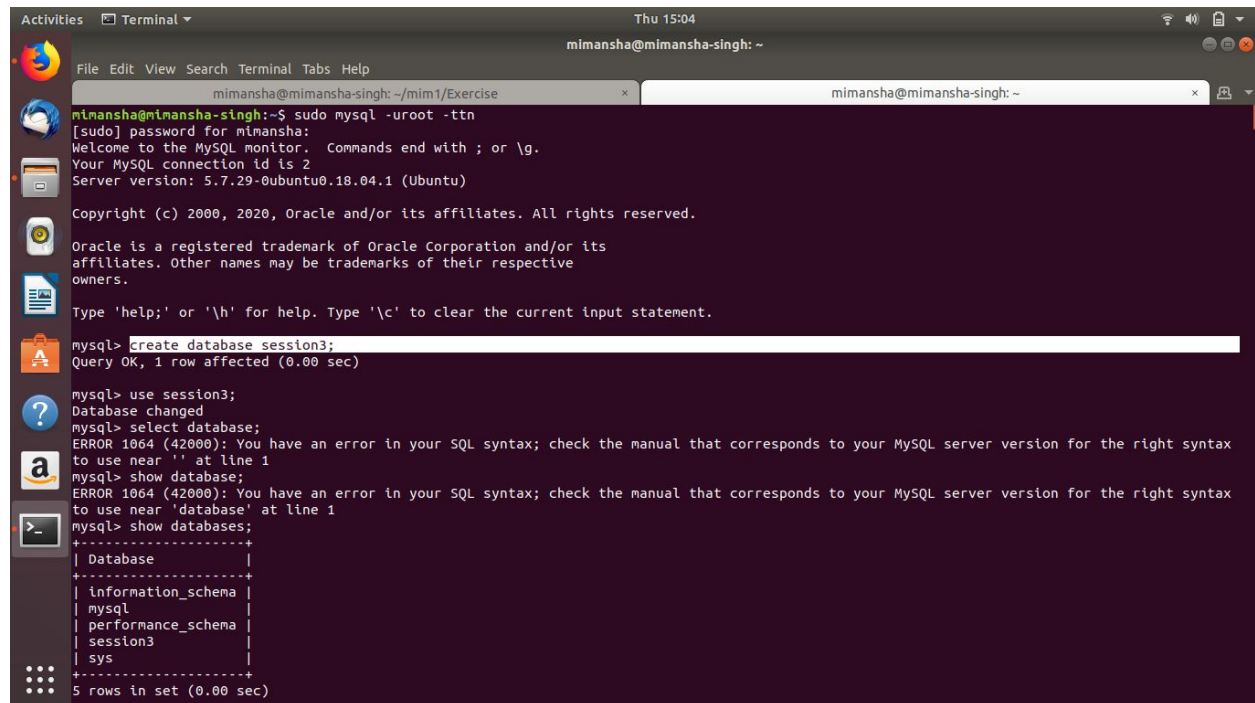


1.Create Database.

create database session3;



A terminal window showing the process of creating a MySQL database named 'session3'. The user runs 'sudo mysql -uroot -ttn' and enters the password. The MySQL prompt appears. The user enters 'create database session3;' and receives a success message. Then, they enter 'use session3;' and receive an error. They then enter 'select database;' and receive another error. Finally, they enter 'show databases;' and see a list of databases including 'session3'.

```
mimansha@mimansha-singh:~$ sudo mysql -uroot -ttn
[sudo] password for mimansha:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 2
Server version: 5.7.29-0ubuntu0.18.04.1 (Ubuntu)

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owners.

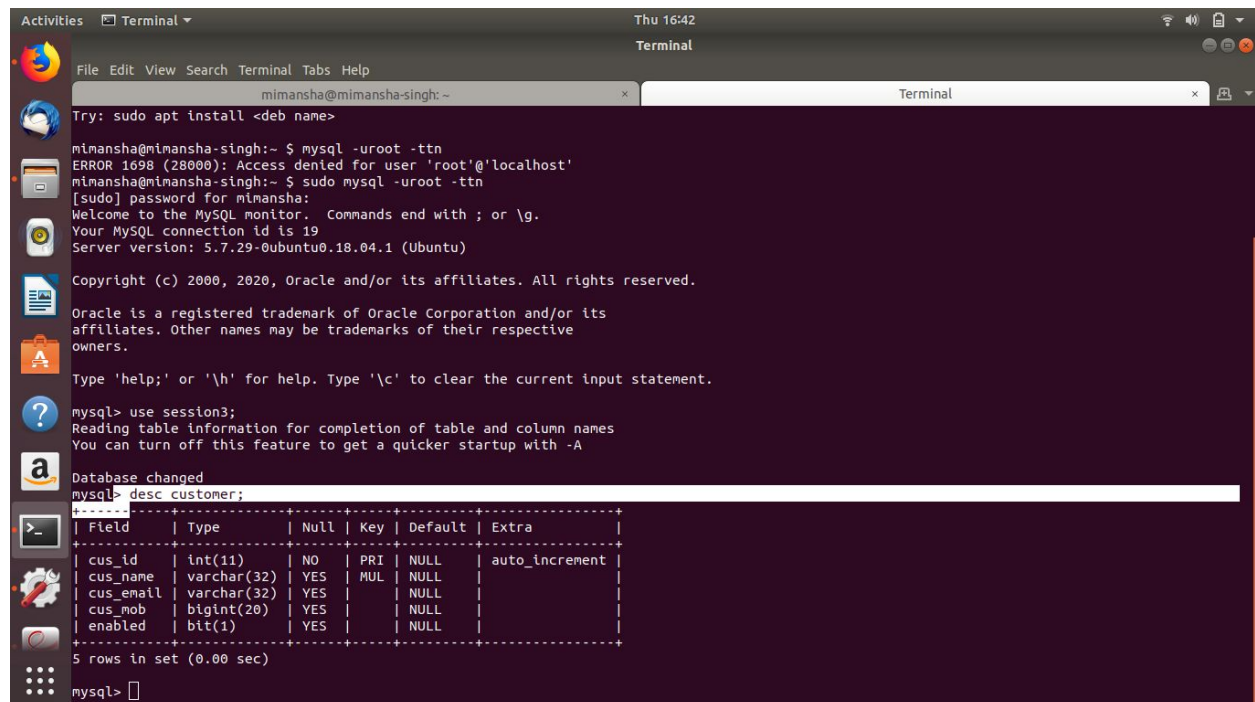
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> create database session3;
Query OK, 1 row affected (0.00 sec)

mysql> use session3;
Database changed
mysql> select 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 '' at line 1
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> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| session3 |
| sys |
+-----+
5 rows in set (0.00 sec)
```

2.Design Schema.

desc customer; desc salesman; desc orders;



A terminal window showing the process of installing a database package and then describing the 'customer' table. The user runs 'sudo apt install <deb name>'. Then, they run 'mysql -uroot -ttn' and enter the password. The MySQL prompt appears. The user enters 'use session3;' and receives an error. They then enter 'desc customer;' and see the table structure for the 'customer' table.

```
mimansha@mimansha-singh:~$ sudo apt install <deb name>

mimansha@mimansha-singh:~$ mysql -uroot -ttn
ERROR 1698 (28000): Access denied for user 'root'@'localhost'
mimansha@mimansha-singh:~$ sudo mysql -uroot -ttn
[sudo] password for mimansha:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 19
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> use session3;
Database changed
mysql> desc customer;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| cus_id | int(11) | NO | PRI | NULL | auto_increment |
| cus_name | varchar(32) | YES | MUL | NULL | |
| cus_email | varchar(32) | YES | | NULL | |
| cus_mob | bigint(20) | YES | | NULL | |
| enabled | bit(1) | YES | | NULL | |
+-----+
5 rows in set (0.00 sec)

mysql>
```

```

Activities  Terminal  Thu 16:43
Terminal
mimansha@mimansha-singh: ~
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owners.

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

mysql> use session3;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> desc customer;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| cus_id | int(11) | NO | PRI | NULL | auto_increment |
| cus_name | varchar(32) | YES | MUL | NULL | |
| cus_email | varchar(32) | YES | | NULL | |
| cus_mob | bigint(20) | YES | | NULL | |
| enabled | bit(1) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> desc salesman;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| sales_id | int(11) | NO | PRI | NULL | auto_increment |
| sales_name | varchar(32) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql>

```

3. Create tables.

create table customer(cus_id int,cus_name varchar,cus_email varchar,cus_contact int);

```

Activities  Terminal  Thu 15:05
Terminal
mimansha@mimansha-singh: ~
mimansha@mimansha-singh: ~/mim1/Exercise
session3
sys
+-----+-----+
| Tables_in_session3 |
+-----+-----+
| customer            |
+-----+-----+
1 row in set (0.00 sec)

mysql> create table customer(cus_id varchar(10),cus_name varchar(32),cus_email varchar(50));
Query OK, 0 rows affected (0.01 sec)

mysql> drop table customer;
Query OK, 0 rows affected (0.00 sec)

mysql> create table customer(cus_id varchar(10),cus_name varchar(32),cus_email varchar(32),cus_contact int(10));
Query OK, 0 rows affected (0.02 sec)

mysql> show tables;
+-----+-----+
| Tables_in_session3 |
+-----+-----+
| customer            |
+-----+-----+
1 row in set (0.00 sec)

mysql> desc customer;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| cus_id | varchar(10) | YES | | NULL | |
| cus_name | varchar(32) | YES | | NULL | |
| cus_email | varchar(32) | YES | | NULL | |
| cus_contact | int(10) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> show create table customer;
+-----+-----+
| Table | Create Table |
+-----+-----+

```

4. Insert sample data.

insert into customer values(1,"mimansha","singhmimansha.23@gmail.com",7388950722);

```

Activities  Terminal  Thu 15:06
mimansha@mimansha-singh: ~

File Edit View Search Terminal Tabs Help

mimansha@mimansha-singh: ~/mim1/Exercise
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| cus_id | int(10) | NO | PRI | NULL | |
| cus_name | varchar(32) | YES | | NULL | |
| cus_email | varchar(32) | YES | | NULL | |
| cus_mob | int(10) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> insert into customer values(1,"Minansha","singhminansha.23@gmail.com",7388950722);
ERROR 1264 (22003): Out of range value for column 'cus_mob' at row 1
mysql> drop table customer;
Query OK, 0 rows affected (0.01 sec)

mysql> create table customer(cus_id int(10),cus_name varchar(32),cus_email varchar(32),cus_mob bigint(10),primary key(cus_id));
Query OK, 0 rows affected (0.02 sec)

mysql> insert into customer values(1,"Minansha","singhminansha.23@gmail.com",7388950722);
Query OK, 1 row affected (0.00 sec)

mysql> alter table customer modify cus_mob bigint(20);
Query OK, 0 rows affected (0.02 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table customer change cus_mob cus_phone bigint(20);
Query OK, 0 rows affected (0.04 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table customer add enabled bit(1);
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> desc customer;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| cus_id | int(10) | NO | PRI | NULL | |
| cus_name | varchar(32) | YES | | NULL | |
| cus_email | varchar(32) | YES | | NULL | |
| cus_phone | bigint(20) | YES | | NULL | |
| enabled | bit(1) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+

```

5. Find the sales person have multiple orders.
 select s.sales_name from orders o inner join salesman s on o.order_sales_id=s.sales_id group by sales_name having count(sales_name)>1;

```

Activities  Terminal  Fri 09:48
Terminal

File Edit View Search Terminal Help

command 'ddd' from deb ddd
command 'tdd' from deb devtodo
command 'mAdd' from deb montage
command 'ldd' from deb libc-bin
command 'pdd' from deb pdd

Try: sudo apt install <deb name>

mimansha@mimansha-singh:~$ sudo mysql -uroot -ttn
[sudo] password for mimansha:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 2
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> use session3;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> select s.sales_name from orders o inner join salesman s on o.order_sales_id=s.sales_id group by sales_name having count(sales_name)>1;
+-----+
| sales_name |
+-----+
| Ankit      |
| Raj        |
+-----+
2 rows in set (0.00 sec)

mysql>

```


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

```
Activities Terminal Thu 15:02
mimansha@mimansha-singh: ~
File Edit View Search Terminal Tabs Help
mimansha@mimansha-singh: ~/mim1/Exercise
mysql> select * from orders;
+-----+-----+-----+-----+
| order_id | date_created | order_sales_id | order_cus_id |
+-----+-----+-----+-----+
| 5 | 2020-02-06 14:38:59.00000 | 1 | 1 |
| 6 | 2020-02-06 14:39:19.00000 | 2 | 2 |
| 7 | 2020-02-06 14:39:30.00000 | 2 | 1 |
| 8 | 2020-02-06 14:39:52.00000 | 1 | 2 |
| 9 | 2020-02-06 14:40:12.00000 | 4 | 1 |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select * from orders o inner join salesman s on o.order_id=s.sales_id;
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 'inner join salesman s on o.order_id=s.sales_id' at line 1
mysql> select * from orders o inner join salesman s on o.order_id=s.sales_id;
+-----+-----+-----+-----+-----+-----+
| order_id | date_created | order_sales_id | order_cus_id | sales_id | sales_name |
+-----+-----+-----+-----+-----+-----+
| 5 | 2020-02-06 14:38:59.00000 | 1 | 1 | 5 | Kajal |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> select * from orders o inner join salesman s on o.order_sales_id=s.sales_id;
+-----+-----+-----+-----+-----+-----+
| order_id | date_created | order_sales_id | order_cus_id | sales_id | sales_name |
+-----+-----+-----+-----+-----+-----+
| 5 | 2020-02-06 14:38:59.00000 | 1 | 1 | 1 | Ankit |
| 6 | 2020-02-06 14:39:19.00000 | 2 | 2 | 2 | Raj |
| 7 | 2020-02-06 14:39:30.00000 | 2 | 1 | 2 | Raj |
| 8 | 2020-02-06 14:39:52.00000 | 1 | 2 | 1 | Ankit |
| 9 | 2020-02-06 14:40:12.00000 | 4 | 1 | 4 | Amit |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select * from orders o inner join salesman s on o.order_sales_id=s.sales_id;
```

7. Create index.

```
Activities Terminal Thu 16:58
Terminal
mimansha@mimansha-singh: ~
File Edit View Search Terminal Tabs Help
mimansha@mimansha-singh: ~
+-----+-----+-----+-----+
| 5 | 2020-02-06 14:38:59.00000 | 1 | 1 |
| 6 | 2020-02-06 14:39:19.00000 | 2 | 2 |
| 7 | 2020-02-06 14:39:30.00000 | 2 | 1 |
| 8 | 2020-02-06 14:39:52.00000 | 1 | 2 |
| 9 | 2020-02-06 14:40:12.00000 | 4 | 1 |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> create index ind on orders(date created);
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> show index orders;
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 'orders' at line 1
mysql> show index from orders;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Table | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Com |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| orders | 0 | PRIMARY | 1 | order_id | A | 4 | NULL | NULL | YES | BTREE | |
| orders | 1 | order_sales_id | 1 | order_sales_id | A | 2 | NULL | NULL | YES | BTREE | |
| orders | 1 | order_cus_id | 1 | order_cus_id | A | 2 | NULL | NULL | YES | BTREE | |
| orders | 1 | ind | 1 | date_created | A | 5 | NULL | NULL | YES | BTREE | |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql>
```

8. How to show index on a table

```

Activities  Terminal  Thu 16:58
Terminal
mimansha@mimansha-singh: ~
+-----+
| 5 | 2020-02-06 14:38:59.000000 | 1 | 1 |
| 6 | 2020-02-06 14:39:19.000000 | 2 | 2 |
| 7 | 2020-02-06 14:39:30.000000 | 2 | 1 |
| 8 | 2020-02-06 14:39:52.000000 | 1 | 2 |
| 9 | 2020-02-06 14:40:12.000000 | 4 | 1 |
+-----+
5 rows in set (0.00 sec)

mysql> create index ind on orders(date_created);
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> show index orders;
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 'orders' at line 1
mysql> show index from orders;
+-----+
| Table | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Com |
+-----+
| orders | 0 | PRIMARY | 1 | order_id | A | 4 | NULL | NULL | YES | BTREE |    |
| orders | 1 | order_sales_id | 1 | order_sales_id | A | 2 | NULL | NULL | YES | BTREE |    |
| orders | 1 | order_cus_id | 1 | order_cus_id | A | 2 | NULL | NULL | YES | BTREE |    |
| orders | 1 | ind | 1 | date_created | A | 5 | NULL | NULL | YES | BTREE |    |
+-----+
4 rows in set (0.00 sec)

mysql>

```

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

```

Activities  Terminal  Thu 15:01
mimansha@mimansha-singh: ~
mimansha@mimansha-singh: ~/mim1/Exercise
mysql> select sales_name from salesman s inner join orders o on o.order_sales_id=s.sales_id;
+-----+
| sales_name |
+-----+
| Ankit      |
| Ankit      |
| Raj        |
| Raj        |
| Anit       |
+-----+
5 rows in set (0.00 sec)

mysql> select sales_name,cus_id,order_id from orders o inner join salesman s on o.order_sales_id=s.sales_id;
ERROR 1054 (42S22): Unknown column 'cus_id' in 'field list'
mysql> select s.sales_name c.cus_name,o.order_id from salesman s inner join orders o inner join customer c on o.order_sales_id=s.sales_id and c.cus_id=o.order_id;
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 '.cus_name,o.order_id from salesman s inner join orders o inner join customer c ' at line 1
mysql> select s.sales_name c.cus_name,o.order_id from salesman s inner join orders o inner join customer c on o.order_sales_id=s.sales_id and c.cus_id=o.order_cus_id;
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 '.cus name,o.order id from salesman s inner join orders o inner join customer c ' at line 1
mysql> select s.sales_name, c.cus name,o.order id from salesman s inner join orders o inner join customer c on o.order sales id=s.sales id a
nd c.cus id=o.order cus id;
+-----+
| sales_name | cus_name | order_id |
+-----+
| Ankit      | Mimansha | 5 |
| Raj        | Mimansha | 7 |
| Anit       | Mimansha | 9 |
| Raj        | Nimmi    | 6 |
| Ankit      | Nimmi    | 8 |
+-----+
5 rows in set (0.00 sec)

mysql>

```