

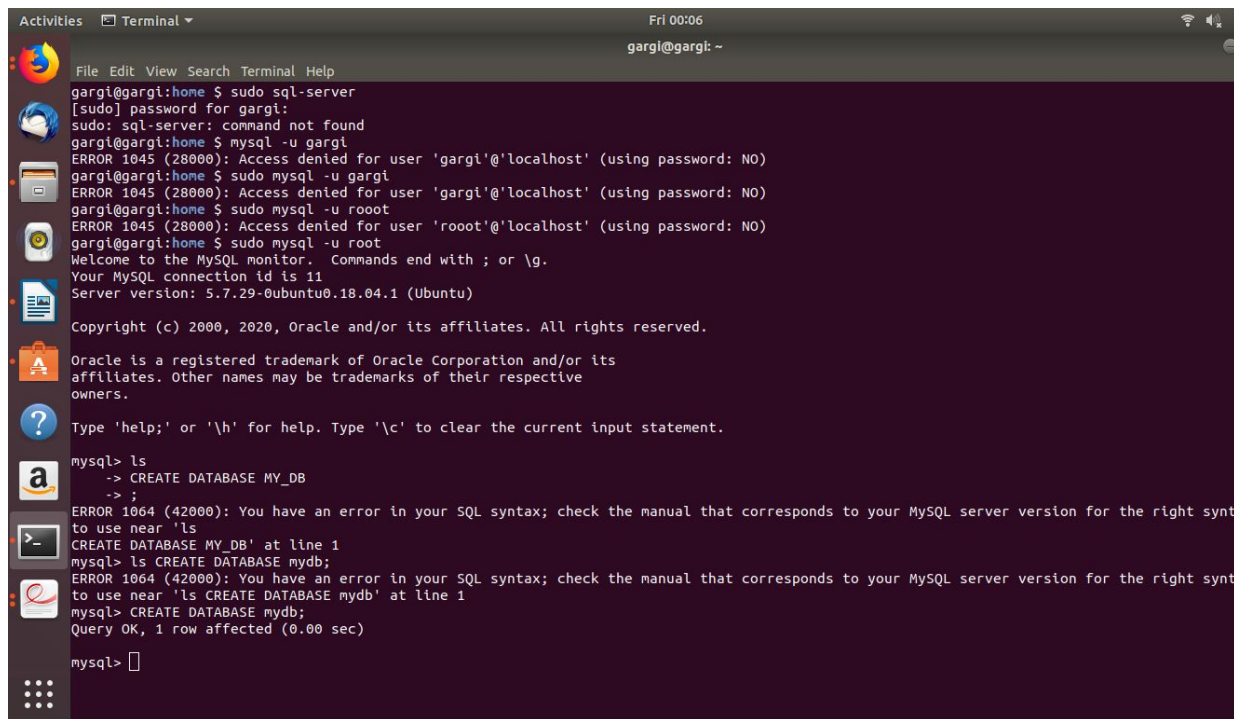
# Assessment 3– Introduction to Databases

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College Name : UPES

## 1. Create Database



```
gargi@gargi:~$ sudo sql-server
[sudo] password for gargi:
sudo: sql-server: command not found
gargi@gargi:~$ mysql -u gargi
ERROR 1045 (28000): Access denied for user 'gargi'@'localhost' (using password: NO)
gargi@gargi:~$ sudo mysql -u gargi
ERROR 1045 (28000): Access denied for user 'gargi'@'localhost' (using password: NO)
gargi@gargi:~$ sudo mysql -u root
ERROR 1045 (28000): Access denied for user 'root'@'localhost' (using password: NO)
gargi@gargi:~$ sudo mysql -u root
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 11
Server version: 5.7.29-0ubuntu0.18.04.1 (Ubuntu)

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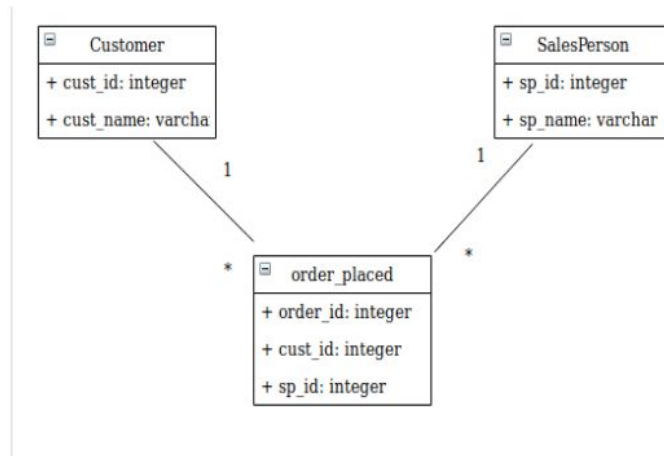
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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> ls
-> CREATE DATABASE MY_DB
-> ;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax
to use near 'ls
CREATE DATABASE MY_DB' at line 1
mysql> ls CREATE DATABASE mydb;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax
to use near 'ls CREATE DATABASE mydb' at line 1
mysql> CREATE DATABASE mydb;
Query OK, 1 row affected (0.00 sec)

mysql>
```

## 1. Design Schema



## 2. Create Tables

```

mysql> show databases
-> ;
+-----+
| Database |
+-----+
| information_schema |
| WEBSITE |
| mydb |
| mysql |
| performance_schema |
| student |
| sys |
+-----+
7 rows in set (0.01 sec)

mysql> use mydb
Database changed
mysql> create table CUSTOMER(Customer_id integer primary key , Customer_name varchar(200) );
Query OK, 0 rows affected (0.05 sec)

mysql> create table SALESPERSON(Salesperson_id integer primary key , Salesperson_name varchar(200));
Query OK, 0 rows affected (0.04 sec)

mysql> create table ORDER_PLACED(order_id integer primary key, Customer_id integer ,Salesperson_id integer, foreign key(Customer_id)references
CUSTOMER(Customer_id), foreign key(Salesperson_id)references SALESPERSON(Salesperson_id));
Query OK, 0 rows affected (0.04 sec)

mysql> desc ORDER_PLACED;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| order_id | int(11) | NO | PRI | NULL | |
| Customer_id | int(11) | YES | MUL | NULL | |
| Salesperson_id | int(11) | YES | MUL | NULL | |
+-----+
3 rows in set (0.01 sec)

mysql>
  
```

## 3. Insert sample data

```
Activities  Terminal  Mon 01:15
Terminal
File Edit View Search Terminal Help

mysql> desc ORDER_PLACED;
+-----+-----+-----+-----+-----+-----+
| Field      | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| order_id   | int(11)| NO   | PRI | NULL    |       |
| Customer_id| int(11)| YES  | MUL | NULL    |       |
| Salesperson_id| int(11)| YES  | MUL | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)

mysql> insert into CUSTOMER(1,"Gargi Sharma"), (2,"Chhavi Sharma"), (3, "Ekanshu Dargan");
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax
to use near '1,"Gargi Sharma"), (2,"Chhavi Sharma"), (3, "Ekanshu Dargan")' at line 1
mysql> insert into CUSTOMER values(1,"Gargi Sharma"), (2,"Chhavi Sharma"), (3,"Ekanshu Dargan");
Query OK, 3 rows affected (0.04 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> desc CUSTOMER;
+-----+-----+-----+-----+-----+-----+
| Field      | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Customer_id| int(11)| NO   | PRI | NULL    |       |
| Customer_name| varchar(200)| YES |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> select * from CUSTOMER;
+-----+-----+
| Customer_id | Customer_name |
+-----+-----+
| 1 | Gargi Sharma |
| 2 | Chhavi Sharma |
| 3 | Ekanshu Dargan |
+-----+-----+
3 rows in set (0.00 sec)

mysql>
```

```
Activities  Terminal  Mon 01:17
Terminal
File Edit View Search Terminal Help

mysql> insert into SALESPERSON values(1,"Arun Parmar"),(2,"Utkarsh Vikram Singh"),(3,"Navin");
Query OK, 3 rows affected (0.04 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> select * from SALESPERSON;
+-----+-----+
| Salesperson_id | Salesperson_name |
+-----+-----+
| 1 | Arun Parmar |
| 2 | Utkarsh Vikram Singh |
| 3 | Navin |
+-----+-----+
3 rows in set (0.00 sec)

mysql>
```

```
Activities Terminal Mon 01:20
File Edit View Search Terminal Help

mysql> select * from SALESPERSON;
+-----+-----+
| Salesperson_id | Salesperson_name |
+-----+-----+
| 1 | Arun Parmar |
| 2 | Utkarsh Vikram Singh |
| 3 | Navin |
+-----+-----+
3 rows in set (0.00 sec)

mysql> desc ORDER_PLACED
-> ;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| order_id | int(11) | NO | PRI | NULL | |
| Customer_id | int(11) | YES | MUL | NULL | |
| Salesperson_id | int(11) | YES | MUL | NULL | |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> insert into ORDER_PLACED values(12,1,1),(13,2,2),(15,1,3),(16,3,2);
Query OK, 4 rows affected (0.04 sec)
Records: 4 Duplicates: 0 Warnings: 0

mysql> select * from ORDER_PLACED;
+-----+-----+-----+
| order_id | Customer_id | Salesperson_id |
+-----+-----+-----+
| 12 | 1 | 1 |
| 13 | 2 | 2 |
| 15 | 1 | 3 |
| 16 | 3 | 2 |
+-----+-----+-----+
4 rows in set (0.00 sec)

mysql>
```

4. Find the salesperson that has multiple orders.

```
mysql> select Salesperson_name from ORDER_PLACED, SALESPERSON where ORDER_PLACED.Salesperson_id=SALESPERSON.Salesperson_id group by ORDER_PLACED.Salesperson_id having count(ORDER_PLACED.Salesperson_id)>1;
+-----+
| Salesperson_name |
+-----+
| Utkarsh Vikram Singh |
+-----+
1 row in set (0.00 sec)

mysql>
```

5. Find all salesperson details along with orderdetails

```

Activities  Terminal  Mon 01:49
Terminal
File Edit View Search Terminal Help
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'Sorry. We're having trouble getting your pages back.'
We are having trouble re' at line 1
mysql> select sp_name from order_placed, salesperson where order_placed.sp_id = salesperson.sp_id group by order_placed.sp_id having count(ord
er_placed.sp_id)>1;
ERROR 1146 (42S02): Table 'mydb.order_placed' doesn't exist
mysql> select Salesperson name from ORDER_PLACED, SALESPERSON where ORDER-PLACED.Salesperson_id=SALESPERSON.Salesperson_id group by ORDER_PLAC
ED.Salesperson_id having count(ORDER_PLACED.Salesperson_id)>1)
-> ;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax
to use near 'ORDER-PLACED.Salesperson_id=SALESPERSON.Salesperson_id group by ORDER_PLACED.Sal' at line 1
mysql> select Salesperson_name from ORDER_PLACED, SALESPERSON where ORDER-PLACED.Salesperson_id=SALESPERSON.Salesperson_id group by ORDER_PLAC
ED.Salesperson_id having count(ORDER_PLACED.Salesperson_id)>1;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax
to use near 'ORDER-PLACED.Salesperson_id=SALESPERSON.Salesperson_id group by ORDER_PLACED.Sal' at line 1
mysql> select Salesperson_name from ORDER_PLACED, SALESPERSON where ORDER_PLACED.Salesperson_id=SALESPERSON.Salesperson_id group by ORDER_PLAC
ED.Salesperson_id having count(ORDER_PLACED.Salesperson_id)>1;
+-----+
| Salesperson_name |
+-----+
| Utkarsh Vikram Singh |
+-----+
1 row in set (0.00 sec)

mysql> select SALESPERSON.*, ORDER_PLACED.Order_id,ORDER_PLACED.Customer_id from SALESPERSON left join ORDER_PLACED on ORDER_PLACED.Salesperso
n_id=SALESPERSON.Salesperson_id;
+-----+-----+-----+-----+
| Salesperson_id | Salesperson_name | Order_id | Customer_id |
+-----+-----+-----+-----+
| 1 | Arun Parmar | 12 | 1 |
| 2 | Utkarsh Vikram Singh | 13 | 2 |
| 3 | Navin | 15 | 1 |
| 2 | Utkarsh Vikram Singh | 16 | 3 |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql>

```

## 6. Create Index

```

Activities  Terminal  Mon 01:52
Terminal
File Edit View Search Terminal Help
4 rows in set (0.00 sec)

mysql> create index ORDER_INDEX on ORDER_PLACED(Order_id);
Query OK, 0 rows affected (0.04 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> select * from ORDER_PLACED;
+-----+-----+-----+
| order_id | Customer_id | Salesperson_id |
+-----+-----+-----+
| 12 | 1 | 1 |
| 13 | 2 | 2 |
| 15 | 1 | 3 |
| 16 | 3 | 2 |
+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> show indexes from ORDER_PLACED;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Table | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type |
| Comment | Index_comment |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| ORDER_PLACED | 0 | PRIMARY | 1 | order_id | A | 3 | NULL | NULL | YES | BTREE |
| ORDER_PLACED | 1 | Customer_id | 1 | Customer_id | A | 2 | NULL | NULL | YES | BTREE |
| ORDER_PLACED | 1 | Salesperson_id | 1 | Salesperson_id | A | 3 | NULL | NULL | YES | BTREE |
| ORDER_PLACED | 1 | ORDER_INDEX | 1 | order_id | A | 4 | NULL | NULL | YES | BTREE |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql>

```

## 7. How to show index on a table



```

Activities  Terminal  Mon 01:52
Terminal
File Edit View Search Terminal Help
4 rows in set (0.00 sec)

mysql> create index ORDER_INDEX on ORDER_PLACED(Order_id);
Query OK, 0 rows affected (0.04 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> select * from ORDER_PLACED;
+-----+-----+-----+
| order_id | Customer_id | Salesperson_id |
+-----+-----+-----+
| 12 | 1 | 1 |
| 13 | 2 | 2 |
| 15 | 1 | 3 |
| 16 | 3 | 2 |
+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> show indexes from ORDER_PLACED;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Table | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| ORDER_PLACED | 0 | PRIMARY | 1 | order_id | A | 3 | NULL | NULL | YES | BTREE |
| ORDER_PLACED | 1 | Customer_id | 1 | Customer_id | A | 2 | NULL | NULL | YES | BTREE |
| ORDER_PLACED | 1 | Salesperson_id | 1 | Salesperson_id | A | 3 | NULL | NULL | YES | BTREE |
| ORDER_PLACED | 1 | ORDER_INDEX | 1 | order_id | A | 4 | NULL | NULL | YES | BTREE |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql>

```

- Find the order number, salesperson name, along with the customer to whom that order belongs to.

```

Activities  Terminal  Mon 02:14
Terminal
File Edit View Search Terminal Help
ERROR 1146 (42S02): Table 'mydb.CUSTOMER' doesn't exist
mysql> select * from CUSTOMER;
+-----+-----+
| Customer_id | Customer_name |
+-----+-----+
| 1 | Gargi Sharma |
| 2 | Chhavi Sharma |
| 3 | Ekanshu Dargan |
+-----+-----+
3 rows in set (0.00 sec)

mysql> select * from SALESPERSON;
+-----+-----+
| Salesperson_id | Salesperson_name |
+-----+-----+
| 1 | Arun Parmar |
| 2 | Utkarsh Vikram Singh |
| 3 | Navin |
+-----+-----+
3 rows in set (0.00 sec)

mysql> select ORDER_PLACED.order_id, SALESPERSON.Salesperson_name, CUSTOMER.Customer_name from ORDER_PLACED inner join SALESPERSON on ORDER_PLACED.Salesperson_id=SALESPERSON.Salesperson_id inner join CUSTOMER on CUSTOMER.Customer_id=ORDER_PLACED.Customer_id;
Empty set (0.00 sec)

mysql> select ORDER_PLACED.order_id, SALESPERSON.Salesperson_name, CUSTOMER.Customer_name from ORDER_PLACED inner join SALESPERSON on ORDER_PLACED.Salesperson_id=SALESPERSON.Salesperson_id inner join CUSTOMER on CUSTOMER.Customer_id=ORDER_PLACED.Customer_id;
+-----+-----+-----+
| order_id | Salesperson_name | Customer_name |
+-----+-----+-----+
| 12 | Arun Parmar | Gargi Sharma |
| 13 | Utkarsh Vikram Singh | Chhavi Sharma |
| 15 | Navin | Gargi Sharma |
| 16 | Utkarsh Vikram Singh | Ekanshu Dargan |
+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> -

```