Hands-on Lab: Joins in MySQL using phpMyAdmin

Estimated time needed: 20 minutes

In this lab, you will learn how to create tables and load data in the MySQL database service using the phpMyAdmin graphical user interface (GUI) tool.

Software Used in this Lab

In this lab, you will use MySQL. MySQL is a Relational Database Management System (RDBMS) designed to efficiently store, manipulate, and retrieve data.

To complete this lab you will utilize MySQL relational database service available as part of IBM Skills Network Labs (SN Labs) Cloud IDE. SN Labs is a virtual lab environment used in this course.

Objectives

After completing this lab, you will be able to:

1. Determine the correct type of join to use for a given problem.
2. Write and execute joins to query data from multiple tables.

Database Used in this Lab

Mysql_learners database has been used in this lab.

Here you will be creating and inserting data into the below mentioned 3 tables

1.chicago_public_schools 2.chicago_socioeconomic_data 3.chicago_crime

Here you will be using 3 dump files for this purpose.

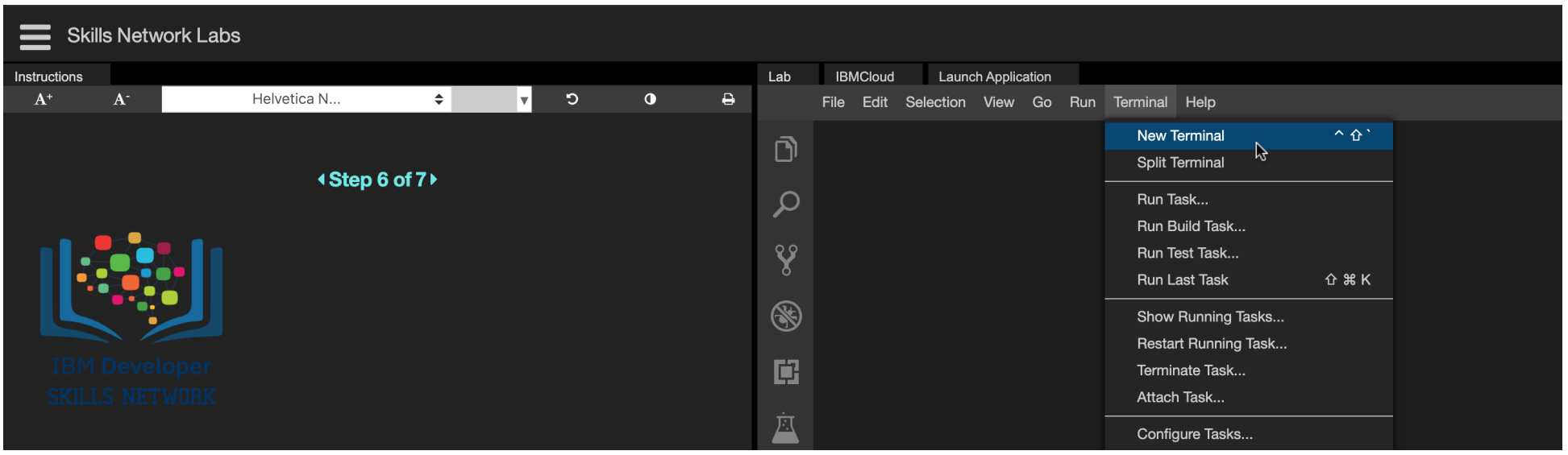
chicago_public_schools

chicago_crime

chicago_socioeconomic_data

Task A: Create a database

1. Go to **Terminal > New Terminal** to open a terminal from the side by side launched Cloud IDE.



2. Start MySQL service session in the Cloud IDE using the command below in the terminal. Find your MySQL service session password from the highlighted location of the terminal shown in the image below. Note down your MySQL service session password because you may need to use it later in the lab.

```
start_mysql
```

```
theia@theiadocker-sandipsahajo:/home/project$ start_mysql
Starting your MySQL database....
This process can take up to a minute.

MySQL database started, waiting for all services to be ready....

Your MySQL database is now ready to use and available with username: root password: MTY5MTUtc2FuZGlw

You can access your MySQL database via:
 • The browser at: https://sandipsahajo-8080.theiadocker-27.proxy.cognitiveclass.ai
 • CommandLine: mysql --host=127.0.0.1 --port=3306 --user=root --password=MTY5MTUtc2FuZGlw
theia@theiadocker-sandipsahajo:/home/project$
```

3. Copy your phpMyAdmin weblink from the highlighted location of the terminal shown in the image below. Past it into the address bar in a new tab of your web browser. This will open the phpMyAdmin tool.

```
theia@theiadocker-sandipsahajo:/home/project$ start_mysql
Starting your MySQL database....
This process can take up to a minute.

MySQL database started, waiting for all services to be ready....

Your MySQL database is now ready to use and available with username: root password: MTY5MTUtc2FuZGlw

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 • CommandLine: mysql --host=127.0.0.1 --port=3306 --user=root --password=MTY5MTUtc2FuZGlw
theia@theiadocker-sandipsahajo:/home/project$
```
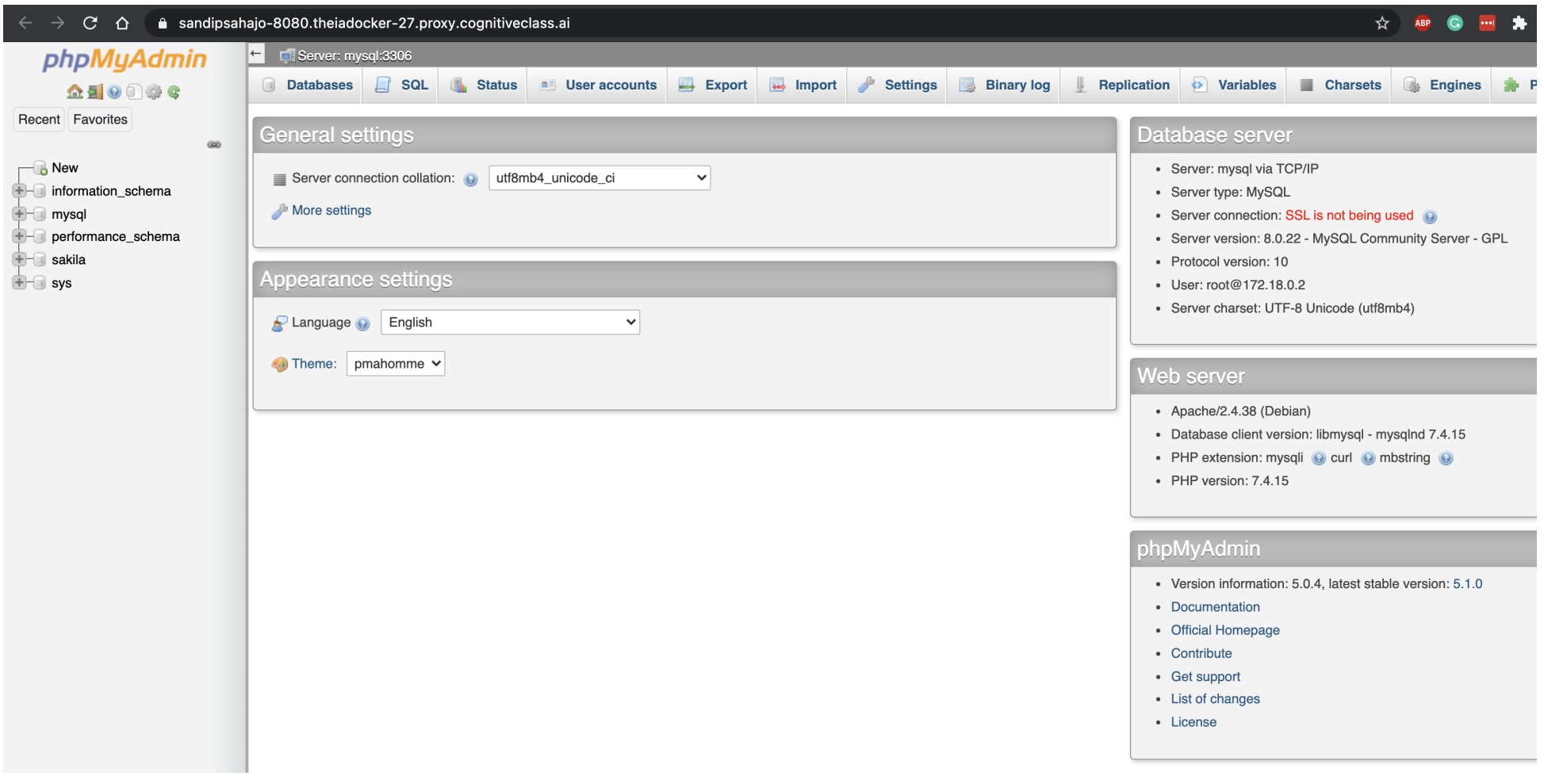
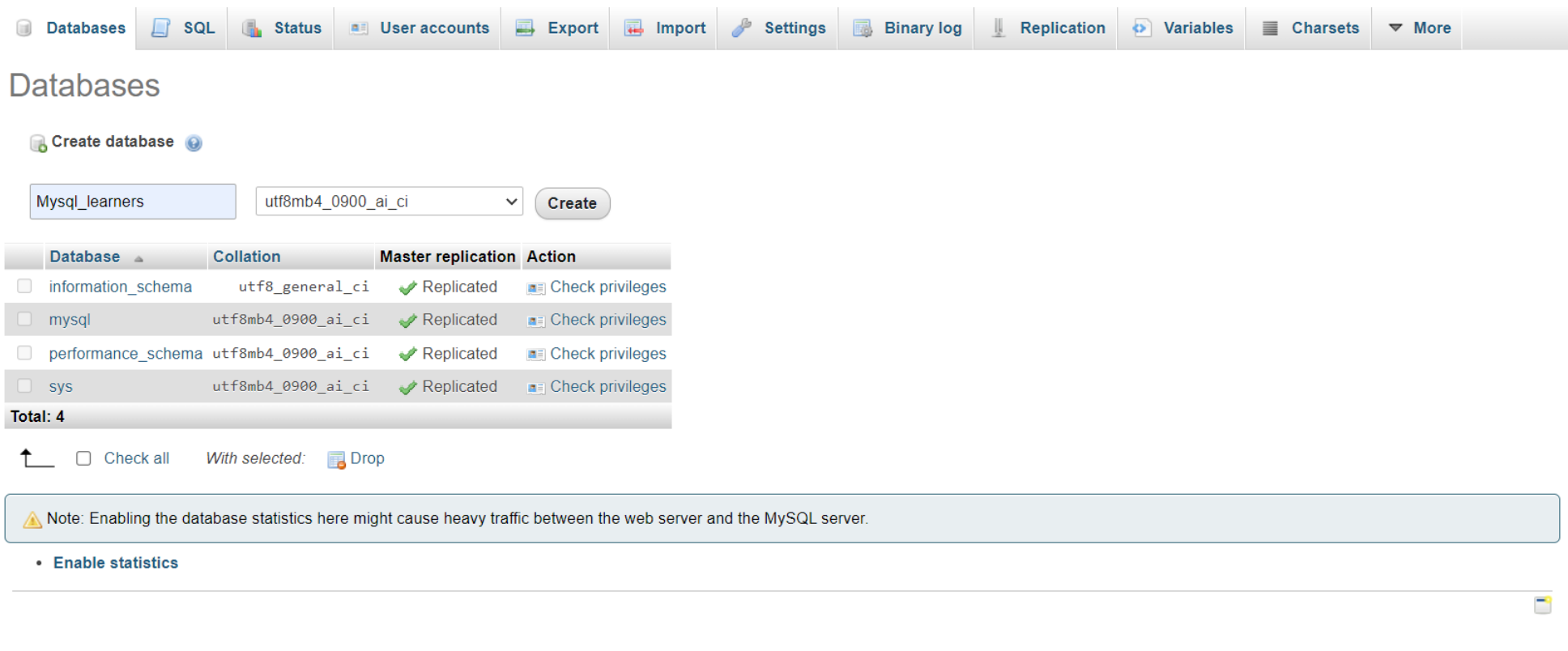

4. You will see the phpMyAdmin GUI tool.



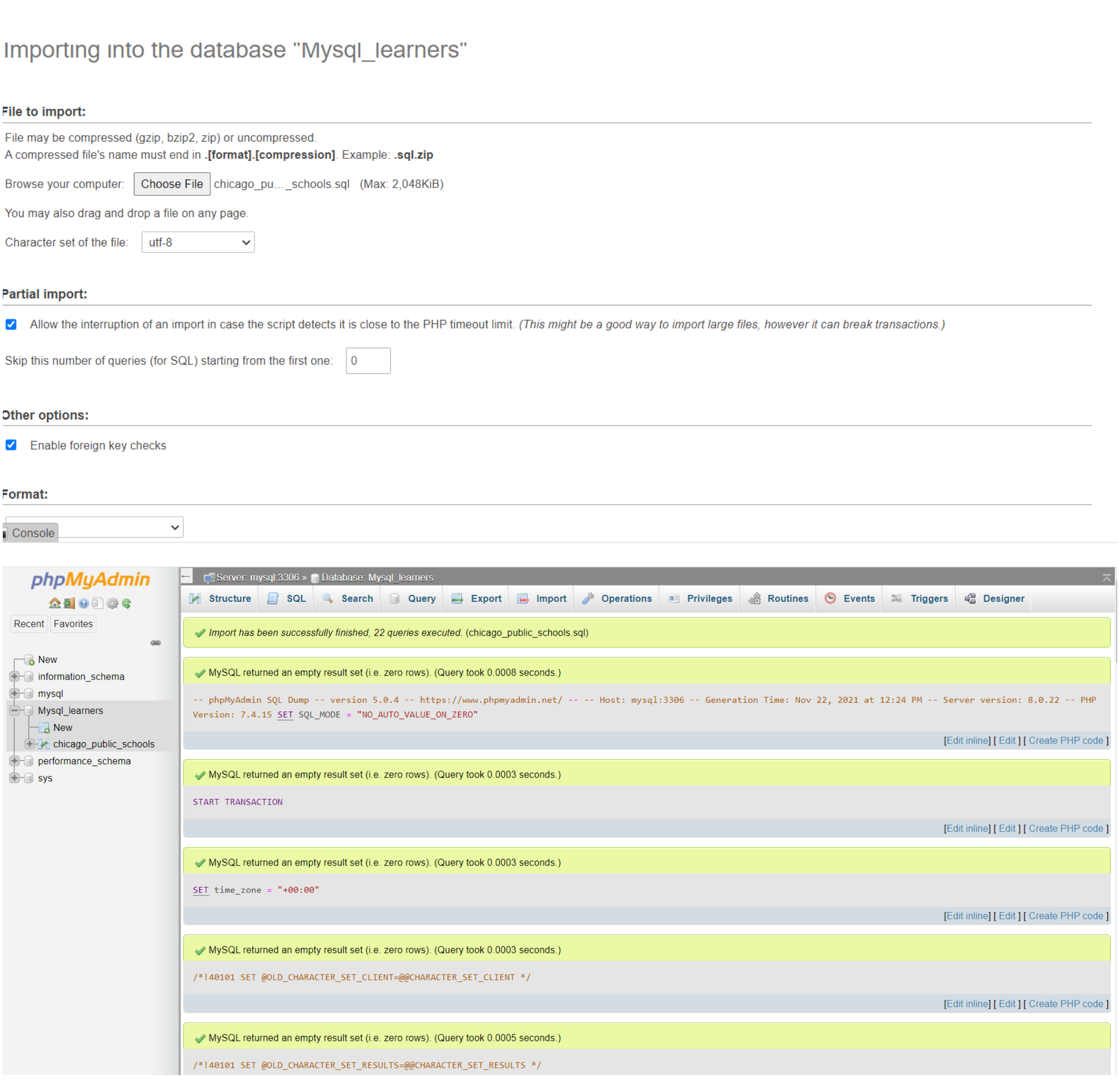
5. In the tree-view, click **New** to create a new empty database. Then enter **Mysql_Learners** as the name of the database and click **Create**.

   The encoding will be left as **utf8mb4_0900_ai_ci**. UTF-8 is the most commonly used character encoding for content or data.

   Proceed to Task B.

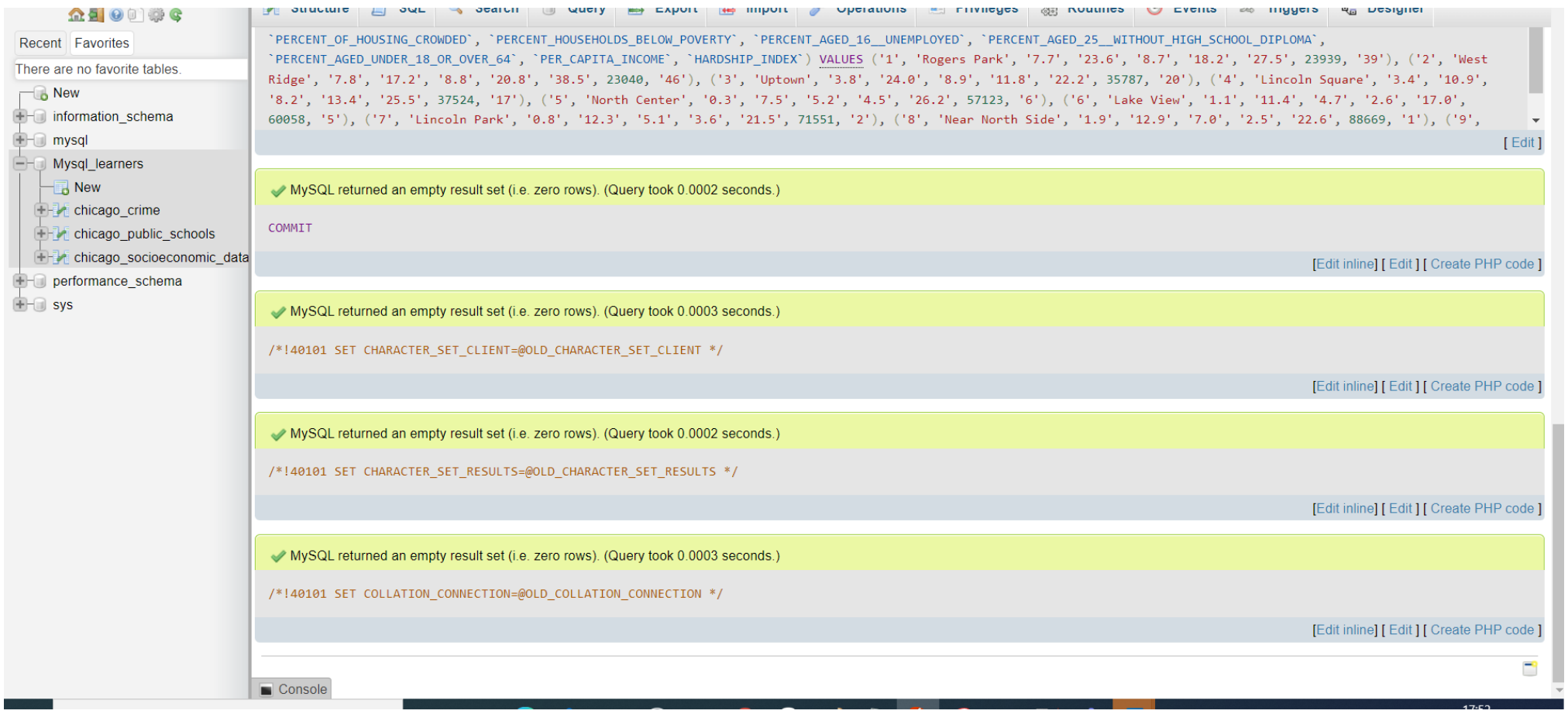


Load the dump files one by one into the database **Mysql_learners** by clicking the **Import** tab and choose the file. Click on **Go** button.



The tables are created and the data is loaded successfully. Repeat the same operation with the other 2 dump files to create and load the tables.

You will see a screen as below



Exercise

Problem 1

List the case number, type of crime and community area for all crimes in community area number 18.

- ▶ Hint 1
- ▶ Hint 2
- ▶ Hint 3

Problem 2

List all crimes that took place at a school. Include case number, crime type and community name.

- ▶ Hint 1
- ▶ Hint 2
- ▶ Hint 3

Problem 3

For the communities of Oakland, Armour Square, Edgewater and CHICAGO list the associated community_area_numbers and the case_numbers.

- ▶ Hint 1
- ▶ Hint 2
- ▶ Hint 3

Congratulations! You have completed this lab, and you are ready for the next topic.

Author(s)

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Changelog

Date	Version	Changed by	Change Description
2022-02-10	0.1	Lakshmi Holla, Malika Singla	Initial Version