# **SQL Assessment Big Query :-**

**Q1. Find the average session Conversion Rate (Number of Orders / Number of Sessions) for each device category in Q3 2020.**

**Sol :**

**SELECT**

**device\_category,**

**COUNT(DISTINCT session\_id) AS num\_sessions,**

**COUNT(DISTINCT order\_id) AS num\_orders,**

**SAFE\_DIVIDE(COUNT(DISTINCT order\_id), COUNT(DISTINCT session\_id)) AS conversion\_rate**

**FROM**

**`your\_dataset.your\_table`**

**WHERE**

**EXTRACT(YEAR FROM created\_at) = 2020**

**AND EXTRACT(QUARTER FROM created\_at) = 3**

**GROUP BY**

**device\_category**

**Q2. Find the last 7-day rolling sum of sessions for each day in April 2020.**

**(e.g. For 4 April 2020, please show the total number of sessions from 29 March 2020 to 4**

**April 2020)**

**Sol :**

**SELECT**

**DATE(session\_date) AS day,**

**SUM(session\_count) OVER (ORDER BY session\_date ROWS BETWEEN 6 PRECEDING AND CURRENT ROW) AS rolling\_sessions**

**FROM (**

**SELECT**

**DATE(session\_start\_time) AS session\_date,**

**COUNT(DISTINCT session\_id) AS session\_count**

**FROM**

**`your\_dataset.your\_table`**

**WHERE**

**EXTRACT(YEAR FROM session\_start\_time) = 2020**

**AND EXTRACT(MONTH FROM session\_start\_time) = 4**

**GROUP BY**

**session\_date**

**)**

**ORDER BY day**

**Q3. The pagePath column in the table stores the path relative URL a user has visited during**

**their session at Sephora’s website.**

**a. To find the number of pageviews for each level 1 page path in 2020, in descending order, you can use the following**

**Sol:**

**SELECT**

**SUBSTR(pagePath, 1, INSTR(pagePath, '/') - 1) AS level1\_page\_path,**

**COUNT(\*) AS pageviews**

**FROM**

**`your\_dataset.your\_table`**

**WHERE**

**EXTRACT(YEAR FROM visitStartTime) = 2020**

**GROUP BY**

**level1\_page\_path**

**ORDER BY**

**pageviews DESC**

**b. 2 page path pageviews in 2020, and rank (highest page views to lowest) by the**

**respective level 1 page path.**

**(eg: for /brands, how many pageviews we have gathered for huda-beauty & kat-vond)**

**Sol:**

**WITH level2\_pageviews AS (**

**SELECT**

**SUBSTR(pagePath, 1, INSTR(pagePath, '/') - 1) AS level1\_page\_path,**

**SUBSTR(pagePath, INSTR(pagePath, '/') + 1) AS level2\_page\_path,**

**COUNT(\*) AS pageviews**

**FROM**

**`your\_dataset.your\_table`**

**WHERE**

**EXTRACT(YEAR FROM visitStartTime) = 2020**

**AND SUBSTR(pagePath, 1, INSTR(pagePath, '/') - 1) IN ('brands', 'categories', 'products')**

**GROUP BY**

**level1\_page\_path,**

**level2\_page\_path**

**)**

**SELECT**

**level1\_page\_path,**

**level2\_page\_path,**

**pageviews**

**FROM**

**level2\_pageviews**

**ORDER BY**

**level1\_page\_path,**

**pageviews DESC**