Hi Team,

Time Duration : submit by 2 pm

Relationships & Privileges

Create a Database structure, columns, data types and execute the queries for following requirement. Provide ER-diagram for the same

Television Dish Networks and their devices(setup cards) data.

- Maintain the list of dish networks available
- Can find the devices(active and inactive) of each network along the customer(the device purchased user), their location details
-

Following is the users

1. Admin
2. Customer Care

Admin should be able to do all operations in database
Customer care user should be able perform operations on customers and devices data

Queries

•Find all the networks available
•Find the number of devices sold for each network
•Find all the customers in a particular location
•Find the networks and the customers counts by grouping the location
•Find all the active devices along the network, customer and location details

```
postgres=# create database network;
CREATE DATABASE
postgres=# \c network;
You are now connected to database "network" as user "postgres".

network=# create table television_dish_network(t_id int primary key,t_name varchar(50) unique);
CREATE TABLE
network=# create table devicies(s_no int primary key,d_id int unique,status varchar,t_id int,foreign
key(t_id) references television_dish_network(t_id));
CREATE TABLE
network=# create table customer(c_id int primary key,c_name varchar(30),location
varchar(50),d_id int  unique not null,foreign key(d_id) references devicies(s_no));
CREATE TABLE
```

Following is the users

1.Admin
2.Customer Care

network=# create user admin superuser login password '123';
CREATE ROLE
network=# create user **customercare** with login password '345';
CREATE ROLE

1.Admin should be able to do all operations in database

network=# grant all privileges on database **network** to admin;
GRANT

postgres@thrymrthrymr123-H310M-H:/home/thrymrthrymr123$ psql -h localhost -d network -U admin
Password for user admin:
psql (14.5 (Ubuntu 14.5-1.pgdg20.04+1))
SSL connection (protocol: TLSv1.3, cipher: TLS_AES_256_GCM_SHA384, bits: 256, compression: off)
Type "help" for help.

network=# select*from television_dish_network;
 t_id | t_name
------+------------------------
    1 | Tata sky dish network
    2 | Airtel dish network
    3 | Nandyal digital network
(3 rows)

network=# select*from devicies;
 s_no | d_id | status | t_id
------+---------+----------+------
    1 | 1200345 | active | 1
    3 | 1200203 | active | 1
    4 | 1300353 | active | 2
    5 | 1300523 | active | 2
    7 | 1400345 | active | 3
    2 | 1200567 | inactive | 1
    6 | 1300256 | inactive | 2
    8 | 1400563 | inactive | 3
(8 rows)

```
network=# select*from customer;;
 c_id  | c_name  | location  | d_id
-------+---------+-----------+------
 10001 | Ajith   | Nandyal   |    1
 10002 | Ajay    | Allagadda |    2
 20034 | Rohit   | Nandyal   |    3
 20045 | Ankith  | Kurnool   |    4
 20065 | Sampath | Nandyal   |    5
 30041 | Kunal   | Kurnool   |    6
 30052 | Maira   | Nandyal   |    7
(7 rows)
```

2.Customer care user should be able perform operations on customers and devices data

```
network=# grant all privileges on customer,devicies to customercare;
GRANT
postgres@thrymrthrymr123-H310M-H:/home/thrymrthrymr123$ psql -h
localhost -d network -U customercare
Password for user customercare:
psql (14.5 (Ubuntu 14.5-1.pgdg20.04+1))
SSL connection (protocol: TLSv1.3, cipher: TLS_AES_256_GCM_SHA384, bits:
256, compression: off)
Type "help" for help.

network=> select*from devicies;
 s_no |  d_id   |  status  | t_id
------+---------+----------+------
    1 | 1200345 | active   |    1
    3 | 1200203 | active   |    1
    4 | 1300353 | active   |    2
    5 | 1300523 | active   |    2
    7 | 1400345 | active   |    3
    2 | 1200567 | inactive |    1
    6 | 1300256 | inactive |    2
    8 | 1400563 | inactive |    3
(8 rows)

network=> select*from customer;
 c_id  | c_name  | location  | d_id
-------+---------+-----------+------
 10001 | Ajith   | Nandyal   |    1
 10002 | Ajay    | Allagadda |    2
 20034 | Rohit   | Nandyal   |    3
```

```
 20045 | Ankith  | Kurnool   |    4
 20065 | Sampath | Nandyal   |    5
 30041 | Kunal   | Kurnool   |    6
 30052 | Maira   | Nandyal   |    7
(7 rows)

network=> select*from television_dish_network;
ERROR:  permission denied for table television_dish_network
```

Queries

1.Find all the networks available

```
network=# select t_name as available_networks from television_dish_network;

   available_networks
------------------------
 Tata sky dish network
 Airtel dish network
 Nandyal digital network
(3 rows)
```

2.Find the number of devices sold for each network

```
network=# select a.t_name,count(d_id) as devicies_sold from
television_dish_network  a join devicies b on a.t_id=b.t_id where
status='active' group by a.t_name;
         t_name          | devicies_sold
-------------------------+---------------
 Airtel dish network     |             2
 Nandyal digital network |             1
 Tata sky dish network   |             2
(3 rows)
```

3.Find all the customers in a particular location

```
network=# select*from customer where location='Nandyal';
 c_id  | c_name  | location | d_id
-------+---------+----------+------
 10001 | Ajith   | Nandyal  |    1
 20034 | Rohit   | Nandyal  |    3
 20065 | Sampath | Nandyal  |    5
 30052 | Maira   | Nandyal  |    7
(4 rows)
```

4.Find the networks and the customers counts by grouping the location

```
network=# select count(t.t_name) network_count,count(c.c_name)
customers_count,c.location from television_dish_network t inner join devicies
d on t.t_id=d.t_id inner join customer c on d.s_no=c.d_id group by c.location;

 network_count | customers_count | location
---------------+-----------------+-----------
             2 |               2 | Kurnool
             1 |               1 | Allagadda
             4 |               4 | Nandyal
(3 rows)
```

5.Find all the active devices along the network, customer and location details

```
network=# select t.t_name network,c.c_name,c.location from television_dish_network t inner join
devicies d on t.t_id=d.t_id inner join customer c on d.s_no=c.d_id where d.status='active' group by
t.t_name,c.c_name,c.location;
        network         | c_name  | location
------------------------+---------+----------
 Nandyal digital network | Maira   | Nandyal
 Airtel dish network     | Sampath | Nandyal
 Tata sky dish network   | Ajith   | Nandyal
 Tata sky dish network   | Rohit   | Nandyal
 Airtel dish network     | Ankith  | Kurnool
(5 rows)
```