Varun Nagendra
Oracle Assignment-02

1.A brief description of your understanding of data.

- There are two data sets – Fact_trip and Dim_city. Fact_trip table provides details of all the trip transactions.
- Dim_city is a dimension table which is the master table.
- Fact_trip is a fact table which is child table which list of the cities that Uber provides services.
- Dim_city is having 20 rows and 3 columns and Fact_trip table is having 73 rows and 10 columns.

2.Any anomalies you identified in the provided dataset and a description of how identified them and why do you think they are anomalies.

- There are no anomalies found in the provided Fact and Dim Tables.

Create the table structure with appropriate data types and using SQL* Loader to load all the data into the Oracle Data Base Tables.

```
create table fact
(
trip_uuid varchar(10) ,
datestr date,
product_type_name varchar(5),
city_id number(5),
driver_uuid varchar2(30),
is_completed varchar(5),
eta number(5),
ata number(5),
upf_fare float(10),
fare_final float(10)
);
```

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```
C:\Users\VarunNagendra\Desktop\training\Oracle SQL\assignment2>sqlldr userid=system control='C:\Users\VarunNagendra\Desktop\training\Oracle SQL\assignment2\control.ctl'
skip=1
Password:

SQL*Loader: Release 11.2.0.2.0 - Production on Tue Aug 24 12:16:21 2021

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Commit point reached - logical record count 64
Commit point reached - logical record count 73

C:\Users\VarunNagendra\Desktop\training\Oracle SQL\assignment2>sqlplus

SQL*Plus: Release 11.2.0.2.0 Production on Tue Aug 24 12:16:34 2021

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Enter user-name: system
Enter password:

Connected to:
Oracle Database 11g Express Edition Release 11.2.0.2.0 - 64bit Production

SQL> select count(*) from fact;

  COUNT(*)
----------
        73
```

```
create table dim
(
city_id number(4),
city_name varchar2(5),
country varchar2(5)
);
```

```
C:\Users\VarunNagendra\Desktop\training\Oracle SQL\assignment2>sqlldr userid=system control='C:\Users\VarunNagendra\Desktop\training\Oracle SQL\assignment2\dimcontrol.c
tl'skip=1
Password:

SQL*Loader: Release 11.2.0.2.0 - Production on Tue Aug 24 12:19:24 2021

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Commit point reached - logical record count 20

C:\Users\VarunNagendra\Desktop\training\Oracle SQL\assignment2>sqlplus

SQL*Plus: Release 11.2.0.2.0 Production on Tue Aug 24 12:19:32 2021

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Enter user-name: system
Enter password:

Connected to:
Oracle Database 11g Express Edition Release 11.2.0.2.0 - 64bit Production

SQL> select count(*) from dim;

  COUNT(*)
----------
        20
```

3. Queries and Results

A. How many city_ids does uberPOOL operate in?

```
select count(distinct(city_id)) as no_of_cities
from fact
where product_type_name='uberPOOL';
```

```
SQL> select count(distinct(city_id)) as no_of_cities
  2  from fact
  3  where product_type_name='uberPOOL';

NO_OF_CITIES
------------
          11
```

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B. Which city_id has the highest error in ETA (where error in ETA = {(eta - ata)/ata}) for the given time period?

```
select city_id from
(
select * from
(
select city_id ,(eta-ata)/ata as ETA
from fact
order by ETA desc
)) where rownum=1;
```

```
SQL> select city_id from
  2  (
  3  select * from
  4  (
  5  select city_id ,(eta-ata)/ata as ETA
  6  from fact
  7  order by ETA desc
  8  )) where rownum=1;

   CITY_ID
----------
         5
```

C. Which is the product type with highest total revenue in San Francisco?

```
select * from
(
select product_type_name as product_type
from fact join dim
on dim.city_id = fact.city_id
where city_name='SanFrancisco'
order by fare_final desc
) where rownum=1;
```

```
SQL> select * from
  2  (
  3  select product_type_name as product_type
  4  from fact join dim
  5  on dim.city_id = fact.city_id
  6  where city_name='SanFrancisco'
  7  order by fare_final desc
  8  ) where rownum=1;

PRODUCT_TYPE
----------------------------
uberX
```

D. Which are the products in each city where total revenue(fare_final) > $100?

```
select city_name,product_type_name
from fact join dim
on fact.city_id = dim.city_id
group by product_type_name,city_name
having sum(fare_final)>100;
```

```
SQL> select city_name,product_type_name
  2  from fact join dim
  3  on fact.city_id = dim.city_id
  4  group by product_type_name,city_name
  5  having sum(fare_final)>100;

CITY_NAME            PRODUCT_TYPE_NAME
-------------------- --------------------------------------------------
SanAntonio           uberPOOL
```

E. Get to 2nd highest country by Uber Revenue (fare_final) for 2nd week of June 2018 across product?

```
select country from
(
select country,rownum as ronum from
(
select country,sum(fare_final) as sm
from fact join dim on fact.city_id = dim.city_id
where to_char(to_date(datestr,'dd-mm-yyyy'),'w')=2
and to_char(to_date(datestr,'dd-mm-yyyy'),'mm')=06
and to_char(to_date(datestr,'dd-mm-yyyy'),'yyyy' )=2018
group by dim.country
order by sm desc
)) where ronum=2;
```

```
SQL> select country from
  2  (
  3  select country,rownum as ronum from
  4  (
  5  select country,sum(fare_final) as sm
  6  from fact join dim on fact.city_id = dim.city_id
  7  where to_char(to_date(datestr,'dd-mm-yyyy'),'w')=2
  8  and to_char(to_date(datestr,'dd-mm-yyyy'),'mm')=06
  9  and to_char(to_date(datestr,'dd-mm-yyyy'),'yyyy' )=2018
 10  group by dim.country
 11  order by sm desc
 12  )) where ronum=2;

COUNT
-----
US
```

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F. **Get WOW growth % for US region for June Month. WOW- Week over week.**
G. **Growth % = ((Current week fare final - previous week fare final) / previous week fare final) * 100**

```
select week,sm,lag,((sm-lag) / lag)*100 as WoW_Growth from
(
select sum(fare_final) as sm,
lag(sum(fare_final)) over(order by to_char(to_date(datestr,'dd-mm-yyyy'),'w') ) as lag ,
to_char(to_date(datestr,'dd-mm-yyyy'),'w') as week
from fact
group by to_char(to_date(datestr,'dd-mm-yyyy'),'w')
order by week asc
);
```