

Q1. create database

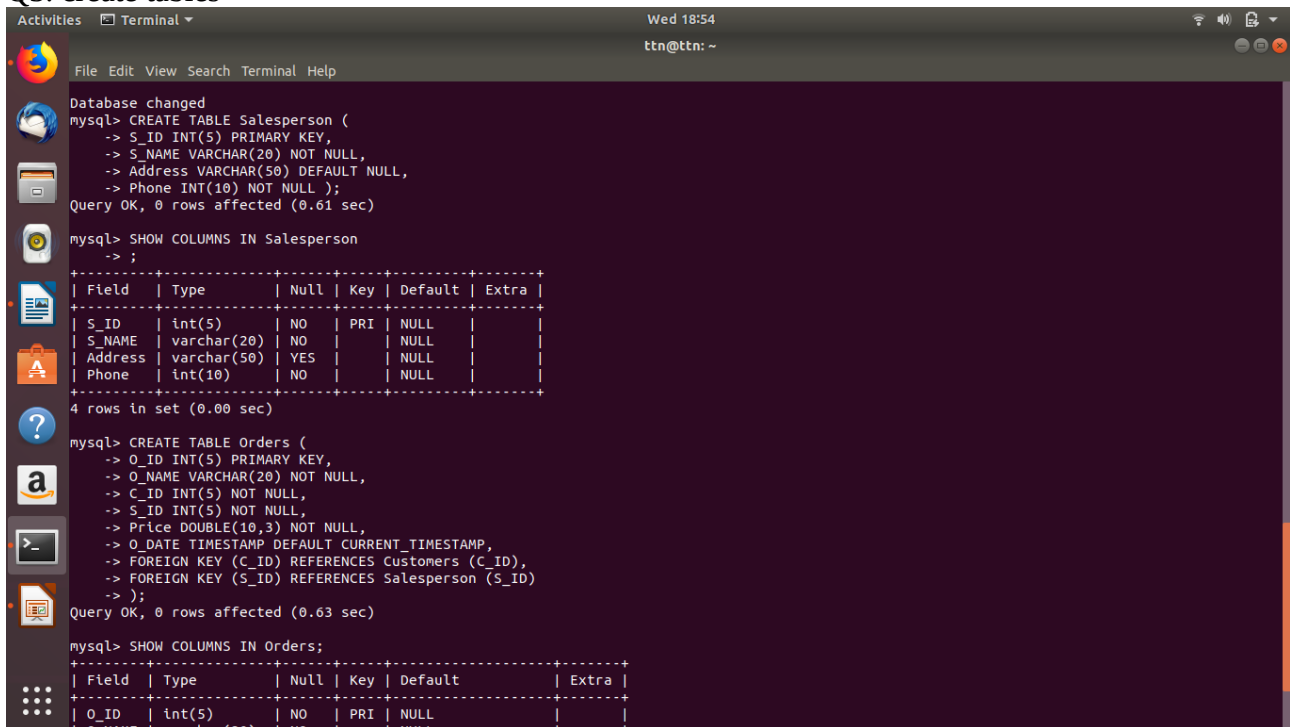
```
mysql> drop database db1;
Query OK, 3 rows affected (0.63 sec)

mysql> create database db1;
Query OK, 1 row affected (0.00 sec)

mysql>
mysql>
mysql>
```

Q2. design schema

Q3. create tables



The screenshot shows a terminal window with the following content:

```
Database changed
mysql> CREATE TABLE Salesperson (
  -> S_ID INT(5) PRIMARY KEY,
  -> S_NAME VARCHAR(20) NOT NULL,
  -> Address VARCHAR(50) DEFAULT NULL,
  -> Phone INT(10) NOT NULL );
Query OK, 0 rows affected (0.61 sec)

mysql> SHOW COLUMNS IN Salesperson
-> ;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| S_ID  | int(5) | NO | PRI | NULL | |
| S_NAME | varchar(20) | NO | | NULL | |
| Address | varchar(50) | YES | | NULL | |
| Phone | int(10) | NO | | NULL | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> CREATE TABLE Orders (
  -> O_ID INT(5) PRIMARY KEY,
  -> O_NAME VARCHAR(20) NOT NULL,
  -> C_ID INT(5) NOT NULL,
  -> S_ID INT(5) NOT NULL,
  -> Price DOUBLE(10,3) NOT NULL,
  -> O_DATE TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
  -> FOREIGN KEY (C_ID) REFERENCES Customers (C_ID),
  -> FOREIGN KEY (S_ID) REFERENCES Salesperson (S_ID)
  -> );
Query OK, 0 rows affected (0.63 sec)

mysql> SHOW COLUMNS IN Orders;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| O_ID  | int(5) | NO | PRI | NULL | |
| O_NAME | varchar(20) | NO | | NULL | |
```

```
Activities Terminal Wed 18:16 ttn@ttn: ~
File Edit View Search Terminal Help
Copyright (c) 2000, 2019, Oracle and/or its affiliates. All rights reserved.
Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> CREATE DATABASE tothenew;
Query OK, 1 row affected (0.00 sec)

mysql> USE tothenew;
Database changed
mysql> CREATE TABLE Customers (
  -> C_ID INT(5) PRIMARY KEY,
  -> C_Name VARCHAR(20) NOT NULL,
  -> Address VARCHAR(50) NOT NULL,
  -> Phone INT(10) NOT NULL
  -> );
Query OK, 0 rows affected (0.37 sec)

mysql> SHOW COLUMNS IN Customers;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| C_ID  | int(5) | NO   | PRI | NULL    |       |
| C_Name | varchar(20) | NO   |     | NULL    |       |
| Address | varchar(50) | NO   |     | NULL    |       |
| Phone | int(10) | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)

mysql> CREATE TABLE Orders (
  -> O_ID INT(5) PRIMARY KEY,
  -> O_Name VARCHAR(20) NOT NULL,
  -> Phone INT(10) NOT NULL
  -> );
[4]+ Stopped sudo mysql
ttn@ttn:~$
```

Q4. Insert sample data into tables

```
Activities Terminal Wed 19:36 ttn@ttn: ~
File Edit View Search Terminal Help
Query OK, 0 rows affected (0.22 sec)

mysql> INSERT INTO Customers VALUES (101, "Shara Rizvi", "Jamia Millia Islamia", 63878905), (102, "Waseem Ahamad Wani", "Jamia Millia Islamia", 98765432);
Query OK, 2 rows affected (0.09 sec)
Records: 2 Duplicates: 0 Warnings: 0

mysql> CREATE TABLE Orders ( O_ID INT(5) PRIMARY KEY NOT NULL AUTO_INCREMENT, O_NAME VARCHAR(20) NOT NULL, C_ID INT(5) NOT NULL, S_ID INT(5) NOT NULL, Price DOUBLE(10,3) NOT NULL, O_DATE TIMESTAMP DEFAULT CURRENT_TIMESTAMP, FOREIGN KEY (C_ID) REFERENCES Customers (C_ID), FOREIGN KEY (S_ID) REFERENCES Salesperson (S_ID) );
Query OK, 0 rows affected (0.47 sec)

mysql> INSERT INTO Orders (O_Name, C_ID, S_ID, Price) VALUES ("Shirt", 102, 101, 700), ("Abaya", 101, 101, 3000), ("Jwelery", 101, 102, 500), ("Trousers", 102, 101, 1000);
Query OK, 4 rows affected (0.16 sec)
Records: 4 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM Customers;
+-----+-----+-----+-----+
| C_ID | C_Name | Address | Phone |
+-----+-----+-----+-----+
| 101 | Shara Rizvi | Jamia Millia Islamia | 63878905 |
| 102 | Waseem Ahamad Wani | Jamia Millia Islamia | 98765432 |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> SELECT * FROM Orders;
+-----+-----+-----+-----+-----+-----+
| O_ID | O_NAME | C_ID | S_ID | Price | O_DATE |
+-----+-----+-----+-----+-----+-----+
| 1 | Shirt | 102 | 101 | 700.000 | 2019-02-06 19:35:30 |
| 2 | Abaya | 101 | 101 | 3000.000 | 2019-02-06 19:35:30 |
| 3 | Jwelery | 101 | 102 | 500.000 | 2019-02-06 19:35:30 |
| 4 | Trousers | 102 | 101 | 1000.000 | 2019-02-06 19:35:30 |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql>
```

Q5 and Q6

```

Wed 19:31
ttn@ttn: ~

mysql> SELECT S.S_ID, S_NAME FROM Salesperson S, Orders GROUP BY C_ID HAVING S.S_ID=Orders.S_ID AND COUNT(*)>1;
ERROR 1054 (42S22): Unknown column 'Orders.S_ID' in 'having clause'
mysql> SELECT S.S_ID, S_NAME FROM Salesperson S, Orders GROUP BY C_ID HAVING S.S_ID=Orders.S_ID AND COUNT(*)>1;
ERROR 1054 (42S22): Unknown column 'Orders.S_ID' in 'having clause'
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql> SELECT S_ID, S_Name FROM Salesperson WHERE S_ID IN (SELECT S_ID FROM Orders GROUP BY S_ID HAVING COUNT(*)>1);
+-----+
| S_ID | S_Name |
+-----+
| 101 | Touseef Raza |
+-----+
1 row in set (0.00 sec)

mysql>
mysql>
mysql> SELECT S.*, O.* FROM Salesperson S INNER JOIN Orders O ON S.S_ID =m.user_id;
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 '=m.user_id' at line 1
mysql> SELECT S.*, O.* FROM Salesperson S INNER JOIN Orders O ON S.S_ID =O.S_ID;
+-----+
| S_ID | S_NAME | Address | Phone | O_ID | O_NAME | C_ID | S_ID | Price | O_DATE |
+-----+
| 101 | Touseef Raza | Okhla | 545454 | 1 | Shirt | 102 | 101 | 700.000 | 2019-02-06 19:16:13 |
| 101 | Touseef Raza | Okhla | 545454 | 2 | Abaya | 101 | 101 | 3000.000 | 2019-02-06 19:16:13 |
| 101 | Touseef Raza | Okhla | 545454 | 4 | Trousers | 102 | 101 | 1000.000 | 2019-02-06 19:16:13 |
| 102 | Nargis Tarannum | Bi Amma Hostel | 877675 | 3 | Jewellery | 101 | 102 | 500.000 | 2019-02-06 19:16:13 |
+-----+
4 rows in set (0.00 sec)

mysql>

```

Q7- Q8

```

Wed 19:45
ttn@ttn: ~

mysql> SELECT * FROM Orders;
+-----+
| O_ID | O_NAME | C_ID | S_ID | Price | O_DATE |
+-----+
| 1 | Shirt | 102 | 101 | 700.000 | 2019-02-06 19:35:30 |
| 2 | Abaya | 101 | 101 | 3000.000 | 2019-02-06 19:35:30 |
| 3 | Jewellery | 101 | 102 | 500.000 | 2019-02-06 19:35:30 |
| 4 | Trousers | 102 | 101 | 1000.000 | 2019-02-06 19:35:30 |
+-----+
4 rows in set (0.00 sec)

mysql> CREATE INDEX OID ON Orders (O_ID);
Query OK, 0 rows affected (0.38 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> SHOW INDEX FROM ORDERS;
ERROR 1146 (42S02): Table 'tothenew.ORDERS' doesn't exist
mysql> SHOW INDEX FROM Orders;
+-----+
| Table | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment | In dex_comment |
+-----+
| Orders | | | | | | | | | | | | |
+-----+
| Orders | | 0 | PRIMARY | | | 1 | O_ID | | A | | 3 | NULL | NULL | | BTREE | | |
| Orders | | 1 | C_ID | | | 1 | C_ID | | A | | 2 | NULL | NULL | | BTREE | | |
| Orders | | 1 | S_ID | | | 1 | S_ID | | A | | 2 | NULL | NULL | | BTREE | | |
| Orders | | 1 | OID | | | 1 | O_ID | | A | | 4 | NULL | NULL | | BTREE | | |
+-----+
4 rows in set (0.00 sec)

mysql>

```

Q9.

```
Activities Terminal Wed 19:51 ttn@ttn: ~
File Edit View Search Terminal Help
4 rows in set (0.00 sec)
mysql> SELECT O.O_ID, S.S_NAME, C.C_ID, C.C_Name FROM Orders O, Salesperson S, Customers O WHERE O.S_ID=S.S_D AND O.C_ID=C.C_ID;
ERROR 1066 (42000): Not unique table/alias: 'O'
mysql> SELECT O.O_ID, S.S_NAME, C.C_ID, C.C_Name FROM Orders O, Salesperson S, Customers C WHERE O.S_ID=S.S_D AND O.C_ID=C.C_ID;
ERROR 1054 (42S22): Unknown column 'S.S_D' in 'where clause'
mysql> SELECT O.O_ID, S.S_NAME, C.C_ID, C.C_Name FROM Orders O, Salesperson S, Customers C WHERE O.S_ID=S.S_ID AND O.C_ID=C.C_ID;
+-----+-----+-----+-----+
| O_ID | S_NAME | C_ID | C_Name |
+-----+-----+-----+-----+
| 2 | Touseef Raza | 101 | Shara Rizvi |
| 3 | Nargis Tarannum | 101 | Shara Rizvi |
| 1 | Touseef Raza | 102 | Waseem Ahamad Wani |
| 4 | Touseef Raza | 102 | Waseem Ahamad Wani |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql> SELECT O.O_ID, S.S_NAME, C.C_ID, C.C_Name FROM Orders O, Salesperson S, Customers C WHERE O.S_ID=S.S_ID AND O.C_ID=C.C_ID;
+-----+-----+-----+-----+
| O_ID | S_NAME | C_ID | C_Name |
+-----+-----+-----+-----+
| 2 | Touseef Raza | 101 | Shara Rizvi |
| 3 | Nargis Tarannum | 101 | Shara Rizvi |
| 1 | Touseef Raza | 102 | Waseem Ahamad Wani |
| 4 | Touseef Raza | 102 | Waseem Ahamad Wani |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)
mysql>
```