1)show databases;
(This command shows all the existing databases that are present in the server)

```
[MariaDB [(none)]> show databases;
+--------------------+
|  Database          |
+--------------------+
|  information_schema |
|  mysql             |
|  performance_schema |
|  phpmyadmin        |
|  test              |
+--------------------+
```

2) create database **shabab_cse370_spring23**;
(This command creates our very own database. The letters in bold is basically the given name of our newly created database.)

```
[MariaDB [(none)]> create database shabab_cse370_spring23
[    -> ;
Query OK, 1 row affected (0.017 sec)

[MariaDB [(none)]> show databases;
+-----------------------+
| Database              |
+-----------------------+
| information_schema    |
| mysql                 |
| performance_schema    |
| phpmyadmin            |
| shabab_cse370_spring23 |
| test                  |
+-----------------------+
6 rows in set (0.008 sec)
```

3)use **shabab_cse370_spring23**;
(This command lets us make any sort of manipulation to our very own database. The
letters in bold is the name of our database)

```
[MariaDB [(none)]> use shabab_cse370_spring23;
 Database changed
```

4)Now, lets create a lab_grades table where the attributes will be student_id, name,
major, section etc. These will be the columns of the table where each row will consist
information about one student regarding these attributes.
Each attribute has a predefined data type.

create table **lab_grades**
```
    -> (
    -> student_id char(4),
    -> name varchar(30),
    -> major char(3),
    -> section char(1),
    -> days_present int,
    -> project_marks double,
    -> cgpa decimal(3,2),
    -> submission_date date
    -> );
```

```
[MariaDB [shabab_cse370_spring23]> create table lab_grades
[    -> (
[    -> student_id char(4),
[    -> name varchar(30),
[    -> major char(3),
[    -> section char(1),
[    -> days_present int,
[    -> project_marks double,
[    -> cgpa decimal(3,2),
[    -> submission_date date
[    -> );
 Query OK, 0 rows affected (0.590 sec)
```
We can have many tables in the database.

5)show tables;
(These command lets us see all the tables present in our the database)

```
[MariaDB [shabab_cse370_spring23]> show tables;
+--------------------------------+
| Tables_in_shabab_cse370_spring23 |
+--------------------------------+
| lab_grades                     |
+--------------------------------+
1 row in set (0.103 sec)
```

(Lets check the structure of our table that we just created.)

describe **lab_grades**;

```
[MariaDB [shabab_cse370_spring23]> describe lab_grades;
+-----------------+--------------+------+-----+---------+-------+
| Field           | Type         | Null | Key | Default | Extra |
+-----------------+--------------+------+-----+---------+-------+
| student_id      | char(4)      | YES  |     | NULL    |       |
| name            | varchar(30)  | YES  |     | NULL    |       |
| major           | char(3)      | YES  |     | NULL    |       |
| section         | char(1)      | YES  |     | NULL    |       |
| days_present    | int(11)      | YES  |     | NULL    |       |
| project_marks   | double       | YES  |     | NULL    |       |
| cgpa            | decimal(3,2) | YES  |     | NULL    |       |
| submission_date | date         | YES  |     | NULL    |       |
+-----------------+--------------+------+-----+---------+-------+
8 rows in set (0.160 sec)
```

6)
(Now, lets populate the table with datas. There are two ways of doing that. A long version and a shorter one.)

(Long version)
insert into lab_grades (student_id, name, major, section, days_present, project_marks, cgpa, submission_date) values ('soo1', 'Abir', 'CS', '1', 10, 18.5, 3.91, '2018-09-16');

```
MariaDB [shabab_cse370_spring23]> insert into lab_grades (student_id, name, majo
r, section, days_present, project_marks, cgpa, submission_date) values ('soo1',
'Abir', 'CS', '1', 10, 18.5, 3.91, '2018-09-16');
Query OK, 1 row affected (0.094 sec)

MariaDB [shabab_cse370_spring23]> select * from lab_grades;
+------------+------+-------+---------+--------------+---------------+------+-----------------+
| student_id | name | major | section | days_present | project_marks | cgpa | submission_date |
+------------+------+-------+---------+--------------+---------------+------+-----------------+
| soo1       | Abir | CS    | 1       |           10 |          18.5 | 3.91 | 2018-09-16      |
+------------+------+-------+---------+--------------+---------------+------+-----------------+
1 row in set (0.034 sec)
```

(Shorter one!)
insert into lab_grades values ('s019', 'Naima', 'CSE', '2', 12, 20, 3.7, '2018-08-14');

```
MariaDB [shabab_cse370_spring23]> insert into lab_grades values ('s019', 'Naima', 'CSE', '2', 12, 20, 3.7, '2018-08-14');
Query OK, 1 row affected (0.039 sec)

MariaDB [shabab_cse370_spring23]> select * from lab_grades;
+------------+-------+-------+---------+--------------+---------------+------+-----------------+
| student_id | name  | major | section | days_present | project_marks | cgpa | submission_date |
+------------+-------+-------+---------+--------------+---------------+------+-----------------+
| soo1       | Abir  | CS    | 1       |           10 |          18.5 | 3.91 | 2018-09-16      |
| s019       | Naima | CSE   | 2       |           12 |            20 | 3.70 | 2018-08-14      |
+------------+-------+-------+---------+--------------+---------------+------+-----------------+
2 rows in set (0.003 sec)
```

insert into lab_grades values
    -> ('s002', 'Nafis', 'CSE', '1', 12, 20, 3.86, '2018-08-15'),
    -> ('s003', 'Tasneem', 'CS', '1', 8, 18, 3.57, '2018-09-18')
    -> ;

```
MariaDB [shabab_cse370_spring23]> insert into lab_grades values
    -> ('s002', 'Nafis', 'CSE', '1', 12, 20, 3.86, '2018-08-15'),
    -> ('s003', 'Tasneem', 'CS', '1', 8, 18, 3.57, '2018-09-18')
    -> ;
Query OK, 2 rows affected (0.023 sec)
Records: 2  Duplicates: 0  Warnings: 0

MariaDB [shabab_cse370_spring23]> select * from lab_grades;
+------------+---------+-------+---------+--------------+---------------+------+-----------------+
| student_id | name    | major | section | days_present | project_marks | cgpa | submission_date |
+------------+---------+-------+---------+--------------+---------------+------+-----------------+
| soo1       | Abir    | CS    | 1       |           10 |          18.5 | 3.91 | 2018-09-16      |
| s019       | Naima   | CSE   | 2       |           12 |            20 | 3.70 | 2018-08-14      |
| s002       | Nafis   | CSE   | 1       |           12 |            20 | 3.86 | 2018-08-15      |
| s003       | Tasneem | CS    | 1       |            8 |            18 | 3.57 | 2018-09-18      |
+------------+---------+-------+---------+--------------+---------------+------+-----------------+
4 rows in set (0.004 sec)
```

insert into lab_grades values
    -> ('s004', 'Nahid', 'ECE', '2', 7, 16.5, 3.25, '2018-08-20'),
    -> ('s005', 'Arafat', 'CS', '2', 11, 20, 4.0, '2018-09-13'),
    -> ('s006', 'Tasneem', 'CSE', '1', 12, 17.5, 3.7, '2018-08-15'),
    -> ('s007', 'Muhtadi', 'ECE',
    -> '1', 10, 9, 3.67, '2018-09-16'),
    -> ('s008', 'Farhana', 'CSE', '2', 6, 15, 2.67, '2018-08-16');

```
[MariaDB [shabab_cse370_spring23]> insert into lab_grades values
[    -> ('s004', 'Nahid', 'ECE', '2', 7, 16.5, 3.25, '2018-08-20'),
[    -> ('s005', 'Arafat', 'CS', '2', 11, 20, 4.0, '2018-09-13'),
[    -> ('s006', 'Tasneem', 'CSE', '1', 12, 17.5, 3.7, '2018-08-15'),
[    -> ('s007', 'Muhtadi', 'ECE',
[    -> '1', 10, 9, 3.67, '2018-09-16'),
[    -> ('s008', 'Farhana', 'CSE', '2', 6, 15, 2.67, '2018-08-16');
Query OK, 5 rows affected (0.014 sec)
Records: 5  Duplicates: 0  Warnings: 0

[MariaDB [shabab_cse370_spring23]> select * from lab_grades;
+------------+---------+--------+---------+--------------+---------------+------+-----------------+
| student_id | name    | major  | section | days_present | project_marks | cgpa | submission_date |
+------------+---------+--------+---------+--------------+---------------+------+-----------------+
| soo1       | Abir    | CS     | 1       |           10 |          18.5 | 3.91 | 2018-09-16      |
| s019       | Naima   | CSE    | 2       |           12 |            20 | 3.70 | 2018-08-14      |
| s002       | Nafis   | CSE    | 1       |           12 |            20 | 3.86 | 2018-08-15      |
| s003       | Tasneem | CS     | 1       |            8 |            18 | 3.57 | 2018-09-18      |
| s004       | Nahid   | ECE    | 2       |            7 |          16.5 | 3.25 | 2018-08-20      |
| s005       | Arafat  | CS     | 2       |           11 |            20 | 4.00 | 2018-09-13      |
| s006       | Tasneem | CSE    | 1       |           12 |          17.5 | 3.70 | 2018-08-15      |
| s007       | Muhtadi | ECE    | 1       |           10 |             9 | 3.67 | 2018-09-16      |
| s008       | Farhana | CSE    | 2       |            6 |            15 | 2.67 | 2018-08-16      |
+------------+---------+--------+---------+--------------+---------------+------+-----------------+
9 rows in set (0.000 sec)
```

7)select * from **lab_grades;**
(This command is used to see all the data that we have inserted/present in the table.)

```
[MariaDB [shabab_cse370_spring23]> select * from lab_grades;
+------------+---------+--------+---------+--------------+---------------+------+-----------------+
| student_id | name    | major  | section | days_present | project_marks | cgpa | submission_date |
+------------+---------+--------+---------+--------------+---------------+------+-----------------+
| soo1       | Abir    | CS     | 1       |           10 |          18.5 | 3.91 | 2018-09-16      |
| s019       | Naima   | CSE    | 2       |           12 |            20 | 3.70 | 2018-08-14      |
| s002       | Nafis   | CSE    | 1       |           12 |            20 | 3.86 | 2018-08-15      |
| s003       | Tasneem | CS     | 1       |            8 |            18 | 3.57 | 2018-09-18      |
| s004       | Nahid   | ECE    | 2       |            7 |          16.5 | 3.25 | 2018-08-20      |
| s005       | Arafat  | CS     | 2       |           11 |            20 | 4.00 | 2018-09-13      |
| s006       | Tasneem | CSE    | 1       |           12 |          17.5 | 3.70 | 2018-08-15      |
| s007       | Muhtadi | ECE    | 1       |           10 |             9 | 3.67 | 2018-09-16      |
| s008       | Farhana | CSE    | 2       |            6 |            15 | 2.67 | 2018-08-16      |
+------------+---------+--------+---------+--------------+---------------+------+-----------------+
9 rows in set (0.010 sec)
```