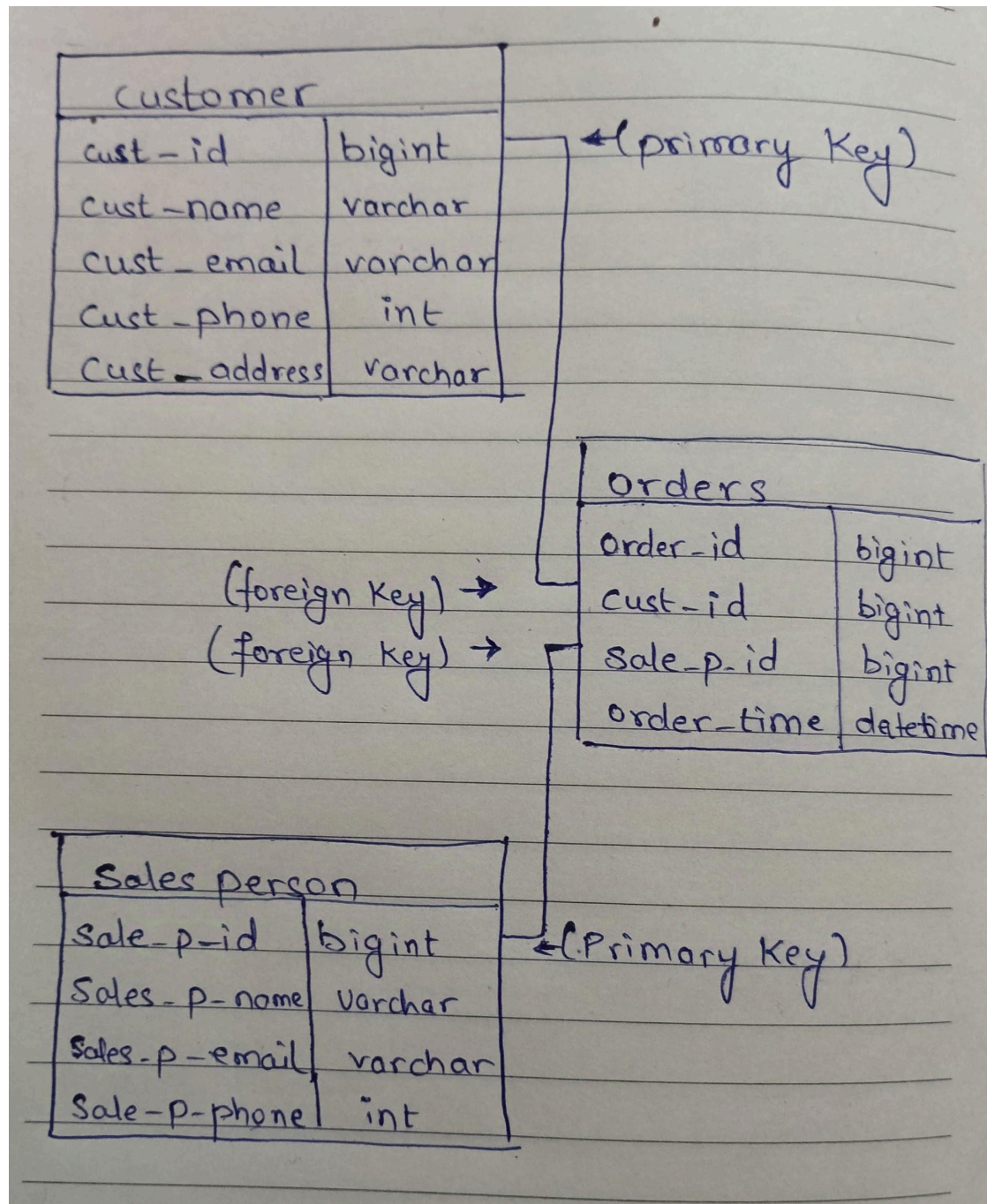


Q1) Problem Statement: There can be multiple customers, who can place multiple orders on the site. Now a sales person can handle these orders will distribute into multiple sales persons (One order will be assign to one salesperson only). So a sales person can have multiple orders of multiple customers. Create Database.

Q2) Design Schema

Ans 1 & 2. Schema of the



create database database\_name command is used to create a database:

```
mysql> create database database_session;
Query OK, 1 row affected (0.01 sec)
```

show database command is used to display the databases:

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

mysql>
mysql> use database_session
Database changed
```

Q3)Create tables

Ans.

1. Creating table for customer with attributes customer id, name, email, phone no, address:

```
mysql> create table customer(cust_id bigint not null, cust_name varchar(255), cust_email varchar(255), cust_phone int(10), cust_address varchar(455), primary key(cust_id));
Query OK, 0 rows affected, 1 warning (0.04 sec)

mysql> desc customer;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| cust_id | bigint | NO | PRI | NULL | |
| cust_name | varchar(255) | YES | | NULL | |
| cust_email | varchar(255) | YES | | NULL | |
| cust_phone | int | YES | | NULL | |
| cust_address | varchar(455) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.01 sec)
```

## 2. Table sales\_person:

```
mysql> create table sales_person(sale_p_id bigint not null, sales_p_name varchar(255), sales_p_email varchar(255), sale_p_phone int(10), primary key(sale_p_id));
Query OK, 0 rows affected, 1 warning (0.05 sec)

mysql> desc sales_person;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| sale_p_id  | bigint    | NO   | PRI | NULL    |       |
| sales_p_name | varchar(255) | YES  |     | NULL    |       |
| sales_p_email | varchar(255) | YES  |     | NULL    |       |
| sale_p_phone | int       | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

## 3. Table orders:

```
mysql> create table orders(order_id bigint not null, cust_id bigint, sale_p_id bigint, order_time datetime, primary key(order_id), foreign key(cust_id) references customer(cust_id), foreign key(sale_p_id) references sales_person(sale_p_id));
Query OK, 0 rows affected (0.08 sec)

mysql> desc orders;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| order_id   | bigint    | NO   | PRI | NULL    |       |
| cust_id    | bigint    | YES  | MUL | NULL    |       |
| sale_p_id  | bigint    | YES  | MUL | NULL    |       |
| order_time | datetime  | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

## Q4)Insert sample data.

Ans. Sample data insertion using insert into table\_name command as follows:

1.

```
mysql> insert into customer (cust_id, cust_name, cust_email, cust_phone, cust_address)
-> values
-> (1, 'aarav patel', 'aarav.patel@abc.com', 987654321, 'mumbai, mh'),
-> (2, 'priya sharma', 'priya.sharma@abc.com', 876543210, 'bengaluru, ka'),
-> (3, 'rohan kumar', 'rohan.kumar@abc.com', 654321987, 'delhi, dl'),
-> (4, 'simran kaur', 'simran.kaur@abc.com', 543210876, 'chandigarh, pb');
Query OK, 4 rows affected (0.02 sec)
Records: 4  Duplicates: 0  Warnings: 0
```

```
mysql> select * from customer;
+-----+-----+-----+-----+-----+
| cust_id | cust_name | cust_email | cust_phone | cust_address |
+-----+-----+-----+-----+-----+
| 1 | aarav patel | aarav.patel@abc.com | 987654321 | mumbai, mh |
| 2 | priya sharma | priya.sharma@abc.com | 876543210 | bengaluru, ka |
| 3 | rohan kumar | rohan.kumar@abc.com | 654321987 | delhi, dl |
| 4 | simran kaur | simran.kaur@abc.com | 543210876 | chandigarh, pb |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

2.

```
mysql> insert into sales_person (sale_p_id, sales_p_name, sales_p_email, sale_p_phone)
-> values
-> (1, 'ananya verma', 'ananya.verma@abc.com', 987123456),
-> (2, 'vikram yadav', 'vikram.yadav@abc.com', 998877665),
-> (3, 'isha reddy', 'isha.reddy@abc.com', 987654321),
-> (4, 'arjun rao', 'arjun.rao@abc.com', 955667788);
Query OK, 4 rows affected (0.02 sec)
Records: 4 Duplicates: 0 Warnings: 0
```

```
mysql> select * from customer;
+-----+-----+-----+-----+-----+
| cust_id | cust_name | cust_email | cust_phone | cust_address |
+-----+-----+-----+-----+-----+
| 1 | aarav patel | aarav.patel@abc.com | 987654321 | mumbai, mh |
| 2 | priya sharma | priya.sharma@abc.com | 876543210 | bengaluru, ka |
| 3 | rohan kumar | rohan.kumar@abc.com | 654321987 | delhi, dl |
| 4 | simran kaur | simran.kaur@abc.com | 543210876 | chandigarh, pb |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

3.

```
mysql> insert into orders (order_id, cust_id, sale_p_id, order_time)
-> values
-> (101, 1, 1, '2024-11-01 09:30:00'),
-> (102, 2, 1, '2024-12-03 14:00:00'),
-> (103, 3, 2, '2024-12-15 11:15:00'),
-> (104, 4, 1, '2025-01-07 16:45:00'),
-> (105, 2, 3, '2025-01-08 17:00:00'),
-> (106, 3, 2, '2025-01-20 10:45:00');
Query OK, 6 rows affected (0.03 sec)
Records: 6 Duplicates: 0 Warnings: 0
```

```
mysql> select * from orders;
+-----+-----+-----+-----+
| order_id | cust_id | sale_p_id | order_time |
+-----+-----+-----+-----+
| 101 | 1 | 1 | 2024-11-01 09:30:00 |
| 102 | 2 | 1 | 2024-12-03 14:00:00 |
| 103 | 3 | 2 | 2024-12-15 11:15:00 |
| 104 | 4 | 1 | 2025-01-07 16:45:00 |
| 105 | 2 | 3 | 2025-01-08 17:00:00 |
| 106 | 3 | 2 | 2025-01-20 10:45:00 |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

Q5)Find the sales person have multiple orders.

Ans.

```
mysql> select s_per.sale_p_id, s_per.sales_p_name, s_per.sales_p_email, s_per.sale_p_phone from sales_person as s_per left join orders as odr on s_per.sale_p_id=odr.sale_p_id GROUP BY s_per.sale_p_id HAVING count(odr.sale_p_id) > 1;
+-----+-----+-----+-----+
| sale_p_id | sales_p_name | sales_p_email | sale_p_phone |
+-----+-----+-----+-----+
| 1 | ananya verma | ananya.verma@abc.com | 987123456 |
| 2 | vikram yadav | vikram.yadav@abc.com | 998877665 |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

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

```
mysql> select * from sales_person inner join orders on sales_person.sale_p_id=orders.sale_p_id;
```

sale_p_id	sales_p_name	sales_p_email	sale_p_phone	order_id	cust_id	sale_p_id	order_time
1	ananya verma	ananya.verma@abc.com	987123456	101	1	1	2024-11-01 09:30:00
1	ananya verma	ananya.verma@abc.com	987123456	102	2	1	2024-12-03 14:00:00
1	ananya verma	ananya.verma@abc.com	987123456	104	4	1	2025-01-07 16:45:00
2	vikram yadav	vikram.yadav@abc.com	998877665	103	3	2	2024-12-15 11:15:00
2	vikram yadav	vikram.yadav@abc.com	998877665	106	3	2	2025-01-20 10:45:00
3	isha reddy	isha.reddy@abc.com	987654321	105	2	3	2025-01-08 17:00:00

6 rows in set (0.01 sec)

Q7)Create index

```
mysql> create index sale_per_indx on sales_person(sales_p_name, sales_p_email);
Query OK, 0 rows affected (0.04 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

Q8)How to show index on a table

```
mysql> show index from sales_person;
```

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment	Index_comment	Visible	Expression
sales_person	0	PRIMARY	1	sale_p_id	A	4	NULL	NULL		BTREE			YES	NULL
sales_person	1	sale_per_indx	1	sales_p_name	A	4	NULL	NULL	YES	BTREE			YES	NULL
sales_person	1	sale_per_indx	2	sales_p_email	A	4	NULL	NULL	YES	BTREE			YES	NULL

3 rows in set (0.01 sec)

Q9)Find the order id, sale person name, along with the customer to whom that order belongs to

```
mysql> select odr.order_id, sp.sales_p_name, ctmr.cust_id, ctmr.cust_name, ctmr.cust_email from orders as odr inner join sales_person as sp on sp.sale_p_id = odr.sale_p_id inner join customers as ctmr on ctmr.cust_id = odr.cust_id;
```

order_id	sales_p_name	cust_id	cust_name	cust_email
101	ananya verma	1	aarav patel	aarav.patel@abc.com
102	ananya verma	2	priya sharna	priya.sharna@abc.com
105	isha reddy	2	priya sharna	priya.sharna@abc.com
103	vikram yadav	3	rohan kumar	rohan.kumar@abc.com
106	vikram yadav	3	rohan kumar	rohan.kumar@abc.com
104	ananya verma	4	simran kaur	simran.kaur@abc.com

6 rows in set (0.00 sec)