* Maximum trip each year in which month

(select year1, month1, Total\_Trips

from (

select year(startDate) as year1, month(startDate) as month1 ,count(trip\_id) as Total\_Trips

from trip

group by year1, month1

) as sub1 where sub1.year1=2014

order by Total\_Trips desc limit 1)

union

(select year1, month1, Total\_Trips

from (

select year(startDate) as year1, month(startDate) as month1 ,count(trip\_id) as Total\_Trips

from trip

group by year1, month1

) as sub1 where sub1.year1=2015

order by Total\_Trips desc limit 1)

union

(select year1, month1, Total\_Trips

from (

select year(startDate) as year1, month(startDate) as month1 ,count(trip\_id) as Total\_Trips

from trip

group by year1, month1

) as sub1 where sub1.year1=2016

order by Total\_Trips desc limit 1);

* age group were most popular

select count(trip\_id), birthyear from trip where birthyear <> 0 group by birthyear ;

* Trip duration wrt Season

SELECT

AVG(tripduration) AS AverageTripDuration, Events AS Season

FROM

trip t

JOIN

weather w ON t.startDate = w.W\_date

GROUP BY Events

ORDER BY AverageTripDuration desc;

* Which from\_stations have an average trip duration greater than 30mins?

SELECT

l.name AS Station,

from\_station\_id AS Start\_Station,

AVG(tripduration) AS Average\_TripDuration

FROM

trip t

JOIN

station s ON t.from\_station\_id = s.station\_id

JOIN

location l ON s.station\_id = l.station\_id

GROUP BY from\_station\_id , l.name

HAVING AVG(tripduration) > 1800

ORDER BY AVG(tripduration) DESC;

* What is the longest trip duration - want to get the names of station

select trip\_id, from\_station\_id, to\_station\_id, (tripduration/3600) as Trip\_Duration\_Hours

from trip t order by tripduration desc limit 5;

# gender

SELECT

COUNT(trip\_id) AS Trips, gender

FROM

trip

WHERE

gender <> 'null'

GROUP BY gender;

#Which routes are the most popular?

SELECT from\_station\_id, to\_station\_id , COUNT(trip\_id) AS Count

FROM trip

GROUP BY from\_station\_id, to\_station\_id

ORDER BY Count DESC

LIMIT 10;

select \* from trip limit 50;

#Number of trips based on time of the day

select hour(startTime) as StartHour, count(trip\_id) as Trips

from trip

group by StartHour

order by Trips desc;

#weekly

select

case

when weekday(startDate) = 0 then 'Monday'

when weekday(startDate)=1 then 'Tuesday'

when weekday(startDate)=2 then 'Wednesday'

when weekday(startDate)=3 then 'Thursday'

when weekday(startDate)=4 then 'Friday'

when weekday(startDate)=5 then 'Saturday'

when weekday(startDate)=6 then 'Sunday'

end as DayName,

count(trip\_id) as TripCount, round(avg(tripduration)) as AvgTripDuuration

from trip

group by weekday(startDate)

order by TripCount desc;

select tr.trip\_id , tr.from\_station\_id, f.lat as from\_lat, f.longitude as from\_long ,tr.to\_station\_id , t.lat as to\_lat, t.longitude as to\_long,

ST\_Distance\_Sphere(point(f.longitude,f.lat), point(t.longitude,t.lat)) as distance

from location f, location t, trip tr

where tr.from\_station\_id=f.station\_id and tr.to\_station\_id=t.station\_id;