

Login to MariaDB

```
ca. mysql -u root -p

Setting environment for using XAMPP for Windows.
Stephen@STEPHEN-PC c:\xampp
# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 9
Server version: 10.4.24-MariaDB mariadb.org binary distribution

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

1. Create database:

```
MariaDB [(none)]> create database Test_Student;
Query OK, 1 row affected (0.001 sec)

MariaDB [(none)]> show databases;
+-----+
| Database |
+-----+
| cse370_lab |
| forcheck |
| information_schema |
| mysql |
| performance_schema |
| phpmyadmin |
| test |
| test_student |
+-----+
8 rows in set (0.001 sec)
```

2. Creation of table:

```
MariaDB [(none)]> use test_Student;
Database changed
MariaDB [test_Student]> create table student(
    -> Student_ID char(3),
    -> Stu_Name char(10),
    -> Stu_Subject_ID char(6),
    -> Stu_Marks int,
    -> Stu_Age int);
Query OK, 0 rows affected (0.354 sec)
```

Description of Table student:

```
MariaDB [test_Student]> describe student;
+-----+-----+-----+-----+-----+-----+
| Field          | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Student_ID     | char(3)   | YES  |     | NULL    |       |
| Stu_Name       | char(10)  | YES  |     | NULL    |       |
| Stu_Subject_ID | char(6)   | YES  |     | NULL    |       |
| Stu_Marks      | int(11)   | YES  |     | NULL    |       |
| Stu_Age        | int(11)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.005 sec)
```

Changing the data-type for Student_Name:

```
MariaDB [test_Student]> ALTER table student
-> modify Stu_Name varchar(10);
Query OK, 1 row affected (0.743 sec)
Records: 1 Duplicates: 0 Warnings: 0

MariaDB [test_Student]> describe student;
+-----+-----+-----+-----+-----+-----+
| Field          | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Student_ID     | char(3)   | YES  |     | NULL    |       |
| Stu_Name       | varchar(10)| YES  |     | NULL    |       |
| Stu_Subject_ID | char(6)   | YES  |     | NULL    |       |
| Stu_Marks      | int(11)   | YES  |     | NULL    |       |
| Stu_Age        | int(11)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.005 sec)
```

3. Insertion into table:

```
MariaDB [test_Student]> insert into student values
-> ('101','Akhil','BCA101',85,20),
-> ('102','Balram','BCA104',78,19),
-> ('103','Bheem','BCA102',80,22),
-> ('104','Chetan','BCA103',95,20),
-> ('105','Diksha','BCA104',99,20),
-> ('106','Raman','BCA105',88,19),
-> ('107','Sheetal','BCA103',98,22);
Query OK, 7 rows affected (0.035 sec)
Records: 7 Duplicates: 0 Warnings: 0
```

Display of all data from student table:

```
MariaDB [test_Student]> select * from student;
```

Student_ID	Stu_Name	Stu_Subject_ID	Stu_Marks	Stu_Age
101	Akhil	BCA101	85	20
102	Balram	BCA104	78	19
103	Bheem	BCA102	80	22
104	Chetan	BCA103	95	20
105	Diksha	BCA104	99	20
106	Raman	BCA105	88	19
107	Sheetal	BCA103	98	22

```
7 rows in set (0.001 sec)
```

4. View the specific record (Age=20):

```
MariaDB [test_Student]> select * from student where stu_age=20;
```

Student_ID	Stu_Name	Stu_Subject_ID	Stu_Marks	Stu_Age
101	Akhil	BCA101	85	20
104	Chetan	BCA103	95	20
105	Diksha	BCA104	99	20

```
3 rows in set (0.037 sec)
```

5. View the specific record (marks>90):

```
MariaDB [test_Student]> select * from student where stu_marks>90;
```

Student_ID	Stu_Name	Stu_Subject_ID	Stu_Marks	Stu_Age
104	Chetan	BCA103	95	20
105	Diksha	BCA104	99	20
107	Sheetal	BCA103	98	22

```
3 rows in set (0.017 sec)
```

6. Minimum and maximum number:

```
MariaDB [test_Student]> select min(Stu_Marks) from student;
+-----+
| min(Stu_Marks) |
+-----+
|          78 |
+-----+
1 row in set (0.036 sec)
```

```
MariaDB [test_Student]> select max(Stu_Marks) from student;
+-----+
| max(Stu_Marks) |
+-----+
|          99 |
+-----+
1 row in set (0.001 sec)
```

7. Access the record of the 2nd last row:

```
MariaDB [test_Student]> select * from student order by Student_ID DESC LIMIT 1,1;
+-----+-----+-----+-----+-----+
| Student_ID | Stu_Name | Stu_Subject_ID | Stu_Marks | Stu_Age |
+-----+-----+-----+-----+-----+
| 106        | Raman    | BCA105         | 88        | 19      |
+-----+-----+-----+-----+-----+
1 row in set (0.024 sec)
```

8. Retrieve only even rows from the table:

```
MariaDB [test_Student]> select * from student where Student_ID % 2 = 0;
+-----+-----+-----+-----+-----+
| Student_ID | Stu_Name | Stu_Subject_ID | Stu_Marks | Stu_Age |
+-----+-----+-----+-----+-----+
| 102        | Balram   | BCA104         | 78        | 19      |
| 104        | Chetan   | BCA103         | 95        | 20      |
| 106        | Raman    | BCA105         | 88        | 19      |
+-----+-----+-----+-----+-----+
3 rows in set (0.009 sec)
```

9. Retrieve only an odd number of rows from the table:

```
MariaDB [test_Student]> select * from student where Student_ID % 2 != 0;
+-----+-----+-----+-----+-----+
| Student_ID | Stu_Name | Stu_Subject_ID | Stu_Marks | Stu_Age |
+-----+-----+-----+-----+-----+
| 101        | Akhil    | BCA101         | 85        | 20      |
| 103        | Bheem    | BCA102         | 80        | 22      |
| 105        | Diksha   | BCA104         | 99        | 20      |
| 107        | Sheetal  | BCA103         | 98        | 22      |
+-----+-----+-----+-----+-----+
4 rows in set (0.015 sec)
```

10. a) New row named date:

```
MariaDB [test_Student]> alter table student
-> add dates date;
Query OK, 0 rows affected (0.133 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

b) Add random dates in every row:

```
MariaDB [test_Student]> update student set dates= date_sub(curdate(), interval rand()*365 day);
Query OK, 7 rows affected (0.129 sec)
Rows matched: 7 Changed: 7 Warnings: 0
```

Final Table:

```
MariaDB [test_Student]> select * from student;
+-----+-----+-----+-----+-----+-----+
| Student_ID | Stu_Name | Stu_Subject_ID | Stu_Marks | Stu_Age | dates          |
+-----+-----+-----+-----+-----+-----+
| 101        | Akhil    | BCA101         | 85        | 20      | 2021-09-07     |
| 102        | Balram   | BCA104         | 78        | 19      | 2022-01-10     |
| 103        | Bheem    | BCA102         | 80        | 22      | 2022-06-18     |
| 104        | Chetan   | BCA103         | 95        | 20      | 2021-08-17     |
| 105        | Diksha   | BCA104         | 99        | 20      | 2022-02-15     |
| 106        | Raman    | BCA105         | 88        | 19      | 2022-02-17     |
| 107        | Sheetal  | BCA103         | 98        | 22      | 2021-09-02     |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.001 sec)
```

Thank you