

Updating your database

Welcome to this lab activity

In this lab activity, you will explore how to update data in an existing database.

The method by which you access the MySQL shell will differ based on your setup. Please refer to the installation instructions earlier in this module for details.

Task 1: Start the MySQL interactive shell

Start the MySQL shell, logging in with the root user and password.

When you start the MySQL shell, you should see the MySQL prompt:

```
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 67
Server version: 8.1.0 MySQL Community Server - GPL

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owners.

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

mysql>
```

Task 2: Check the existing data in myBookshop database

First of all, let's check the list of databases present in your MySQL server.

1. Run the following command in the MySQL shell:

```
SHOW DATABASES ;
```

Check that `myBookshop` is there:

```
mysql> SHOW DATABASES;
+-----+
| Database |
+-----+
| information_schema |
| myBookshop |
| myRestaurantMenu |
| mysql |
| performance_schema |
| sys |
+-----+
6 rows in set (0.01 sec)
```

2. Go ahead and select the 'myBookshop' database.

```
USE myBookshop;
```

If you have successfully selected the database, you will get the following confirmation:

```
mysql> USE myBookshop;
Database changed
mysql> █
```

3. Run the following MySQL command to view the 'books' table content:

```
SELECT * FROM books;
```

You should see a list of books in your books table, for example:

```
+-----+-----+-----+
| id | name          | price |
+-----+-----+-----+
| 1 | Don Quixote   | 19.99 |
| 2 | Atlas of the World | 25.00 |
| 3 | World History | 31.99 |
+-----+-----+-----+
3 rows in set (0.00 sec)
```

Remember that you will have two additional books in your database if you have completed all the activities so far.

Task 3: Update data in the myBookshop database

In order to update data in a database with SQL, you need to use a combination of the `UPDATE` and `SET` statements.

The basic format of the `UPDATE` statement looks like this below:

```
UPDATE TableName SET fieldName1 = new-value1, fieldName2 = new-value2;
```

`fileName1` and `fieldName2` are the field names that you want to update with `newValue1` and `new-value2` respectively. `TableName` is the name of the table where you want to update the data.

The above statement will update **all** the items in your table. However, you can combine your query with the `WHERE` statement to target a particular entry of a table.

4. Update the price of the book, which has an id of 1.

Run the following command in the MySQL shell:

```
UPDATE books SET price = 25.50 WHERE id = 1;
```

You should see a confirmation that the data has been updated:

```
mysql> UPDATE books SET price = 25.50 WHERE id = 1;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

5. You can now verify that the price has been changed by querying the `books` table.

Run the following terminal command:

```
SELECT * FROM books;
```

```
mysql> SELECT * FROM books;
+----+-----+-----+
| id | name       | price |
+----+-----+-----+
|  1 | Don Quixote | 25.50 |
|  2 | Atlas of the World | 25.00 |
|  3 | World History | 31.99 |
+----+-----+-----+
3 rows in set (0.00 sec)
```

As you can see, the price of the first book is now £25.50.

Remember that you will have two additional books in your database if you have completed all of the activities so far.

Task 4: Updating data in the myRestaurantMenu database

Let's now switch database and update some fields in the `myRestaurantMenu` database to give you a chance to practise.

6. Switch to the `myRestaurantMenu` database using the `USE` command.

7. Check that the `myRestaurantMenu` database exists using the `SHOW DATABASES` command.
8. Retrieve all the existing data from the `dishes` table using the `SELECT` command to confirm what data you already have. One of the entries should be a Margherita pizza at £10.99.
9. Change the price of the Margherita pizza to £8.90 using the `UPDATE...SET` command.
10. Verify that the price change has taken effect by querying the `dishes` table.

Task 6: Exit MySQL shell

11. Exit the MySQL shell.

Task 7: Explore further

When tackling these lab activities, it's always good to stretch yourself by doing some research and attempting some changes on your own.

Update the 'Node.js book' book in your 'myBookshop' database with the following data:

- **name:** 'Node.js book'
- **price:** 18.99

Update the 'cheese sandwich' dish in your 'myRestaurantMenu' database with the following data:

- **name:** 'cheese and bacon sandwich'
- **price:** 3.50
- **is_vegetarian:** 0
- **is_vegan:** 0

End of section

Congratulations on completing this section.

You have learned how to update data in your database.

Next you will look at deleting items in your database tables.