

Question: Out of the total visitors who visited our website, what % made a purchase?

The screenshot shows the Google Cloud BigQuery console. On the left, the Explorer pane displays a project named 'qwklabs-gcp-00-b9880cbaea28' with a folder 'data-to-insights' containing various datasets. The main editor shows a SQL query titled 'Untitled 2' that calculates the conversion rate by dividing the number of purchasers by the number of visitors. The query is as follows:

```
1 #standardSQL
2 WITH visitors AS(
3   SELECT
4     COUNT(DISTINCT fullVisitorId) AS total_visitors
5   FROM `data-to-insights.ecommerce.web_analytics`
6 ),
7
8 purchasers AS(
9   SELECT
10    COUNT(DISTINCT fullVisitorId) AS total_purchasers
11  FROM `data-to-insights.ecommerce.web_analytics`
12  WHERE totals.transactions IS NOT NULL
13 )
14
15 SELECT
16   total_visitors,
17   total_purchasers,
18   total_purchasers / total_visitors AS conversion_rate
19 FROM visitors, purchasers
```

The 'Query results' pane shows a single row of data:

Row	total_visitors	total_purchasers	conversion_rate
1	741721	20015	0.026984540008...

The result being 2.69%.

Question: What are the top 5 selling products?

The screenshot shows the Google Cloud BigQuery console with a new SQL query titled 'Untitled 2' that identifies the top 5 selling products by revenue. The query is as follows:

```
1 SELECT
2   p.v2ProductName,
3   p.v2ProductCategory,
4   SUM(p.productQuantity) AS units_sold,
5   ROUND(SUM(p.localProductRevenue/1000000), 2) AS revenue
6 FROM `data-to-insights.ecommerce.web_analytics`
7 UNNEST(hits) AS h,
8 UNNEST(h.product) AS p
9 GROUP BY 1, 2
10 ORDER BY revenue DESC
11 LIMIT 5;
```

The 'Query results' pane displays the following table:

Row	v2ProductName	v2ProductCategory	units_sold	revenue
1	Nest® Learning Thermostat 3rd Gen-USA - Stainless Steel	Nest-USA	17651	870976.95
2	Nest® Cam Outdoor Security Camera - USA	Nest-USA	16930	684034.55
3	Nest® Cam Indoor Security Camera - USA	Nest-USA	14155	548104.47
4	Nest® Protect Smoke + CO White Wired Alarm-USA	Nest-USA	6394	178937.6
5	Nest® Protect Smoke + CO White Battery Alarm-USA	Nest-USA	6340	178572.4

Question: How many visitors bought on subsequent visits to the website?

The screenshot shows the Google Cloud BigQuery console interface. On the left is the Explorer pane showing a project hierarchy with 'data-to-insights' expanded. The main area displays a SQL query titled 'Untitled 2' with the following code:

```
1 # visitors who bought on a return visit (could have bought on first as well)
2 WITH all_visitor_stats AS (
3   SELECT
4     fullvisitorid, # 741,721 unique visitors
5     IF(COUNTIF(totals.transactions > 0 AND totals.newVisits IS NULL) > 0, 1, 0) AS will_buy_on_return_visit
6   FROM `data-to-insights.ecommerce.web_analytics`
7   GROUP BY fullvisitorid
8 )
9
10 SELECT
11   COUNT(DISTINCT fullvisitorid) AS total_visitors,
12   will_buy_on_return_visit
13 FROM all_visitor_stats
14 GROUP BY will_buy_on_return_visit
```

Below the query, the 'Query results' section shows a table with two columns: 'total_visitors' and 'will_buy_on_return_visit'. The results are as follows:

Row	total_visitors	will_buy_on_return_visit
1	729848	0
2	11873	1

The bottom of the console shows the Windows taskbar with the date 05-01-2024 and time 13:20.

Analysing the results, we can observe $(11873 / 729848) = 1.6\%$ of total visitors will return and purchase from the website.

The major reason for people not buying the products on first visit can be due to the following reasons-

- 1.The customer wants to comparison shop on other sites before making a purchase decision.**
- 2.The customer is waiting for products to go on sale or other promotion.**
- 3.The customer is doing additional research.**

In the world of online marketing, identifying and marketing to these future customers based on the characteristics of their first visit will increase conversion rates and reduce the outflow to competitor sites.