Hands-on Activity 1.1 : SQL Data Definition Language Commands	
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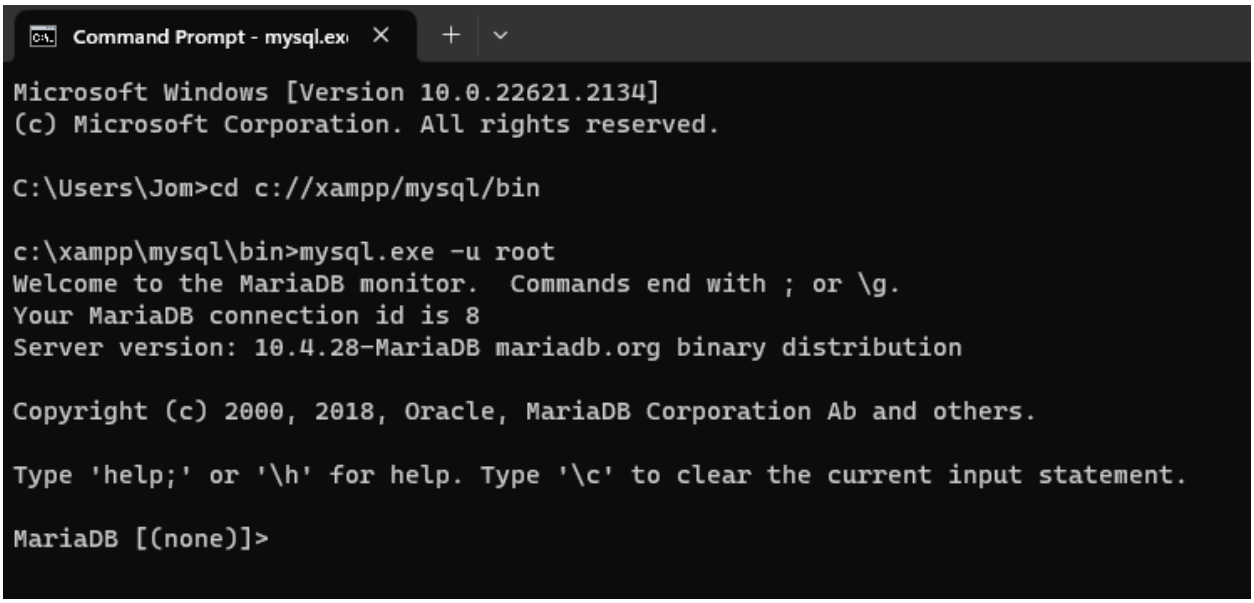
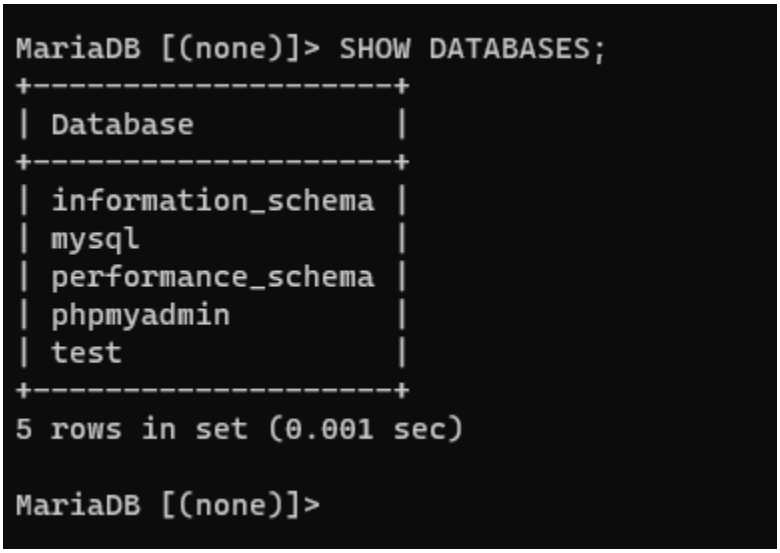


Show databases: (The show databases shows the databases created)



Creating Database “vehiclesdb”: (This part will create a database named “vehiclesdb”)

```
MariaDB [(none)]> CREATE DATABASE vehiclesdb;
Query OK, 1 row affected (0.001 sec)

MariaDB [(none)]> show databases
    -> SHOW DATABASES;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that correspo
on for the right syntax to use near 'SHOW DATABASES' at line 2
MariaDB [(none)]> CREATE DATABASE vehiclesdb;
ERROR 1007 (HY000): Can't create database 'vehiclesdb'; database exists
MariaDB [(none)]> SHOW DATABASES;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| phpmyadmin         |
| test               |
| vehiclesdb         |
+--------------------+
6 rows in set (0.001 sec)

MariaDB [(none)]>
```

Removing database “vehiclesdb”: (The remove data base uses the “DROP” command line)

```
MariaDB [(none)]> DROP DATABASE vehiclesdb;
Query OK, 0 rows affected (0.002 sec)

MariaDB [(none)]> SHOW DATABASES;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| phpmyadmin         |
| test               |
+--------------------+
5 rows in set (0.001 sec)

MariaDB [(none)]>
```

Using a Database: (The “USE” is like a SELECT command line to use the database)

```
MariaDB [(none)]> USE vehiclesdb;
Database changed
MariaDB [vehiclesdb]>
```

Creating another Table: (This part will create another table vehicles)

```
MariaDB [(none)]> USE vehiclesdb;
Database changed
MariaDB [vehiclesdb]> CREATE TABLE vehicles(car_maker CHAR(20), car_model CHAR(20),number_of_doors INT);
Query OK, 0 rows affected (0.007 sec)

MariaDB [vehiclesdb]>
```

Showing the Created Tables: (This part will output the created tables that you make)

```
MariaDB [vehiclesdb]> CREATE TABLE vehicles(car_maker CHAR(20), car_model CHAR(20),number_of_doors INT);
Query OK, 0 rows affected (0.007 sec)

MariaDB [vehiclesdb]> SHOW TABLES;
+---------------------+
| Tables_in_vehiclesdb |
+---------------------+
| vehicles            |
+---------------------+
1 row in set (0.001 sec)
```

Structure of a particular table:

```
MariaDB [vehiclesdb]> DESCRIBE vehicles;
+-----------------+----------+------+-----+---------+-------+
| Field           | Type     | Null | Key | Default | Extra |
+-----------------+----------+------+-----+---------+-------+
| car_maker       | char(20) | YES  |     | NULL    |       |
| car_model       | char(20) | YES  |     | NULL    |       |
| number_of_doors | int(11)  | YES  |     | NULL    |       |
+-----------------+----------+------+-----+---------+-------+
3 rows in set (0.008 sec)
```

Altering the table structure:

- ALTER TABLE vehicles RENAME vehicle; and DESCRIBE vehicle;

```
MariaDB [vehiclesdb]> ALTER TABLE vehicles RENAME vehicle;
Query OK, 0 rows affected (0.008 sec)

MariaDB [vehiclesdb]> DESCRIBE vehicle;
+-----------------+----------+------+-----+---------+-------+
| Field           | Type     | Null | Key | Default | Extra |
+-----------------+----------+------+-----+---------+-------+
| car_maker       | char(20) | YES  |     | NULL    |       |
| car_model       | char(20) | YES  |     | NULL    |       |
| number_of_doors | int(11)  | YES  |     | NULL    |       |
+-----------------+----------+------+-----+---------+-------+
3 rows in set (0.008 sec)
```

- ALTER TABLE vehicle MODIFY number_of_doors INT(2); and DESCRIBE vehicle;

```
MariaDB [vehiclesdb]> ALTER TABLE vehicle MODIFY number_of_doors INT(2);
Query OK, 0 rows affected (0.007 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [vehiclesdb]> DESCRIBE vehicle;
+-----------------+----------+------+-----+---------+-------+
| Field           | Type     | Null | Key | Default | Extra |
+-----------------+----------+------+-----+---------+-------+
| car_maker       | char(20) | YES  |     | NULL    |       |
| car_model       | char(20) | YES  |     | NULL    |       |
| number_of_doors | int(2)   | YES  |     | NULL    |       |
+-----------------+----------+------+-----+---------+-------+
3 rows in set (0.007 sec)
```

- ALTER TABLE vehicle ADD year_model DATE; and DESCRIBE vehicle;

```
MariaDB [vehiclesdb]> ALTER TABLE vehicle ADD year_model DATE;
Query OK, 0 rows affected (0.007 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [vehiclesdb]> DESCRIBE vehicle;
+-----------------+----------+------+-----+---------+-------+
| Field           | Type     | Null | Key | Default | Extra |
+-----------------+----------+------+-----+---------+-------+
| car_maker       | char(20) | YES  |     | NULL    |       |
| car_model       | char(20) | YES  |     | NULL    |       |
| number_of_doors | int(2)   | YES  |     | NULL    |       |
| year_model      | date     | YES  |     | NULL    |       |
+-----------------+----------+------+-----+---------+-------+
4 rows in set (0.008 sec)
```

- ALTER TABLE vehicle CHANGE year_model year_released DATE; , ALTER TABLE vehicle DROP year_model; and DESCRIBE vehicle;

```
MariaDB [vehiclesdb]> ALTER TABLE vehicle CHANGE year_model year_released DATE;
Query OK, 0 rows affected (0.010 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [vehiclesdb]> ALTER TABLE vehicle DROP year_model;
ERROR 1091 (42000): Can't DROP COLUMN `year_model`; check that it exists
MariaDB [vehiclesdb]> DESCRIBE vehicle;
+-----------------+----------+------+-----+---------+-------+
| Field           | Type     | Null | Key | Default | Extra |
+-----------------+----------+------+-----+---------+-------+
| car_maker       | char(20) | YES  |     | NULL    |       |
| car_model       | char(20) | YES  |     | NULL    |       |
| number_of_doors | int(2)   | YES  |     | NULL    |       |
| year_released   | date     | YES  |     | NULL    |       |
+-----------------+----------+------+-----+---------+-------+
4 rows in set (0.008 sec)
```

- ALTER TABLE vehicle RENAME vehicles;

```
MariaDB [vehiclesdb]> ALTER TABLE vehicle RENAME vehicles;
Query OK, 0 rows affected (0.007 sec)

MariaDB [vehiclesdb]>
```

Supplementary Activity:

```
MariaDB [(none)]> CREATE DATABASE driversdb_Belocora;
Query OK, 1 row affected (0.001 sec)

MariaDB [(none)]> SHOW DATABASES;
+--------------------+
| Database           |
+--------------------+
| driversdb_belocora |
| information_schema |
| mysql              |
| performance_schema |
| phpmyadmin         |
| test               |
+--------------------+
6 rows in set (0.001 sec)
```

- Creating the table drivers:

```
MariaDB [(none)]> USE driversdb_Belocora;
Database changed
MariaDB [driversdb_Belocora]> CREATE TABLE drivers(id INT, first_Name CHAR(20), last_Name CHAR(20), age INT, address CHA
R(20), vehicles CHAR(20), years_driving INT, status CHAR(20));
Query OK, 0 rows affected (0.010 sec)
```

- Creating the table vehicles:

```
MariaDB [driversdb_Belocora]> CREATE TABLE vehicles(car_maker CHAR(20), car_model CHAR(20), number_of_doors INT);
Query OK, 0 rows affected (0.008 sec)
```

- Tables created:

```
MariaDB [driversdb_Belocora]> CREATE TABLE vehicles(car_maker CHAR(20), car_model CHAR(20), number_of_doors INT);
Query OK, 0 rows affected (0.008 sec)

MariaDB [driversdb_Belocora]> SHOW TABLES;
+-----------------------------+
| Tables_in_driversdb_belocora |
+-----------------------------+
| drivers                     |
| vehicles                    |
+-----------------------------+
2 rows in set (0.000 sec)
```

- Structures of each tables:

```
MariaDB [driversdb_Belocora]> DESCRIBE drivers;
+---------------+----------+------+-----+---------+-------+
| Field         | Type     | Null | Key | Default | Extra |
+---------------+----------+------+-----+---------+-------+
| id            | int(11)  | YES  |     | NULL    |       |
| first_Name    | char(20) | YES  |     | NULL    |       |
| last_Name     | char(20) | YES  |     | NULL    |       |
| age           | int(11)  | YES  |     | NULL    |       |
| address       | char(20) | YES  |     | NULL    |       |
| vehicles      | char(20) | YES  |     | NULL    |       |
| years_driving | int(11)  | YES  |     | NULL    |       |
| status        | char(20) | YES  |     | NULL    |       |
+---------------+----------+------+-----+---------+-------+
8 rows in set (0.008 sec)
```

```
MariaDB [driversdb_Belocora]> DESCRIBE vehicles;
+-----------------+----------+------+-----+---------+-------+
| Field           | Type     | Null | Key | Default | Extra |
+-----------------+----------+------+-----+---------+-------+
| car_maker       | char(20) | YES  |     | NULL    |       |
| car_model       | char(20) | YES  |     | NULL    |       |
| number_of_doors | int(11)  | YES  |     | NULL    |       |
+-----------------+----------+------+-----+---------+-------+
3 rows in set (0.008 sec)
```

- Adding the Drivers_license into the Field Drivers.

(int)

```
MariaDB [driversdb_Belocora]> DESCRIBE drivers;
+-----------------+----------+------+-----+---------+-------+
| Field           | Type     | Null | Key | Default | Extra |
+-----------------+----------+------+-----+---------+-------+
| id              | int(11)  | YES  |     | NULL    |       |
| first_Name      | char(20) | YES  |     | NULL    |       |
| last_Name       | char(20) | YES  |     | NULL    |       |
| age             | int(11)  | YES  |     | NULL    |       |
| address         | char(20) | YES  |     | NULL    |       |
| vehicles        | char(20) | YES  |     | NULL    |       |
| years_driving   | int(11)  | YES  |     | NULL    |       |
| status          | char(20) | YES  |     | NULL    |       |
| drivers_license | int(11)  | YES  |     | NULL    |       |
+-----------------+----------+------+-----+---------+-------+
9 rows in set (0.007 sec)
```

(char)

```
MariaDB [driversdb_Belocora]> ALTER TABLE drivers ADD drivers_license CHAR(13);
Query OK, 0 rows affected (0.007 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [driversdb_Belocora]> DESCRIBE drivers;
+-----------------+----------+------+-----+---------+-------+
| Field           | Type     | Null | Key | Default | Extra |
+-----------------+----------+------+-----+---------+-------+
| id              | int(11)  | YES  |     | NULL    |       |
| first_Name      | char(20) | YES  |     | NULL    |       |
| last_Name       | char(20) | YES  |     | NULL    |       |
| age             | int(11)  | YES  |     | NULL    |       |
| address         | char(20) | YES  |     | NULL    |       |
| vehicles        | char(20) | YES  |     | NULL    |       |
| years_driving   | int(11)  | YES  |     | NULL    |       |
| status          | char(20) | YES  |     | NULL    |       |
| drivers_license | char(13) | YES  |     | NULL    |       |
+-----------------+----------+------+-----+---------+-------+
9 rows in set (0.007 sec)
```

- Removing the field vehicles from the drivers table

```
MariaDB [driversdb_Belocora]> ALTER TABLE drivers DROP vehicles;
Query OK, 0 rows affected (0.008 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [driversdb_Belocora]> DESCRIBE drivers;
+----------------+---------+------+-----+---------+-------+
| Field          | Type    | Null | Key | Default | Extra |
+----------------+---------+------+-----+---------+-------+
| id             | int(11) | YES  |     | NULL    |       |
| first_Name     | char(20)| YES  |     | NULL    |       |
| last_Name      | char(20)| YES  |     | NULL    |       |
| age            | int(11) | YES  |     | NULL    |       |
| address        | char(20)| YES  |     | NULL    |       |
| years_driving  | int(11) | YES  |     | NULL    |       |
| status         | char(20)| YES  |     | NULL    |       |
| drivers_license| int(11) | YES  |     | NULL    |       |
+----------------+---------+------+-----+---------+-------+
8 rows in set (0.007 sec)
```

- Structures created in the table:

```
MariaDB [driversdb_Belocora]>  DESCRIBE drivers;
+----------------+---------+------+-----+---------+-------+
| Field          | Type    | Null | Key | Default | Extra |
+----------------+---------+------+-----+---------+-------+
| id             | int(11) | YES  |     | NULL    |       |
| first_Name     | char(20)| YES  |     | NULL    |       |
| last_Name      | char(20)| YES  |     | NULL    |       |
| age            | int(11) | YES  |     | NULL    |       |
| address        | char(20)| YES  |     | NULL    |       |
| years_driving  | int(11) | YES  |     | NULL    |       |
| status         | char(20)| YES  |     | NULL    |       |
| drivers_license| int(11) | YES  |     | NULL    |       |
+----------------+---------+------+-----+---------+-------+
8 rows in set (0.009 sec)
```

Tasks	Syntax	Actual SQL Command Used
Create a new database	CREATE DATABASE	CREATE DATABASE driversdb_Belocora;
Create a table named drivers	CREATE TABLE drivers	CREATE TABLE drivers(id INT, first_Name CHAR(20), last_Name CHAR(20), age INT, address CHAR(20), vehicles CHAR(20), years_driving INT, status CHAR(20));
Create a table named vehicles	CREATE TABLE vehicles	CREATE TABLE

		vehicles(car_maker CHAR(20), car_model CHAR(20), number_of_doors INT);
Add a new column drivers_license	ALTER TABLE drivers ADD drivers_license	ALTER TABLE drivers ADD drivers_license INT;
Change the data type of drivers_license	ALTER TABLE drivers CHANGE drivers_license	ALTER TABLE drivers CHANGE drivers_license CHAR(13);
Remove the field vehicles from the drivers table	ALTER TABLE drivers DROP vehicles	ALTER TABLE drivers DROP vehicles;

Questions:

1. Try and run your SQL Commands in opposite case or in mixed cases (ex. SHOW TABLES – show tables). What is the output and what is the feature of SQL that you can see in doing this task?

- I used the "SHOW DATABASES" command in opposite case and it still worked. I think that the SQL will do the command as long as it is given the right Command or Syntax.

2. Attempt creating a database with a similar name, but with varying capitalization. What is the result? Why?

- It showed an error which it says that the database already exist. It is because it still has the same name which also means it has the same value but they only vary or differ in capitalization.

3. Attempt creating a table with two similar names. What is the result? Why?

- It showed an error which says that the table already exist. It won't create another table with similar name since it already exist.

4. Try creating two fields in table with two similar names with same then with different data types. What are the results? Why?

- It shows a output that the field has a Duplicate column name. Because you cannot create a two fields with the same name since it cannot be duplicated or else the attributes of the fields will not work properly.

5. From the output of Question #4. How does MySQL perform the check to determine the output the result in Question#4? Does its data type matter?

- The MySQL will first check if it has the similar name then if yes, it would show an error that it is a duplicate name. Yes, it's data type matter since the attributes concluded in the field represents its value.

6. Why do you think the keywords in SQL commands written in the instructions of this manual and online references are capitalized? Does it affect the query in anyway? Why?

- Capitalizing SQL keywords makes them stand out and easily recognizable within a query. The Capitalization of SQL keywords does not affect the functionality or execution of a query in any way since SQL is not a case-sensitive when it comes to keywords and identifiers.

Conclusion:

In conclusion, SQL command lines are powerful tools for interacting with and managing relational databases. They provide a direct and flexible means of querying, updating, and maintaining data. Here are some key takeaways about the use of SQL command lines.