

1.Create Database

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

2.Design Schema

```
mysql> desc customers;  
+-----+-----+-----+-----+-----+-----+  
| Field | Type          | Null | Key | Default | Extra          |  
+-----+-----+-----+-----+-----+-----+  
| cid   | int(11)       | NO   | PRI | NULL    | auto_increment |  
| cname | varchar(40)   | YES  |     | NULL    |                |  
+-----+-----+-----+-----+-----+-----+  
2 rows in set (0.00 sec)
```

```
mysql> desc salesPerson;  
+-----+-----+-----+-----+-----+-----+  
| Field | Type          | Null | Key | Default | Extra          |  
+-----+-----+-----+-----+-----+-----+  
| sid   | int(11)       | NO   | PRI | NULL    | auto_increment |  
| sname | varchar(40)   | YES  |     | NULL    |                |  
+-----+-----+-----+-----+-----+-----+  
2 rows in set (0.00 sec)
```

```
mysql> desc orders;  
+-----+-----+-----+-----+-----+-----+  
| Field | Type          | Null | Key | Default | Extra          |  
+-----+-----+-----+-----+-----+-----+  
| oid   | int(11)       | NO   | PRI | NULL    | auto_increment |  
| odesc | varchar(40)   | YES  |     | NULL    |                |  
| cust_id | int(11)      | YES  | MUL | NULL    |                |  
| sp_id | int(11)       | YES  | MUL | NULL    |                |  
+-----+-----+-----+-----+-----+-----+  
4 rows in set (0.00 sec)
```

3.Create tables

```
mysql> create table customers(cid int primary key auto_increment, cname varchar(40));  
Query OK, 0 rows affected (0.36 sec)  
  
mysql> create table salesPerson(sid int primary key auto_increment, sname varchar(40));  
Query OK, 0 rows affected (0.32 sec)  
  
mysql> create table orders(oid int primary key auto_increment, odesc varchar(40), cust_id int, foreign key(cust_id) references customers(cid),  
sp_id int, foreign key(sp_id) references salesPerson(sid));  
Query OK, 0 rows affected (0.73 sec)
```

4.Insert sample data

```
mysql> insert into customers(cname) values('John');
Query OK, 1 row affected (0.06 sec)

mysql> insert into customers(cname) values('Adam');
Query OK, 1 row affected (0.10 sec)

mysql> insert into customers(cname) values('Steve');
Query OK, 1 row affected (0.05 sec)

mysql> insert into salesPerson(sname) values('Jolly');
Query OK, 1 row affected (0.04 sec)

mysql> insert into salesPerson(sname) values('Tom');
Query OK, 1 row affected (0.08 sec)

mysql> insert into salesPerson(sname) values('Mike');
Query OK, 1 row affected (0.09 sec)

mysql> insert into orders(odesc, cust_id, sp_id) values('Laptop', 1, 2);
Query OK, 1 row affected (0.09 sec)

mysql> insert into orders(odesc, cust_id, sp_id) values('Keyboard', 3, 2);
Query OK, 1 row affected (0.09 sec)

mysql> insert into orders(odesc, cust_id, sp_id) values('Keyboard', 2, 1);
Query OK, 1 row affected (0.11 sec)
```

5.Find the sales person have multiple orders.

```
mysql> select sname from salesPerson INNER JOIN (select sp_id from orders group by sp_id having count(sp_id)>1) dup ON dup.sp_id=salesPerson.sp_id;
+-----+
| sname |
+-----+
| Tom   |
+-----+
```

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

```
mysql> select s.sid, s.sname, o.odesc
-> from salesPerson s
-> INNER JOIN orders o
-> ON o.sp_id=s.sid;
+-----+-----+-----+
| sid | sname | odesc |
+-----+-----+-----+
| 2 | Tom | Laptop |
| 2 | Tom | Keyboard |
| 1 | Jolly | Keyboard |
+-----+-----+-----+
3 rows in set (0.00 sec)
```

7. Create index

```
mysql> create index oid_index on orders(oid);
Query OK, 0 rows affected (0.40 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

8. How to show index on a table

```
mysql> show index from orders;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Table | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment | Index_comment |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| orders | 0 | PRIMARY | 1 | oid | A | 2 | NULL | NULL | | BTREE | | |
| orders | 1 | cust_id | 1 | cust_id | A | 2 | NULL | NULL | YES | BTREE | | |
| orders | 1 | sp_id | 1 | sp_id | A | 1 | NULL | NULL | YES | BTREE | | |
| orders | 1 | oid_index | 1 | oid | A | 3 | NULL | NULL | | BTREE | | |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

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

```
mysql> select o.oid, c.cname, s.sname
-> from orders o
-> JOIN customers c ON o.cust_id=c.cid
-> JOIN salesPerson s ON o.sp_id=s.sid;
+-----+-----+-----+
| oid | cname | sname |
+-----+-----+-----+
| 1 | John | Tom |
| 2 | Steve | Tom |
| 3 | Adam | Jolly |
+-----+-----+-----+
3 rows in set (0.00 sec)
```

