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

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

mysql> use on_sell;
Database changed
```

2. Design Schema

```
mysql>
mysql> desc customers;
+---------------+-------------+------+-----+---------+----------------+
| Field         | Type        | Null | Key | Default | Extra          |
+---------------+-------------+------+-----+---------+----------------+
| cust_id       | int(20)     | NO   | PRI | NULL    | auto_increment |
| customer_name | varchar(20) | YES  |     | NULL    |                |
+---------------+-------------+------+-----+---------+----------------+
2 rows in set (0.00 sec)

mysql> desc orders;
+------------+-------------+------+-----+---------+----------------+
| Field      | Type        | Null | Key | Default | Extra          |
+------------+-------------+------+-----+---------+----------------+
| order_id   | int(11)     | NO   | PRI | NULL    | auto_increment |
| order_name | varchar(20) | YES  |     | NULL    |                |
| c_id       | int(11)     | YES  | MUL | NULL    |                |
| s_id       | int(11)     | YES  | MUL | NULL    |                |
+------------+-------------+------+-----+---------+----------------+
4 rows in set (0.00 sec)

mysql> desc salesperson;
+------------+-------------+------+-----+---------+----------------+
| Field      | Type        | Null | Key | Default | Extra          |
+------------+-------------+------+-----+---------+----------------+
| sales_id   | int(20)     | NO   | PRI | NULL    | auto_increment |
| sales_name | varchar(20) | YES  |     | NULL    |                |
+------------+-------------+------+-----+---------+----------------+
2 rows in set (0.00 sec)

mysql>
```

3. Create tables

```
mysql> CREATE TABLE salesperson (sales_id int(20) NOT NULL AUTO_INCREMENT, sales_name VARCHAR(20), primary key(sales_id));
Query OK, 0 rows affected (0.04 sec)

mysql> CREATE TABLE customers (cust_id int(20) NOT NULL AUTO_INCREMENT, customer_name VARCHAR(20), primary key(cust_id));
Query OK, 0 rows affected (0.05 sec)

mysql> CREATE TABLE orders (
    -> order_id int NOT NULL AUTO_INCREMENT,
    -> order_name varchar(20),
    -> primary key(order_id),
    -> c_id  int,
    -> s_id int,
    -> FOREIGN KEY(c_id) REFERENCES customers(cust_id),
    -> FOREIGN KEY(s_id) REFERENCES salesperson(sales_id)
    -> );
Query OK, 0 rows affected (0.05 sec)

mysql>
```

```
mysql> select sales_name,order_id from salesperson JOIN orders ON salesperson.sales_id=orders.s_id and 1<(select count(*) from orders where sa
lesperson.sales_id=orders.s_id);
+------------+----------+
| sales_name | order_id |
+------------+----------+
| Sumit      |        2 |
| Sumit      |        7 |
| Sarvesh    |        1 |
| Sarvesh    |        6 |
| Sarvesh    |       10 |
+------------+----------+
5 rows in set (0.00 sec)

mysql>
```

4. Find the sales person have multiple orders.

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

```
mysql> select s.sales_id,s.sales_name,o.order_id from salesperson s , orders o where s.sales_id=o.s_id;
+----------+------------+----------+
| sales_id | sales_name | order_id |
+----------+------------+----------+
|        1 | Rahul      |        4 |
|        2 | Vishwas    |        8 |
|        3 | Harshit    |        5 |
|        4 | Sumit      |        2 |
|        4 | Sumit      |        7 |
|        5 | Sarvesh    |        1 |
|        5 | Sarvesh    |        6 |
|        5 | Sarvesh    |       10 |
|        6 | Bindeshwar |        3 |
|        7 | Raj        |        9 |
+----------+------------+----------+
10 rows in set (0.00 sec)
```

6. Create index

```
mysql> create index order_id_index on salesperson(sales_id);
Query OK, 0 rows affected (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

7. How to show index on a table ,

```
mysql> show index from salesperson;
+-------------+------------+---------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---
--------+---------------+
| Table       | Non_unique | Key_name      | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | C
omment | Index_comment |
+-------------+------------+---------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---
--------+---------------+
| salesperson |          0 | PRIMARY       |            1 | sales_id    | A         |           7 |     NULL | NULL   |      | BTREE      |
       |               |
| salesperson |          1 | order_id_index |            1 | sales_id    | A         |           7 |     NULL | NULL   |      | BTREE      |
       |               |
+-------------+------------+---------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---
--------+---------------+
2 rows in set (0.00 sec)

mysql>
```

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

```
mysql> select o.order_id,s.sales_name,c.customer_name from orders o,salesperson s, customers c where o.c_id=c.cust_id AND o.s_id=s.sales_id;
+----------+------------+---------------+
| order_id | sales_name | customer_name |
+----------+------------+---------------+
|        4 | Rahul      | Sonia         |
|        8 | Vishwas    | Gargi         |
|        5 | Harshit    | Devesh        |
|        2 | Sumit      | Sonia         |
|        7 | Sumit      | Devesh        |
|        1 | Sarvesh    | Anamika       |
|        6 | Sarvesh    | Vishal        |
|       10 | Sarvesh    | Sonia         |
|        3 | Bindeshwar | Kshitija      |
|        9 | Raj        | Disha         |
+----------+------------+---------------+
10 rows in set (0.00 sec)
```