Q1 Create Database.

```
tushar@tushar:~$ sudo mysql -u root -p
[sudo] password for tushar:
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 2
Server version: 5.7.29-0ubuntu0.18.04.1 (Ubuntu)

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owners.

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

mysql> create database global;
Query OK, 1 row affected (0.00 sec)

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| global             |
```

```
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| global             |
| mysql              |
| performance_schema |
| sys                |
| t                  |
| vaish              |
+--------------------+
7 rows in set (0.04 sec)

mysql>
```

Q2 Design Schema .

```
mysql> desc customer;
+--------+-------------+------+-----+---------+----------------+
| Field  | Type        | Null | Key | Default | Extra          |
+--------+-------------+------+-----+---------+----------------+
| id     | bigint(10)  | NO   | PRI | NULL    | auto_increment |
| name   | varchar(32) | YES  |     | NULL    |                |
| email  | varchar(32) | YES  |     | NULL    |                |
| phone  | int(11)     | YES  |     | NULL    |                |
+--------+-------------+------+-----+---------+----------------+
4 rows in set (0.01 sec)

mysql>
```

```
mysql> desc orders;
+--------+-------------+------+-----+---------+-------+
| Field  | Type        | Null | Key | Default | Extra |
+--------+-------------+------+-----+---------+-------+
| o_id   | int(12)     | NO   | PRI | NULL    |       |
| c_id   | bigint(10)  | YES  | MUL | NULL    |       |
| s_id   | int(12)     | YES  | MUL | NULL    |       |
+--------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

```
mysql> desc salesperson;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| salesman_id | int(12)     | NO   | PRI | NULL    |       |
| name        | varchar(32) | YES  |     | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

Q3 Create tables

```
mysql> use global;
Database changed
mysql> desc global;
ERROR 1146 (42S02): Table 'global.global' doesn't exist
mysql> create table customer (id bigint(10) primary key not null auto_increment
, name varchar(32) ,email varchar(32),phone int(11));
Query OK, 0 rows affected (0.02 sec)

mysql>
```

```
mysql> create table salesperson ( salesman_id int(12) primary key , name varchar(32));
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> create table orders ( o_id int(12) primary key, c_id bigint(10) , s_id int(12), foreign key(c_id) references customer(id), foreign key
(s_id) references salesperson(salesman_id));
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> show tables;
+------------------+
| Tables_in_global |
+------------------+
| customer         |
| orders           |
| salesperson      |
+------------------+
```

Q4 Insert sample data.

```
mysql> insert into customer values(1, "naresh", "naresh@ttn.com", 9256784255);
ERROR 1264 (22003): Out of range value for column 'phone' at row 1
mysql> insert into customer values(1, "naresh", "naresh@ttn.com", 92567842);
Query OK, 1 row affected (0.04 sec)

mysql> insert into customer column(id,name,phone) values(1, "naresh", 92567842);
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 'column(id,name,phone) values(1, "naresh", 92567842)' at line 1
mysql> insert into customer (id,name,phone) values(1, "naresh", 92567842);
ERROR 1062 (23000): Duplicate entry '1' for key 'PRIMARY'
mysql> insert into customer(id,name,phone) values(2, "punit", 56567842);
Query OK, 1 row affected (0.01 sec)

mysql> select * from customer;
+----+--------+----------------+----------+
| id | name   | email          | phone    |
+----+--------+----------------+----------+
|  1 | naresh | naresh@ttn.com | 92567842 |
|  2 | punit  | NULL           | 56567842 |
+----+--------+----------------+----------+
2 rows in set (0.00 sec)

mysql>
```

Q5   Find the sales person have multiple orders.

```
mysql> select salesman_id ,name from salesperson a where 1<(select count(*) from orders where orders.s_id = a.salesman_id);
+-------------+--------+
| salesman_id | name   |
+-------------+--------+
|         101 | shweta |
|         102 | veena  |
+-------------+--------+
2 rows in set (0.00 sec)
```

Q6 Find the all sales person details along with order details.

```
mysql> select s.salesman_id ,s.name, o.o_id from salesperson s join orders o join customer c where s.salesman_id=o.s_id and o.c_id=c.id;
+-------------+--------+------+
| salesman_id | name   | o_id |
+-------------+--------+------+
|         102 | veena  | 1001 |
|         102 | veena  | 1002 |
|         103 | anchal | 1003 |
|         101 | shweta | 1004 |
|         101 | shweta | 1005 |
|         102 | veena  | 1006 |
|         105 | bawa   | 1007 |
+-------------+--------+------+
7 rows in set (0.03 sec)
```

Q7 Create index.

```
mysql> create index xyz on customer(name);
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

Q8 How to show index on a table.

```
mysql> create index xyz on customer(name);
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> show index from  customer;
+----------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+
| Table    | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment | Index_comment |
+----------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+
| customer |          0 | PRIMARY  |            1 | id          | A         |           2 |     NULL | NULL   |      | BTREE      |         |               |
| customer |          1 | xyz      |            1 | name        | A         |           2 |     NULL | NULL   | YES  | BTREE      |         |               |
+----------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+
2 rows in set (0.00 sec)
```

Q9 Find the order number, sale person name, along with the customer to whom that order belongs to.

```
mysql> select o.o_id,s.salesman_id,c.name from orders o join salesperson s join customer c where s.salesman_id=o.s_id and o.c_id=c.id;
+------+-------------+--------+
| o_id | salesman_id | name   |
+------+-------------+--------+
| 1001 |         102 | punit  |
| 1002 |         102 | naresh |
| 1003 |         103 | aakash |
| 1004 |         101 | punit  |
| 1005 |         101 | punit  |
| 1006 |         102 | vineet |
| 1007 |         105 | naresh |
+------+-------------+--------+
7 rows in set (0.00 sec)
```