery?project=basic-cat-478118-j7&ws=!1m10!1m4!4m3!1sbasic-cat-478118-j7!2sRetail_Sales!3s2112!1m4!1m3!1sbasic-...
Google Cloud
My Project 36343
Sandbox Set up billing to upgrade to the full BigQuery experience. Learn more
Untitled query
Run
Save
Download
Share
Schedule
Open in
More

```
-----Q5. For each Product Category, calculate the total quantity sold.
------Expected output: Product_Category

SELECT
  `Product Category`,
  SUM(Quantity) AS Total_Quantity_Sold
```

Query completed

Using on-demand processing quota

Query results

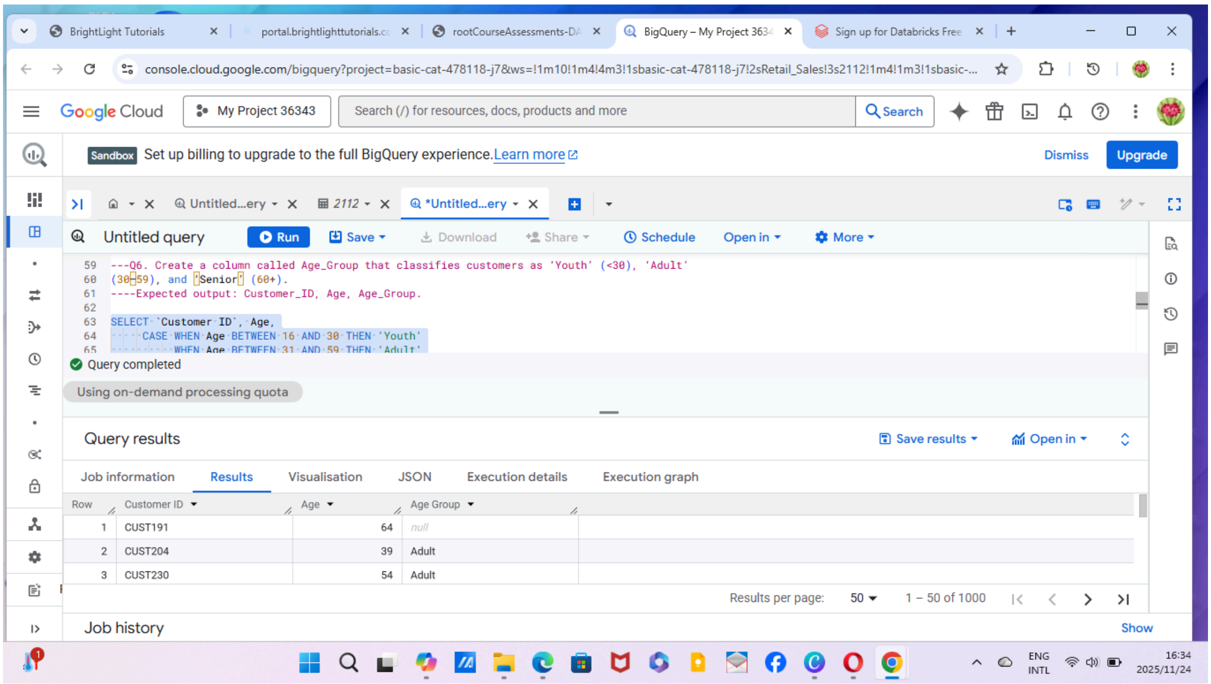
Job information
Results
Visualisation
JSON
Execution details
Execution graph

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

Results per page: 50 1 – 3 of 3

Job history
Show
ENG INTL
16:33
2025/11/24

Question 5


BigQuery – My Project 363
console.google.com/bigquery?project=basic-cat-478118-j7&ws=!1m10!1m4!4m3!1sbasic-cat-478118-j7!2sRetail_Sales!3s2112!1m4!1m3!1sbasic-...
Google Cloud
My Project 36343
Sandbox
Set up billing to upgrade to the full BigQuery experience. Learn more
Dismiss
Upgrade
Untitled query
Run
Save
Download
Share
Schedule
Open in
More

```
---Q6. Create a column called Age_Group that classifies customers as ‘Youth’ (<30), ‘Adult’
(30–59), and 'Senior' (60+).
----Expected output: Customer_ID, Age, Age_Group.

SELECT `Customer ID`, Age,
    CASE WHEN Age BETWEEN 16 AND 30 THEN 'Youth'
         WHEN Age BETWEEN 31 AND 59 THEN 'Adult'
```

Query completed

Using on-demand processing quota

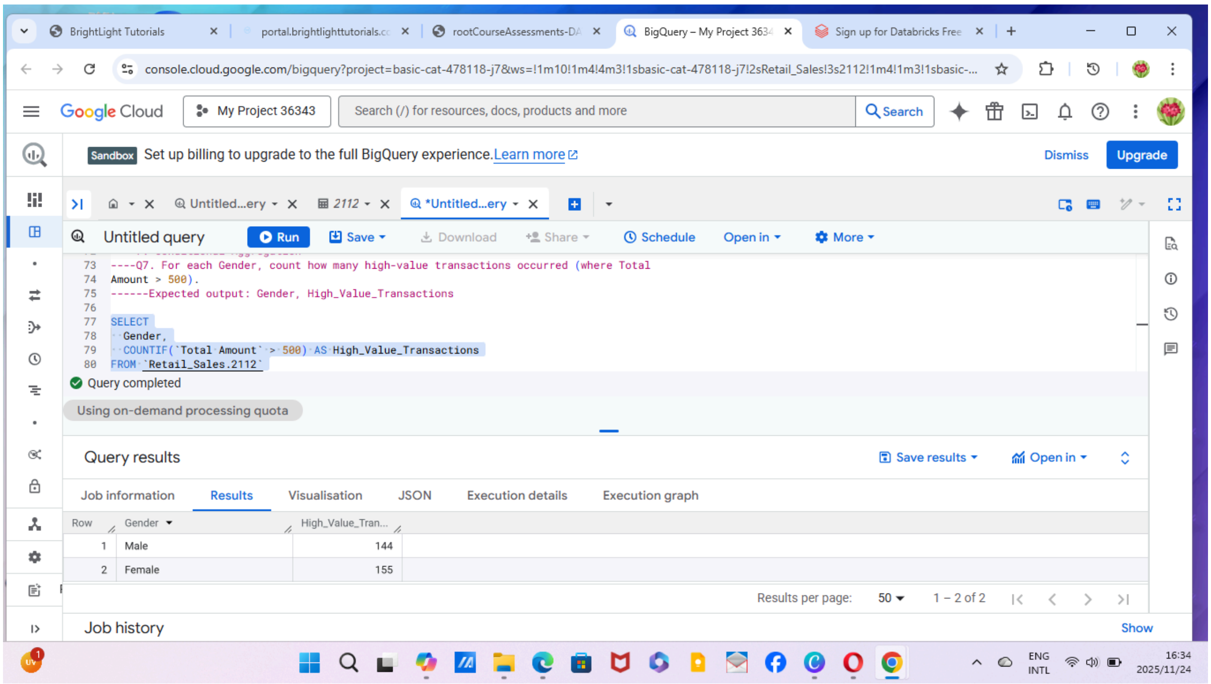
Query results

Save results
Open in
Job information
Results
Visualisation
JSON
Execution details
Execution graph

Row	Customer ID	Age	Age Group
1	CUST191	64	null
2	CUST204	39	Adult
3	CUST230	54	Adult

Results per page: 50   1 – 50 of 1000

Question 6


BigQuery – My Project 363
console.google.com/bigquery?project=basic-cat-478118-j7&ws=!1m10!1m4!4m3!1sbasic-cat-478118-j7!2sRetail_Sales!3s2112!1m4!1m3!1sbasic-...
Google Cloud
My Project 36343
Sandbox
Set up billing to upgrade to the full BigQuery experience. Learn more
Dismiss
Upgrade
Untitled query
Run
Save
Download
Share
Schedule
Open in
More

```
----Q7. For each Gender, count how many high-value transactions occurred (where Total
Amount > 500).
------Expected output: Gender, High_Value_Transactions

SELECT
  Gender,
  COUNTIF(`Total Amount` > 500) AS High_Value_Transactions
FROM `Retail_Sales.2112`
```

Query completed

Using on-demand processing quota

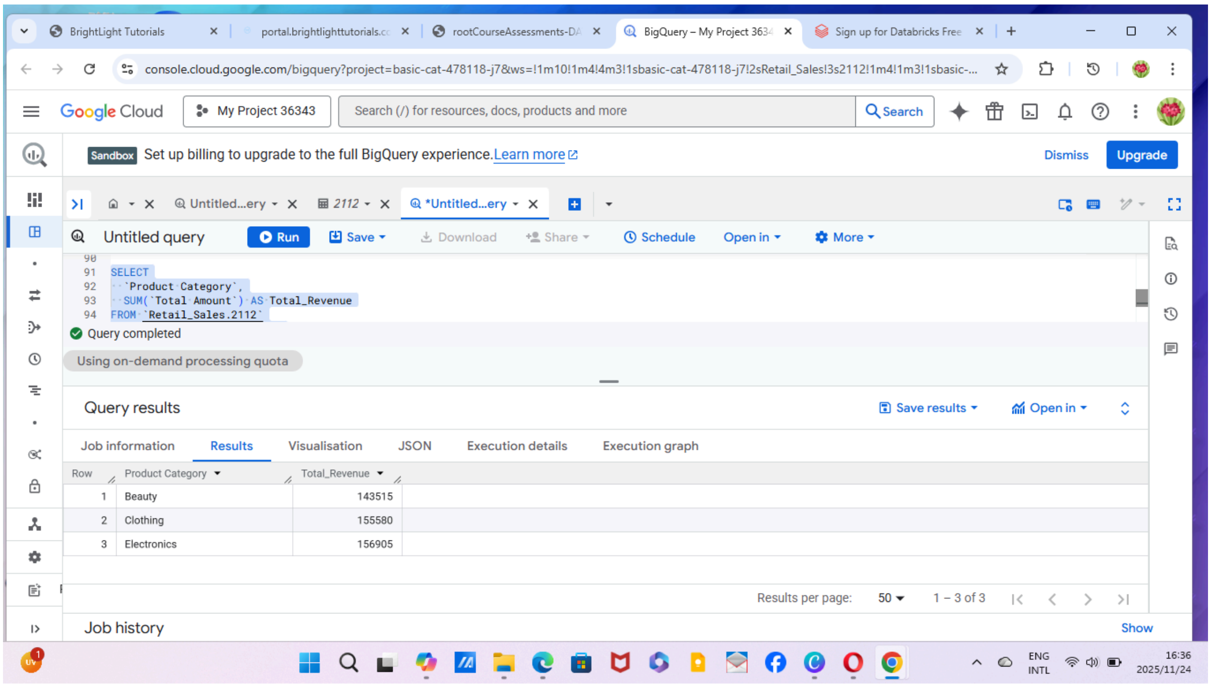
Query results

Save results
Open in
Job information
Results
Visualisation
JSON
Execution details
Execution graph

Row	Gender	High_Value_Tran...
1	Male	144
2	Female	155

Results per page: 50   1 – 2 of 2

Question 7



```
SELECT
  `Product Category`,
  SUM(`Total Amount`) AS Total_Revenue
FROM `Retail_Sales.2112`
```

Query completed

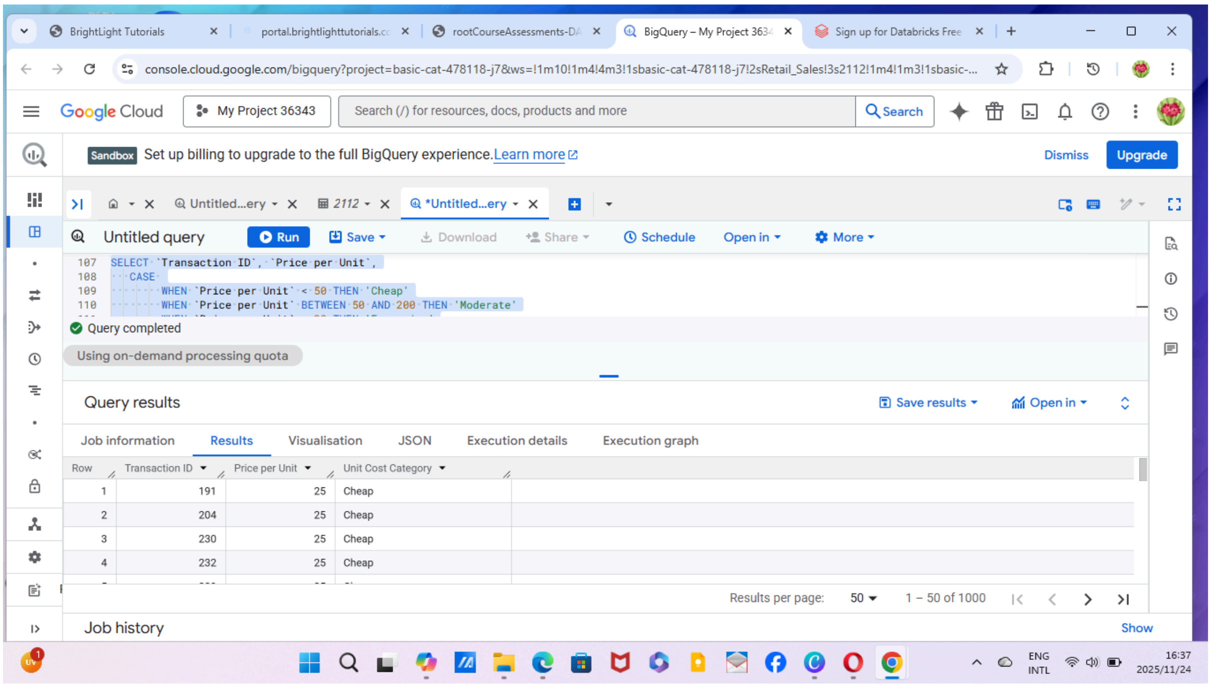
Using on-demand processing quota

Query results

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

Results per page: 50 1 – 3 of 3

Question 8



```
SELECT `Transaction ID`, `Price per Unit`,
  CASE
      WHEN `Price per Unit` < 50 THEN 'Cheap'
      WHEN `Price per Unit` BETWEEN 50 AND 200 THEN 'Moderate'
```

Query completed

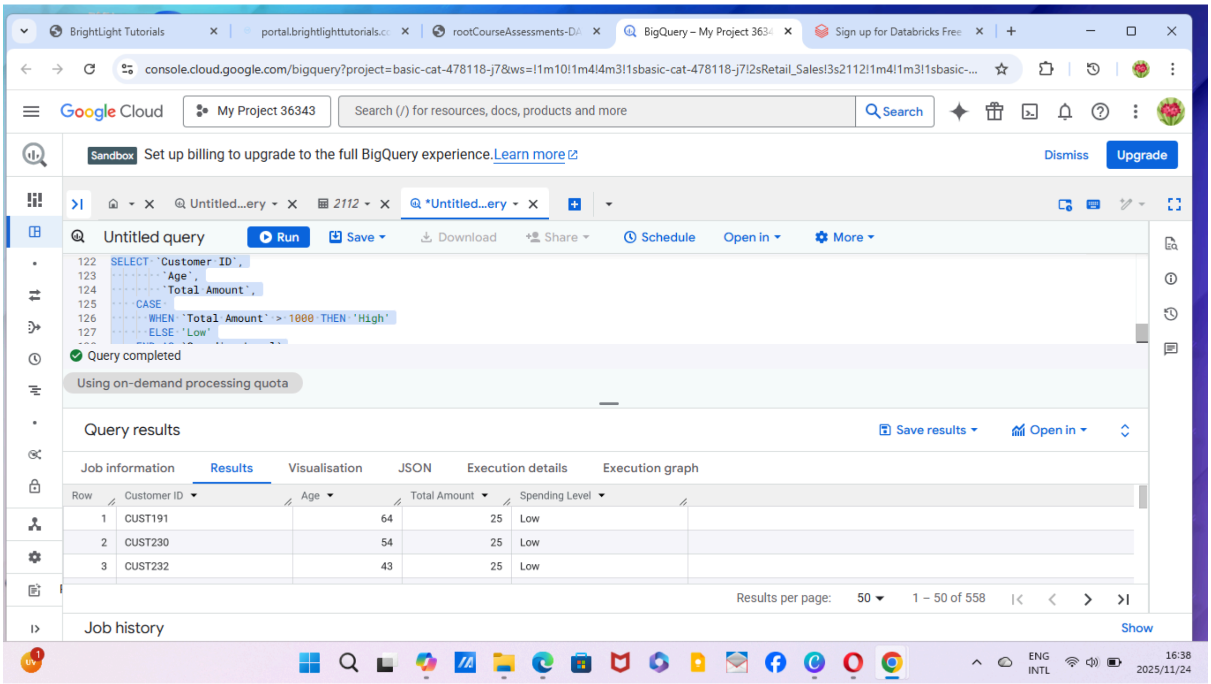
Using on-demand processing quota

Query results

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

Results per page: 50 1 – 50 of 1000

Question 9



console.cloud.google.com/bigquery?project=basic-cat-478118-j7&ws=!1m10!1m4!4m3!1sbasic-cat-478118-j7!2sRetail_Sales!3s2112!1m4!1m3!1sbasic-...
Google Cloud
My Project 36343
Sandbox
Set up billing to upgrade to the full BigQuery experience. Learn more
Dismiss
Upgrade
Untitled query
Run
Save
Download
Share
Schedule
Open in
More

```
SELECT `Customer ID`,
       `Age`,
       `Total Amount`,
   CASE
     WHEN `Total Amount` > 1000 THEN 'High'
     ELSE 'Low'
```

Query completed

Using on-demand processing quota

Query results

Job information
Results
Visualisation
JSON
Execution details
Execution graph

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

Results per page: 50 1 – 50 of 558

Job history
Show
16:38
2025/11/24

Question 10