LAB02: DDL Commands

Data manipulation language (DML) statements access and manipulate data in existing schema objects. These are used for managing data within schema objects.

SELECT - retrieve data from the database.

Syntax:

SELECT column01,column02,… FROM table-name

WHERE condition;

INSERT - insert data into a table.

Syntax:

INSERT into table-name(column01,column2,…) values(data1,data2,..);

UPDATE - updates existing data within a table.

Syntax:

UPDATE table-name SET Column-name=value WHERE condition;

DELETE - deletes all records from a table, the space for the records remain.

Syntax:

DELETE FROM table-name WHERE condition

```
C:\xampp\mysql\bin>mysql -u root -p -h 127.0.0.1

Enter password:


MariaDB [(none)]> show databases;

+--------------------+

| Database           |

+--------------------+

0 rows in set (0.001 sec)


MariaDB [(none)]> create database music_playlist;

Query OK, 1 row affected (0.007 sec)


MariaDB [(none)]> show databases;

+--------------------+

| Database           |

+--------------------+

| music_playlist     |

+--------------------+

1 rows in set (0.001 sec)


MariaDB [(none)]> use music_playlist;

Database changed
```

```
MariaDB [music_playlist]> show tables;

Empty set (0.001 sec)


MariaDB [music_playlist]> create table music(id int(11) auto_increment not null
primary key,name varchar(25) not null,artist varchar(25) not null,album
varchar(25) not null,genre varchar(25) not null,year int(11) not null);

Query OK, 0 rows affected (0.021 sec)


MariaDB [music_playlist]> show tables;

+-------------------------+
| Tables_in_music_playlist |
+-------------------------+
| music                   |
+-------------------------+
1 row in set (0.000 sec)


MariaDB [music_playlist]> describe music;

+--------+-------------+------+-----+---------+----------------+
| Field  | Type        | Null | Key | Default | Extra          |
+--------+-------------+------+-----+---------+----------------+
| id     | int(11)     | NO   | PRI | NULL    | auto_increment |
| name   | varchar(25) | NO   |     | NULL    |                |
| artist | varchar(25) | NO   |     | NULL    |                |
| album  | varchar(25) | NO   |     | NULL    |                |
| genre  | varchar(25) | NO   |     | NULL    |                |
```

```
| year   | int(11)    | NO  |     | NULL    |                |
+--------+------------+------+-----+---------+----------------+
6 rows in set (0.016 sec)


MariaDB [music_playlist]> select * from music;
Empty set (0.000 sec)


MariaDB [music_playlist]> insert into music(name,artist,album,genre,year)
values('Crooked Smile','J Cole','Born Sinner','HipHop','2012');
Query OK, 1 row affected (0.003 sec)


MariaDB [music_playlist]> select * from music;
+----+--------------+--------+-------------+--------+------+
| id | name         | artist | album       | genre  | year |
+----+--------------+--------+-------------+--------+------+
|  1 | Crooked Smile | J Cole | Born Sinner | HipHop | 2012 |
+----+--------------+--------+-------------+--------+------+
1 row in set (0.000 sec)


MariaDB [music_playlist]> insert into music(name,artist,album,genre,year)
   -> values('Power Trip','J Cole','Born Sinner','HipHop','2012');
Query OK, 1 row affected (0.003 sec)


MariaDB [music_playlist]> select * from music;
+----+--------------+--------+-------------+--------+------+
```

```
| id | name         | artist | album       | genre  | year |
+----+--------------+--------+-------------+--------+------+
|  1 | Crooked Smile | J Cole | Born Sinner | HipHop | 2012 |
|  2 | Power Trip    | J Cole | Born Sinner | HipHop | 2012 |
+----+--------------+--------+-------------+--------+------+
2 rows in set (0.000 sec)


MariaDB [music_playlist]> insert into music(name,artist,album,genre,year)
    -> values('already','Kemba','Negus','HipHop','2016')
    -> ;
Query OK, 1 row affected (0.002 sec)


MariaDB [music_playlist]> select * from music;
+----+--------------+--------+-------------+--------+------+
| id | name         | artist | album       | genre  | year |
+----+--------------+--------+-------------+--------+------+
|  1 | Crooked Smile | J Cole | Born Sinner | HipHop | 2012 |
|  2 | Power Trip    | J Cole | Born Sinner | HipHop | 2012 |
|  3 | already       | Kemba  | Negus       | HipHop | 2016 |
+----+--------------+--------+-------------+--------+------+
3 rows in set (0.000 sec)


MariaDB [music_playlist]> update music
    -> set name='Already'
```

```
    -> where id=3;

Query OK, 1 row affected (0.002 sec)

Rows matched: 1  Changed: 1  Warnings: 0


MariaDB [music_playlist]> select * from music;

+----+--------------+--------+-------------+--------+------+
| id | name         | artist | album       | genre  | year |
+----+--------------+--------+-------------+--------+------+
|  1 | Crooked Smile | J Cole | Born Sinner | HipHop | 2012 |
|  2 | Power Trip    | J Cole | Born Sinner | HipHop | 2012 |
|  3 | Already       | Kemba  | Negus       | HipHop | 2016 |
+----+--------------+--------+-------------+--------+------+
3 rows in set (0.000 sec)


Microsoft Windows [Version 10.0.19041.630]

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C:\xampp\mysql\bin>mysql -u root -p -h 127.0.0.1

Enter password:

Welcome to the MariaDB monitor.  Commands end with ; or \g.

Your MariaDB connection id is 8

Server version: 10.4.16-MariaDB mariadb.org binary distribution


Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.
```
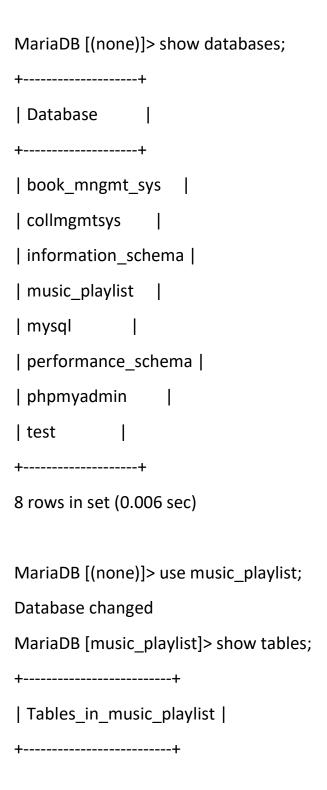
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> show databases;

```
+--------------------+
| Database           |
+--------------------+
| book_mngmt_sys     |
| collmgmtsys        |
| information_schema |
| music_playlist     |
| mysql              |
| performance_schema |
| phpmyadmin         |
| test               |
+--------------------+
8 rows in set (0.006 sec)
```

MariaDB [(none)]> use music_playlist;

Database changed

MariaDB [music_playlist]> show tables;

```
+-------------------------+
| Tables_in_music_playlist |
+-------------------------+
```

```
| music                  |

+------------------------+

1 row in set (0.002 sec)


MariaDB [music_playlist]> select * from music;

+----+---------------+--------+-------------+--------+------+

| id | name          | artist | album       | genre  | year |

+----+---------------+--------+-------------+--------+------+

|  1 | Crooked Smile | J Cole | Born Sinner | HipHop | 2012 |

|  2 | Power Trip    | J Cole | Born Sinner | HipHop | 2012 |

|  3 | Already       | Kemba  | Negus       | HipHop | 2016 |

+----+---------------+--------+-------------+--------+------+

3 rows in set (0.018 sec)


MariaDB [music_playlist]> insert into music(name,artist,album,genre,year)

   -> values('Mirrors','Justin Timberlake','2020 Experience','Pop','2013');

Query OK, 1 row affected (0.006 sec)


MariaDB [music_playlist]> insert into music(name,artist,album,genre,year)

   -> values('HUMBLE','Kendrick Lamar','DAMN','HipHop','2017');

Query OK, 1 row affected (0.004 sec)


MariaDB [music_playlist]> select * from music;

+----+---------------+-----------------+----------------+--------+------+
```

```
| id | name          | artist           | album           | genre  | year |
+----+---------------+------------------+-----------------+--------+------+
|  1 | Crooked Smile | J Cole           | Born Sinner     | HipHop | 2012 |
|  2 | Power Trip    | J Cole           | Born Sinner     | HipHop | 2012 |
|  3 | Already       | Kemba            | Negus           | HipHop | 2016 |
|  4 | Mirrors       | Justin Timberlake | 2020 Experience | Pop    | 2013 |
|  5 | HUMBLE        | Kendrick Lamar   | DAMN            | HipHop | 2017 |
+----+---------------+------------------+-----------------+--------+------+
5 rows in set (0.000 sec)
```

MariaDB [music_playlist]> select name from music;

```
+---------------+
| name          |
+---------------+
| Crooked Smile |
| Power Trip    |
| Already       |
| Mirrors       |
| HUMBLE        |
+---------------+
5 rows in set (0.000 sec)
```

MariaDB [music_playlist]> select artist from music;

```
+-------------------+
```

```
| artist            |
+-------------------+
| J Cole            |
| J Cole            |
| Kemba             |
| Justin Timberlake |
| Kendrick Lamar    |
+-------------------+
5 rows in set (0.000 sec)


MariaDB [music_playlist]> select artist from music
    -> where album='HipHop';
Empty set (0.004 sec)


MariaDB [music_playlist]> select name from music
    -> where genre='HipHop';
+---------------+
| name          |
+---------------+
| Crooked Smile |
| Power Trip    |
| Already       |
| HUMBLE        |
+---------------+
```

4 rows in set (0.000 sec)

MariaDB [music_playlist]> delete from music

   -> where name='Power Trip';

Query OK, 1 row affected (0.004 sec)

MariaDB [music_playlist]> select * from music;

```
+----+--------------+------------------+----------------+--------+------+
| id | name         | artist           | album          | genre  | year |
+----+--------------+------------------+----------------+--------+------+
|  1 | Crooked Smile | J Cole          | Born Sinner    | HipHop | 2012 |
|  3 | Already      | Kemba            | Negus          | HipHop | 2016 |
|  4 | Mirrors      | Justin Timberlake | 2020 Experience | Pop   | 2013 |
|  5 | HUMBLE       | Kendrick Lamar   | DAMN           | HipHop | 2017 |
+----+--------------+------------------+----------------+--------+------+
```

4 rows in set (0.000 sec)

MariaDB [music_playlist]> insert into music(name,artist,album,genre,year)

   -> values('Sweet Child Of Mine','Guns N Roses','Appetite for Destruction','Classic Rock','1987');

Query OK, 1 row affected (0.003 sec)

MariaDB [music_playlist]> select * from music;

```
+----+--------------------+------------------+------------------------+--------------+------+
| id | name               | artist           | album                  | genre        | year |
```

```
+----+-------------------+------------------+------------------------+--------------+------+
|  1 | Crooked Smile     | J Cole           | Born Sinner            | HipHop       | 2012 |
|  3 | Already           | Kemba            | Negus                  | HipHop       | 2016 |
|  4 | Mirrors           | Justin Timberlake | 2020 Experience       | Pop          | 2013 |
|  5 | HUMBLE            | Kendrick Lamar   | DAMN                   | HipHop       | 2017 |
|  6 | Sweet Child Of Mine | Guns N Roses   | Appetite for Destruction | Classic Rock | 1987 |
+----+-------------------+------------------+------------------------+--------------+------+
5 rows in set (0.000 sec)
```

MariaDB [music_playlist]> update music

   -> set artist='Guns & Roses'

   -> where id=6;

Query OK, 1 row affected (0.005 sec)

Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [music_playlist]> select * from music;

```
+----+-------------------+------------------+------------------------+--------------+------+
| id | name              | artist           | album                  | genre        | year |
+----+-------------------+------------------+------------------------+--------------+------+
|  1 | Crooked Smile     | J Cole           | Born Sinner            | HipHop       | 2012 |
|  3 | Already           | Kemba            | Negus                  | HipHop       | 2016 |
|  4 | Mirrors           | Justin Timberlake | 2020 Experience       | Pop          | 2013 |
```

| 5 | HUMBLE | Kendrick Lamar | DAMN | HipHop | 2017 |

| 6 | Sweet Child Of Mine | Guns & Roses | Appetite for Destruction | Classic Rock | 1987 |

+----+--------------------+------------------+------------------------+--------------+------+

5 rows in set (0.000 sec)

MariaDB [music_playlist]> update music

    -> set id='2';

ERROR 1062 (23000): Duplicate entry '2' for key 'PRIMARY'

MariaDB [music_playlist]> delete from music;

Query OK, 5 rows affected (0.009 sec)

MariaDB [music_playlist]> show tables;

+-------------------------+

| Tables_in_music_playlist |

+-------------------------+

| music |

+-------------------------+

1 row in set (0.001 sec)

MariaDB [music_playlist]> select * from music;

Empty set (0.000 sec)

MariaDB [music_playlist]>exit;