

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 orders
-> ;
Query OK, 1 row affected (0.00 sec)

mysql> show databases
-> ;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| orders |
| performance_schema |
| sys |
+-----+
5 rows in set (0.00 sec)
  
```

The screenshot shows a terminal window with a Google Docs document open in the background. The document contains the problem statement and a list of tasks. The terminal shows the successful execution of the 'create database orders' command and the subsequent 'show databases' command, which lists the newly created 'orders' database along with standard MySQL databases.

2. Design Schema

```

mysql> desc customers
-> ;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| c_id | varchar(20) | NO | PRI | NULL | |
| c_name | varchar(20) | YES | | NULL | |
| c_phn | varchar(20) | YES | | NULL | |
+-----+
3 rows in set (0.00 sec)

mysql> desc ord;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| o_id | varchar(20) | YES | | NULL | |
| o_name | varchar(20) | YES | | NULL | |
| sales_id | varchar(20) | YES | | NULL | |
| cust_id | varchar(20) | YES | MUL | NULL | |
+-----+
4 rows in set (0.00 sec)

mysql> desc salesperson;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| s_id | varchar(20) | NO | PRI | NULL | |
| s_name | varchar(20) | YES | | NULL | |
+-----+
2 rows in set (0.01 sec)

mysql>
  
```

The screenshot shows a terminal window with the following schema information:

- customers table:**
 - c_id: varchar(20), NO, PRI, NULL
 - c_name: varchar(20), YES, NULL
 - c_phn: varchar(20), YES, NULL
- ord table:**
 - o_id: varchar(20), YES, NULL
 - o_name: varchar(20), YES, NULL
 - sales_id: varchar(20), YES, NULL
 - cust_id: varchar(20), YES, MUL, NULL
- salesperson table:**
 - s_id: varchar(20), NO, PRI, NULL
 - s_name: varchar(20), YES, NULL

3. Create tables

The screenshot shows a terminal window with the following MySQL commands and output:

```
mysql> create database orders;
mysql> use orders;
mysql> create table salesperson(s_id varchar(20),
-> s_name varchar(20),
-> primary key(s_id)
-> );
Query OK, 0 rows affected (0.33 sec)

mysql> show tables
+-----+
| Tables_in_orders |
+-----+
| customers        |
| ord              |
| salesperson      |
+-----+
3 rows in set (0.00 sec)
```

In the background, a Google Docs document titled 'Exercise 3' is open, showing a list of tasks:

1. Create Database
2. Design Schema
3. Create tables
4. Insert sample data
5. Find the sales person have multiple orders.
6. Find the all sales person details along with order belongs to
7. Create index
8. How to show index on a table
9. Find the order number, sales person name, along with the customer to whom that order belongs to

4. Insert sample data

The screenshot shows a terminal window with the following MySQL commands and output:

```
mysql> select * from customers;
+----+-----+-----+
| c_id | c_name | c_phn |
+----+-----+-----+
| 101  | Aman   | 4020   |
| 102  | Ajay   | 4021   |
| 103  | Rahul  | 4022   |
| 104  | Rishav | 4023   |
+----+-----+-----+
4 rows in set (0.00 sec)

mysql> select * from ord;
+----+-----+-----+-----+
| o_id | o_name | sales_id | cust_id |
+----+-----+-----+-----+
| 1    | bag    | 201      | 101     |
| 2    | phone  | 202      | 102     |
| 3    | pen    | 203      | 103     |
| 4    | laptop | 204      | 104     |
+----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> select * from salesperson;
+----+-----+
| s_id | s_name |
+----+-----+
| 201  | Ram    |
| 202  | Shyam  |
| 203  | Veer   |
| 204  | Mohan  |
+----+-----+
4 rows in set (0.00 sec)
```

5. Find the sales person have multiple orders.

The screenshot shows a desktop environment with a Gmail inbox on the left, a Google Docs document titled 'Exercise 3 - Google Docs' in the center, and a terminal window on the right. The terminal window displays the following MySQL queries and results:

```
mysql> select * from salesperson where s_id in ( select distinct s_id from ord o
where exists( select * from ord p where p.s_id=o.s_id and p.o_id>o.o_id));
+----+-----+
| s_id | s_name |
+----+-----+
| 201  | Ram    |
| 202  | Shyam  |
+----+-----+
2 rows in set (0.00 sec)
```

The Gmail inbox shows a list of emails, including one from 'Nikhil Talwar' with the subject 'Yes, one of the key must be'.

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

The screenshot shows a desktop environment with a Google Docs document titled 'Exercise 3 - Google Docs' in the center, a terminal window on the right, and a list of tasks at the bottom. The terminal window displays the following MySQL queries and results:

```
mysql> select salesperson.s_name, salesperson.s_id, ord.o_id from salesperson in
ner join ord on salesperson.s_id=ord.s_id where (select s_id from ord group by s
_id having count(s_id)>1);
ERROR 1242 (21000): Subquery returns more than 1 row
mysql> select salesperson.s_id, salesperson.s_name, ord.o_id, ord.o_name
-> from salesperson
-> inner join ord on salesperson.s_id = ord.s_id;
+----+-----+----+-----+
| s_id | s_name | o_id | o_name |
+----+-----+----+-----+
| 201  | Ram    | 1    | bag    |
| 202  | Shyam  | 2    | phone  |
| 203  | Veer   | 3    | pen    |
| 204  | Mohan  | 4    | laptop |
| 201  | Ram    | 5    | toy    |
| 202  | Shyam  | 6    | charger |
+----+-----+----+-----+
6 rows in set (0.00 sec)
```

The Google Docs document shows a list of tasks:

- 5. Find the sales person have multiple orders
- 6. Find the all sales person details along with order details
- 7. Create index
- 8. How to show index on a table

7. Create index

create index name on salesperson (s_name);

8. How to show index on a table

The screenshot shows a terminal window with the following commands and output:

```
ttn@ttn: ~  
mysql> create index name on salesperson (name);  
4 rows in set (0.00 sec)  
  
mysql> show index from salesperson;  
+-----+-----+-----+-----+-----+-----+  
| Table           | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Index_comment |  
+-----+-----+-----+-----+-----+-----+  
| salesperson     | 0          | PRIMARY | 1            | s_id        | A         |               |  
+-----+-----+-----+-----+-----+-----+  
| salesperson     | 1          | name     | 1            | s_name      | A         |               |  
+-----+-----+-----+-----+-----+-----+  
2 rows in set (0.00 sec)  
  
mysql>  
mysql>  
mysql>
```

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

The screenshot shows a terminal window with the following query and output:

```
ttn@ttn: ~  
mysql> select o_id, s_name, c_name  
-> from ord o, salesperson s, customers c  
-> where  
-> s.s_id = o.s_id and c.c_id = o.c_id  
-> ;  
+-----+-----+-----+  
| o_id | s_name | c_name |  
+-----+-----+-----+  
| 1    | Ram    | Anan   |  
| 2    | Shyam  | Ajay   |  
| 3    | Veer   | Rahul  |  
| 4    | Mohan  | Rishav |  
| 5    | Ram    | Rishav |  
| 6    | Shyam  | Rahul  |  
+-----+-----+-----+  
6 rows in set (0.01 sec)  
  
mysql>  
mysql>  
mysql>  
mysql>  
mysql>
```

A file manager window is also open, showing a list of image files: 2.png, 3.png, 4.png, 5.png, 6.png, and 7.png. The file 5.png is selected, with a size of 205.7 kB.