

Review the database operations

Welcome to this lab activity

In this lab activity, you will review the database operations that you encountered in your previous lab activity. You will create a new database called `myRestaurantMenu` to simulate a restaurant. In the database, you will create a table and then insert some data in the table. You will then write some queries to retrieve data from the database.

You will find a list of the tasks required to do this activity, but you will need to work out the correct commands. Refer to the previous lab to see how you did this for the `myBookshop` database. The commands that you need are very similar!

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

mysql>
```

Task 2: Creating a new database

Before creating a new database, let's check which databases are already set up in your MySQL server.

1. Check what databases are already in your MySQL server using the `SHOW DATABASES` command.
2. Create a new database called `myRestaurantMenu`.
3. Check that your database has been created using the `SHOW DATABASES` command.

Task 3: Creating a table on your database

Now add a table to your newly created database.

4. Switch to your new database using the `USE` command
5. Create a table named 'dishes' using the `CREATE TABLE` statement. The table should have the following fields:

```
id INT AUTO_INCREMENT
name VARCHAR(50)
price DECIMAL(5, 2) unsigned
is_vegetarian BOOLEAN
is_vegan BOOLEAN
```

Make sure that you specify the primary key for your table.

6. Check that the table has been created by using the `SHOW TABLES` command to see if it is in the list of tables in the database.
7. Check the structure of the table by using the `DESCRIBE` command.

Task 4: Adding dummy data to your database

Now that you have correctly created the 'dishes' table in your database, it is time for you to add some data to it.

8. Add the following two dishes to the table using the `INSERT INTO` command:

Name	Price	is_vegetarian	is_vegan
Margherita pizza	10.99	1	0
Soya burger	9.50	1	1

9. Add an additional dish of your choosing to the dishes table.

Task 5: Query the data in the database

Now that you have successfully created a new database and corresponding table, you can perform SQL queries on it. To read data from a database with SQL, you need to use the `SELECT` statement.

10. Select all the dishes in the table using the `SELECT` command.
11. Select the first dish only using the `SELECT ... LIMIT` command.
12. Select just the name and price of the dish with id 2.

Task 6: Exit MySQL shell

13. 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.

Add the following dish to the 'dishes' table in your 'myRestaurantMenu' database:

- **name:** 'cheese sandwich'
- **price:** 4.99
- **is_vegetarian:** 1
- **is_vegan:** 0

End of section

Congratulations on completing this section.

This was just a review of the main SQL operations that you have learned so far.

In the next lab activity, you will explore how to update and delete data in your database.