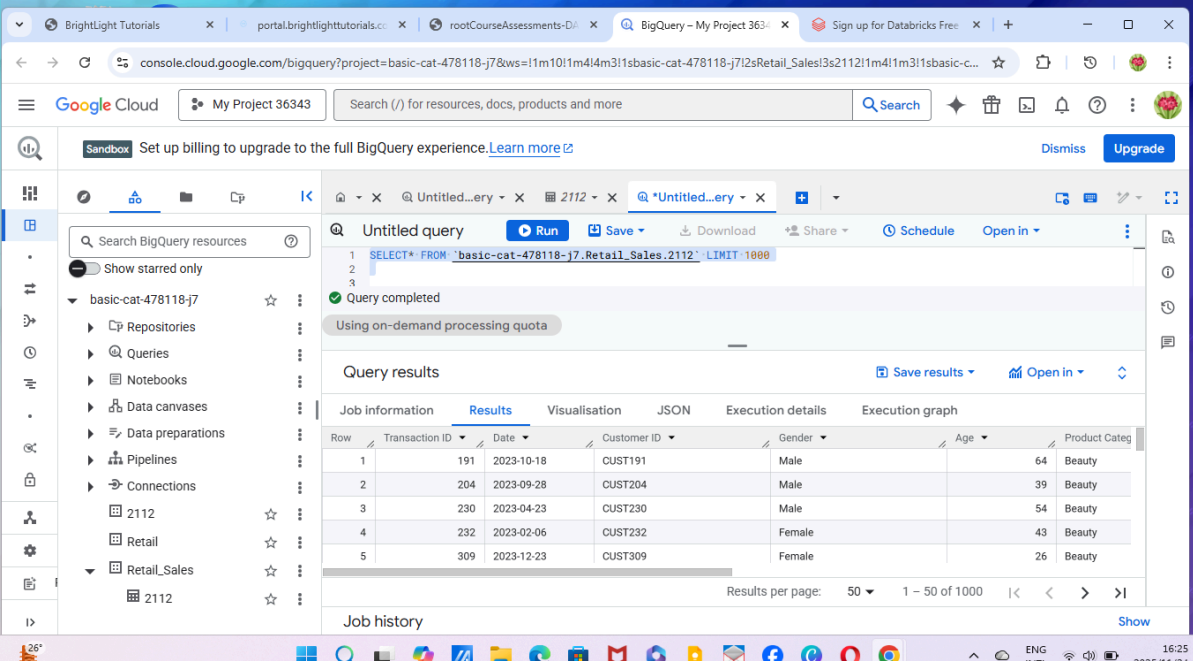


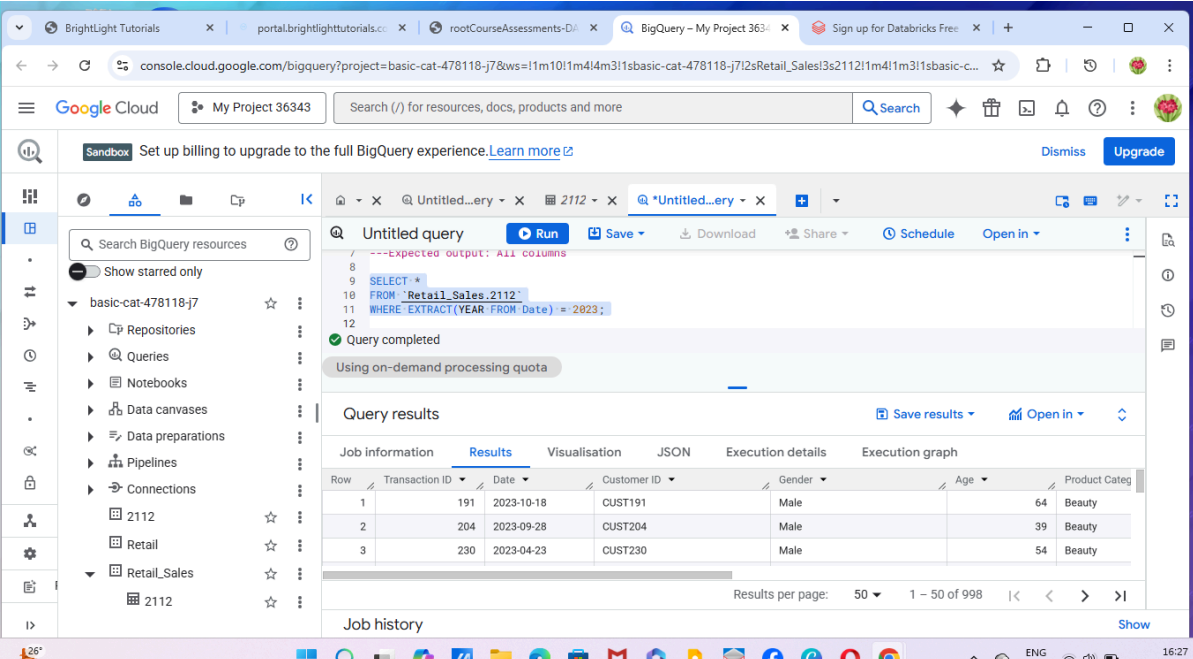
BigQuery Exercise



The screenshot shows the Google Cloud BigQuery console interface. The left sidebar displays the project hierarchy for 'basic-cat-478118-j7', including 'Retail_Sales' and '2112'. The main panel shows an 'Untitled query' with the SQL statement: `SELECT * FROM 'basic-cat-478118-j7.Retail_Sales.2112' LIMIT 1000`. The query is completed, and the results are displayed in a table format. The table has 7 columns: Transaction ID, Date, Customer ID, Gender, Age, and Product Category. The results show 5 rows of data.

Row	Transaction ID	Date	Customer ID	Gender	Age	Product Category
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

Table



The screenshot shows the Google Cloud BigQuery console interface. The left sidebar displays the project hierarchy for 'basic-cat-478118-j7', including 'Retail_Sales' and '2112'. The main panel shows an 'Untitled query' with the SQL statement: `SELECT * FROM 'Retail_Sales.2112' WHERE EXTRACT(YEAR FROM Date) = 2023;`. The query is completed, and the results are displayed in a table format. The table has 7 columns: Transaction ID, Date, Customer ID, Gender, Age, and Product Category. The results show 3 rows of data for the year 2023.

Row	Transaction ID	Date	Customer ID	Gender	Age	Product Category
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

Question 1

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Untitled query Run Save Download Share Schedule Open in More

```
18 SELECT *
19 FROM `Retail_Sales.2112`
20 WHERE `Total Amount` > (
21   SELECT AVG(`Total Amount`)
22   FROM `Retail_Sales.2112`
23 )
```

Query completed

Query results Save results Open in

Job information Results Visualisation JSON Execution details Execution graph

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	2023-08-03	CUST220	Male	64	Retail	1	

Results per page: 50 1 - 50 of 350

Job history Show

Question 2

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Untitled query Run Save Download Share Schedule Open in More

```
28 -----3. Aggregate Functions
29 --Q3. Calculate the total revenue (sum of Total Amount).
30 ---Expected output: Total_Revenue
31
32 SELECT COUNT(`Total Amount`) AS Total_Revenue
33 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	Total_Revenue
1	1000

Results per page: 50 1 - 1 of 1

Job history Show

Question 3

The screenshot shows the Google Cloud BigQuery console interface. The query editor contains the following SQL code:

```
37 ---4. DISTINCT
38 ---Q4. Display all distinct Product Categories in the dataset.
39 ---Expected output: Product_Category
40
41 SELECT DISTINCT `Product_Category`
42 FROM `Retail_Sales.2112`
43
```

The query has been completed successfully. The results are displayed in a table with the following data:

Row	Product_Category
1	Beauty
2	Clothing
3	Electronics

The interface also shows job information, results, and execution details tabs. The results tab is currently selected, showing 1 - 3 of 3 results.

Question 4

The screenshot shows the Google Cloud BigQuery console interface. The query editor contains the following SQL code:

```
47 ---Q5. For each Product Category, calculate the total quantity sold.
48 ---Expected output: Product_Category
49
50 SELECT
51   `Product_Category`,
52   SUM(Quantity) AS Total_Quantity_Sold

```

The query has been completed successfully. The results are displayed in a table with the following data:

Row	Product_Category	Total_Quantity_Sold
1	Beauty	771
2	Clothing	894
3	Electronics	849

The interface also shows job information, results, and execution details tabs. The results tab is currently selected, showing 1 - 3 of 3 results.

Question 5

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Untitled query Run Save Download Share Schedule Open in More

```
59 ---06. Create a column called Age_Group that classifies customers as 'Youth' (<30), 'Adult'
60 (30-59), and 'Senior' (60+).
61 ---Expected output: Customer_ID, Age, Age_Group.
62
63 SELECT 'Customer ID', Age,
64 CASE WHEN Age BETWEEN 16 AND 30 THEN 'Youth'
65 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

Job history Show

16:34 2025/11/24

Question 6

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Untitled query Run Save Download Share Schedule Open in More

```
73 ---07. For each Gender, count how many high-value transactions occurred (where Total
74 Amount > 500).
75 ---Expected output: Gender, High_Value_Transactions
76
77 SELECT
78 Gender,
79 COUNTIF('Total Amount' > 500) AS High_Value_Transactions
80 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_Trans...
1	Male	144
2	Female	155

Results per page: 50 1 - 2 of 2

Job history Show

16:34 2025/11/24

Question 7

The screenshot shows the Google Cloud BigQuery console interface. The query editor at the top contains the following SQL code:

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

The query has been completed successfully. The results are displayed in a table with the following data:

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

The interface includes a sidebar with navigation options, a top bar with project information, and a bottom status bar showing the time as 16:36 on 2025/11/24.

Question 8

The screenshot shows the Google Cloud BigQuery console interface. The query editor at the top contains the following SQL code:

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

The query has been completed successfully. The results are displayed in a table with the following data:

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

The interface includes a sidebar with navigation options, a top bar with project information, and a bottom status bar showing the time as 16:37 on 2025/11/24.

Question 9

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console.cloud.google.com/bigquery?project=basic-cat-478118-j7&ws=11m1011m414m311sbasic-cat-478118-j712sRetail_Sales13s211211m411m311sbasic-...

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Untitled query Run Save Download Share Schedule Open in More

```
122 SELECT 'Customer ID',
123        Age,
124        Total Amount,
125        CASE
126        WHEN Total Amount > 1000 THEN 'High'
127        ELSE 'Low'
```

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	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