

**TO
THE
NEW**™



Assessment - 3

Introduction To Databases

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Problem Statement: There can be multiple customers, who can place multiple orders on the site. Now a salesperson can handle these orders will distribute into multiple sales persons (One order will be assigned to one salesperson only). So a salesperson can have multiple orders of multiple customers

1.Create Database

Ans.

create database ecom;

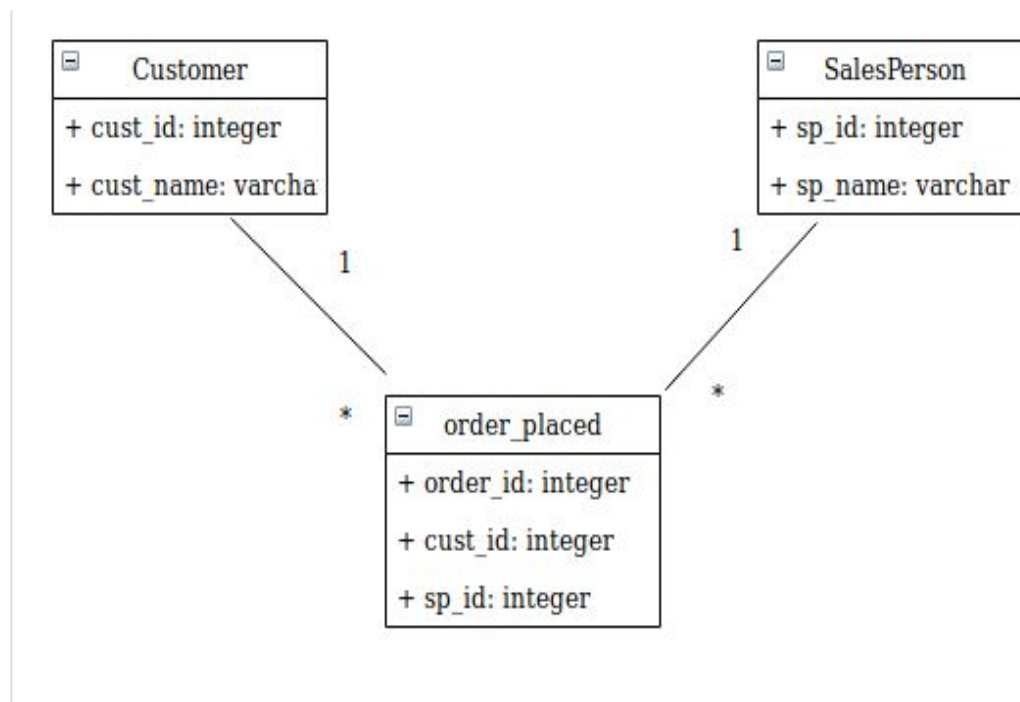
```
chhavi@chhavi: ~/Documents/DatabaseSession
File Edit View Search Terminal Help
mysql> create database ecom;
Query OK, 1 row affected (0.00 sec)

mysql> use ecom;
Database changed

mysql> create table customer(cust_id integer primary key, cust_name varchar(255) not null);
```

2.Design Schema.

Ans.



3.Create tables

Ans.

Customer Table

create table customer(cust_id integer primary key, cust_name varchar(255) not null);

```
mysql> create table customer(cust_id integer primary key, cust_name varchar(255) not null);
Query OK, 0 rows affected (0.04 sec)

mysql> desc customer;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| cust_id | int(11) | NO | PRI | NULL | |
| cust_name | varchar(255) | NO | | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.01 sec)
```

SalesPerson Table

create table salesperson(sp_id integer primary key, sp_name varchar(255) not null);

```
mysql> create table salesperson(sp_id integer primary key, sp_name varchar(255) not null);
Query OK, 0 rows affected (0.04 sec)

mysql> desc salesperson;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| sp_id | int(11) | NO | PRI | NULL | |
| sp_name | varchar(255) | NO | | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.01 sec)
```

Order Placed Table

create table order_placed(order_id integer primary key,cust_id integer, sp_id integer,foreign key (cust_id) references customer (cust_id), foreign key (sp_id) references salesperson(sp_id));

```
mysql> create table order_placed(order_id integer primary key,cust_id integer, sp_id integer,foreign key (cust_id) references customer (cust_id), foreign key (sp_id) references salesperson(sp_id));
Query OK, 0 rows affected (0.04 sec)

mysql> desc order_placed;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| order_id | int(11) | NO | PRI | NULL | |
| cust_id | int(11) | YES | MUL | NULL | |
| sp_id | int(11) | YES | MUL | NULL | |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

4.Insert sample data

Ans.

```
chhavi@chhavi: ~/Documents/DatabaseSession
File Edit View Search Terminal Help

mysql> insert into customer values(1001,"Chhavi Sharma"),(1010,"Vaibhavi Pathak"),(1013,"Subhash Singh");
Query OK, 3 rows affected (0.01 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> insert into salesperson values(4201,"Hemant Trivedi"),(4242,"Lucky Singh"),(4203,"Shahid Sethi");
Query OK, 3 rows affected (0.01 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> insert into order_placed values(9019987,1010,4203),(9037277,1013,4242),(904323,1001,4201);
Query OK, 3 rows affected (0.01 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> insert into order_placed values(9019087,1010,4201),(9039277,1010,4203),(906323,1013,4201);
Query OK, 3 rows affected (0.01 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> select * from customer;
+-----+-----+
| cust_id | cust_name |
+-----+-----+
| 1001 | Chhavi Sharma |
| 1010 | Vaibhavi Pathak |
| 1013 | Subhash Singh |
+-----+-----+
3 rows in set (0.00 sec)

mysql> select * from salesperson;
+-----+-----+
| sp_id | sp_name |
+-----+-----+
| 4201 | Hemant Trivedi |
| 4203 | Shahid Sethi |
| 4242 | Lucky Singh |
+-----+-----+
3 rows in set (0.00 sec)

mysql> insert into order_placed values(9063231,1013,4201);
Query OK, 1 row affected (0.01 sec)

mysql> insert into order_placed values(9063273,1013,4201);
Query OK, 1 row affected (0.01 sec)

mysql> select * from order_placed;
+-----+-----+-----+
| order_id | cust_id | sp_id |
+-----+-----+-----+
| 9019087 | 1010 | 4201 |
| 9019987 | 1010 | 4203 |
| 9037277 | 1013 | 4242 |
| 9039277 | 1010 | 4203 |
| 9063231 | 1013 | 4201 |
| 9063273 | 1013 | 4201 |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> 
```

5.Find the salesperson that has multiple orders.

Ans.

select sp_name from order_placed, salesperson where order_placed.sp_id = salesperson.sp_id group by order_placed.sp_id having count(order_placed.sp_id)>1;

```
chhavi@chhavi: ~/Documents/DatabaseSession
File Edit View Search Terminal Help
mysql> select sp_name from order_placed, salesperson where order_placed.sp_id = salesperson.sp_id group by order_placed.sp_id having count(ord
er_placed.sp_id)>1;
+-----+
| sp_name |
+-----+
| Hemant Trivedi |
| Shahid Sethi |
+-----+
2 rows in set (0.00 sec)

mysql> 
```

OR

select sp.* from salesperson as sp inner join order_placed as op on op.sp_id=sp.sp_id group by op.sp_id having count(op.sp_id)>1;

```
mysql> select sp.* from salesperson as sp inner join order_placed as op on op.sp_id=sp.sp_id group by op.sp_id having count(op.sp_id)>1;
+-----+-----+
| sp_id | sp_name |
+-----+-----+
| 4201 | Hemant Trivedi |
| 4203 | Shahid Sethi |
+-----+-----+
2 rows in set (0.00 sec)
```

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

Ans.

select sp.*,orders.cust_id,orders.order_id from salesperson as sp left join order_placed as orders on orders.sp_id=sp.sp_id;

```

chhavi@chhavi: ~/Documents/DatabaseSession
File Edit View Search Terminal Help
mysql> select sp.*,orders.cust_id,orders.order_id from salesperson as sp left join order_placed as orders on orders.sp_id=sp.sp_id;
+-----+-----+-----+-----+
| sp_id | sp_name      | cust_id | order_id |
+-----+-----+-----+-----+
| 4201 | Hemant Trivedi | 1010    | 9019087  |
| 4201 | Hemant Trivedi | 1013    | 9063231  |
| 4201 | Hemant Trivedi | 1013    | 9063273  |
| 4203 | Shahid Sethi   | 1010    | 9019987  |
| 4203 | Shahid Sethi   | 1010    | 9039277  |
| 4242 | Lucky Singh    | 1013    | 9037277  |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> 

```

7.Create index

Ans.

```
create index order_index on order_placed(order_id);
```

```
chhavi@chhavi: ~/Documents/DatabaseSession
File Edit View Search Terminal Help
mysql> create index order_index on order_placed(order_id);
Query OK, 0 rows affected (0.03 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

8.How to show index on a table

Ans.

```
show indexes from order_placed;
```

```
mysql> show indexes from order_placed;
```

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment
order_placed	0	PRIMARY	1	order_id	A	6			NULL	BTREE	
order_placed	1	cust_id	1	cust_id	A	2			NULL	BTREE	
order_placed	1	sp_id	1	sp_id	A	3			NULL	BTREE	
order_placed	1	order_index	1	order_id	A	6			NULL	BTREE	

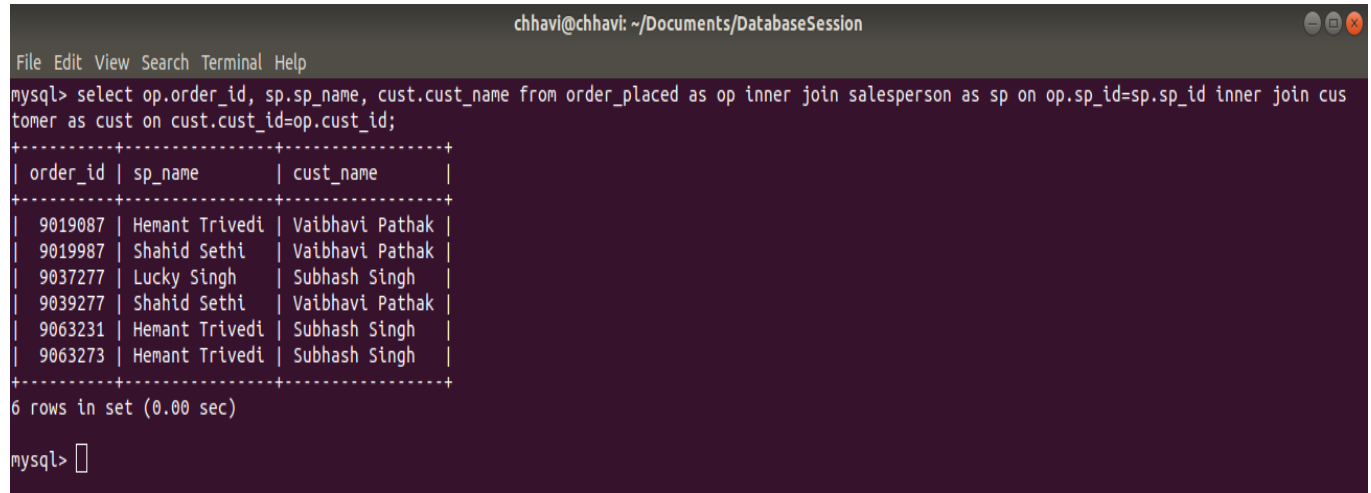
```
4 rows in set (0.00 sec)
```

```
mysql>
```

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

Ans.

```
select op.order_id, sp.sp_name, cust.cust_name from order_placed as op inner join  
salesperson as sp on op.sp_id=sp.sp_id inner join customer as cust on  
cust.cust_id=op.cust_id;
```



The screenshot shows a MySQL terminal window with the title bar 'chhavi@chhavi: ~/Documents/DatabaseSession'. The terminal displays a SQL query and its output. The query is: `mysql> select op.order_id, sp.sp_name, cust.cust_name from order_placed as op inner join salesperson as sp on op.sp_id=sp.sp_id inner join customer as cust on cust.cust_id=op.cust_id;` The output is a table with 3 columns: `order_id`, `sp_name`, and `cust_name`. There are 6 rows of data. Below the table, it says '6 rows in set (0.00 sec)'. The prompt `mysql>` is visible at the bottom.

```
File Edit View Search Terminal Help
mysql> select op.order_id, sp.sp_name, cust.cust_name from order_placed as op inner join salesperson as sp on op.sp_id=sp.sp_id inner join cus
tomer as cust on cust.cust_id=op.cust_id;
+-----+-----+-----+
| order_id | sp_name      | cust_name |
+-----+-----+-----+
| 9019087 | Hemant Trivedi | Vaibhavi Pathak |
| 9019987 | Shahid Sethi   | Vaibhavi Pathak |
| 9037277 | Lucky Singh    | Subhash Singh   |
| 9039277 | Shahid Sethi   | Vaibhavi Pathak |
| 9063231 | Hemant Trivedi | Subhash Singh   |
| 9063273 | Hemant Trivedi | Subhash Singh   |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> 
```