# Updating your database

Welcome to this Lab activity

In this lab activity you will be exploring how to update an existing database. For the purpose of this lab you will be working with the Terminal panel inside Visual Studio Code.

Start the Lab environment application

It is simple to launch a lab exercise. You only need to click on the button "Start" below the activity title to enter a lab environment.

Let's explore this lab activity. Go ahead and click on the "Start" button!

<div style="border:1px solid #000; text-align:center; padding:2em;">

Updating your database

[↑ **Start**]

</div>
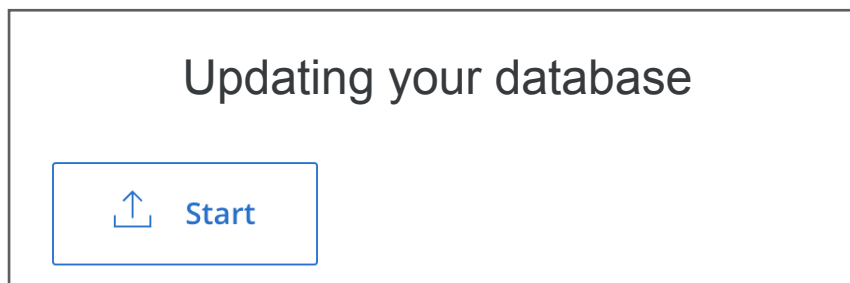
Task 1: Accessing the MySQL interactive shell

The folder structure has already been partially constructed for you and organised into different topics. For the purpose of this lab, you are not required to make any changes to the folder structure. You can see a folder called "topic6" inside this lab environment; it is only there as a reference for you and you are not required to add any content to it at the moment. Let's get started!

In order to access your mysql interactive shell use the Visual Studio Code Terminal and run the following command:

- **mysql**: type this command and press *Enter*. This command will log you into mysql shell as the root(default) user.

If you have successfully followed all the above steps you should now be logged in inside mysql and see the following result on the Terminal:

Task 2: Updating the "myBookshop" database

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

Use the Visual Studio Code Terminal and run the following command:

- **SHOW DATABASES;** type this command and press *Enter*. This command will show you all the databases that already exist in your virtual server.

Go ahead and select the "myBookshop" database. Use the Visual Studio Code Terminal and run the following command:

- **USE myBookshop;** type this command and press *Enter*. This command will switch and select the "myBookshop" database.

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

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

Run the following terminal command to view the "books" table content:

- **SELECT * FROM books;** type this command and press *Enter*. This command will retrieve all the data from the "books" table.

```
mysql> SELECT * FROM books;
+----+---------------+-------+
| id | name          | price |
+----+---------------+-------+
|  1 | database book | 40.25 |
|  2 | Node.js book  | 25.00 |
|  3 | Express book  | 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.

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 below:

UPDATE TableName SET filedName1 = new-value1, fieldName2 = new-value2;

filedName1 and fieldName2 are the field names that you want to update with respectively new-value1 and new-value2 and TableName is the name of the table where you want to update the fields.

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

Update the price of the "database book" which has an id of 1.

Use the Visual Studio Code Terminal and run the following command:

- **UPDATE books SET price = 25.50 WHERE id = 1;** type this command and press *Enter*. This command will change the price of the "database book" to 25.50£;

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

Run the following terminal command:

- **SELECT * FROM books;** type this command and press *Enter*. This command will retrieve all the data from the "books" table.

```
mysql> SELECT * FROM books;
+----+---------------+-------+
| id | name          | price |
+----+---------------+-------+
|  1 | database book | 25.50 |
|  2 | Node.js book  | 25.00 |
|  3 | Express book  | 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 the activities so far.

Let's now switch database and update some fields in the "myRestaurantMenu" database.

Task 3: Updating the "myRestaurantMenu" database

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

Use the Visual Studio Code Terminal and run the following command:

- **SHOW DATABASES;** type this command and press *Enter*. This command will show you all the databases that already exist in your virtual server.

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

Go ahead and select the "myRestaurantMenu" database. Use the Visual Studio Code Terminal and run the following command:

- **USE myRestaurantMenu;** type this command and press *Enter*. This command will switch and select the "myRestaurantMenu" database.

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

```
mysql> USE myRestaurantMenu;
Database changed
mysql>
```

Run the following terminal command to view the "dishes" table content:

- **SELECT * FROM dishes;** type this command and press *Enter*. This command will retrieve all the data from the "dishes" table.

```
mysql> SELECT * FROM dishes;
+----+-----------------+-------+---------------+----------+
| id | name            | price | is_vegetarian | is_vegan |
+----+-----------------+-------+---------------+----------+
|  1 | pizza margherita | 10.99 |             1 |        0 |
|  2 | soya burger     |  9.50 |             1 |        1 |
+----+-----------------+-------+---------------+----------+
2 rows in set (0.00 sec)
```

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

Let's update the price of the "pizza margherita" which has an id of 1.

Use the Visual Studio Code Terminal and run the following command:

- **UPDATE dishes SET price = 8.90 WHERE id = 1;** type this command and press *Enter*. This command will change the price of the "pizza margherita" to 8.90£;

You can now verify that the price has been changed by querying the "dishes" table.

Run the following terminal command:

- **SELECT * FROM dishes;** type this command and press *Enter*. This command will retrieve all the data from the "dishes" table.

```
mysql> SELECT * FROM dishes;
+----+-----------------+-------+---------------+----------+
| id | name            | price | is_vegetarian | is_vegan |
+----+-----------------+-------+---------------+----------+
|  1 | pizza margherita |  8.90 |             1 |        0 |
|  2 | soya burger     |  9.50 |             1 |        1 |
+----+-----------------+-------+---------------+----------+
2 rows in set (0.00 sec)
```

As you can see the price of the first dish is now 8.90£.

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

Task 4: Exit mysql shell

Exiting the mysql shell is very straight forward. In your Terminal panel type the following command:

- **exit**: type this command and press *Enter*. This command will log you out from your mysql virtual server.

If you have successfully exited the database you will get the following confirmation:

```
mysql> exit
Bye
root@7fbe1633ac7c:/home/coder/project#
```

End of Section

Congratulations for completing this section. As long as you have saved your work, your files will remain when you close this lab activity so do not worry about losing your data. In this activity you have learned how to update items in your database tables.

Next you will be looking at deleting items in your database tables.