

CISC 3810 Section TR9 MariaDB Commands – Part I

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1 Version Number?

MariaDB is actively maintained software that evolves. There is a need to figure out the version of the software you are using, e.g., to answer question like which version of the documentation to read. To figure out the version of the MariaDB you are using, issue command `SELECT VERSION()`, e.g.,

```
MariaDB [(none)]> SELECT VERSION();
+-----+
| VERSION()          |
+-----+
| 10.6.21-MariaDB   |
+-----+
1 row in set (0.001 sec)

MariaDB [(none)]>
```

2 Backing up Database

To back up the database schema and the data inserted, use the `mysqldump` command. For example, assume the database is `ex_db`, the MariaDB username is `bcuser`, the host running MariaDB is `127.0.0.1`,

```
mysqldump -h 127.0.0.1 -u bcuser ex_db -p > db_hw1.sql
```

which backs up the schema and the data into the text file `db_hw1.sql`.

If you set up the `.my.cnf` configuration file and wish to name the dumped SQL script after the timestamp, you may:

```
mysqldump ex_db > ex_db_$(date +%Y%m%d%H%M%S).sql
```

where the database is backed up to a SQL script file that we chose to name after the timestamp.

2.1 Reference

<https://mariadb.com/kb/en/mariadb-dumpmysqldump/>

3 Restoring Database

To restore a database that you backed up. Use the `mysql` command.

A good practice is to first list the content of the directory to identify the SQL script file to which the database is backed up:

```
ls
```

then run:

```
mysql -h 127.0.0.1 -u bcuser ex_db -p < db_hw1.sql
```

where we assume the host running MariaDB is 127.0.0.1, the user is `bcuser`, the database is `ex_db`, and the backup file is `db_hw1.sql`

If you have set up the `.my.cnf`, you have a simpler command, e.g.,

```
mysql ex_db < ex_db_20250227091505.sql
```

where we assume the filename is `ex_db_20250227091505.sql`.

3.1 Reference

<https://mariadb.com/kb/en/restoring-data-from-dump-files/>

4 show databases

Lists the databases on the MariaDB server host.

4.1 Example

```
MariaDB [(none)]> show databases;
```

```
+-----+
| Database          |
+-----+
| information_schema |
| db                |
+-----+
2 rows in set (0.00 sec)
```

```
MariaDB [(none)]>
```

4.2 Reference

<https://mariadb.com/kb/en/show-databases/>

5 use db_nme

Tells MariaDB to use the `db_name` database as the default (current) database for subsequent statements.

5.1 Example

```
MariaDB [(none)]> use db
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 [ex_db]>
```

5.2 Reference

<https://mariadb.com/kb/en/use/>

6 SELECT DATABASE()

Show the default (current) database

6.1 Example

```
MariaDB [ex_db]> SELECT DATABASE();
+-----+
| DATABASE() |
+-----+
| ex_db      |
+-----+
1 row in set (0.01 sec)
```

```
MariaDB [ex_db]>
```

7 show tables

Lists the non-TEMPORARY tables, sequences and views in a given database.

7.1 Example

```
MariaDB [ex_db]> show tables;
+-----+
| Tables_in_ex_db |
+-----+
| Courses          |
| Enrollment       |
| Students        |
+-----+
3 rows in set (0.00 sec)
```

```
MariaDB [ex_db]>
```

8 describe tables

Show the schema of a relation or a view.

```
MariaDB [ex_db]> desc Courses;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| title | varchar(255) | YES  |     | NULL    |      |
| idnum | char(5)       | NO   | PRI | NULL    |      |
| hours | int(11)      | YES  |     | NULL    |      |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

```
MariaDB [ex_db]>
```

8.1 Reference

<https://mariadb.com/kb/en/show-tables/>

9 show create table

Shows the CREATE TABLE statement that created the given table.

```
MariaDB [ex_db]> show create table Enrollment;
+-----+-----+-----+-----+-----+-----+
| Table      | Create Table
+-----+-----+-----+-----+-----+-----+
| Enrollment | CREATE TABLE 'Enrollment' (
  'sname' varchar(30) NOT NULL,
  'sphone' char(10) NOT NULL,
  'cnumber' char(4) NOT NULL,
  'since' datetime DEFAULT NULL,
  PRIMARY KEY ('sname', 'sphone', 'cnumber'),
  KEY 'cnumber' ('cnumber'),
  CONSTRAINT 'Enrollment_ibfk_1'
    FOREIGN KEY ('sname', 'sphone') REFERENCES 'Students' ('name', 'phone'),
  CONSTRAINT 'Enrollment_ibfk_2'
    FOREIGN KEY ('cnumber') REFERENCES 'Courses' ('cnumber')
) ENGINE=InnoDB DEFAULT CHARSET=latin1 COLLATE=latin1_swedish_ci
+-----+-----+-----+-----+-----+-----+
1 row in set (0.001 sec)
```

```
MariaDB [ex_db]>
```

where “KEY” in “KEY cnumber (cnumber)” is the synonym for INDEX.

9.1 Reference

1. <https://mariadb.com/kb/en/show-create-table/>
2. <https://mariadb.com/kb/en/foreign-keys/>
3. <https://mariadb.com/kb/en/create-table/>