DBMS Lab Assignment - 01
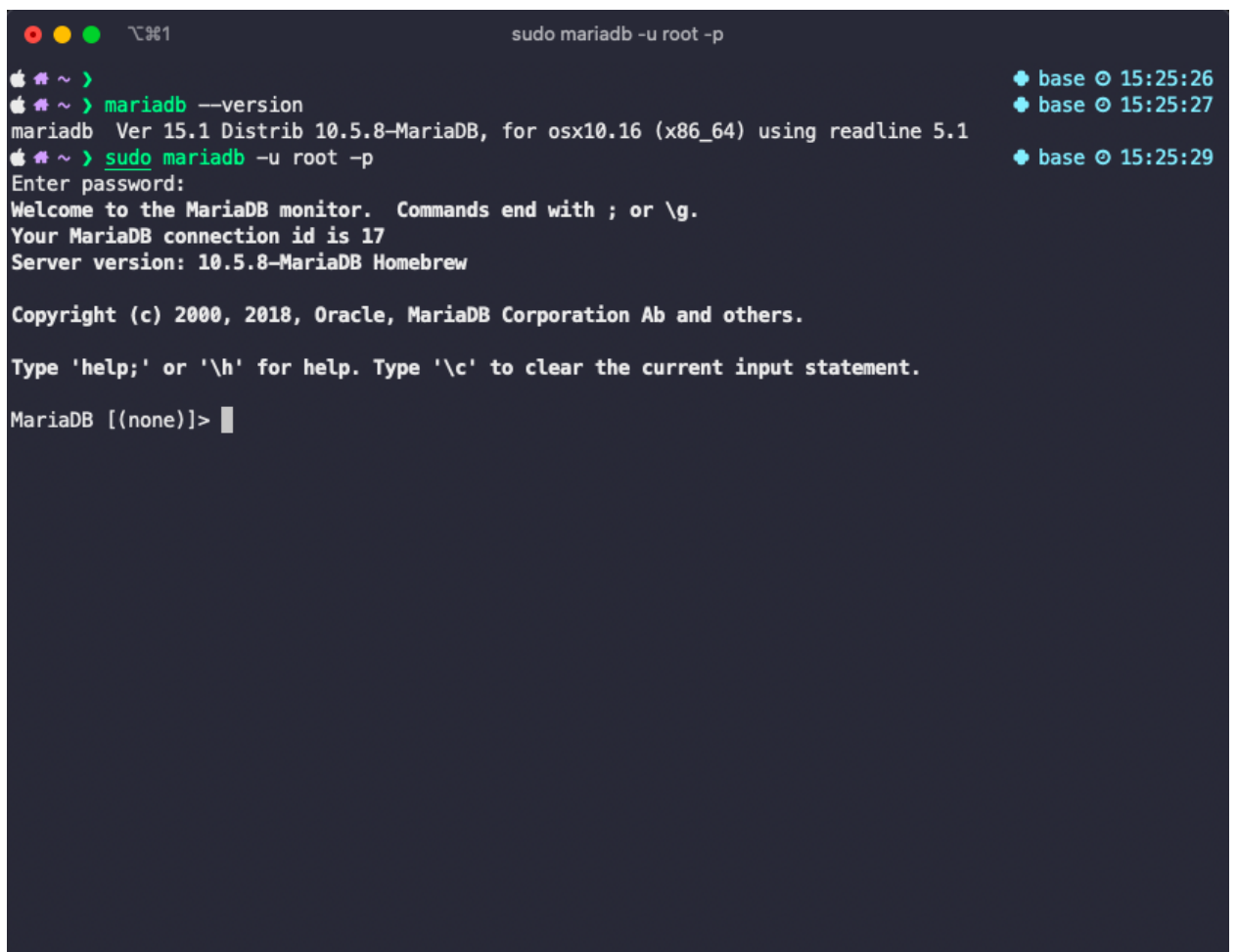
Name: V. Sai Vipul Mohan
Roll.no: 111801045

B. Observe existing databases

1. Login in mysql server

```
sudo mariadb -u root -p
```


2. Show databases

```
show databases;
```

```
●●●   ⌥⌘1                          sudo mariadb -u root -p

 ~ >                                                              ⬥ base ⊘ 15:25:26
 ~ > mariadb --version                                           ⬥ base ⊘ 15:25:27
mariadb  Ver 15.1 Distrib 10.5.8-MariaDB, for osx10.16 (x86_64) using readline 5.1
 ~ > sudo mariadb -u root -p                                     ⬥ base ⊘ 15:25:29
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 17
Server version: 10.5.8-MariaDB Homebrew

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

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

MariaDB [(none)]> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| test               |
+--------------------+
4 rows in set (0.002 sec)

MariaDB [(none)]> ▮
```

3. select Host, User from mysql.User

```sql
select Host, User from mysql.User;
```

4. Use information_schema

```
use information_schema;
```

```
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

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

MariaDB [(none)]> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| test               |
+--------------------+
4 rows in set (0.002 sec)

MariaDB [(none)]> select Host, User from mysql.User;
+------------------------+-------------+
| Host                   | User        |
+------------------------+-------------+
| localhost              |             |
| localhost              | mariadb.sys |
| localhost              | root        |
| localhost              | vipul       |
| sais-macbook-air.local |             |
+------------------------+-------------+
5 rows in set (0.004 sec)

MariaDB [(none)]> Use information_schema;
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
MariaDB [information_schema]>
```

5. Show tables

```
show tables;
```

```
MariaDB [information_schema]> show tables;
+---------------------------------------+
| Tables_in_information_schema          |
+---------------------------------------+
| ALL_PLUGINS                           |
| APPLICABLE_ROLES                      |
| CHARACTER_SETS                        |
| CHECK_CONSTRAINTS                     |
| COLLATIONS                            |
| COLLATION_CHARACTER_SET_APPLICABILITY |
| COLUMNS                               |
| COLUMN_PRIVILEGES                     |
| ENABLED_ROLES                         |
| ENGINES                               |
| EVENTS                                |
| FILES                                 |
| GLOBAL_STATUS                         |
| GLOBAL_VARIABLES                      |
| KEY_CACHES                            |
| KEY_COLUMN_USAGE                      |
| OPTIMIZER_TRACE                       |
| PARAMETERS                            |
| PARTITIONS                            |
| PLUGINS                               |
| PROCESSLIST                           |
| PROFILING                             |
| REFERENTIAL_CONSTRAINTS               |
| ROUTINES                              |
| SCHEMATA                              |
| SCHEMA_PRIVILEGES                     |
| SESSION_STATUS                        |
| SESSION_VARIABLES                     |
| STATISTICS                            |
| SYSTEM_VARIABLES                      |
| TABLES                                |
| TABLESPACES                           |
| TABLE_CONSTRAINTS                     |
| TABLE_PRIVILEGES                      |
| TRIGGERS                              |
| USER_PRIVILEGES                       |
| VIEWS                                 |
| CLIENT_STATISTICS                     |
| INDEX_STATISTICS                      |
| INNODB_SYS_DATAFILES                  |
| GEOMETRY_COLUMNS                      |
| INNODB_SYS_TABLESTATS                 |
```

```
● ● ●        ⌥⌘1                              sudo mariadb -u root -p
| INDEX_STATISTICS                  |
| INNODB_SYS_DATAFILES              |
| GEOMETRY_COLUMNS                  |
| INNODB_SYS_TABLESTATS            |
| SPATIAL_REF_SYS                   |
| INNODB_BUFFER_PAGE               |
| INNODB_TRX                        |
| INNODB_CMP_PER_INDEX             |
| INNODB_METRICS                    |
| INNODB_LOCK_WAITS                |
| INNODB_CMP                        |
| THREAD_POOL_WAITS                |
| INNODB_CMP_RESET                  |
| THREAD_POOL_QUEUES               |
| TABLE_STATISTICS                  |
| INNODB_SYS_FIELDS                |
| INNODB_BUFFER_PAGE_LRU           |
| INNODB_LOCKS                      |
| INNODB_FT_INDEX_TABLE           |
| INNODB_CMPMEM                     |
| THREAD_POOL_GROUPS               |
| INNODB_CMP_PER_INDEX_RESET      |
| INNODB_SYS_FOREIGN_COLS         |
| INNODB_FT_INDEX_CACHE           |
| INNODB_BUFFER_POOL_STATS        |
| INNODB_FT_BEING_DELETED         |
| INNODB_SYS_FOREIGN              |
| INNODB_CMPMEM_RESET             |
| INNODB_FT_DEFAULT_STOPWORD      |
| INNODB_SYS_TABLES                |
| INNODB_SYS_COLUMNS               |
| INNODB_FT_CONFIG                 |
| USER_STATISTICS                   |
| INNODB_SYS_TABLESPACES          |
| INNODB_SYS_VIRTUAL              |
| INNODB_SYS_INDEXES              |
| INNODB_SYS_SEMAPHORE_WAITS      |
| INNODB_MUTEXES                    |
| user_variables                   |
| INNODB_TABLESPACES_ENCRYPTION   |
| INNODB_FT_DELETED               |
| THREAD_POOL_STATS                |
+----------------------------------+
80 rows in set (0.001 sec)

MariaDB [information_schema]> █
```

6. Select * from CHARACTER_SETS

```
select * from CHARACTER_SETS;
```

```
●●●  ⌥⌘1                          sudo mariadb -u root -p

MariaDB [information_schema]> select * from CHARACTER_SETS;
+--------------------+----------------------+-----------------------------+---------+
| CHARACTER_SET_NAME | DEFAULT_COLLATE_NAME | DESCRIPTION                 | MAXLEN  |
+--------------------+----------------------+-----------------------------+---------+
| big5               | big5_chinese_ci      | Big5 Traditional Chinese    |      2  |
| dec8               | dec8_swedish_ci      | DEC West European           |      1  |
| cp850              | cp850_general_ci     | DOS West European           |      1  |
| hp8                | hp8_english_ci       | HP West European            |      1  |
| koi8r              | koi8r_general_ci     | KOI8-R Relcom Russian       |      1  |
| latin1             | latin1_swedish_ci    | cp1252 West European        |      1  |
| latin2             | latin2_general_ci    | ISO 8859-2 Central European |      1  |
| swe7               | swe7_swedish_ci      | 7bit Swedish                |      1  |
| ascii              | ascii_general_ci     | US ASCII                    |      1  |
| ujis               | ujis_japanese_ci     | EUC-JP Japanese             |      3  |
| sjis               | sjis_japanese_ci     | Shift-JIS Japanese          |      2  |
| hebrew             | hebrew_general_ci    | ISO 8859-8 Hebrew           |      1  |
| tis620             | tis620_thai_ci       | TIS620 Thai                 |      1  |
| euckr              | euckr_korean_ci      | EUC-KR Korean               |      2  |
| koi8u              | koi8u_general_ci     | KOI8-U Ukrainian            |      1  |
| gb2312             | gb2312_chinese_ci    | GB2312 Simplified Chinese   |      2  |
| greek              | greek_general_ci     | ISO 8859-7 Greek            |      1  |
| cp1250             | cp1250_general_ci    | Windows Central European    |      1  |
| gbk                | gbk_chinese_ci       | GBK Simplified Chinese      |      2  |
| latin5             | latin5_turkish_ci    | ISO 8859-9 Turkish          |      1  |
| armscii8           | armscii8_general_ci  | ARMSCII-8 Armenian          |      1  |
| utf8               | utf8_general_ci      | UTF-8 Unicode               |      3  |
| ucs2               | ucs2_general_ci      | UCS-2 Unicode               |      2  |
| cp866              | cp866_general_ci     | DOS Russian                 |      1  |
| keybcs2            | keybcs2_general_ci   | DOS Kamenicky Czech-Slovak  |      1  |
| macce              | macce_general_ci     | Mac Central European        |      1  |
| macroman           | macroman_general_ci  | Mac West European           |      1  |
| cp852              | cp852_general_ci     | DOS Central European        |      1  |
| latin7             | latin7_general_ci    | ISO 8859-13 Baltic          |      1  |
| utf8mb4            | utf8mb4_general_ci   | UTF-8 Unicode               |      4  |
| cp1251             | cp1251_general_ci    | Windows Cyrillic            |      1  |
| utf16              | utf16_general_ci     | UTF-16 Unicode              |      4  |
| utf16le            | utf16le_general_ci   | UTF-16LE Unicode            |      4  |
| cp1256             | cp1256_general_ci    | Windows Arabic              |      1  |
| cp1257             | cp1257_general_ci    | Windows Baltic              |      1  |
| utf32              | utf32_general_ci     | UTF-32 Unicode              |      4  |
| binary             | binary               | Binary pseudo charset       |      1  |
| geostd8            | geostd8_general_ci   | GEOSTD8 Georgian            |      1  |
| cp932              | cp932_japanese_ci    | SJIS for Windows Japanese   |      2  |
| eucjpms            | eucjpms_japanese_ci  | UJIS for Windows Japanese   |      3  |
+--------------------+----------------------+-----------------------------+---------+
40 rows in set (0.002 sec)
```

7. Desc TABLES

desc TABLES;

```
40 rows in set (0.002 sec)

MariaDB [information_schema]>
MariaDB [information_schema]> desc TABLES;
+------------------+-------------------+------+-----+---------+-------+
| Field            | Type              | Null | Key | Default | Extra |
+------------------+-------------------+------+-----+---------+-------+
| TABLE_CATALOG    | varchar(512)      | NO   |     |         |       |
| TABLE_SCHEMA     | varchar(64)       | NO   |     |         |       |
| TABLE_NAME       | varchar(64)       | NO   |     |         |       |
| TABLE_TYPE       | varchar(64)       | NO   |     |         |       |
| ENGINE           | varchar(64)       | YES  |     | NULL    |       |
| VERSION          | bigint(21) unsigned | YES |   | NULL    |       |
| ROW_FORMAT       | varchar(10)       | YES  |     | NULL    |       |
| TABLE_ROWS       | bigint(21) unsigned | YES |   | NULL    |       |
| AVG_ROW_LENGTH   | bigint(21) unsigned | YES |   | NULL    |       |
| DATA_LENGTH      | bigint(21) unsigned | YES |   | NULL    |       |
| MAX_DATA_LENGTH  | bigint(21) unsigned | YES |   | NULL    |       |
| INDEX_LENGTH     | bigint(21) unsigned | YES |   | NULL    |       |
| DATA_FREE        | bigint(21) unsigned | YES |   | NULL    |       |
| AUTO_INCREMENT   | bigint(21) unsigned | YES |   | NULL    |       |
| CREATE_TIME      | datetime          | YES  |     | NULL    |       |
| UPDATE_TIME      | datetime          | YES  |     | NULL    |       |
| CHECK_TIME       | datetime          | YES  |     | NULL    |       |
| TABLE_COLLATION  | varchar(32)       | YES  |     | NULL    |       |
| CHECKSUM         | bigint(21) unsigned | YES |   | NULL    |       |
| CREATE_OPTIONS   | varchar(2048)     | YES  |     | NULL    |       |
| TABLE_COMMENT    | varchar(2048)     | NO   |     |         |       |
| MAX_INDEX_LENGTH | bigint(21) unsigned | YES |   | NULL    |       |
| TEMPORARY        | varchar(1)        | YES  |     | NULL    |       |
+------------------+-------------------+------+-----+---------+-------+
23 rows in set (0.006 sec)

MariaDB [information_schema]>
```

8. Select TABLE_NAME,TABLE_TYPE from TABLES

select TABLE_NAME,TABLE_TYPE from TABLES;

```
MariaDB [information_schema]> select TABLE_NAME,TABLE_TYPE from TABLES
    -> ;
+-------------------------------------------------+---------------+
| TABLE_NAME                                      | TABLE_TYPE    |
+-------------------------------------------------+---------------+
| ALL_PLUGINS                                     | SYSTEM VIEW   |
| APPLICABLE_ROLES                                | SYSTEM VIEW   |
| CHARACTER_SETS                                  | SYSTEM VIEW   |
| CHECK_CONSTRAINTS                               | SYSTEM VIEW   |
| COLLATIONS                                      | SYSTEM VIEW   |
| COLLATION_CHARACTER_SET_APPLICABILITY           | SYSTEM VIEW   |
| COLUMNS                                         | SYSTEM VIEW   |
| COLUMN_PRIVILEGES                               | SYSTEM VIEW   |
| ENABLED_ROLES                                   | SYSTEM VIEW   |
| ENGINES                                         | SYSTEM VIEW   |
| EVENTS                                          | SYSTEM VIEW   |
| FILES                                           | SYSTEM VIEW   |
| GLOBAL_STATUS                                   | SYSTEM VIEW   |
| GLOBAL_VARIABLES                                | SYSTEM VIEW   |
| KEY_CACHES                                      | SYSTEM VIEW   |
| KEY_COLUMN_USAGE                                | SYSTEM VIEW   |
| OPTIMIZER_TRACE                                 | SYSTEM VIEW   |
| PARAMETERS                                      | SYSTEM VIEW   |
| PARTITIONS                                      | SYSTEM VIEW   |
| PLUGINS                                         | SYSTEM VIEW   |
| PROCESSLIST                                     | SYSTEM VIEW   |
| PROFILING                                       | SYSTEM VIEW   |
| REFERENTIAL_CONSTRAINTS                         | SYSTEM VIEW   |
| ROUTINES                                        | SYSTEM VIEW   |
| SCHEMATA                                        | SYSTEM VIEW   |
| SCHEMA_PRIVILEGES                               | SYSTEM VIEW   |
| SESSION_STATUS                                  | SYSTEM VIEW   |
| SESSION_VARIABLES                               | SYSTEM VIEW   |
| STATISTICS                                      | SYSTEM VIEW   |
| SYSTEM_VARIABLES                                | SYSTEM VIEW   |
| TABLES                                          | SYSTEM VIEW   |
| TABLESPACES                                     | SYSTEM VIEW   |
| TABLE_CONSTRAINTS                               | SYSTEM VIEW   |
| TABLE_PRIVILEGES                                | SYSTEM VIEW   |
| TRIGGERS                                        | SYSTEM VIEW   |
| USER_PRIVILEGES                                 | SYSTEM VIEW   |
| VIEWS                                           | SYSTEM VIEW   |
| CLIENT_STATISTICS                               | SYSTEM VIEW   |
| INDEX_STATISTICS                                | SYSTEM VIEW   |
```

```
| file_summary_by_instance                      | BASE TABLE |
| global_status                                 | BASE TABLE |
| host_cache                                    | BASE TABLE |
| hosts                                         | BASE TABLE |
| memory_summary_by_account_by_event_name       | BASE TABLE |
| memory_summary_by_host_by_event_name          | BASE TABLE |
| memory_summary_by_thread_by_event_name        | BASE TABLE |
| memory_summary_by_user_by_event_name          | BASE TABLE |
| memory_summary_global_by_event_name           | BASE TABLE |
| metadata_locks                                | BASE TABLE |
| mutex_instances                               | BASE TABLE |
| objects_summary_global_by_type                | BASE TABLE |
| performance_timers                            | BASE TABLE |
| prepared_statements_instances                 | BASE TABLE |
| replication_applier_configuration             | BASE TABLE |
| replication_applier_status                    | BASE TABLE |
| replication_applier_status_by_coordinator     | BASE TABLE |
| replication_connection_configuration          | BASE TABLE |
| rwlock_instances                              | BASE TABLE |
| session_account_connect_attrs                 | BASE TABLE |
| session_connect_attrs                         | BASE TABLE |
| session_status                                | BASE TABLE |
| setup_actors                                  | BASE TABLE |
| setup_consumers                               | BASE TABLE |
| setup_instruments                             | BASE TABLE |
| setup_objects                                 | BASE TABLE |
| setup_timers                                  | BASE TABLE |
| socket_instances                              | BASE TABLE |
| socket_summary_by_event_name                  | BASE TABLE |
| socket_summary_by_instance                    | BASE TABLE |
| status_by_account                             | BASE TABLE |
| status_by_host                                | BASE TABLE |
| status_by_thread                              | BASE TABLE |
| status_by_user                                | BASE TABLE |
| table_handles                                 | BASE TABLE |
| table_io_waits_summary_by_index_usage         | BASE TABLE |
| table_io_waits_summary_by_table               | BASE TABLE |
| table_lock_waits_summary_by_table             | BASE TABLE |
| threads                                       | BASE TABLE |
| user_variables_by_thread                      | BASE TABLE |
| users                                         | BASE TABLE |
+-----------------------------------------------+------------+
191 rows in set (0.044 sec)

MariaDB [information_schema]>
```

INNODB_SYS_DATAFILES	SYSTEM VIEW
GEOMETRY_COLUMNS	SYSTEM VIEW
INNODB_SYS_TABLESTATS	SYSTEM VIEW
SPATIAL_REF_SYS	SYSTEM VIEW
INNODB_BUFFER_PAGE	SYSTEM VIEW
INNODB_TRX	SYSTEM VIEW
INNODB_CMP_PER_INDEX	SYSTEM VIEW
INNODB_METRICS	SYSTEM VIEW
INNODB_LOCK_WAITS	SYSTEM VIEW
INNODB_CMP	SYSTEM VIEW
THREAD_POOL_WAITS	SYSTEM VIEW
INNODB_CMP_RESET	SYSTEM VIEW
THREAD_POOL_QUEUES	SYSTEM VIEW
TABLE_STATISTICS	SYSTEM VIEW
INNODB_SYS_FIELDS	SYSTEM VIEW
INNODB_BUFFER_PAGE_LRU	SYSTEM VIEW
INNODB_LOCKS	SYSTEM VIEW
INNODB_FT_INDEX_TABLE	SYSTEM VIEW
INNODB_CMPMEM	SYSTEM VIEW
THREAD_POOL_GROUPS	SYSTEM VIEW
INNODB_CMP_PER_INDEX_RESET	SYSTEM VIEW
INNODB_SYS_FOREIGN_COLS	SYSTEM VIEW
INNODB_FT_INDEX_CACHE	SYSTEM VIEW
INNODB_BUFFER_POOL_STATS	SYSTEM VIEW
INNODB_FT_BEING_DELETED	SYSTEM VIEW
INNODB_SYS_FOREIGN	SYSTEM VIEW
INNODB_CMPMEM_RESET	SYSTEM VIEW
INNODB_FT_DEFAULT_STOPWORD	SYSTEM VIEW
INNODB_SYS_TABLES	SYSTEM VIEW
INNODB_SYS_COLUMNS	SYSTEM VIEW
INNODB_FT_CONFIG	SYSTEM VIEW
USER_STATISTICS	SYSTEM VIEW
INNODB_SYS_TABLESPACES	SYSTEM VIEW
INNODB_SYS_VIRTUAL	SYSTEM VIEW
INNODB_SYS_INDEXES	SYSTEM VIEW
INNODB_SYS_SEMAPHORE_WAITS	SYSTEM VIEW
INNODB_MUTEXES	SYSTEM VIEW
user_variables	SYSTEM VIEW
INNODB_TABLESPACES_ENCRYPTION	SYSTEM VIEW
INNODB_FT_DELETED	SYSTEM VIEW
THREAD_POOL_STATS	SYSTEM VIEW
index_stats	BASE TABLE
table_stats	BASE TABLE
slow_log	BASE TABLE
columns_priv	BASE TABLE

```
| columns_priv                                             | BASE TABLE |
| time_zone_transition_type                                | BASE TABLE |
| tables_priv                                              | BASE TABLE |
| column_stats                                             | BASE TABLE |
| func                                                     | BASE TABLE |
| innodb_index_stats                                       | BASE TABLE |
| innodb_table_stats                                       | BASE TABLE |
| gtid_slave_pos                                           | BASE TABLE |
| proc                                                     | BASE TABLE |
| time_zone_leap_second                                    | BASE TABLE |
| db                                                       | BASE TABLE |
| help_topic                                               | BASE TABLE |
| procs_priv                                               | BASE TABLE |
| global_priv                                              | BASE TABLE |
| transaction_registry                                     | BASE TABLE |
| time_zone_transition                                     | BASE TABLE |
| user                                                     | VIEW       |
| help_category                                            | BASE TABLE |
| plugin                                                   | BASE TABLE |
| help_relation                                            | BASE TABLE |
| proxies_priv                                             | BASE TABLE |
| roles_mapping                                            | BASE TABLE |
| time_zone                                                | BASE TABLE |
| time_zone_name                                           | BASE TABLE |
| general_log                                              | BASE TABLE |
| servers                                                  | BASE TABLE |
| help_keyword                                             | BASE TABLE |
| event                                                    | BASE TABLE |
| accounts                                                 | BASE TABLE |
| cond_instances                                           | BASE TABLE |
| events_stages_current                                    | BASE TABLE |
| events_stages_history                                    | BASE TABLE |
| events_stages_history_long                               | BASE TABLE |
| events_stages_summary_by_account_by_event_name           | BASE TABLE |
| events_stages_summary_by_host_by_event_name              | BASE TABLE |
| events_stages_summary_by_thread_by_event_name            | BASE TABLE |
| events_stages_summary_by_user_by_event_name              | BASE TABLE |
| events_stages_summary_global_by_event_name               | BASE TABLE |
| events_statements_current                                | BASE TABLE |
| events_statements_history                                | BASE TABLE |
| events_statements_history_long                           | BASE TABLE |
| events_statements_summary_by_account_by_event_name       | BASE TABLE |
| events_statements_summary_by_digest                      | BASE TABLE |
| events_statements_summary_by_host_by_event_name          | BASE TABLE |
| events_statements_summary_by_program                     | BASE TABLE |
```

```
● ● ●    ⌥⌘1                          sudo mariadb -u root -p
| events_statements_summary_by_program                     | BASE TABLE |
| events_statements_summary_by_thread_by_event_name        | BASE TABLE |
| events_statements_summary_by_user_by_event_name          | BASE TABLE |
| events_statements_summary_global_by_event_name           | BASE TABLE |
| events_transactions_current                              | BASE TABLE |
| events_transactions_history                              | BASE TABLE |
| events_transactions_history_long                         | BASE TABLE |
| events_transactions_summary_by_account_by_event_name     | BASE TABLE |
| events_transactions_summary_by_host_by_event_name        | BASE TABLE |
| events_transactions_summary_by_thread_by_event_name      | BASE TABLE |
| events_transactions_summary_by_user_by_event_name        | BASE TABLE |
| events_transactions_summary_global_by_event_name         | BASE TABLE |
| events_waits_current                                     | BASE TABLE |
| events_waits_history                                     | BASE TABLE |
| events_waits_history_long                                | BASE TABLE |
| events_waits_summary_by_account_by_event_name            | BASE TABLE |
| events_waits_summary_by_host_by_event_name               | BASE TABLE |
| events_waits_summary_by_instance                         | BASE TABLE |
| events_waits_summary_by_thread_by_event_name             | BASE TABLE |
| events_waits_summary_by_user_by_event_name               | BASE TABLE |
| events_waits_summary_global_by_event_name                | BASE TABLE |
| file_instances                                           | BASE TABLE |
| file_summary_by_event_name                               | BASE TABLE |
| file_summary_by_instance                                 | BASE TABLE |
| global_status                                            | BASE TABLE |
| host_cache                                               | BASE TABLE |
| hosts                                                    | BASE TABLE |
| memory_summary_by_account_by_event_name                  | BASE TABLE |
| memory_summary_by_host_by_event_name                     | BASE TABLE |
| memory_summary_by_thread_by_event_name                   | BASE TABLE |
| memory_summary_by_user_by_event_name                     | BASE TABLE |
| memory_summary_global_by_event_name                      | BASE TABLE |
| metadata_locks                                           | BASE TABLE |
| mutex_instances                                          | BASE TABLE |
| objects_summary_global_by_type                           | BASE TABLE |
| performance_timers                                       | BASE TABLE |
| prepared_statements_instances                            | BASE TABLE |
| replication_applier_configuration                        | BASE TABLE |
| replication_applier_status                               | BASE TABLE |
| replication_applier_status_by_coordinator                | BASE TABLE |
| replication_connection_configuration                     | BASE TABLE |
| rwlock_instances                                         | BASE TABLE |
| session_account_connect_attrs                            | BASE TABLE |
| session_connect_attrs                                    | BASE TABLE |
| session_status                                           | BASE TABLE |
```

Observations

1. SQL database names, table names and column names are case insensitive.
2. SQL commands are case insensitive.
3. SQL commands are space insensitive.
4. Hierarchy: There can be multiple databases, each database can have multiple tables, each table can have multiple rows.

5. MariaDB client's prompt displays the current database which is being used. Like
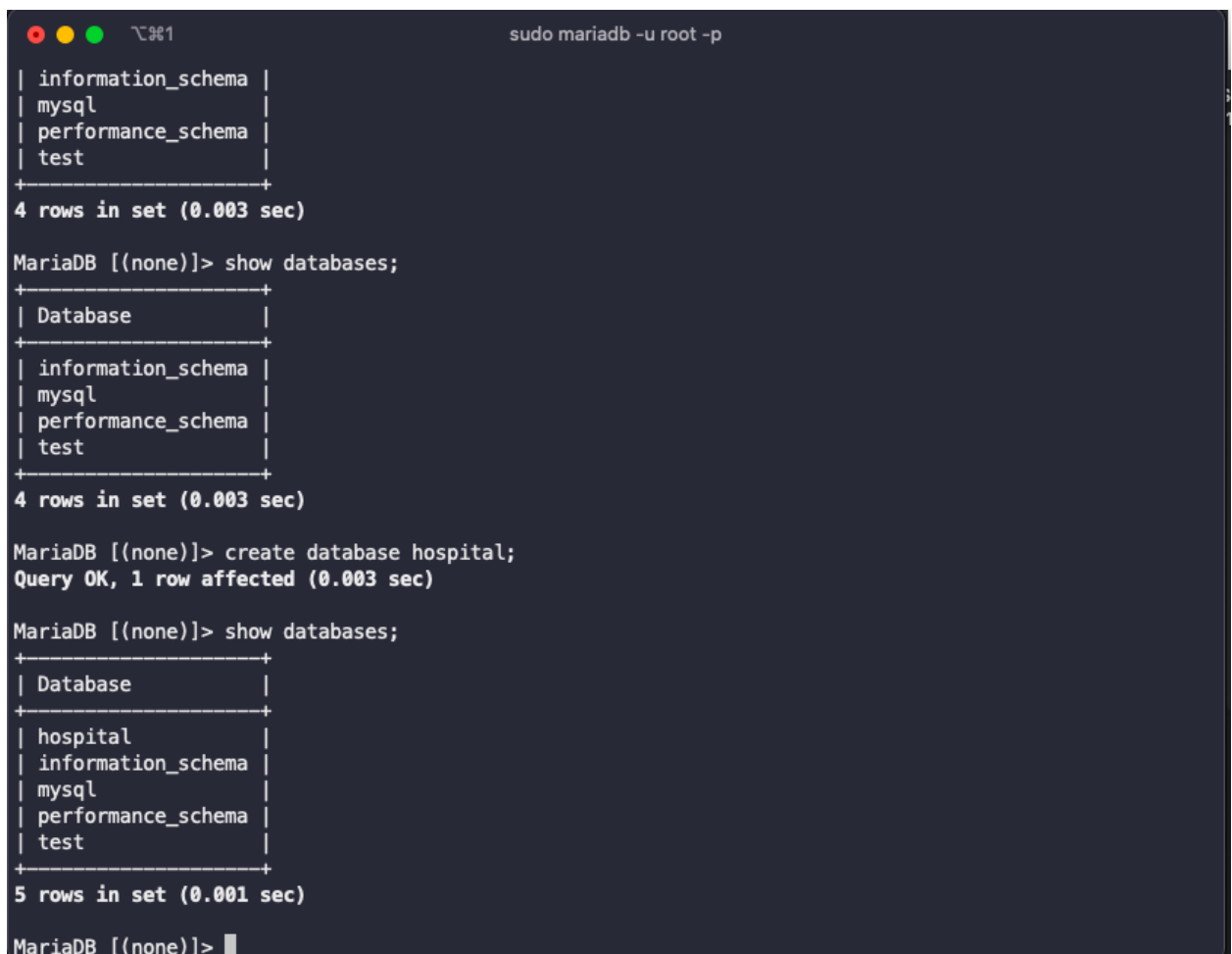
   `MariaDB [information_schema]>`
   `/* above database is information_scheme */`
6. A table with name as `tablename` inside a database with name as `databasename` can be referred as `databasename.tablename`
7. `select` statement can be used to show only certain columns of a table. Like `select Host, User from mysql.User`

C. Creating Database:

1. Create a database hospital

```
create database hospital;
```


2. Create table patients

```sql
use hospital;
create table patients(
   id varchar(255) primary key,
   name varchar(50),
   age int,
   disease_diagnosed varchar(50),
   admit_date datetime,
   discharge_date datetime,
   guardian_name varchar(50),
   guardian_contact varchar(50));
/* id is unique identification of each patient
    name is name of the patient
    age is age of the patient
    disease_diagnosed is disease of the patient
    admit_date is date when the patient admitted in hospital
    discharge_date is date when the patient is discharged
    guardian_name is name of guardian to patient
    guardian_contact is details of guardian of patient */
```

```
| information_schema |
| mysql              |
| performance_schema |
| test               |
+--------------------+
5 rows in set (0.001 sec)

MariaDB [(none)]> use hospital'
ERROR 1049 (42000): Unknown database 'hospital''
MariaDB [(none)]> use hospital;
Database changed
MariaDB [hospital]> show tables;
Empty set (0.001 sec)

MariaDB [hospital]> create table patients(
    -> id varchar(255) primary key,
    -> name varchar(50),
    -> age int,
    -> disease_diagnosed varchar(50),
    -> admit_date datetime,
    -> discharge_date datetime,
    -> guardian_name varchar(50),
    -> guardian_contact varchar(50));
Query OK, 0 rows affected (0.061 sec)

MariaDB [hospital]> show tables;
+--------------------+
| Tables_in_hospital |
+--------------------+
| patients           |
+--------------------+
1 row in set (0.003 sec)

MariaDB [hospital]>
```

3. Create table payments

```
use hospital;
create table payments(
  id varchar(255) primary key,
  patient_id varchar(255),
  bill_paid float,
  bill_due float,
  foreign key (patient_id) references patients(id));
/* id is unique identification of each payment
   patient_id is id from patients table-
   each patient has multiple payments
   bill_paid is bill paid corresponding to the payment
   bill_due is bill due corresponding to the payment */
```

```
  -> disease_diagnosed varchar(50),
  -> admit_date datetime,
  -> discharge_date datetime,
  -> guardian_name varchar(50),
  -> guardian_contact varchar(50));
Query OK, 0 rows affected (0.061 sec)

MariaDB [hospital]> show tables;
+---------------------+
| Tables_in_hospital |
+---------------------+
| patients           |
+---------------------+
1 row in set (0.003 sec)

MariaDB [hospital]> create table payments(
  -> id varchar(255) primary key,
  -> patient_id varchar(255),
  -> bill_paid float,
  -> bill_due float,
  -> bill_total float,
  -> foreign key (patient_id) references patients(id));
Query OK, 0 rows affected (0.053 sec)

MariaDB [hospital]> show tables;
+---------------------+
| Tables_in_hospital |
+---------------------+
| patients           |
| payments           |
+---------------------+
2 rows in set (0.000 sec)

MariaDB [hospital]>
```

4. Create table doctors

```
use hospital;
create table doctors(
  id varchar(255) primary key,
  patient_id varchar(255),
  field varchar(50),
  diagnosis varchar(50),
  salary float,
  foreign key (patient_id) references patients(id));
/* id is unique identification of each doctors
   patient_id is id from patients table-
   each patient has multiple doctors assigned for treatment
   field is the field in which doctor is expertise
   diagnosis is the diagnosis prescribed by doctor to-
```

patient with id as patient_id
salary is the payment that doctor received for treating-
the patient with id as patient_id
*/

```
-> bill_due float,
-> bill_total float,
-> foreign key (patient_id) references patients(id));
Query OK, 0 rows affected (0.053 sec)

MariaDB [hospital]> show tables;
+---------------------+
| Tables_in_hospital |
+---------------------+
| patients            |
| payments            |
+---------------------+
2 rows in set (0.000 sec)

MariaDB [hospital]> create table doctors(
-> id varchar(255) primary key,
-> patient_id varchar(255),
-> field varchar(50),
-> diagnosis varchar(50),
-> salary float,
-> foreign key (patient_id) references patients(id));
Query OK, 0 rows affected (0.034 sec)

MariaDB [hospital]> show tables;
+---------------------+
| Tables_in_hospital |
+---------------------+
| doctors             |
| patients            |
| payments            |
+---------------------+
3 rows in set (0.001 sec)

MariaDB [hospital]>
```