

Assignment Exercise for Introduction to Databases has been created



Question 1: Create Database

Answer 1:

```
abhinash@abhinash:~$ mysql -u debian-sys-maint -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 3
Server version: 5.7.29-0ubuntu0.18.04.1 (Ubuntu)

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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> clear
mysql> create database rdbms;
Query OK, 1 row affected (0.01 sec)

mysql> use rdbms
Database changed
```

Question 2:Design Schema

Answer 2:

```
Activities Terminal
abhinash@abhinash: ~
File Edit View Search Terminal Help
mysql> create table customer(c_id int primary key NOT NULL,c_name varchar(220) NOT NULL);
Query OK, 0 rows affected (0.03 sec)

mysql> desc customer
+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+
| c_id  | int(11)       | NO   | PRI | NULL    |       |
| c_name | varchar(220)  | NO   |     | NULL    |       |
+-----+
2 rows in set (0.01 sec)

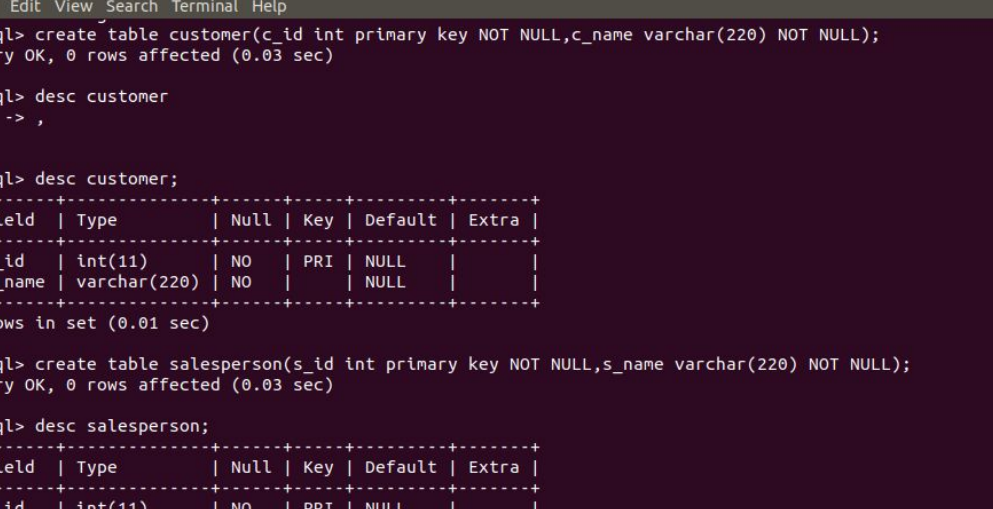
mysql> create table salesperson(s_id int primary key NOT NULL,s_name varchar(220) NOT NULL);
Query OK, 0 rows affected (0.03 sec)

mysql> desc salesperson;
+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+
| s_id  | int(11)       | NO   | PRI | NULL    |       |
| s_name | varchar(220)  | NO   |     | NULL    |       |
+-----+
2 rows in set (0.00 sec)

mysql> create table OrderTable(o_id int primary key NOT NULL,qty varchar(220) NOT NULL,c_id int ,s_id int ,foreign key(c_id) references customer(c_id),foreign key(s_id) references salesperson(s_id));
Query OK, 0 rows affected (0.04 sec)

mysql> desc OrderTable;
+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+
| o_id  | int(11)       | NO   | PRI | NULL    |       |
| qty   | varchar(220)  | NO   |     | NULL    |       |
| c_id  | int(11)       | YES  | MUL | NULL    |       |
| s_id  | int(11)       | YES  | MUL | NULL    |       |
+-----+
4 rows in set (0.00 sec)
```

Answer 3:



Terminal window showing MySQL commands and output:

```

mysql> create table customer(c_id int primary key NOT NULL,c_name varchar(220) NOT NULL);
Query OK, 0 rows affected (0.03 sec)

mysql> desc customer
+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+
| c_id  | int(11)       | NO   | PRI | NULL    |       |
| c_name| varchar(220)  | NO   |     | NULL    |       |
+-----+
2 rows in set (0.01 sec)

mysql> create table salesperson(s_id int primary key NOT NULL,s_name varchar(220) NOT NULL);
Query OK, 0 rows affected (0.03 sec)

mysql> desc salesperson;
+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+
| s_id  | int(11)       | NO   | PRI | NULL    |       |
| s_name| varchar(220)  | NO   |     | NULL    |       |
+-----+
2 rows in set (0.00 sec)

```

```
mysql> create table OrderTable(o_id int primary key NOT NULL,qty varchar(220) NOT NULL,c_id int ,s_id int ,foreign key(c_id) references customer(c_id),foreign key(s_id) references salesperson(s_id));
Query OK, 0 rows affected (0.04 sec)

mysql> desc OrderTable;
```

Field	Type	Null	Key	Default	Extra
o_id	int(11)	NO	PRI	NULL	
qty	varchar(220)	NO		NULL	
c_id	int(11)	YES	MUL	NULL	
s_id	int(11)	YES	MUL	NULL	

```
4 rows in set (0.00 sec)
```

Question 4: Insert sample data

Answer 4:

```
mysql> insert into customer(c_id,c_name) values(1,"R");
Query OK, 1 row affected (0.01 sec)

mysql> insert into customer(c_id,c_name) values(2,"s");
Query OK, 1 row affected (0.01 sec)

mysql> insert into customer(c_id,c_name) values(3,"l");
Query OK, 1 row affected (0.01 sec)

mysql> insert into customer(c_id,c_name) values(4,"g");
Query OK, 1 row affected (0.01 sec)

mysql> insert into salesperson(s_id,s_name) values(1,"v");
Query OK, 1 row affected (0.01 sec)

mysql> insert into salesperson(s_id,s_name) values(1,"sm");
ERROR 1062 (23000): Duplicate entry '1' for key 'PRIMARY'
mysql> insert into salesperson(s_id,s_name) values(2,"sm");
Query OK, 1 row affected (0.00 sec)

mysql> insert into salesperson(s_id,s_name) values(3,"abhi");
Query OK, 1 row affected (0.01 sec)
```

```
mysql> insert into salesperson(s_id,s_name) values(3,"Priyanshu");
ERROR 1062 (23000): Duplicate entry '3' for key 'PRIMARY'
mysql> insert into salesperson(s_id,s_name) values(4,"Priyanshu");
Query OK, 1 row affected (0.01 sec)

mysql> insert into OrderTable(o_id,qty,c_id,s_id) values(1,"100",1,2);
Query OK, 1 row affected (0.01 sec)

mysql> insert into OrderTable(o_id,qty,c_id,s_id) values(2,"500",3,2);
Query OK, 1 row affected (0.01 sec)

mysql> insert into OrderTable(o_id,qty,c_id,s_id) values(3,"500",1,3);
Query OK, 1 row affected (0.02 sec)

mysql> insert into OrderTable(o_id,qty,c_id,s_id) values(4,"700",3,4);
Query OK, 1 row affected (0.01 sec)
```

```
mysql> desc customer;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| c_id  | int(11)       | NO   | PRI | NULL    |       |
| c_name | varchar(220)  | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> desc salesperson
->
-> s
-> a
-> as
-> ;
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 'a
as' at line 4
mysql> desc salesperson;
```

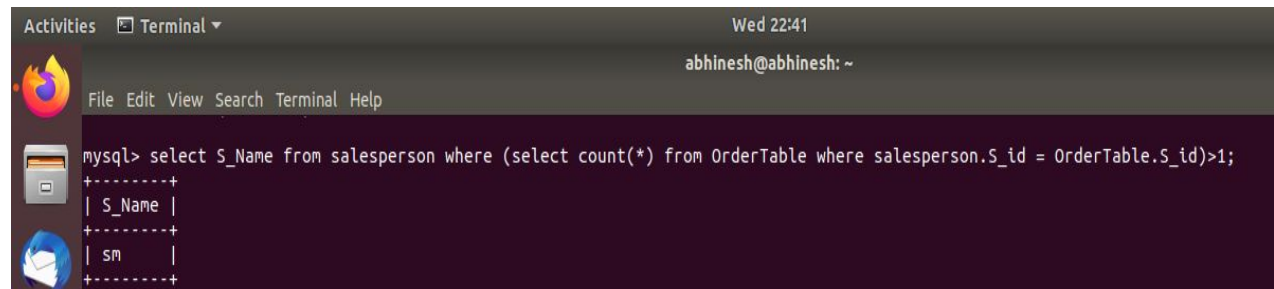
```
mysql> desc salesperson;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| s_id  | int(11)       | NO   | PRI | NULL    |       |
| s_name | varchar(220)  | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> desc OrderTable;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| o_id  | int(11)       | NO   | PRI | NULL    |       |
| qty   | varchar(220)  | NO   |     | NULL    |       |
| c_id  | int(11)       | YES  | MUL | NULL    |       |
| s_id  | int(11)       | YES  | MUL | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql>
```

Question 5: Find the sales person have multiple orders.

Answer 5:

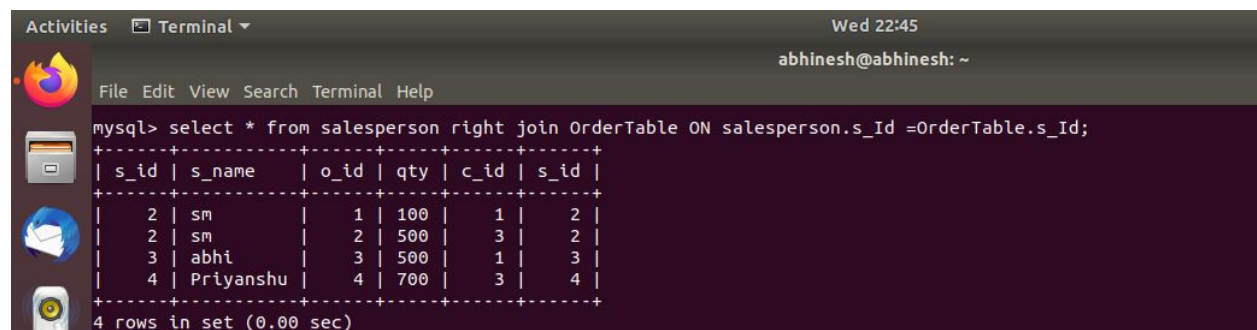


```
Activities Terminal Wed 22:41
abhinesh@abhinesh: ~

mysql> select S_Name from salesperson where (select count(*) from OrderTable where salesperson.S_id = OrderTable.S_id)>1;
+-----+
| S_Name |
+-----+
| sm     |
+-----+
```

Question 6: Find the all sales person details along with order details

Answer 6:

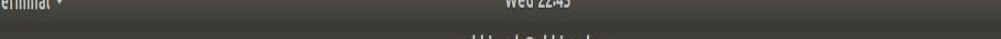


```
Activities Terminal Wed 22:45
abhinesh@abhinesh: ~

mysql> select * from salesperson right join OrderTable ON salesperson.s_Id =OrderTable.s_Id;
+-----+-----+-----+-----+-----+-----+
| s_id | s_name  | o_id | qty | c_id | s_id |
+-----+-----+-----+-----+-----+-----+
| 2    | sm      | 1    | 100 | 1    | 2    |
| 2    | sm      | 2    | 500 | 3    | 2    |
| 3    | abhi    | 3    | 500 | 1    | 3    |
| 4    | Priyanshu | 4    | 700 | 3    | 4    |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```


Question 7:Create index

Answer 7:



The screenshot shows a terminal window with a dark background. At the top, the title bar reads "Activities" and "Terminal". The system clock shows "Wed 22:45". The user prompt is "abhinash@abhinash: ~". The terminal content shows a MySQL command: "mysql> create index cf on customer(c_name);". The output is: "Query OK, 0 rows affected (0.03 sec)" and "Records: 0 Duplicates: 0 Warnings: 0".

```
mysql> create index cf on customer(c_name);
Query OK, 0 rows affected (0.03 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

Question 8:How to show index on a table

Answer 8:

```
Activities Terminal Wed 22:47 abhinesh@abhinesh: ~  
File Edit View Search Terminal Help  
mysql> create index cf on customer(c_name);  
Query OK, 0 rows affected (0.03 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 | c_id | A | 4 | NULL | NULL | | BTREE | |  
| customer | 1 | cf | 1 | c_name | A | 4 | NULL | NULL | | BTREE | |  
+-----+  
2 rows in set (0.00 sec)
```

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

Answer 9:



A terminal window with a dark background. At the top, it says "2 rows in set (0.00 sec)". Below that is the MySQL prompt "mysql>" followed by the query: "select OrderTable.O_Id,salesperson.S_Name,OrderTable.C_Id from salesperson right join OrderTable ON salesperson.S_Id = OrderTable.S_Id;". The output is a table with three columns: O_Id, S_Name, and C_Id. It contains four rows of data. On the left side of the terminal, there are several icons: a document, a shopping bag, a question mark, and a server.

```
mysql> select OrderTable.O_Id,salesperson.S_Name,OrderTable.C_Id from salesperson right join OrderTable ON salesperson.S_Id = OrderTable.S_Id;
```

O_Id	S_Name	C_Id
1	SM	1
2	SM	3
3	abhi	1
4	Priyanshu	3