Create a database and a table

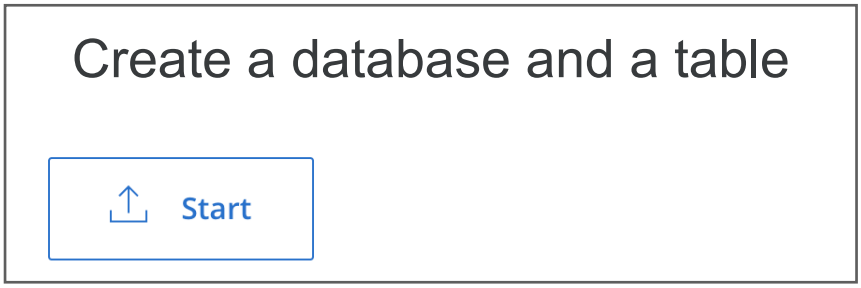
Welcome to this Lab activity

In this lab activity you will be exploring how to use the **mysql shell** and how to create a database and a table with it. 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!



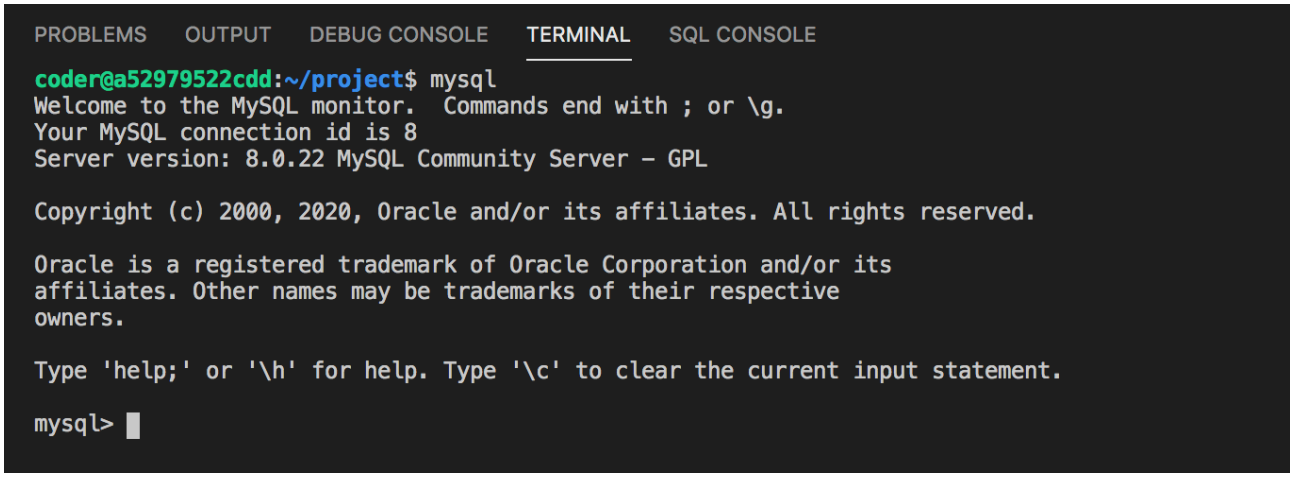
Task 1: Accessing the MySQL interactive shell

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 “topic5” inside this lab environment; it is only there as a reference for you and you are not required to add any content to it. 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: Creating a new database

Before creating a new database, let's check which databases are already linked to 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.

You will see that you already have some databases in your virtual server; these just contain information about your mysql account and you can ignore them:

Now create a new database called “myBookshop”.

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

- **CREATE DATABASE myBookshop;** type this command and press *Enter*. This command will create a new database called “myBookshop” in your virtual server.

In the above, “myBookshop” is the name of the database. You may call your database whatever you like, but “myBookshop” is suggested here because it relates to your web application.

Please note: names are lower and upper case-sensitive; “myBookshop” is different from “mybookshop”! Please use the same names as instructed on the lab instructions to avoid any confusion. Commands, on the other hand, are not case-sensitive; “CREATE” is the same as “create”.

Now that you have created your new database, you can view it by running the following command once again:

- **SHOW DATABASES;**

```
mysql> SHOW DATABASES;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| myBookshop         |
| mysql              |
| performance_schema |
| sys                |
+--------------------+
5 rows in set (0.00 sec)
```

As you can see the “myBookshop” database is now part of your databases list.

Task 3: Creating a table on your database

It is now time to add a table to your newly created database. The very first thing you need to do is to select your “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 receive the following confirmation:

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

Now that you have correctly selected your “myBookshop” database, go ahead and create a table name “books” by running the following command on the Terminal:

- **CREATE TABLE books (id INT AUTO_INCREMENT, name VARCHAR(50), price DECIMAL(5, 2) unsigned,PRIMARY KEY(id));** type this command and press *Enter*. This command will create a new table called “books” in your currently selected database.

If you have successfully created a new table you will get the following confirmation:

```
mysql> CREATE TABLE books (id INT AUTO_INCREMENT, name VARCHAR(50), price DECIMAL(5, 2) unsigned,PRIMARY KEY(id));
Query OK, 0 rows affected (0.30 sec)
```

You can now view your newly created table by running the following command:

- **SHOW TABLES;** type this command and press *Enter*. This command will show you all the tables related to your currently selected database.

```
mysql> SHOW TABLES;
+----------------------+
| Tables_in_myBookshop |
+----------------------+
| books                |
+----------------------+
1 row in set (0.00 sec)
```

Finally, view the content of the “books” table. Run the following command:

- **DESCRIBE books;** type this command and press *Enter*. This command will show you all the tables related to your selected database.

```
mysql> DESCRIBE books;
+--------+---------------------+------+-----+---------+----------------+
| Field  | Type                | Null | Key | Default | Extra          |
+--------+---------------------+------+-----+---------+----------------+
| id     | int(11)             | NO   | PRI | NULL    | auto_increment |
| name   | varchar(50)         | YES  |     | NULL    |                |
| price  | decimal(5,2) unsigned | YES  |     | NULL    |                |
+--------+---------------------+------+-----+---------+----------------+
3 rows in set (0.00 sec)
```

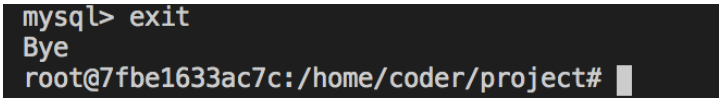
You can see from the above picture that you have successfully created a new table called “books” with 3 fields (id, name, price) in your “myBookshop” database.

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:



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. You have successfully logged in inside your mysql shell and managed to create a new database containing one table. In the next lab activity you will explore how to add data to your existing database's table.