Yeselth Angarita-Peña

SQL Code for BigQuery Public Datasets
NYC Citi Bike Stations and NYC Citi Bike Trips

1. *What are the top 5 most popular trips (start and end stations combination) for all time?*

```
SELECT
 start_station_name,
 end_station_name,
 IF(start_station_name = end_station_name,
   TRUE,
   FALSE) same_station,
 AVG(tripduration) AS avg_duration,
 COUNT(*) AS total_rides
FROM
 `bigquery-public-data.new_york_citibike.citibike_trips`
WHERE
 start_station_id != end_station_id
GROUP BY
 start_station_name,
 end_station_name,
 same_station
ORDER BY
 total_rides DESC
LIMIT 5
```

2. *Which hours of the day does usage peak on weekdays?*

```
SELECT
 hour,
 MAX(number_trips) AS maximum_trips
FROM (
 SELECT
  EXTRACT(HOUR
  FROM
   CAST(start_date AS TIME)) AS hour,
  EXTRACT (DAYOFWEEK
```

```
    FROM
      start_date) AS day_week,
    COUNT(*) AS number_trips
FROM
  start_date ) AS day_week,
  COUNT() AS number_trips
FROM
  `bigquery-public-data.new_york_citibike.citibike_trips`
GROUP BY
  1,
  2)
WHERE
  day_week !=7
  OR day_week !=1
GROUP BY
  1
ORDER BY
  2 DESC
```

3. *Which hours of the day does usage peak on weekends?*

```
SELECT
 hour,
 MAX(number_trips) AS maximum_trips
FROM (
 SELECT
  EXTRACT (HOUR
  FROM
    CAST(starttime AS TIME)) AS hour,
  EXTRACT (DAYOFWEEK
  FROM
    starttime) AS weekend,
  COUNT(*) AS number_trips
 FROM
  `bigquery-public-data.new_york_citibike.citibike_trips`
```

```
GROUP BY
  1,
  2)
WHERE
  weekend != 6
  AND weekend != 5
  AND weekend != 4
  AND weekend != 3
  AND weekend != 2
GROUP BY
  1
ORDER BY
  2 DESC
```

4. *From April 2017 to September 2018, which generation was the first to ride bicycles?*

```
SELECT
 EXTRACT(year
 FROM
   starttime) AS year,
 COUNT(CASE
    WHEN birth_year>= 1940 AND birth_year < 1959 THEN 1
 END
  ) AS Boomer,
 COUNT(CASE
    WHEN birth_year>= 1960 AND birth_year < 1979 THEN 1
 END
  ) AS Gen_X,
 COUNT(CASE
    WHEN birth_year>= 1980 AND birth_year < 1996 THEN 1
 END
  ) AS Gen_Y,
 COUNT(CASE
    WHEN birth_year>= 1997 AND birth_year < 2012 THEN 1
```

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```
 END
   ) AS Gen_Z
FROM
 `bigquery-public-data.new_york_citibike.citibike_trips`
GROUP BY
 year
HAVING
 year is NOT NULL
ORDER BY
 year DESC
```