

ASSIGNMENT ON INTRODUCTION TO DATABASE

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

Q1. Create Database

```
mysql> create database test
      -> create database test;
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 'cre
ate database test' at line 2
mysql> create database test;
Query OK, 1 row affected (0.04 sec)

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

Q2. Design Schema

```
mysql> desc customer;
```

Field	Type	Null	Key	Default	Extra
cust_id	int	NO	PRI	NULL	auto_increment
cust_name	text	YES		NULL	
cust_address	text	YES		NULL	
cust_ph_no	bigint	YES		NULL	

```
4 rows in set (0.01 sec)
```

```
mysql> desc orders;
```

Field	Type	Null	Key	Default	Extra
order_id	int	NO	PRI	NULL	auto_increment
order_name	text	YES		NULL	
salesperson_id	int	YES		NULL	
cust_id	int	YES		NULL	
order_status	text	YES		NULL	

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

```
mysql> desc sales;
```

Field	Type	Null	Key	Default	Extra
salesperson_id	int	NO	PRI	NULL	auto_increment
salesperson_name	text	YES		NULL	
salesperson_address	text	YES		NULL	
salesperson_ph_no	bigint	YES		NULL	

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

Q3. Create tables

```
mysql> CREATE TABLE customer(cust_id INT PRIMARY KEY AUTO_INCREMENT, cust_name TEXT, cust_address TEXT, cust_ph_no BIGINT);
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> CREATE TABLE orders(order_id INT PRIMARY KEY AUTO_INCREMENT, order_name TEXT,salesperson_id INT, cust_id INT,order_status TEXT);
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> CREATE TABLE sales(salesperson_id INT PRIMARY KEY AUTO_INCREMENT, salesperson_name TEXT, salesperson_address TEXT, salesperson_ph_no BIGINT);
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> show tables;
```

Tables_in_Management
customer
orders
sales

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

Q4. Insert sample data

```
mysql> INSERT INTO customer VALUES(103,'shah','kerala',983264);
Query OK, 1 row affected (0.03 sec)

mysql> INSERT INTO customer VALUES(104,'manan','UP',4366831);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO customer VALUES(105,'brook','mumbai',8787823);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO customer VALUES(106,'dave','delhi',32798327);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO sales VALUES(111,'sam','delhi',797987);
Query OK, 1 row affected (0.03 sec)

mysql> INSERT INTO sales VALUES(112,'harry','delhi',79879879);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO sales VALUES(113,'sudo','delhi',09809880);
Query OK, 1 row affected (0.03 sec)

mysql> INSERT INTO sales VALUES(114,'hari','delhi',7656557);
Query OK, 1 row affected (0.04 sec)

mysql> INSERT INTO orders VALUES(1,'microwave',101,103,'pending');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO orders VALUES(2,'bread',102,104,'delivered');
Query OK, 1 row affected (0.01 sec)
```



```
Terminal
mysql> INSERT INTO sales VALUES(112,'harry','delhi',79879879);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO sales VALUES(113,'sude','delhi',09809880);
Query OK, 1 row affected (0.03 sec)

mysql> INSERT INTO sales VALUES(114,'hari','delhi',7656557);
Query OK, 1 row affected (0.04 sec)

mysql> INSERT INTO orders VALUES(1,'microwave',101,103,'pending');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO orders VALUES(2,'bread',102,104,'delivered');
Query OK, 1 row affected (0.01 sec)

mysql> DELETE FROM orders;
Query OK, 2 rows affected (0.00 sec)

mysql> select * from orders;
Empty set (0.00 sec)

mysql> INSERT INTO orders VALUES(1,'microwave',101,113,'pending');
Query OK, 1 row affected (0.03 sec)

mysql> select * from orders;
+-----+-----+-----+-----+-----+
| order_id | order_name | salesperson_id | cust_id | order_status |
+-----+-----+-----+-----+-----+
|          1 | microwave |          101 |      113 | pending      |
+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> DELETE FROM orders;
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO orders VALUES(1,'microwave',111,103,'pending');
Query OK, 1 row affected (0.03 sec)

mysql> INSERT INTO orders VALUES(2,'bread',112,104,'delivered');
Query OK, 1 row affected (0.04 sec)

mysql> INSERT INTO orders VALUES(3,'arrow',111,105,'delivered');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO orders VALUES(4,'phone',113,106,'pending');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO orders VALUES(5,'phone',114,101,'delivered');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO orders VALUES(6,'chair',112,103,'delivered');
Query OK, 1 row affected (0.04 sec)

mysql> INSERT INTO orders VALUES(7,'gas',112,106,'pending');
Query OK, 1 row affected (0.00 sec)
```

```
mysql> select * from customer;
```

cust_id	cust_name	cust_address	cust_ph_no
101	kashif	UP	123456
102	adnan	delhi	8756878348
103	shah	kerala	983264
104	manan	UP	4366831
105	brook	mumbai	8787823
106	dave	delhi	32798327

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

```
mysql> select * from orders;
```

order_id	order_name	salesperson_id	cust_id	order_status
1	microwave	111	103	pending
2	bread	112	104	delivered
3	arrow	111	105	delivered
4	phone	113	106	pending
5	phone	114	101	delivered
6	chair	112	103	delivered
7	gas	112	106	pending
8	car	114	103	delivered

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

```
mysql> select * from sales;
```

salesperson_id	salesperson_name	salesperson_address	salesperson_ph_no
111	sam	delhi	797987
112	harry	delhi	79879879
113	sudo	delhi	9809880
114	hari	delhi	7656557

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

Q5. Find the sales person have multiple orders.

```
mysql> SELECT salesperson_name FROM sales INNER JOIN orders ON sales.salesperson_id = orders.salesperson_id GROUP BY sales.salesperson_id HAVING COUNT(cust_id)>1;
```

salesperson_name
sam
harry
hari

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


Q6. Find the all sales person details along with order details

```
mysql> SELECT * FROM sales RIGHT OUTER JOIN orders ON sales.salesperson_id = orders.salesperson_id;
```

salesperson_id	salesperson_name	salesperson_address	salesperson_ph_no	order_id	order_name	salesperson_id	cust_id	order_status
111	sam	delhi	797987	1	microwave	111	103	pending
112	harry	delhi	79879879	2	bread	112	104	delivered
111	sam	delhi	797987	3	arrow	111	105	delivered
113	sudo	delhi	9809880	4	phone	113	106	pending
114	hari	delhi	7656557	5	phone	114	101	delivered
112	harry	delhi	79879879	6	chair	112	103	delivered
112	harry	delhi	79879879	7	gas	112	106	pending
114	hari	delhi	7656557	8	car	114	103	delivered

8 rows in set (0.00 sec)

```
mysql> SELECT * FROM sales LEFT OUTER JOIN orders ON sales.salesperson_id = orders.salesperson_id;
```

salesperson_id	salesperson_name	salesperson_address	salesperson_ph_no	order_id	order_name	salesperson_id	cust_id	order_status
111	sam	delhi	797987	3	arrow	111	105	delivered
111	sam	delhi	797987	1	microwave	111	103	pending
112	harry	delhi	79879879	7	gas	112	106	pending
112	harry	delhi	79879879	6	chair	112	103	delivered
112	harry	delhi	79879879	2	bread	112	104	delivered
113	sudo	delhi	9809880	4	phone	113	106	pending
114	hari	delhi	7656557	8	car	114	103	delivered
114	hari	delhi	7656557	5	phone	114	101	delivered

8 rows in set (0.00 sec)

Q7. Create index

```
mysql> CREATE INDEX indx ON orders(order_id,salesperson_id,cust_id);
Query OK, 0 rows affected (0.03 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

Q8. 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	Visible	Expression
orders	0	PRIMARY	1	order_id	A	8	NULL	NULL		BTREE			YES	NULL
orders	1	indx	1	order_id	A	8	NULL	NULL		BTREE			YES	NULL
orders	1	indx	2	salesperson_id	A	8	NULL	NULL	YES	BTREE			YES	NULL
orders	1	indx	3	cust_id	A	8	NULL	NULL	YES	BTREE			YES	NULL

4 rows in set (0.01 sec)

Q9. Find the order number, sale person name, along with the customer to whom that order belongs to

```
mysql> SELECT orders.order_id,sales.salesperson_name,customer.cust_name FROM orders INNER JOIN sales ON sales.salesperson_id = orders.salesperson_id INNER JOIN customer ON customer.cust_id = orders.cust_id;
```

order_id	salesperson_name	cust_name
1	sam	shah
2	harry	manan
3	sam	brook
4	sudo	dave
5	hari	kashif
6	harry	shah
7	harry	dave
8	hari	shah

8 rows in set (0.00 sec)