**SQL Assignment**

The data set of Austin is taken form the World Bank Public Database and the SQL queries are made on it. The queries are executed on Google Biquery Sandbox Platform.

1. **Arrange in Ascending order the Station Id of Austin bikeshare. Pick the result of top 10 observations.**

Command: SELECT station\_id

FROM `bigquery-public-data.austin\_bikeshare.bikeshare\_stations`

ORDER BY station\_id ASC

Result

| Row | station\_id |  |
| --- | --- | --- |
| 1 | 1001 |  |
| 2 | 1002 |  |
| 3 | 1003 |  |
| 4 | 1004 |  |
| 5 | 1005 |  |
| 6 | 1006 |  |
| 7 | 1007 |  |
| 8 | 1008 |  |
| 9 | 2494 |  |
| 10 | 2495 |  |

1. **Select all the bike stations in Austin City such that the station id of bikeshare is greater than 100 and arrange them in descending order. (show the result of 5 id’s only)**

Command:

SELECT station\_id

FROM `bigquery-public-data.austin\_bikeshare.bikeshare\_stations` limit5

WHERE station\_id >100

ORDER BY station\_id DESC

Result:

| Row | station\_id |  |
| --- | --- | --- |
| 1 | 4062 |  |
| 2 | 4061 |  |
| 3 | 4060 |  |
| 4 | 4059 |  |
| 5 | 4058 |  |

1. **What is the total number of stations with station ID Greater than 100?**

Command:

SELECT COUNT (station\_id )

FROM `bigquery-public-data.austin\_bikeshare.bikeshare\_stations`

WHERE station\_id >100

Result: 96. There are in total 96 numbers of stations in Austin with station id greater than 100.

1. **Show in a table the variables named: case number, date and location, where show the crime cases of Austin that happened in Apartment, and arrange the date in a manner that shows the latest occurrences first. Pick top 10 latest crime cases.**

Command:

SELECT case\_number, date,location\_description

FROM `bigquery-public-data.chicago\_crime.crime`

WHERE location\_description = "APARTMENT"

GROUP BY case\_number, date,location\_description

ORDER BY Date DESC

Result:

| Row | case\_number | date | location\_description |  |
| --- | --- | --- | --- | --- |
| 1 | JD130146 | 2020-01-22 23:30:00 UTC | APARTMENT |  |
| 2 | JD125839 | 2020-01-22 23:00:00 UTC | APARTMENT |  |
| 3 | JD125244 | 2020-01-22 22:50:00 UTC | APARTMENT |  |
| 4 | JD125254 | 2020-01-22 22:50:00 UTC | APARTMENT |  |
| 5 | JD128208 | 2020-01-22 22:30:00 UTC | APARTMENT |  |
| 6 | JD125281 | 2020-01-22 22:30:00 UTC | APARTMENT |  |
| 7 | JD125270 | 2020-01-22 22:12:00 UTC | APARTMENT |  |
| 8 | JD125233 | 2020-01-22 22:05:00 UTC | APARTMENT |  |
| 9 | JD125667 | 2020-01-22 21:30:00 UTC | APARTMENT |  |
| 10 | JD125181 | 2020-01-22 21:00:00 UTC | APARTMENT |  |

1. **What is the Average duration (in minutes) travelled by the bikeshare trips?**

Command:

SELECT AVG(duration\_minutes)

FROM `bigquery-public-data.austin\_bikeshare.bikeshare\_trips`

Result: Average duration travelled is 29.03 minutes.

1. **What is the total duration (in minutes) travelled by bikes in Austin?**

Command:

SELECT SUM(duration\_minutes)

FROM `bigquery-public-data.austin\_bikeshare.bikeshare\_trips`

Result: 35327453 minutes

1. **Find out the case number of Chicago Crime in community 10**.

Command:

SELECT case\_number

FROM `bigquery-public-data.chicago\_crime.crime`

WHERE community\_area = 10

Result:

| Row | case\_number |  |
| --- | --- | --- |
| 1 | JC389450 |  |
| 2 | HZ403451 |  |
| 3 | HZ554259 |  |
| 4 | HH393084 |  |
| 5 | HK768492 |  |

1. **Count the number of Crime in Austin through its unique id that has occurred between the year 2000 and 2017**.

Command:

SELECT COUNT(unique\_key)

FROM `bigquery-public-data.austin\_crime.crime`

WHERE year BETWEEN 2000 AND 2017

Result: 116674

1. **Inner join the address and time of Austin incidents with Latitude .**

Command :

SELECT `bigquery-public-data.austin\_incidents.incidents\_2008`.address,`bigquery-public-data.austin\_incidents.incidents\_2009`.time FROM `bigquery-public-data.austin\_incidents.incidents\_2008` INNER JOIN `bigquery-public-data.austin\_incidents.incidents\_2009`ON `bigquery-public-data.austin\_incidents.incidents\_2008`.latitude = `bigquery-public-data.austin\_incidents.incidents\_2009`.latitude

Result

|  |
| --- |
|  |
| Row | address | time |  |
| 1 | W 18TH ST / GUADALUPE ST | 22:07:00 |  |
| 2 | W 18TH ST / GUADALUPE ST | 22:07:00 |  |
| 3 | S L DAVIS AVE / POQUITO ST | 20:42:00 |  |
| 4 | S L DAVIS AVE / POQUITO ST | 20:42:00 |  |
| 5 | W 10TH ST / SAN ANTONIO ST | 01:05:00 |  |
| 6 | W 10TH ST / SAN ANTONIO ST | 01:05:00 |  |

1. **Left join the date and time of Austin crime with latitude.**

Command:

SELECT `bigquery-public-data.austin\_incidents.incidents\_2008`.date,`bigquery-public-data.austin\_incidents.incidents\_2009`.time FROM `bigquery-public-data.austin\_incidents.incidents\_2008` LEFT JOIN `bigquery-public-data.austin\_incidents.incidents\_2009`ON `bigquery-public-data.austin\_incidents.incidents\_2008`.latitude = `bigquery-public-data.austin\_incidents.incidents\_2009`.latitude

Result:

|  |  |  |  |
| --- | --- | --- | --- |
| 30 | 2008-08-26 | *null* |  |
| 31 | 2008-12-09 | *null* |  |
| 32 | 2008-09-30 | *null* |  |
| 33 | 2008-07-29 | 19:00:00 |  |
| 34 | 2008-07-29 | 02:45:00 |  |
| 35 | 2008-07-29 | 08:30:00 |  |

1. **Right Join date and unique key with Address**

Command:

SELECT `bigquery-public-data.austin\_incidents.incidents\_2008`.date,`bigquery-public-data.austin\_incidents.incidents\_2009`.unique\_key FROM `bigquery-public-data.austin\_incidents.incidents\_2008` RIGHT JOIN `bigquery-public-data.austin\_incidents.incidents\_2009`ON `bigquery-public-data.austin\_incidents.incidents\_2008`.address = `bigquery-public-data.austin\_incidents.incidents\_2009`.address

Result

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1 | | 2008-04-09 | | 20092550103 |  |
| 2 | | 2008-02-13 | | 20092550103 |  |
| 3 | | 2008-03-09 | | 20092550103 |  |
| 4 | | 2008-02-07 | | 20092550103 |  |
| 5 | | 2008-03-20 | | 20092550103 |  |
|  | |