

**TO  
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## **Assessment 3 – Introduction To Databases**

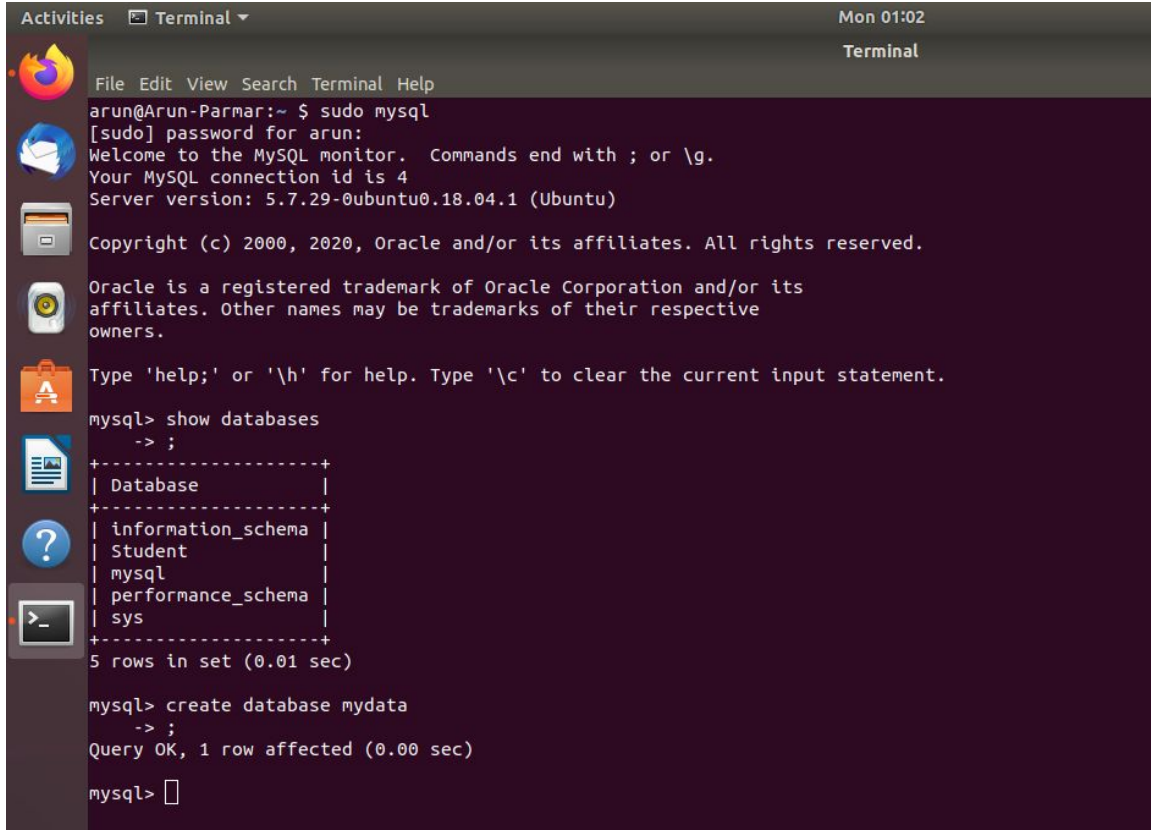
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**Mentor Name : Mr. Ravi Kumar**

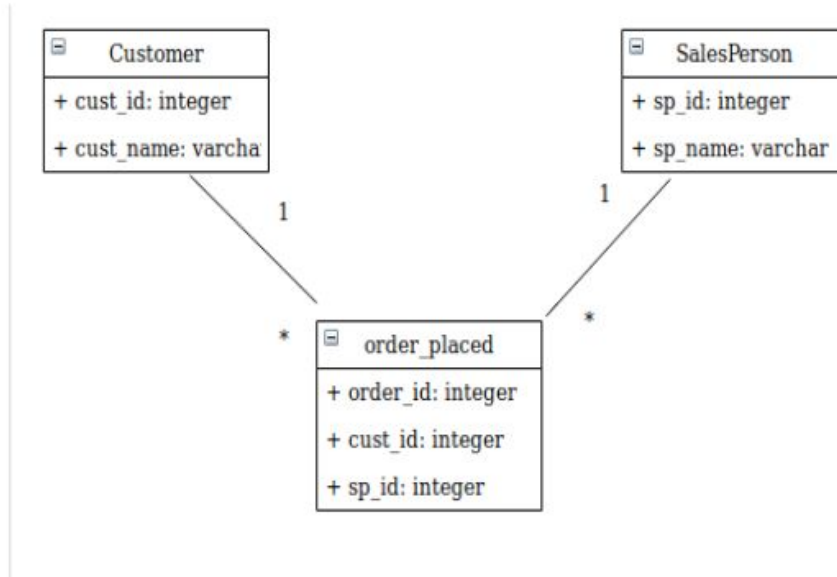
**College Name : UPES**

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

## 1.Create Database

A screenshot of a Linux terminal window titled 'Terminal' with a timestamp of 'Mon 01:02'. The terminal shows the execution of 'sudo mysql' which opens the MySQL monitor. The user 'arun' provides a password. The terminal displays the MySQL welcome message, connection ID (4), and server version (5.7.29-0ubuntu0.18.04.1). It also shows the copyright notice for Oracle and its affiliates. The user enters 'show databases' and the terminal displays a table of existing databases: information\_schema, Student, mysql, performance\_schema, and sys. Finally, the user enters 'create database mydata' and the terminal confirms 'Query OK, 1 row affected (0.00 sec)'.

## 2. Design Schema.



### 3. Create tables.

```

Terminal
File Edit View Search Terminal Help
mysql> use mydata
Database changed
mysql> create table customer(cust_id integer primary key, cust_name varchar(255) not null);
Query OK, 0 rows affected (0.03 sec)

mysql> create table salesperson(sp_id integer primary key, sp_name varchar(255) not null);
Query OK, 0 rows affected (0.03 sec)

mysql> create table order_placed(order_id integer primary key, cust_id integer, sp_id integer, foreign key (cust_id) references customer (cust_id), foreign key (sp_id) references salesperson(sp_id));
Query OK, 0 rows affected (0.03 sec)

mysql> desc customer
+-----+
-> ;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| cust_id | int(11) | NO | PRI | NULL | |
| cust_name | varchar(255) | NO | | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

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

mysql>
  
```

## 4. Insert sample data

```
Terminal
File Edit View Search Terminal Help
mysql> insert into customer values(1001, "Tommy Shelby"),(1010,"Arthur Shelby"),(1100,"John Shelby");
Query OK, 3 rows affected (0.02 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> insert into salesperson values(4201,"Amar"),(4202,"Akbar"),(4203,"Anthony");
Query OK, 3 rows affected (0.01 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> insert into order_placed values(9111111,1001,4202),(9222222,1001,4203),(9333333,1010,4201),(9444444,1100,4203),(9555555,1100,4202),(9666666,1100,4202);
Query OK, 6 rows affected (0.02 sec)
Records: 6 Duplicates: 0 Warnings: 0

mysql> select * from order_placed
-> ;
+-----+-----+-----+
| order_id | cust_id | sp_id |
+-----+-----+-----+
| 9111111 | 1001 | 4202 |
| 9222222 | 1001 | 4203 |
| 9333333 | 1010 | 4201 |
| 9444444 | 1100 | 4203 |
| 9555555 | 1100 | 4202 |
| 9666666 | 1100 | 4202 |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> select * from customer values;
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 'values' at line 1
mysql> select * from customer
-> ;
+-----+-----+
| cust_id | cust_name |
+-----+-----+
| 1001 | Tommy Shelby |
| 1010 | Arthur Shelby |
| 1100 | John Shelby |
+-----+-----+
```

## 5. Find the salesperson that has multiple orders.

```
mysql>
mysql>
mysql> select sp_name from order_placed, salesperson where order_placed.sp_id = salesperson.sp_id group by order_placed.sp_id having count(order_placed.sp_id)>1;
+-----+
| sp_name |
+-----+
| Akbar |
| Anthony |
+-----+
2 rows in set (0.02 sec)

mysql> 
```

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

```
Activities Terminal Mon 01:30
Terminal
File Edit View Search Terminal Help
mysql> select sp.*,orders.cust_id,orders.order_id from salesperson as sp left join order_placed as orders on orders.sp_id=sp.sp_id;
+-----+-----+-----+-----+
| sp_id | sp_name | cust_id | order_id |
+-----+-----+-----+-----+
| 4201 | Amar | 1010 | 9333333 |
| 4202 | Akbar | 1001 | 9111111 |
| 4202 | Akbar | 1100 | 9555555 |
| 4202 | Akbar | 1100 | 9666666 |
| 4203 | Anthony | 1001 | 9222222 |
| 4203 | Anthony | 1100 | 9444444 |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

## 7.Create index

## 8.How to show index on a table

```
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> show indexes from order_placed;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Table | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| order_placed | 0 | PRIMARY | 1 | order_id | A | 6 | NULL | NULL | | BTREE | |
| order_placed | 1 | cust_id | 1 | cust_id | A | 3 | NULL | NULL | YES | BTREE | |
| order_placed | 1 | sp_id | 1 | sp_id | A | 3 | NULL | NULL | YES | BTREE | |
| order_placed | 1 | order_index | 1 | order_id | A | 6 | NULL | NULL | | BTREE | |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> g/
```

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

```
Terminal
File Edit View Search Terminal Help
mysql> select op.order_id, sp.sp_name, cust.cust_name from order_placed as op inner join salesperson as sp on op.sp_id=sp.sp_id inner join customer as cust on cust.cust_id=op.cust_id;
+-----+-----+-----+
| order_id | sp_name | cust_name |
+-----+-----+-----+
| 9111111 | Akbar | Tommy Shelby |
| 9222222 | Anthony | Tommy Shelby |
| 9333333 | Amar | Arthur Shelby |
| 9444444 | Anthony | John Shelby |
| 9555555 | Akbar | John Shelby |
| 9666666 | Akbar | John Shelby |
+-----+-----+-----+
6 rows in set (0.00 sec)
```

