

Lesson 05 Demo 03

Inserting, Updating, and Deleting Records

Objective: To demonstrate the basic operations such as inserting, updating, and deleting records in a MySQL table

Tools required: MySQL

Prerequisites: None

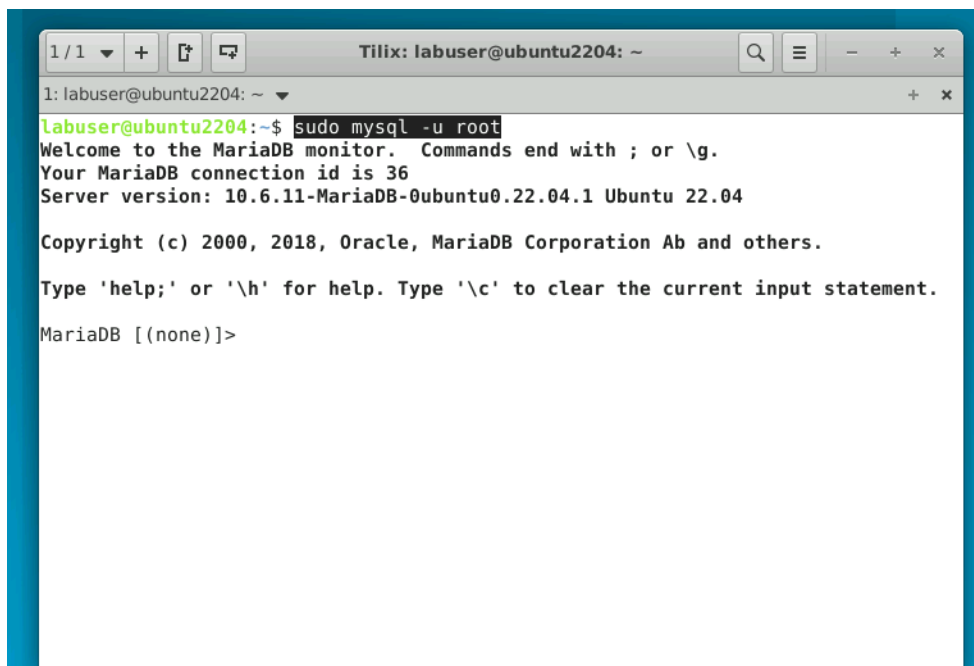
Steps to be followed:

1. Set up a database and table
2. Insert records
3. Update records
4. Delete records

Step 1: Set up a database and table

1.1 Open a terminal window and access MySQL as a root user:

sudo mysql -u root



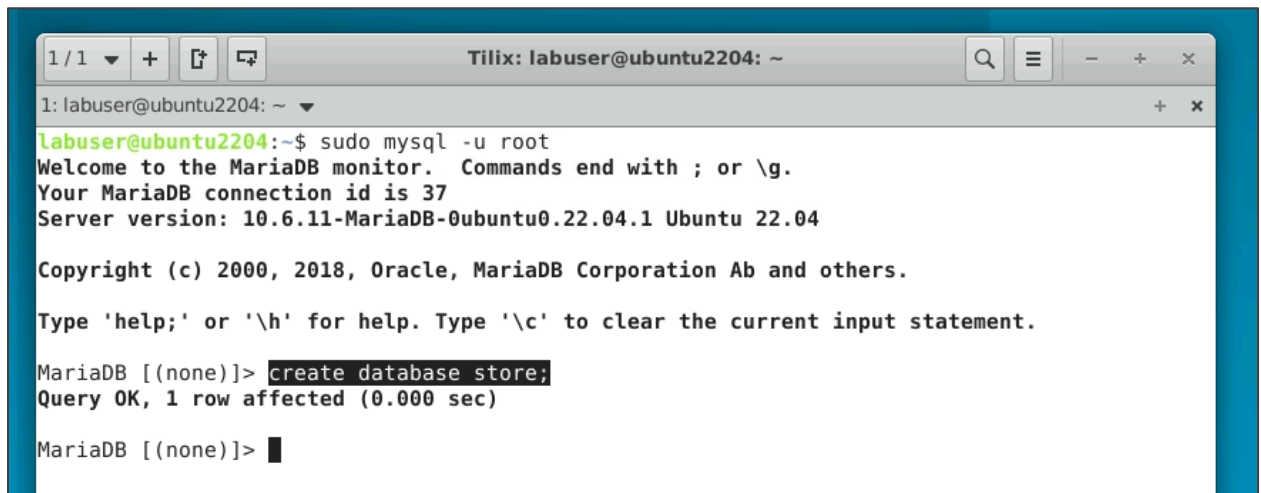
```
1 / 1 ▼ + [ ] [ ] Tilix: labuser@ubuntu2204: ~
1: labuser@ubuntu2204: ~ ▼
labuser@ubuntu2204:~$ sudo mysql -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 36
Server version: 10.6.11-MariaDB-0ubuntu0.22.04.1 Ubuntu 22.04

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

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

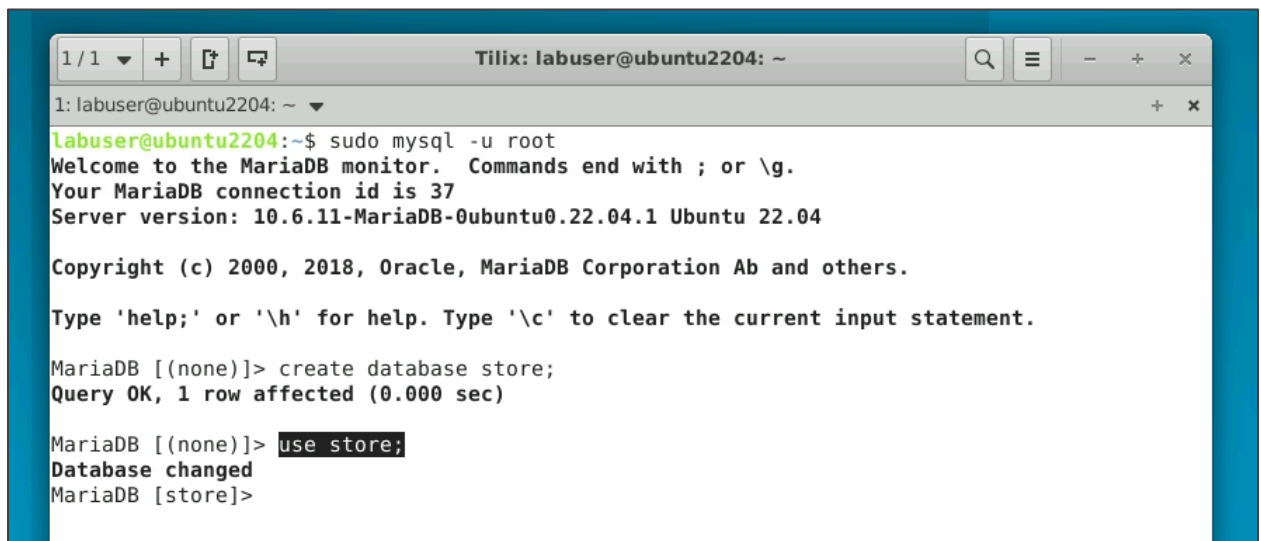
MariaDB [(none)]>
```

- 1.2 Create a new database named **store**:
create database store;

A terminal window titled 'Tilix: labuser@ubuntu2204: ~' showing a user logging in as 'labuser' and running 'sudo mysql -u root'. The terminal displays the MariaDB monitor interface with a welcome message, connection ID 37, and server version 10.6.11-MariaDB-0ubuntu0.22.04.1. The user enters 'create database store;' and the terminal shows 'Query OK, 1 row affected (0.000 sec)'.

```
1: labuser@ubuntu2204: ~  
labuser@ubuntu2204:~$ sudo mysql -u root  
Welcome to the MariaDB monitor.  Commands end with ; or \g.  
Your MariaDB connection id is 37  
Server version: 10.6.11-MariaDB-0ubuntu0.22.04.1 Ubuntu 22.04  
  
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)]> create database store;  
Query OK, 1 row affected (0.000 sec)  
  
MariaDB [(none)]> █
```

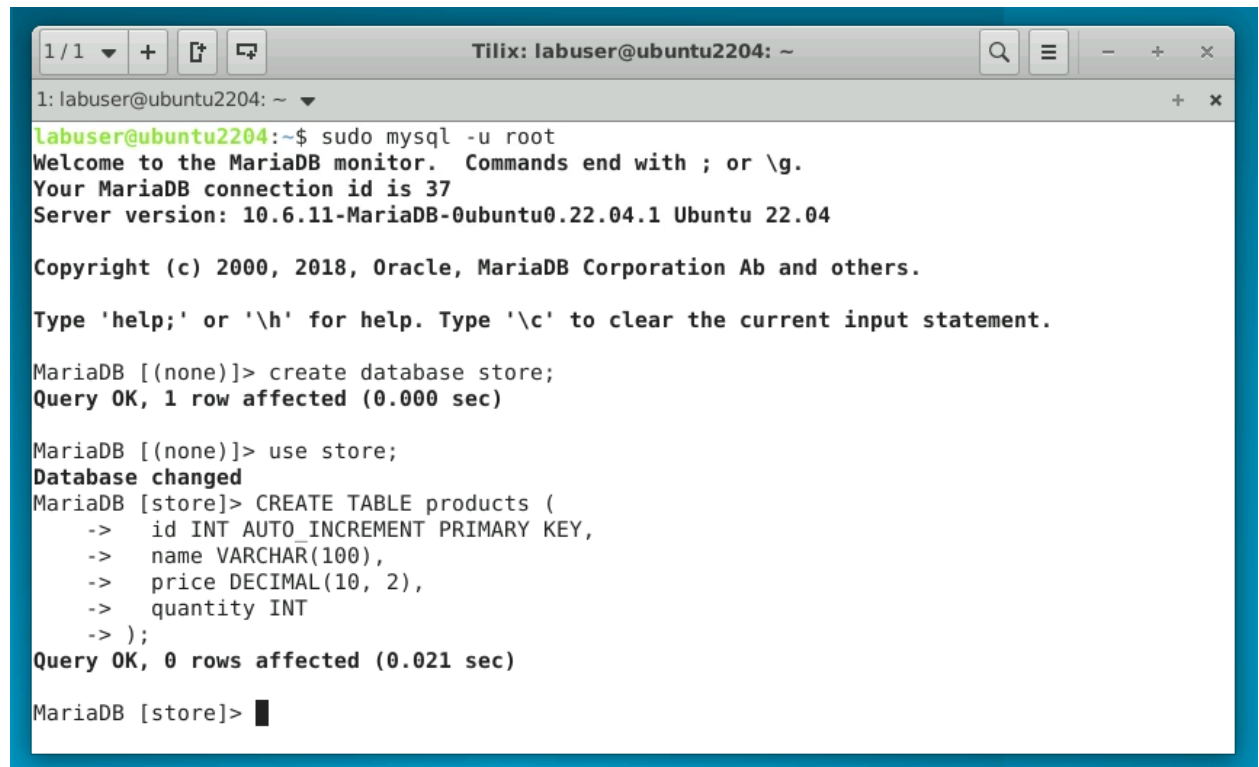
- 1.3 Select the **store** database:
use store;

A terminal window titled 'Tilix: labuser@ubuntu2204: ~' showing the same user logging in and running 'sudo mysql -u root'. The terminal displays the MariaDB monitor interface. The user enters 'create database store;' and the terminal shows 'Query OK, 1 row affected (0.000 sec)'. Then, the user enters 'use store;' and the terminal shows 'Database changed' and 'MariaDB [store]>'.

```
1: labuser@ubuntu2204: ~  
labuser@ubuntu2204:~$ sudo mysql -u root  
Welcome to the MariaDB monitor.  Commands end with ; or \g.  
Your MariaDB connection id is 37  
Server version: 10.6.11-MariaDB-0ubuntu0.22.04.1 Ubuntu 22.04  
  
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)]> create database store;  
Query OK, 1 row affected (0.000 sec)  
  
MariaDB [(none)]> use store;  
Database changed  
MariaDB [store]>
```

1.4 Create a **products** table with relevant fields:

```
CREATE TABLE products (  
  id INT AUTO_INCREMENT PRIMARY KEY,  
  name VARCHAR(100),  
  price DECIMAL(10, 2),  
  quantity INT  
);
```

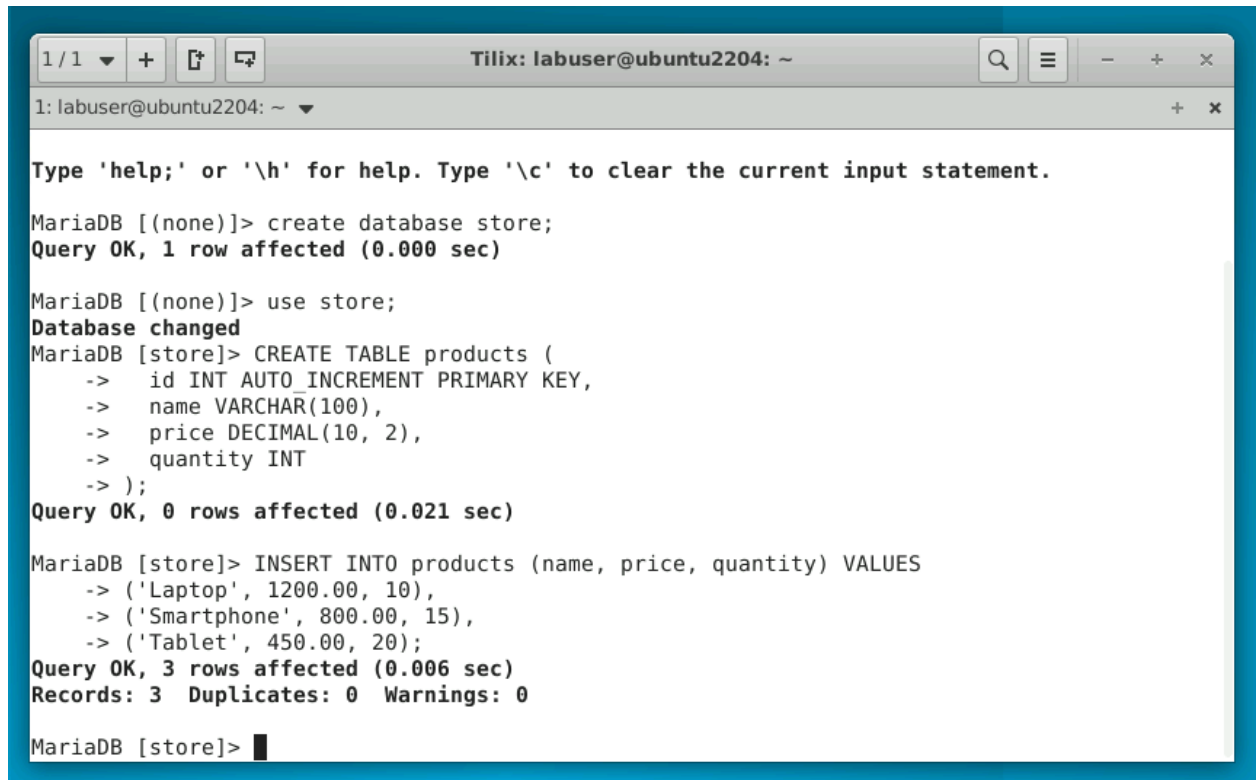


```
Tilix: labuser@ubuntu2204: ~  
1: labuser@ubuntu2204: ~  
labuser@ubuntu2204:~$ sudo mysql -u root  
Welcome to the MariaDB monitor.  Commands end with ; or \g.  
Your MariaDB connection id is 37  
Server version: 10.6.11-MariaDB-0ubuntu0.22.04.1 Ubuntu 22.04  
  
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
MariaDB [(none)]> create database store;  
Query OK, 1 row affected (0.000 sec)  
  
MariaDB [(none)]> use store;  
Database changed  
MariaDB [store]> CREATE TABLE products (  
-> id INT AUTO_INCREMENT PRIMARY KEY,  
-> name VARCHAR(100),  
-> price DECIMAL(10, 2),  
-> quantity INT  
-> );  
Query OK, 0 rows affected (0.021 sec)  
  
MariaDB [store]> █
```

Step 2: Insert records

2.1 Insert data into the **products** table:

```
INSERT INTO products (name, price, quantity) VALUES  
( 'Laptop', 1200.00, 10),  
( 'Smartphone', 800.00, 15),  
( 'Tablet', 450.00, 20);
```



```
Tilix: labuser@ubuntu2204: ~  
1: labuser@ubuntu2204: ~  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
MariaDB [(none)]> create database store;  
Query OK, 1 row affected (0.000 sec)  
  
MariaDB [(none)]> use store;  
Database changed  
MariaDB [store]> CREATE TABLE products (  
-> id INT AUTO_INCREMENT PRIMARY KEY,  
-> name VARCHAR(100),  
-> price DECIMAL(10, 2),  
-> quantity INT  
-> );  
Query OK, 0 rows affected (0.021 sec)  
  
MariaDB [store]> INSERT INTO products (name, price, quantity) VALUES  
-> ( 'Laptop', 1200.00, 10),  
-> ( 'Smartphone', 800.00, 15),  
-> ( 'Tablet', 450.00, 20);  
Query OK, 3 rows affected (0.006 sec)  
Records: 3 Duplicates: 0 Warnings: 0  
  
MariaDB [store]> █
```

Step 3: Update records

3.1 Increase the price of Smartphone by 100:

UPDATE products SET price = price + 100 WHERE name = 'Smartphone';

```
Tilix: labuser@ubuntu2204: ~
1: labuser@ubuntu2204: ~
MariaDB [store]> INSERT INTO products (name, price, quantity) VALUES
-> ('Laptop', 1200.00, 10),
-> ('Smartphone', 800.00, 15),
-> ('Tablet', 450.00, 20);
Query OK, 3 rows affected (0.006 sec)
Records: 3 Duplicates: 0 Warnings: 0

MariaDB [store]> UPDATE products SET price = price + 100 WHERE name = 'Smartphone';
Query OK, 1 row affected (0.016 sec)
Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [store]> SELECT * from products
-> ;
+-----+-----+-----+-----+
| id | name      | price  | quantity |
+-----+-----+-----+-----+
| 1  | Laptop    | 1200.00 | 10       |
| 2  | Smartphone | 900.00  | 15       |
| 3  | Tablet    | 450.00  | 20       |
+-----+-----+-----+-----+
3 rows in set (0.000 sec)

MariaDB [store]>
```

3.2 Reduce the quantity of Tablet by 5:

UPDATE products SET quantity = quantity - 5 WHERE name = 'Tablet';

```
Tilix: labuser@ubuntu2204: ~
1: labuser@ubuntu2204: ~
+-----+-----+-----+-----+
| id | name      | price  | quantity |
+-----+-----+-----+-----+
| 1  | Laptop    | 1200.00 | 10       |
| 2  | Smartphone | 900.00  | 15       |
| 3  | Tablet    | 450.00  | 20       |
+-----+-----+-----+-----+
3 rows in set (0.000 sec)

MariaDB [store]> UPDATE products SET quantity = quantity - 5 WHERE name = 'Tablet';
Query OK, 1 row affected (0.003 sec)
Rows matched: 1 Changed: 1 Warnings: 0

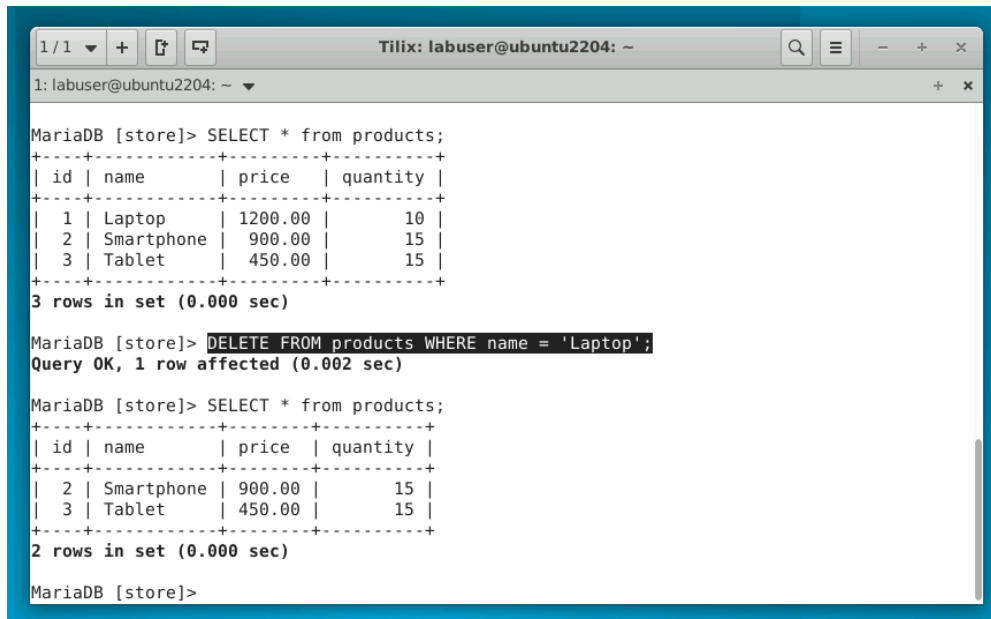
MariaDB [store]> SELECT * from products;
+-----+-----+-----+-----+
| id | name      | price  | quantity |
+-----+-----+-----+-----+
| 1  | Laptop    | 1200.00 | 10       |
| 2  | Smartphone | 900.00  | 15       |
| 3  | Tablet    | 450.00  | 15       |
+-----+-----+-----+-----+
3 rows in set (0.000 sec)

MariaDB [store]>
```

Step 4: Delete records

4.1 Delete the **Laptop** record from the table:

DELETE FROM products WHERE name = 'Laptop';



```
Tilix: labuser@ubuntu2204: ~
1: labuser@ubuntu2204: ~
MariaDB [store]> SELECT * from products;
+-----+-----+-----+-----+
| id | name      | price | quantity |
+-----+-----+-----+-----+
| 1  | Laptop    | 1200.00 | 10 |
| 2  | Smartphone | 900.00  | 15 |
| 3  | Tablet    | 450.00  | 15 |
+-----+-----+-----+-----+
3 rows in set (0.000 sec)

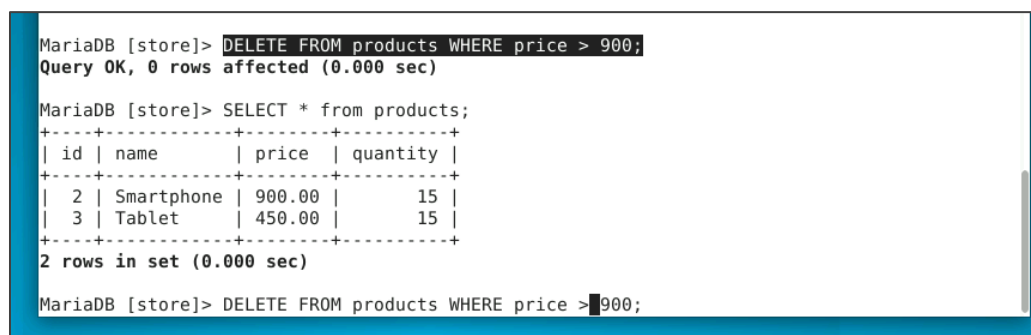
MariaDB [store]> DELETE FROM products WHERE name = 'Laptop';
Query OK, 1 row affected (0.002 sec)

MariaDB [store]> SELECT * from products;
+-----+-----+-----+-----+
| id | name      | price | quantity |
+-----+-----+-----+-----+
| 2  | Smartphone | 900.00  | 15 |
| 3  | Tablet    | 450.00  | 15 |
+-----+-----+-----+-----+
2 rows in set (0.000 sec)

MariaDB [store]>
```

4.2 Remove all products with a price over 900:

DELETE FROM products WHERE price > 900;



```
MariaDB [store]> DELETE FROM products WHERE price > 900;
Query OK, 0 rows affected (0.000 sec)

MariaDB [store]> SELECT * from products;
+-----+-----+-----+-----+
| id | name      | price | quantity |
+-----+-----+-----+-----+
| 2  | Smartphone | 900.00  | 15 |
| 3  | Tablet    | 450.00  | 15 |
+-----+-----+-----+-----+
2 rows in set (0.000 sec)

MariaDB [store]> DELETE FROM products WHERE price > 900;
```

By following these steps, you have successfully executed the fundamental operations of inserting, updating, and deleting records in a MySQL table.