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--Queries for Citibike project;

--Query with basic info:

-- a. Query to count the number of rows
SELECT COUNT(*) FROM `bigquery-public-data.new_york.citibike_trips`;

-- b. Query to know the date of the first observation in the data
SELECT * FROM `bigquery-public-data.new_york.citibike_trips`
ORDER BY starttime
LIMIT 1;

-- c. Query to know the date of the last observation in the data
SELECT * FROM `bigquery-public-data.new_york.citibike_trips`
ORDER BY starttime DESC
LIMIT 1;


-- d. Query to know the years of the trips in the data
SELECT DISTINCT(EXTRACT(YEAR from stoptime)) FROM `bigquery-public-data.new_york.citibike_trips`;

-- Queries whose results need to be saved in google sheets



-- a. Query to separate the number of trips per month, year and day of week and gender and usertype
SELECT usertype, gender,
      EXTRACT(YEAR from starttime) as Year,
      EXTRACT(MONTH from starttime) as Month,
      EXTRACT(DAYOFWEEK from starttime) as Day,
      COUNT(*) as total_number_of_trips
FROM (SELECT * FROM `bigquery-public-data.new_york.citibike_trips` ORDER BY starttime)
GROUP BY usertype, gender, Year, Month, Day
ORDER BY usertype, gender, Year, Month, Day;
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-- b. Query to know the average trip time per customer each year
SELECT usertype, EXTRACT(YEAR from starttime) as Year, AVG(tripduration/60) AS average_lease_time FROM `bigquery-public-
data.new_york.citibike_trips`
GROUP BY usertype, Year
ORDER BY usertype, Year;

-- c. Query to know the average trip time per customer gender each year
SELECT gender, EXTRACT(YEAR from starttime) as Year, AVG(tripduration/60) AS average_lease_time FROM `bigquery-public-
data.new_york.citibike_trips`
GROUP BY gender, Year
ORDER BY gender, Year;


-- d. Query to know the max trip time per customer type and gender each year
SELECT usertype, gender, EXTRACT(YEAR from starttime) as Year , MAX(tripduration/60) AS maximum_rent_time FROM `bigquery-public-
data.new_york.citibike_trips`
GROUP BY usertype, gender, Year
ORDER BY usertype, gender, Year;


-- e. Query to know how many trips longer than 1 hour occurred each year and month by usertype and gender
SELECT usertype, gender, EXTRACT(YEAR from starttime) as Year, EXTRACT(MONTH from starttime) as Month , COUNT(*) AS total_number_of_leases
FROM `bigquery-public-data.new_york.citibike_trips`
WHERE tripduration > 3600
GROUP BY usertype, gender, Year, Month
ORDER BY usertype, gender, Year, Month;

-- f. Query to know the average trip time of short trips per customer each year
SELECT usertype, EXTRACT(YEAR from starttime) as Year , AVG(tripduration/60) AS average_rent_time FROM `bigquery-public-
data.new_york.citibike_trips`
WHERE tripduration < 3600
GROUP BY usertype, Year
ORDER BY usertype, Year;

-- g. Query to know the average trip time of short trips per customer gender each year
SELECT gender, EXTRACT(YEAR from starttime) as Year , AVG(tripduration/60) AS average_rent_time FROM `bigquery-public-
data.new_york.citibike_trips`
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WHERE tripduration < 3600
GROUP BY gender, Year
ORDER BY gender, Year;

-- h. Query to know the average trip time of short trips per customer gender and type each year
SELECT usertype, gender, EXTRACT(YEAR from starttime) as Year, AVG(tripduration/60) AS average_rent_time FROM `bigquery-public-
data.new_york.citibike_trips`
WHERE tripduration < 3600
GROUP BY usertype, gender, Year
ORDER BY usertype, gender, Year;
```