

_01___Rental_Details_Duration_In_Seconds_Uncapped

Trip_ID

Start_Time

End_Time

Bike_ID

Trip_Duration

From_Station_ID

From_Station_Name

To_Station_ID

To_Station_Name

User_Type

Gender

Birthyear

Data dictionary

Divvy Trips in Year 2014 - 2015

> Q1Q2
> Q3: July
> Q3: August: September
> Q4

Q1: The whole Year 2014's data query. (The bike ride duration.)

```
WITH CTE AS (  
  SELECT bikeid AS Bike_ID, SUM(tripduration/60) AS Total_Duration_In_Minutes,  
  COUNT(trip_id) AS Number_of_ride  
  FROM `diploma-intern.Divvy_Trips_2014.2014_q1q2`  
  GROUP BY Bike_ID  
  UNION ALL  
  SELECT bikeid AS Bike_ID, SUM(tripduration/60) AS Total_Duration_In_Minutes,  
  COUNT(trip_id) AS Number_of_ride  
  FROM `diploma-intern.Divvy_Trips_2014.2014_q3_07`  
  GROUP BY Bike_ID  
  UNION ALL  
  SELECT bikeid AS Bike_ID, SUM(tripduration/60) AS Total_Duration_In_Minutes,  
  COUNT(trip_id) AS Number_of_ride  
  FROM `diploma-intern.Divvy_Trips_2014.2014_q3_0809`  
  GROUP BY Bike_ID  
  UNION ALL  
  SELECT bikeid AS Bike_ID, SUM(tripduration/60) AS Total_Duration_In_Minutes,  
  COUNT(trip_id) AS Number_of_ride  
  FROM `diploma-intern.Divvy_Trips_2014.2014_q4`  
  GROUP BY Bike_ID  
)  
  
SELECT Bike_ID, SUM(Total_Duration_In_Minutes) AS Total_Duration_In_Minutes,  
SUM(Number_of_ride) AS Number_of_ride  
FROM CTE  
GROUP BY Bike_ID  
ORDER BY Total_Duration_In_Minutes DESC  
LIMIT 10;
```

Bike_ID	Total_Duration_In_Minutes	Number_of_ride
3016	19394.7	969
2851	18326.68333	925
1768	18220.3	1013
2322	17471.65	871
2176	17379.35	951
2444	17375.36667	827
2435	17182.41667	886
2162	17046.83333	875
1079	17034.13333	859
2896	16952.41667	840

- Reminder: minutes.

Q2: Average of ride and the percentage for the beginning stations. **(Year 2014)**

```
WITH CTE AS
(
    SELECT from_station_id AS Station_ID, from_station_name AS Station_Name,
    COUNT(trip_id) AS Num_Of_Trips
    FROM `diploma-intern.Divvy_Trips_2014.2014_q1q2`
    GROUP BY Station_ID, Station_Name
    UNION ALL
    SELECT from_station_id AS Station_ID, from_station_name AS Station_Name,
    COUNT(trip_id) AS Num_Of_Trips
    FROM `diploma-intern.Divvy_Trips_2014.2014_q3_07`
    GROUP BY Station_ID, Station_Name
    UNION ALL
    SELECT from_station_id AS Station_ID, from_station_name AS Station_Name,
    COUNT(trip_id) AS Num_Of_Trips
    FROM `diploma-intern.Divvy_Trips_2014.2014_q3_0809`
    GROUP BY Station_ID, Station_Name
    UNION ALL
    SELECT from_station_id AS Station_ID, from_station_name AS Station_Name,
    COUNT(trip_id) AS Num_Of_Trips
    FROM `diploma-intern.Divvy_Trips_2014.2014_q4`
    GROUP BY Station_ID, Station_Name
)

SELECT Station_ID, Station_Name,
(SUM(Num_Of_Trips)/12) AS Average_Of_Ride_InYear,
((SUM(Num_Of_Trips)/1939126)*100) AS Percentage
FROM CTE
GROUP BY Station_ID, Station_Name
ORDER BY Percentage DESC
LIMIT 10;
```

Station_ID	Station_Name	Average_Of_Ride_InYear	Percentage
35	Streeter Dr & Illinois St	3684.333333	2.279996246
76	Lake Shore Dr & Monroe St	2769	1.713555488
177	Theater on the Lake	2599.916667	1.60892072
91	Clinton St & Washington Blvd	2363.666667	1.462720834
85	Michigan Ave & Oak St	2339.333333	1.447662504
90	Millennium Park	2139.916667	1.324256392
268	Lake Shore Dr & North Blvd	2071.666667	1.282020869
174	Canal St & Madison St	1946.75	1.204718002
192	Canal St & Adams St	1938.916667	1.199870457
195	Columbus Dr & Randolph St	1811.333333	1.120917362

- Try to make the float look more formal.

Q3: Average of the trip duration between the X station to Y station ; Used for Year compare with year)

WITH CTE AS

(

```
SELECT from_station_id AS Started_Station_ID, to_station_id AS Ended_Station_ID,  
SUM(tripduration/60) AS Trip_duration,  
COUNT(trip_id) AS TripID  
FROM `diploma-intern.Divvy_Trips_2014.2014_q1q2`  
GROUP BY Started_Station_ID, Ended_Station_ID  
UNION ALL
```

```
SELECT from_station_id AS Started_Station_ID, to_station_id AS Ended_Station_ID,  
SUM(tripduration/60) AS Trip_duration,  
COUNT(trip_id) AS TripID  
FROM `diploma-intern.Divvy_Trips_2014.2014_q3_07`  
GROUP BY Started_Station_ID, Ended_Station_ID  
UNION ALL
```

```
SELECT from_station_id AS Started_Station_ID, to_station_id AS Ended_Station_ID,  
SUM(tripduration/60) AS Trip_duration,  
COUNT(trip_id) AS TripID  
FROM `diploma-intern.Divvy_Trips_2014.2014_q3_0809`  
GROUP BY Started_Station_ID, Ended_Station_ID  
UNION ALL
```

```
SELECT from_station_id AS Started_Station_ID, to_station_id AS Ended_Station_ID,  
SUM(tripduration/60) AS Trip_duration,  
COUNT(trip_id) AS TripID  
FROM `diploma-intern.Divvy_Trips_2014.2014_q4`  
GROUP BY Started_Station_ID, Ended_Station_ID
```

)

```
SELECT (AVG(Trip_duration)/12) AS Average_of_the_trip_duration_INMinutes,  
(AVG(TripID)/12) AS Monthly_Average_TripID  
FROM CTE
```

Average_of_the_trip_duration_INMinutes	Monthly_Average_TripID
17.71358846	1.038434021

- The Minutes have decimal values; TITLE function.

Q4: Monthly average trips of the Users (Customer & Casual) for Year 2015

```
WITH CTE AS
(
    SELECT usertype AS Type_Of_Users, COUNT(trip_id) AS No_Trip
    FROM `diploma-intern.Divvy_Trips_2015.2015_q1`
    GROUP BY Type_Of_Users
    UNION ALL
    SELECT usertype AS Type_Of_Users, COUNT(trip_id) AS No_Trip
    FROM `diploma-intern.Divvy_Trips_2015.2015_q2`
    GROUP BY Type_Of_Users
    UNION ALL
    SELECT usertype AS Type_Of_Users, COUNT(trip_id) AS No_Trip
    FROM `diploma-intern.Divvy_Trips_2015.2015_q3_07`
    GROUP BY Type_Of_Users
    UNION ALL
    SELECT usertype AS Type_Of_Users, COUNT(trip_id) AS No_Trip
    FROM `diploma-intern.Divvy_Trips_2015.2015_q3_08`
    GROUP BY Type_Of_Users
    UNION ALL
    SELECT usertype AS Type_Of_Users, COUNT(trip_id) AS No_Trip
    FROM `diploma-intern.Divvy_Trips_2015.2015_q3_09`
    GROUP BY Type_Of_Users
    UNION ALL
    SELECT usertype AS Type_Of_Users, COUNT(trip_id) AS No_Trip
    FROM `diploma-intern.Divvy_Trips_2015.2015_q4`
    GROUP BY Type_Of_Users
)

SELECT
REPLACE(
    REPLACE (
        REPLACE(
            Type_Of_Users, 'Dependent', 'Other'
        ),
        'Customer', 'Casual'),
    'Subscriber', 'Member'
) AS Type_Of_Status,
(AVG(No_Trip)/12) AS Monthly_Average_Trips_OfTheUsers
FROM CTE
```


GROUP BY Type_Of_Users

- Make sure the value is valid/ makes sense.

Type_Of_Status	Monthly_Average_Trips_OfTheUsers
Member	31297.40278
Casual	12915.04167
Other	1.986111111

Q5: Which age group is the most rider in a given year? 2015

WITH CTE AS

```
(
    SELECT (2015 - birthyear) AS Age, gender AS Gender, COUNT (birthyear) AS
Number_Of_Rider
    FROM `diploma-intern.Divvy_Trips_2015.2015_q1`
    GROUP BY Age, Gender
    UNION ALL
    SELECT (2015 - birthyear) AS Age, gender AS Gender, COUNT (birthyear) AS
Number_Of_Rider
    FROM `diploma-intern.Divvy_Trips_2015.2015_q2`
    GROUP BY Age, Gender
    UNION ALL
    SELECT (2015 - birthyear) AS Age, gender AS Gender, COUNT (birthyear) AS
Number_Of_Rider
    FROM `diploma-intern.Divvy_Trips_2015.2015_q3_07`
    GROUP BY Age, Gender
    UNION ALL
    SELECT (2015 - birthyear) AS Age, gender AS Gender, COUNT (birthyear) AS
Number_Of_Rider
    FROM `diploma-intern.Divvy_Trips_2015.2015_q3_08`
    GROUP BY Age, Gender
    UNION ALL
    SELECT (2015 - birthyear) AS Age, gender AS Gender, COUNT (birthyear) AS
Number_Of_Rider
    FROM `diploma-intern.Divvy_Trips_2015.2015_q3_09`
    GROUP BY Age, Gender
    UNION ALL
    SELECT (2015 - birthyear) AS Age, gender AS Gender, COUNT (birthyear) AS
Number_Of_Rider
    FROM `diploma-intern.Divvy_Trips_2015.2015_q4`
    GROUP BY Age, Gender
)
```

SELECT Age, Gender, SUM(Number_Of_Rider) AS Number_Of_Rider

FROM CTE

WHERE Age < 100

GROUP BY Age, Gender

ORDER BY Number_Of_Rider DESC

LIMIT 20;

Age	Gender	Number_Of_Rider
29	Male	96383
27	Male	91544
30	Male	87271
31	Male	85862
26	Male	85723
28	Male	84203
32	Male	74628
25	Male	72890
33	Male	70166
34	Male	62620
35	Male	61093
24	Male	54038
36	Male	47125
23	Male	42060
28	Female	39473
37	Male	39343
38	Male	36250
39	Male	36189
26	Female	35735
27	Female	35411

Divvy Trips in Year 2016 - 2017

- Q1: 2016
- Q2: Apr 2016
- Q3: Jul - Sept 2016
- Q4: Apr - Jun 2017
- Q5: 2017

Q1. Most Used Bikes in 2016

Query:

```
WITH Trips_2016 AS
(
    SELECT bikeid AS Bike_ID, COUNT(trip_id) AS Total_Num_Of_Customers,
SUM(tripduration) AS Total_Duration_In_Minutes
    FROM `pelagic-core-326613.divvy_trips.2016_Q1`
    GROUP BY bikeid
    UNION ALL
    SELECT bikeid AS Bike_ID, COUNT(trip_id) AS Total_Num_Of_Customers,
SUM(tripduration) AS Total_Duration_In_Minutes
    FROM `pelagic-core-326613.divvy_trips.Apr_2016`
    GROUP BY bikeid
    UNION ALL
    SELECT bikeid AS Bike_ID, COUNT(trip_id) AS Total_Num_Of_Customers,
SUM(tripduration) AS Total_Duration_In_Minutes
    FROM `pelagic-core-326613.divvy_trips.May_2016`
    GROUP BY bikeid
    UNION ALL

    SELECT bikeid AS Bike_ID, COUNT(trip_id) AS Total_Num_Of_Customers,
SUM(tripduration) AS Total_Duration_In_Minutes
    FROM `pelagic-core-326613.divvy_trips.Jun_2016`
    GROUP BY bikeid
    UNION ALL
    SELECT bikeid AS Bike_ID, COUNT(trip_id) AS Total_Num_Of_Customers,
SUM(tripduration) AS Total_Duration_In_Minutes
    FROM `pelagic-core-326613.divvy_trips.2016_Q3`
    GROUP BY bikeid
    UNION ALL
    SELECT bikeid AS Bike_ID, COUNT(trip_id) AS Total_Num_Of_Customers,
SUM(tripduration) AS Total_Duration_In_Minutes
    FROM `pelagic-core-326613.divvy_trips.2016_Q4`
```

```

    GROUP BY bikeid
)
SELECT Bike_ID, Total_Num_Of_Customers, Total_Duration_In_Minutes
FROM Trips_2016
ORDER BY Total_Num_Of_Customers DESC
LIMIT 10

```

Result:

Bike_ID	Total_Num_Of_Customers	Total_Duration_In_Minutes
5783	631	610138
5249	612	625945
5383	603	602489
5493	572	645988
5775	571	594587
4844	570	615174
5885	566	580950
5804	561	614029
5156	559	558402
4981	558	572361

Q2. Most Common Trips from April 2016 to June 2016

Query:

```
WITH Q2_2016 AS
(
    SELECT from_station_name AS From_station, to_station_name AS To_Station,
    COUNT(to_station_id) AS Num_Of_Customers
    FROM `pelagic-core-326613.divvy_trips.Apr_2016`
    GROUP BY From_station, To_Station
    UNION ALL

    SELECT from_station_name AS From_station, to_station_name AS To_Station,
    COUNT(to_station_id) AS Num_Of_Customers
    FROM `pelagic-core-326613.divvy_trips.May_2016`
    GROUP BY From_station, To_Station
    UNION ALL

    SELECT from_station_name AS From_station, to_station_name AS To_Station,
    COUNT(to_station_id) AS Num_Of_Customers
    FROM `pelagic-core-326613.divvy_trips.Jun_2016`
    GROUP BY From_station, To_Station
)
SELECT From_station, To_Station, Num_Of_Customers
FROM Q2_2016
ORDER BY Num_Of_Customers DESC
LIMIT 10
```

Results:

From_Station	To_Station	Number_Of_Customers
Lake Shore Dr & Monroe St	Streeter Dr & Grand Ave	1315
Lake Shore Dr & Monroe St	Streeter Dr & Grand Ave	1273
Lake Shore Dr & North Blvd	Streeter Dr & Grand Ave	1076
Streeter Dr & Grand Ave	Lake Shore Dr & North Blvd	1071
Streeter Dr & Grand Ave	Streeter Dr & Grand Ave	1033
Streeter Dr & Grand Ave	Lake Shore Dr & Monroe St	925
Streeter Dr & Grand Ave	Millennium Pare	894
Theatre on a Lake	Streeter Dr & Grand Avek	889

Streeter Dr & Grand Ave	Theatre on a Laker	871
Lake Shore Dr & Monroe St	Lake Shore Dr & Monroe St	829

Q3. No. of Customers from different ages from July 2016 to September 2016

Query:

```
SELECT 2021 - birthyear AS Age, count(birthyear) AS Number_Of_Customers
FROM `pelagic-core-326613.divvy_trips.2016_Q3`
GROUP BY Age
ORDER BY Age
LIMIT 10
```

Result:

Age	Number_Of_Customers
21	341
22	836
23	1119
24	3988
25	3898
26	6871
27	13156
28	28170
29	44885
30	50381

Q4. Total No. of Customers and Subscribers Who Made Trips in April 2017 to June 2017

Query:

```
SELECT usertype AS User, COUNT(trip_id) AS Amount_of_Trips, SUM(tripduration) AS  
Total_Trip_Time_in_Minutes, ROUND(100.* COUNT(*) / SUM(COUNT(*)) over ()) AS  
Percentage  
FROM `pelagic-core-326613.divvy_trips.2017_Q2`  
WHERE usertype LIKE '%Subscriber%' OR usertype LIKE '%Customer%'  
GROUP BY User
```

Results:

User	Amount_of_Trips	Total_Trip_Time_in_Minutes	Percentage
Subscriber	844047	618563884	75.0
Customer	275767	518915052	25.0

Q5. Most visited locations in 2017

Query:

```
WITH Trips_2017 AS  
(  
    SELECT to_station_name AS To_Station,  
    COUNT(to_station_id) AS Num_Of_Customers  
    FROM `pelagic-core-326613.divvy_trips.2017-Q1`  
    GROUP BY To_Station  
    UNION ALL  
  
    SELECT to_station_name AS To_Station,  
    COUNT(to_station_id) AS Num_Of_Customers  
    FROM `pelagic-core-326613.divvy_trips.2017_Q2`  
    GROUP BY To_Station  
    UNION ALL  
  
    SELECT to_station_name AS To_Station,  
    COUNT(to_station_id) AS Num_Of_Customers  
    FROM `pelagic-core-326613.divvy_trips.2017_Q3`  
    GROUP BY To_Station  
    UNION ALL
```

```

SELECT to_station_name AS To_Station,
COUNT(to_station_id) AS Num_Of_Customers
FROM `pelagic-core-326613.divvy_trips.2017_Q4`
GROUP BY To_Station
)

```

```

SELECT To_Station, Num_Of_Customers
FROM Trips_2017
ORDER BY Num_Of_Customers DESC
LIMIT 10

```

Result:

To_Station	Num_Of_Customers
Streeter Dr & Grand Ave	56631
Streeter Dr & Grand Ave	33925
Lake Shore Dr & North Blvd	29650
Theater on the Lake	27759
Lake Shore Dr & Monroe St	25005
Michigan Ave & Oak St	22102
Canal St & Adams St	20703
Millennium Park	18441
Lake Shore Dr & Monroe St	17916
Lake Shore Dr & North Blvd	17783

Divvy Trips in Year 2018 Queries

- 2018 Q1
- 2018 Q2
- 2018 Q3
- 2018 Q4

Q1. Popular location that start or end with the most customer

Query:

```
SELECT COUNT(from_station_id) AS Number_of_customer, To_Station_Name AS Station_Name
FROM `internship-01-330103.2018Q14.2018Q2`
GROUP BY from_station_id, Station_Name
LIMIT 20
```

Row	Number_of_customer	Station_Name
1	15	May St & Cullerton St
2	54	Clark St & Wellington Ave
3	68	State St & Pearson St
4	113	Wells St & Concord Ln
5	30	Clark St & Armitage Ave
6	63	Broadway & Cornelia Ave
7	21	Michigan Ave & Congress Pkwy
8	7	Sheffield Ave & Kingsbury St
9	1	Maplewood Ave & Peterson Ave
10	158	Pine Grove Ave & Waveland Ave
11	1	Clinton St & Polk St (*)
12	26	Rush St & Cedar St
13	37	Clark St & Schiller St

14	56	Clinton St & Madison St
15	92	Dearborn St & Erie St
16	307	Millennium Park
17	346	University Ave & 57th St
18	96	Michigan Ave & Oak St
19	66	Clark St & Lake St
20	17	Sheridan Rd & Buena Ave

Q2. Details of customers in the year 2018

Query:

```
SELECT Trip_ID AS ID, Gender AS Gender, Birthyear AS Birthyear, Bike_ID AS Bike_ID,  
From_Station_ID AS Station_ID  
FROM `internship-01-330103.2018Q14.2018Q3`  
LIMIT 10
```

Q3. Total trip duration and total customer in 2018

Query:

```
SELECT SUM (Trip_Duration) AS Total_Duration_Of_Trip, SUM (From_Station_ID) AS  
Total_Customer  
FROM `internship-01-330103.2018Q14.2018Q4`  
LIMIT 10
```

```
SELECT Trip_Duration  
FROM(  
    SELECT COUNT(Trip_Duration)  
    FROM `internship-01-330103.2018Q14.2018Q1`  
    UNION ALL  
  
    SELECT COUNT(Trip_Duration)  
    FROM `internship-01-330103.2018Q14.2018Q2`  
    UNION ALL  
  
    SELECT COUNT(Trip_Duration)  
    FROM `internship-01-330103.2018Q14.2018Q3`  
    UNION ALL  
  
    SELECT COUNT(Trip_Duration)  
    FROM `internship-01-330103.2018Q14.2018Q4`  
)
```

Row	Total_Duration_Of_Trip	Total_Customer
1	669256993	126217999

Q4. Top 5 most trip duration from 5 different station

Query:

```

SELECT COUNT(Trip_Duration) AS Trip_duration, From_Station_Name
FROM `internship-01-330103.2018Q14.2018Q3`
GROUP BY From_Station_Name
ORDER BY Trip_duration DESC
LIMIT 5

```

Row	Trip_duration	From_Station_Name
1	27858	Streeter Dr & Grand Ave
2	17091	Canal St & Adams St
3	14569	Clinton St & Madison St
4	14269	Lake Shore Dr & North Blvd
5	13419	Lake Shore Dr & Monroe St

Q5. Missing information of customer

Query:

```

SELECT _01__Rental_Details_Rental_ID, Member_Gender,
_05__Member_Details_Member_Birthday_Year
FROM `internship-01-330103.2018Q14.2018Q1`
WHERE Member_Gender IS NULL
LIMIT 15

```

Row	_01__Rental_Details_Rental_ID	Member_Gender	_05__Member_Details_Member_Birthday_Year
1	17945099	<i>null</i>	<i>null</i>
2	17810591	<i>null</i>	<i>null</i>

3	17905230	<i>null</i>	<i>null</i>
4	17982022	<i>null</i>	1980
5	17816796	<i>null</i>	<i>null</i>
6	17696019	<i>null</i>	<i>null</i>
7	17820756	<i>null</i>	<i>null</i>
8	17820758	<i>null</i>	<i>null</i>
9	17820760	<i>null</i>	<i>null</i>
10	17907000	<i>null</i>	<i>null</i>
11	17611314	<i>null</i>	<i>null</i>
12	17790072	<i>null</i>	<i>null</i>
13	17702347	<i>null</i>	1980
14	17788930	<i>null</i>	<i>null</i>
15	17788964	<i>null</i>	<i>null</i>

Divvy Trips in Year 2019

Top 10 biggest starting points spot for customer to rent a bicycle

```
SELECT COUNT(from_station_id) AS Number_of_customer, from_station_name AS Station_Name
FROM `internship-program-326613.2019.Q1`
GROUP BY Station_Name
ORDER BY Number_of_customer DESC
limit 10
```

Row	Number_of_customer	Station_Name	
1	7699	Clinton St & Washington Blvd	
2	6565	Clinton St & Madison St	
3	6342	Canal St & Adams St	
4	4655	Columbus Dr & Randolph St	
5	4571	Canal St & Madison St	
6	4395	Kingsbury St & Kinzie St	
7	3992	Michigan Ave & Washington St	
8	3516	Franklin St & Monroe St	
9	3252	LaSalle St & Jackson Blvd	
10	3246	Dearborn St & Monroe St	

Queries 2019
Q2

Total number of customer in the year of 2019

```
WITH CTE AS (  
  SELECT SUM(trip_id) AS Trip_ID  
  FROM `internship-program-326613.2019.Q1`  
  UNION ALL  
  
  SELECT SUM(trip_id) AS Trip_ID  
  FROM `internship-program-326613.2019.Q3`  
  UNION ALL  
  
  SELECT SUM(trip_id) AS Trip_ID  
  FROM `internship-program-326613.2019.Q4`  
)  
  
SELECT SUM(Trip_ID) AS Trip_ID FROM CTE  
ORDER BY Trip_ID DESC  
LIMIT 10;
```

Row	Trip_ID
1	66010766005778

Per Quater

```
SELECT COUNT(trip_id) AS Trip_ID
FROM `internship-program-326613.2019.Q1`
UNION ALL
```

```
SELECT COUNT(trip_id) AS Trip_ID
FROM `internship-program-326613.2019.Q3`
UNION ALL
```

```
SELECT COUNT(trip_id) AS Trip_ID
FROM `internship-program-326613.2019.Q4`
```

Row	Trip_ID	
1	704054	
2	1640718	
3	365069	

Queries 2019

Q3

Total number of each customer per quarter in the year of 2019

```
SELECT SUM(tripduration) AS Total_Time_Taken
FROM `internship-program-326613.2019.Q1`
(overall; total time taken)
```

```
SELECT SUM(tripduration) AS Total_Time_Taken, usertype AS User, count(trip_id)
FROM `internship-program-326613.2019.Q1`
WHERE usertype LIKE '%Subscriber%' OR usertype LIKE '%Customer%'
GROUP BY User
```

```
SELECT (SUM(duration_minutes)/84479047)*100 AS percentDuration,member_casual
FROM `coursera-319703.bike_trip.all_trip_duration`
GROUP BY member_casual
```

```
WITH CTE AS (
SELECT SUM(tripduration/60) AS Total_Duration_In_Minutes, usertype AS Usertype
FROM `internship-program-326613.2019.Q1`
GROUP BY Usertype
```

```
UNION ALL
SELECT SUM(tripduration/60) AS Total_Duration_In_Minutes, usertype AS Usertype
FROM `internship-program-326613.2019.Q3`
GROUP BY Usertype
```

```
UNION ALL
SELECT SUM(tripduration/60) AS Total_Duration_In_Minutes, usertype AS Usertype
FROM `internship-program-326613.2019.Q4`
GROUP BY Usertype
```

)

```
SELECT (SUM(Total_Duration_In_Minutes)/84479047) * 100 AS Percentage, Usertype
FROM CTE
GROUP BY Usertype
```

Row	Percentage	Usertype
1	35.69160778609079	Subscriber
2	44.526090218956135	Customer

Q4

Which gender type has a higher percentage in the quarter year of 2019

```
WITH CTE AS (  
SELECT usertype AS User, gender AS Gender, COUNT(usertype) AS Num_of_user  
FROM `internship-program-326613.2019.Q1`  
GROUP BY User, Gender  
UNION ALL
```

```
SELECT usertype AS User, gender AS Gender, COUNT(usertype) AS Num_of_user  
FROM `internship-program-326613.2019.Q3`  
GROUP BY User, Gender  
UNION ALL
```

```
SELECT usertype AS User, gender AS Gender, COUNT(usertype) AS Num_of_user  
FROM `internship-program-326613.2019.Q4`  
GROUP BY User, Gender  
)
```

```
SELECT User, Gender, SUM(Num_of_user)/515674194200 * 100 AS Percentage  
FROM CTE  
GROUP BY User, Gender  
LIMIT 10
```

Row	User	Gender	Percentage	
1	Customer	<i>null</i>	6.910215869010418E-5	
2	Subscriber	Male	3.017036759835596E-4	
3	Customer	Female	1.905563650561283E-5	
4	Subscriber	Female	9.999957449877759E-5	
5	Customer	Male	3.227696903821525E-5	
6	Subscriber	<i>null</i>	3.356770649897299E-6	

Q5

Which generation use the bicycle more for quarter year of 2019

```
WITH CTE AS (  
  SELECT (2019 - birthyear ) AS Age, COUNT(trip_id) AS Trip_id  
  FROM `internship-program-326613.2019.Q1`  
  WHERE birthyear >= 1931  
  GROUP BY Age  
  UNION ALL
```

```
  SELECT (2019 - birthyear ) AS Age, COUNT(trip_id) AS Trip_id  
  FROM `internship-program-326613.2019.Q3`  
  WHERE birthyear >= 1931  
  GROUP BY Age  
  UNION ALL
```

```
  SELECT (2019 - birthyear ) AS Age, COUNT(trip_id) AS Trip_id  
  FROM `internship-program-326613.2019.Q4`  
  WHERE birthyear >= 1931  
  GROUP BY Age  
)
```

```
SELECT Age, SUM(Trip_ID) AS Trip_ID  
FROM CTE  
GROUP BY Age  
ORDER BY Age, Trip_ID
```

LIMIT 10;

Row	Age	Trip_ID
1	16	473
2	17	1483
3	18	7643
4	19	14382
5	20	16431
6	21	22112
7	22	35079
8	23	68999
9	24	101231
10	25	118051