Q.1 Create Database

Ans. create database shopping;


```
ERROR 1045 (28000): Access denied for user 'bharat'@'localhost' (using password: NO)
bharat@Bharat:~$ sudo mysql
[sudo] password for bharat:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 4
Server version: 5.7.29-0ubuntu0.18.04.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

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

mysql> show database;
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 'database' at line 1
mysql> use shopping;
Database changed
mysql>
```
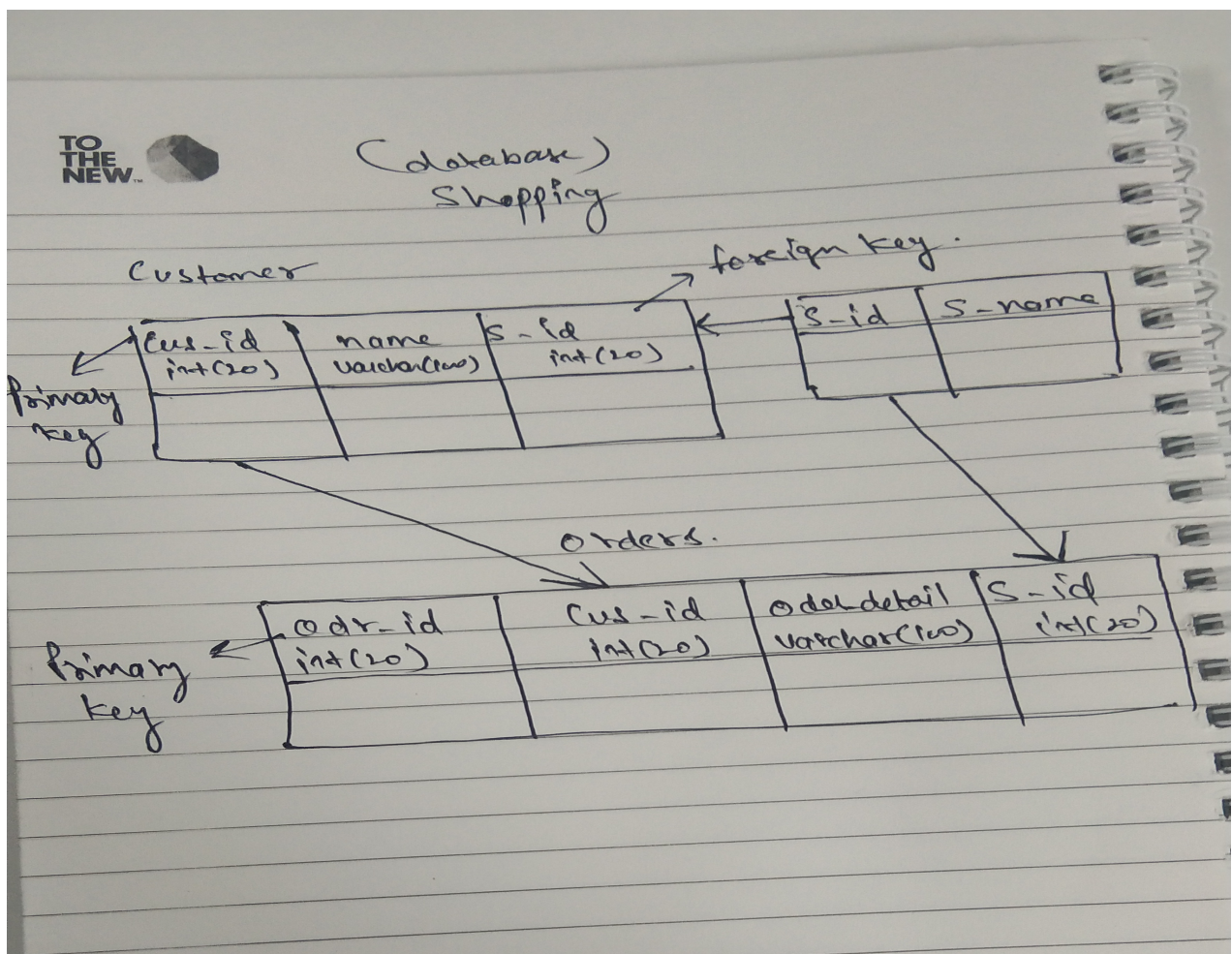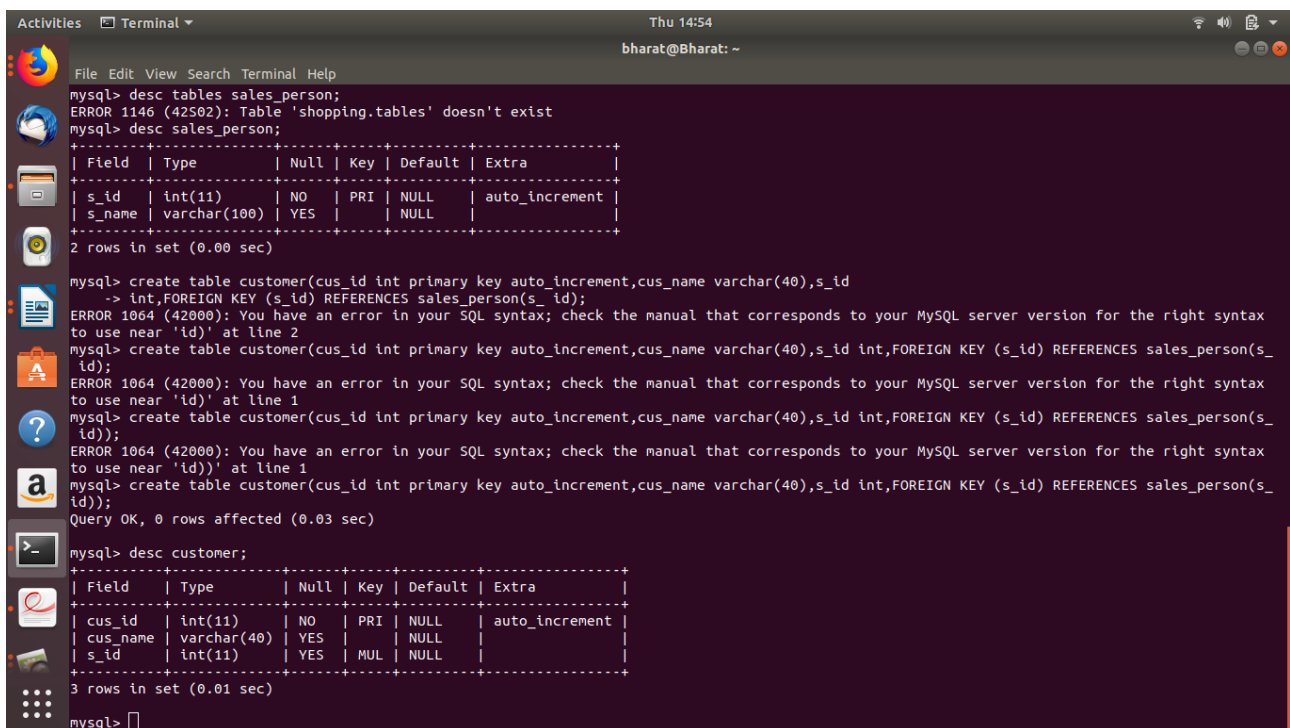
Q.2 Design Schema

Q.3 Create tables
//for creating sales-person table

create table sales_person(s_id int primary key auto_increment,s_name varchar(100));

//for creating customer table

 mysql> create table customer(cus_id int primary key auto_increment,cus_name varchar(40),s_id int,FOREIGN KEY (s_id) REFERENCES sales_person(s_id));

//for creating order table

create table orders(odr_id int primary key auto_increment,order_detail varchar(100),cus_id int,s_id int, foreign key(cus_id) references customer(cus_id),foreign key(s_id) references sales_person(s_id));

Q.4 Insert sample data
 Ans.
mysql> insert into sales_person(s_id,s_name) values(100,'sales');
 insert into customer(cus_id,cus_name,s_id) values (1,'abc',100);
 insert into orders(odr_id,order_detail,cus_id,s_id) values(1000,'order is places',1,100);

```
| cus_id          | int(11)       |  | YES | MUL | NULL |                 |
| s_id            | int(11)       |  | YES | MUL | NULL |                 |
+-----------------+---------------+--+-----+-----+------+-----------------+
4 rows in set (0.00 sec)

mysql> insert into orders(odr_id,order_detail,cus_id,s_id) values(1000,'order is places',1,100);
Query OK, 1 row affected (0.01 sec)

mysql> ^C;
;
^C
mysql> insert into sales_person(s_id,s_name) values(101,'sales1');
Query OK, 1 row affected (0.01 sec)

mysql> insert into sales_person(s_id,s_name) values(102,'sales2');
Query OK, 1 row affected (0.01 sec)

mysql> insert into sales_person(s_id,s_name) values(103,'sales3');
Query OK, 1 row affected (0.01 sec)

mysql> insert into customer(cus_id,cus_name,s_id) values (2,'ram',100);
Query OK, 1 row affected (0.01 sec)

mysql> insert into customer(cus_id,cus_name,s_id) values (3,'john',101);
Query OK, 1 row affected (0.01 sec)

mysql> insert into orders(odr_id,order_detail,cus_id,s_id) values(1001,'order is placed 1',1,100);
Query OK, 1 row affected (0.01 sec)

mysql> insert into orders(odr_id,order_detail,cus_id,s_id) values(1001,'order is placed 2',2,101);
ERROR 1062 (23000): Duplicate entry '1001' for key 'PRIMARY'
mysql> insert into orders(odr_id,order_detail,cus_id,s_id) values(1002,'order is placed 2',2,101);
Query OK, 1 row affected (0.01 sec)

mysql> insert into orders(odr_id,order_detail,cus_id,s_id) values(1003,'order is placed 3',2,102);
Query OK, 1 row affected (0.01 sec)

mysql>
```

```
Query OK, 1 row affected (0.01 sec)

mysql> select * from sales_person;
+------+--------+
| s_id | s_name |
+------+--------+
|  100 | sales  |
|  101 | sales1 |
|  102 | sales2 |
|  103 | sales3 |
+------+--------+
4 rows in set (0.00 sec)

mysql> select * from customer;
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 'salect * from customer' at line 1
mysql> select * from customer;
+--------+----------+------+
| cus_id | cus_name | s_id |
+--------+----------+------+
|      1 | abc      |  100 |
|      2 | ram      |  100 |
|      3 | john     |  101 |
+--------+----------+------+
3 rows in set (0.00 sec)

mysql> select * from orders;
+--------+-------------------+--------+------+
| odr_id | order_detail      | cus_id | s_id |
+--------+-------------------+--------+------+
|   1000 | order is places   |      1 |  100 |
|   1001 | order is placed 1 |      1 |  100 |
|   1002 | order is placed 2 |      2 |  101 |
|   1003 | order is placed 3 |      2 |  102 |
+--------+-------------------+--------+------+
4 rows in set (0.00 sec)

mysql>
```

Q.5 Find the sales person have multiple orders.

Ans. Select * from sales_person where s_id in(select distinct s_id from orders o where exists(select * from orders o1 where o1.s_id=o.s_id and o1.odr_id<>o.odr_id));

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

 Ans select s_name,odr_id,order_detail from sales_person inner join orders on sales_person.s_id=orders.s_id;

Q.7 Create index

Ans. create index detail on orders(order_detail);


```
Activities    Terminal ▾                              Thu 15:33
                                              bharat@Bharat: ~
File Edit View Search Terminal Help
+--------+------------------+--------+------+
4 rows in set (0.00 sec)

mysql> select odr_id,order_detail,cus_id,s_id from orders where s_id IN(1,2) group by s_id having count(s_id)=2;
ERROR 1055 (42000): Expression #1 of SELECT list is not in GROUP BY clause and contains nonaggregated column 'shopping.orders.odr_id' which is
 not functionally dependent on columns in GROUP BY clause; this is incompatible with sql_mode=only_full_group_by
mysql> select odr_id,sales_person where s_id in(select distinct s_id from orders o where exists(select * from orders o1 where o1.s_id=o.s_id a
nd o1.odr_id<>o.odr_id));
+------+--------+
| s_id | s_name |
+------+--------+
|  100 | sales  |
+------+--------+
1 row in set (0.00 sec)

mysql> select s_name,odr_id,odr_desc from sales_person inner join orders on sales_person.s_id=orders.s_id;
ERROR 1054 (42S22): Unknown column 'odr_desc' in 'field list'
mysql> mysql> select s_name,odr_id,odr_detail from sales_person inner join orders on sales_person.s_id=orders.s_id;
ERROR 1054 (42S22): Unknown column 'odr_detail' in 'field list'
mysql> select s_name,odr_id,order_detail from sales_person inner join orders on sales_person.s_id=orders.s_id;
+--------+--------+------------------+
| s_name | odr_id | order_detail     |
+--------+--------+------------------+
| sales  |   1000 | order is places  |
| sales  |   1001 | order is placed 1 |
| sales1 |   1002 | order is placed 2 |
| sales2 |   1003 | order is placed 3 |
+--------+--------+------------------+
4 rows in set (0.00 sec)

mysql> create index detail on order(order_detail);
create index detail on order(order_detail);
^C
mysql> create index detail on orders(order_detail);
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> 
```

Q.8 How to show index on a table
 Ans. show indexes from orders;


```
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                                              bharat@Bharat: ~
File Edit View Search Terminal Help
+--------+--------+------------------+
| sales  |   1000 | order is places  |
| sales  |   1001 | order is placed 1 |
| sales1 |   1002 | order is placed 2 |
| sales2 |   1003 | order is placed 3 |
+--------+--------+------------------+
4 rows in set (0.00 sec)

mysql> create index detail on order(order_detail);
create index detail on order(order_detail);
^C
mysql> create index detail on orders(order_detail);
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> show indexes from orders;
show indexes from orders;
^C
mysql> show indexes from orders;
+--------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+
| Table  | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment | Index_comment |
+--------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+
| orders |          0 | PRIMARY  |            1 | odr_id      | A         |           4 |     NULL | NULL   |      | BTREE      |         |               |
| orders |          1 | cus_id   |            1 | cus_id      | A         |           2 |     NULL | NULL   | YES  | BTREE      |         |               |
| orders |          1 | s_id     |            1 | s_id        | A         |           3 |     NULL | NULL   | YES  | BTREE      |         |               |
| orders |          1 | detail   |            1 | order_detail | A        |           4 |     NULL | NULL   | YES  | BTREE      |         |               |
+--------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+
4 rows in set (0.00 sec)

mysql> 
```

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

Ans. select c.cus_id,c.cus_name,s.s_id,odr_id,s_name from customer c inner join sales_person s on c.s_id=s.s_id inner join orders o on o.s_id=s.s_id;