

ASSESSMENT - 3

Introduction to Databases

**TO
THE
NEW™**



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 assigned SQL Statement to one salesperson only). So a sales person can have multiple orders of multiple customers

```
garima@garima: ~  
File Edit View Search Terminal Help  
garima@garima:~$ 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 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  
0 upgraded, 9 newly installed, 0 to remove and 36 not upgraded.  
Need to get 19.1 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  
+1.0.4 [7,308 B]
```

```
garima@garima: ~
File Edit View Search Terminal Help
garima@garima:~$ 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 10:56:10 IST; 8min ago
 Main PID: 18344 (mysqld)
    Tasks: 29 (limit: 4915)
   CGroup: /system.slice/mysql.service
           └─18344 /usr/sbin/mysqld --daemonize --pid-file=/run/mysqld/mysqld.pi

Feb 05 10:56:10 garima systemd[1]: Starting MySQL Community Server...
Feb 05 10:56:10 garima systemd[1]: Started MySQL Community Server.
garima@garima:~$ systemctl start mysql.service
garima@garima:~$ systemctl status mysql.service
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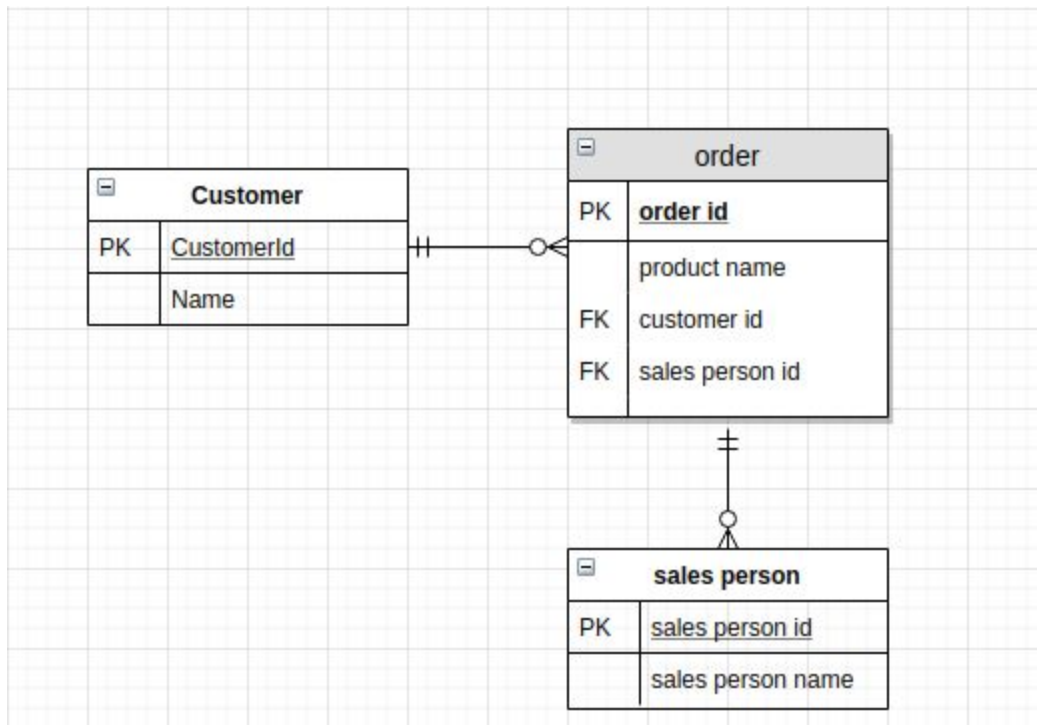
Feb 05 10:56:10 garima systemd[1]: Starting MySQL Community Server...
Feb 05 10:56:10 garima systemd[1]: Started MySQL Community Server.
```

1. Create Database

```
mysql> create database garima;
Query OK, 1 row affected (0.01 sec)

mysql> use garima;
Database changed
mysql> 
```

2. Design Schema



3. Create tables

```
mysql> SHOW DATABASES;
+-----+
| Database |
+-----+
| information_schema |
| garima      |
| mysql      |
| performance_schema |
| sys        |
| training    |
+-----+
6 rows in set (0.00 sec)

mysql> USE garima;
Database changed
mysql> CREATE TABLE CUSTOMER_TAB(cust_id INT PRIMARY KEY, cust_name VARCHAR(100));
Query OK, 0 rows affected (0.04 sec)

mysql> CREATE TABLE SALES_PERSON(salesp_id INT PRIMARY KEY, salesp_name VARCHAR(100));
Query OK, 0 rows affected (0.04 sec)
```

```
mysql> CREATE TABLE CUST_ORDERS(order_id INT PRIMARY KEY, pro_name VARCHAR(100),
  f_custid INT, f_salespid INT, FOREIGN KEY(f_custid) REFERENCES CUSTOMER_TAB(cus
t_id),FOREIGN KEY(f_salespid) REFERENCES SALES_PERSON(salesp_id));
Query OK, 0 rows affected (0.05 sec)

mysql> 
```

```
mysql> SHOW TABLES;
+-----+
| Tables_in_garima |
+-----+
| CUSTOMER_TAB      |
| CUST_ORDERS       |
| ORDERS            |
| SALES_PERSON      |
+-----+
4 rows in set (0.00 sec)
```


4. Insert sample data

```
mysql> INSERT INTO CUSTOMER_TAB VALUES(1,"Joe"),(2,"Daniel"),(3,"Ajay"),(4,"Joey");
Query OK, 4 rows affected (0.03 sec)
Records: 4  Duplicates: 0  Warnings: 0

mysql> INSERT INTO SALES_PERSON VALUES(1,"SP1"),(2,"SP2"),(3,"SP3"),(4,"SP4");
Query OK, 4 rows affected (0.04 sec)
Records: 4  Duplicates: 0  Warnings: 0

mysql> INSERT INTO CUST_ORDERS VALUES(1,"Blanket",2,4),(2,"Table",1,1),(3,"Book",3,2),(4,"Bottle",4,3);
Query OK, 4 rows affected (0.04 sec)
Records: 4  Duplicates: 0  Warnings: 0

mysql> █
```

5. Find the sales person have multiple orders.

```
mysql> SELECT salesp_name
-> FROM SALES_PERSON
-> INNER JOIN CUST_ORDERS
-> ON SALES_PERSON.salesp_id=CUST_ORDERS.f_salespid
-> GROUP BY f_salespid
-> HAVING COUNT(order_id) > 1;
+-----+
| salesp_name |
+-----+
| SP4         |
+-----+
1 row in set (0.00 sec)

mysql> █
```

6. Find the all sales person details along with order details

```
mysql> SELECT salesp_name, salesp_id, order_id, pro_name
-> FROM SALES_PERSON
-> INNER JOIN CUST_ORDERS
-> WHERE SALES_PERSON.salesp_id=CUST_ORDERS.f_salespid;
+-----+-----+-----+-----+
| salesp_name | salesp_id | order_id | pro_name |
+-----+-----+-----+-----+
| SP1         | 1         | 2        | Table    |
| SP2         | 2         | 3        | Book     |
| SP3         | 3         | 4        | Bottle   |
| SP4         | 4         | 1        | Blanket  |
| SP4         | 4         | 5        | Bag      |
| SP4         | 4         | 6        | Bottle   |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

7. Create index

```
mysql> CREATE INDEX Index_Key ON SALES_PERSON(salesp_id);
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

8. How to show index on a table

```
mysql> desc SALES_PERSON
-> ;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| salesp_id  | int(11)       | NO   | PRI | NULL    |       |
| salesp_name | varchar(100)  | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.01 sec)
```

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

```
mysql> SELECT order_id, salesp_name, cust_name  
-> FROM CUST_ORDERS  
-> INNER JOIN SALES_PERSON  
-> ON SALES_PERSON.salesp_id=CUST_ORDERS.f_salespid  
-> INNER JOIN CUSTOMER_TAB  
-> ON CUSTOMER_TAB.cust_id=CUST_ORDERS.f_custid;
```

| order_id | salesp_name | cust_name |
|----------|-------------|-----------|
| 2 | SP1 | Joe |
| 1 | SP4 | Daniel |
| 5 | SP4 | Daniel |
| 3 | SP2 | Ajay |
| 6 | SP4 | Ajay |
| 4 | SP3 | Joey |

```
6 rows in set (0.00 sec)
```