ASSESSMENT ON DATABASE

Problem Statement: There can be multiple customers, who can place multiple orders on the site. Now a sales person can handle these orders will distribute into multiple sales persons (One order will be assign to one salesperson only). So a sales person can have multiple orders of multiple customers

1.Create Database

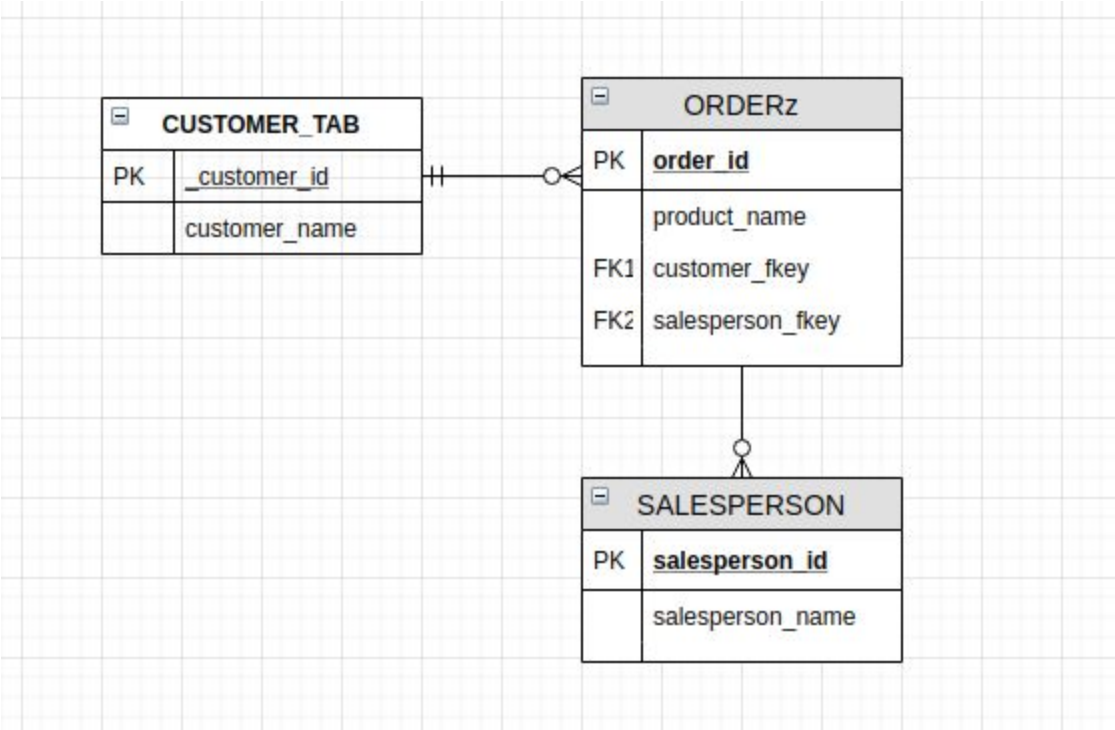
```
diksha@diksha:~$ sudo apt-get install mysql-server
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  libaio1 libevent-core-2.1-6 libhtml-template-perl libssl1.1 mysql-client-5.7
  mysql-client-core-5.7 mysql-common mysql-server-5.7 mysql-server-core-5.7
Suggested packages:
  libipc-sharedcache-perl mailx tinyca
The following NEW packages will be installed:
  libaio1 libevent-core-2.1-6 libhtml-template-perl mysql-client-5.7
  mysql-client-core-5.7 mysql-common mysql-server mysql-server-5.7
  mysql-server-core-5.7
The following packages will be upgraded:
  libssl1.1
1 upgraded, 9 newly installed, 0 to remove and 620 not upgraded.
Need to get 19.1 MB/20.4 MB of archives.
After this operation, 155 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://in.archive.ubuntu.com/ubuntu bionic/main amd64 mysql-common all 5.8
+1.0.4 [7,308 B]
Get:2 http://in.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libaio1 amd6
4 0.3.110-5ubuntu0.1 [6,476 B]
```

```
diksha@diksha:~$ systemctl status mysql.service
● mysql.service - MySQL Community Server
   Loaded: loaded (/lib/systemd/system/mysql.service; enabled; vendor preset: en
   Active: active (running) since Wed 2020-02-05 10:49:58 IST; 6min ago
 Main PID: 5422 (mysqld)
    Tasks: 29 (limit: 4915)
   CGroup: /system.slice/mysql.service
           └─5422 /usr/sbin/mysqld --daemonize --pid-file=/run/mysqld/mysqld.pid

Feb 05 10:49:58 diksha systemd[1]: Starting MySQL Community Server...
Feb 05 10:49:58 diksha systemd[1]: Started MySQL Community Server.
lines 1-10/10 (END)
```

```
mysql> CREATE DATABASE New_project;
Query OK, 1 row affected (0.00 sec)
```

2.Design Schema



3.Create tables

```
mysql> CREATE TABLE CUSTOMER_TAB(customer_id INT PRIMARY KEY, customer_name VAR
CHAR(100));
Query OK, 0 rows affected (0.03 sec)

mysql> CREATE TABLE SALESPERSON(salesperson_id INT PRIMARY KEY, salesperson_nam
e VARCHAR(100));
Query OK, 0 rows affected (0.03 sec)

mysql> CREATE TABLE ORDERz(order_id INT PRIMARY KEY, product_name VARCHAR(100),
customer_fkey INT,salesperson_fkey INT,FOREIGN KEY(customer_fkey) REFERENCES CU
STOMER_TAB(customer_id), FOREIGN KEY(salesperson_fkey) REFERENCES SALESPERSON(s
alesperson_id));
Query OK, 0 rows affected (0.04 sec)
```

```
mysql> SHOW TABLES;
+------------------------+
| Tables_in_New_project |
+------------------------+
| CUSTOMER_TAB           |
| ORDERz                 |
| SALESPERSON            |
+------------------------+
3 rows in set (0.00 sec)

mysql>
```

4.Insert sample data

```
mysql> INSERT INTO CUSTOMER_TAB VALUES(1,"RAJ"),(2,"SID"),(3,"JAY"),(4,"OLI");
Query OK, 4 rows affected (0.02 sec)
Records: 4  Duplicates: 0  Warnings: 0
```

```
mysql> INSERT INTO SALESPERSON VALUES(1,"ABI"),(2,"HANA"),(3,"JAYA"),(4,"ZOE");

Query OK, 4 rows affected (0.01 sec)
Records: 4  Duplicates: 0  Warnings: 0
```

```
mysql> INSERT INTO ORDERz VALUES(1,"Shirt",2,3),(2,"Shoes",2,1),(3,"Matress",4,
3),(4,"Wallframes",1,4);
Query OK, 4 rows affected (0.00 sec)
Records: 4  Duplicates: 0  Warnings: 0
```

```
mysql> SELECT * FROM CUSTOMER_TAB;
+-------------+---------------+
| customer_id | customer_name |
+-------------+---------------+
|           1 | RAJ           |
|           2 | SID           |
|           3 | JAY           |
|           4 | OLI           |
+-------------+---------------+
4 rows in set (0.00 sec)

mysql> SELECT * FROM SALESPERSON;
+----------------+------------------+
| salesperson_id | salesperson_name |
+----------------+------------------+
|              1 | ABI              |
|              2 | HANA             |
|              3 | JAYA             |
|              4 | ZOE              |
+----------------+------------------+
4 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM ORDERz;
+----------+--------------+---------------+-------------------+
| order_id | product_name | customer_fkey | salesperson_fkey |
+----------+--------------+---------------+-------------------+
|        1 | Shirt        |             2 |                 3 |
|        2 | Shoes        |             2 |                 1 |
|        3 | Matress      |             4 |                 3 |
|        4 | Wallframes   |             1 |                 4 |
+----------+--------------+---------------+-------------------+
4 rows in set (0.00 sec)
```

5.Find the sales person having multiple orders.

```
mysql> SELECT sp.salesperson_id,sp.salesperson_name from SALESPERSON s
p INNER JOIN ORDERz od ON sp.salesperson_id=od.salesperson_fkey group
by salesperson_id having count(*)>1;
+----------------+------------------+
| salesperson_id | salesperson_name |
+----------------+------------------+
|              3 | JAYA             |
+----------------+------------------+
1 row in set (0.00 sec)
```

6.Find all sales persons details along with order details

```
mysql> SELECT ct.customer_name,od.order_id,od.product_name,sp.salesperson_id,sp.salesperso
n_name FROM CUSTOMER_TAB ct inner join ORDERz od on ct.customer_id=od.customer_fkey INNER
JOIN SALESPERSON sp where sp.salesperson_id=od.salesperson_fkey ;
+---------------+----------+--------------+----------------+------------------+
| customer_name | order_id | product_name | salesperson_id | salesperson_name |
+---------------+----------+--------------+----------------+------------------+
| SID           |        1 | Shirt        |              3 | JAYA             |
| SID           |        2 | Shoes        |              1 | ABI              |
| OLI           |        3 | Matress      |              3 | JAYA             |
| RAJ           |        4 | Wallframes   |              4 | ZOE              |
+---------------+----------+--------------+----------------+------------------+
4 rows in set (0.00 sec)

mysql>
```

7.Create index

```
mysql> ALTER TABLE SALESPERSON ADD index s_person_name(salesperson_nam
e);
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

8.How to show index on a table

```
mysql> SHOW index FROM SALESPERSON\G;
*************************** 1. row ***************************
        Table: SALESPERSON
   Non_unique: 0
     Key_name: PRIMARY
 Seq_in_index: 1
  Column_name: salesperson_id
    Collation: A
  Cardinality: 4
     Sub_part: NULL
       Packed: NULL
         Null:
   Index_type: BTREE
      Comment:
Index_comment:
*************************** 2. row ***************************
        Table: SALESPERSON
   Non_unique: 1
     Key_name: s_person_name
 Seq_in_index: 1
  Column_name: salesperson_name
    Collation: A
  Cardinality: 4
     Sub_part: NULL
       Packed: NULL
         Null: YES
   Index_type: BTREE
      Comment:
Index_comment:
2 rows in set (0.00 sec)

ERROR:
No query specified
```

9.Find the order number, sales person name, along with the customer to whom that order belongs to

```
mysql> SELECT od.order_id,sp.salesperson_name,c.customer_name FROM SALESPERSON
sp INNER JOIN ORDERz od ON sp.salesperson_id=od.salesperson_fkey INNER JOIN CUS
TOMER_TAB c ON od.customer_fkey=c.customer_id;
+----------+------------------+---------------+
| order_id | salesperson_name | customer_name |
+----------+------------------+---------------+
|        1 | JAYA             | SID           |
|        2 | ABI              | SID           |
|        3 | JAYA             | OLI           |
|        4 | ZOE              | RAJ           |
+----------+------------------+---------------+
4 rows in set (0.00 sec)
```