Hands-on Lab: Analyzing a real world data-set with SQL 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.

Database Used in this Lab

Mysql_learners database has been used in this lab.

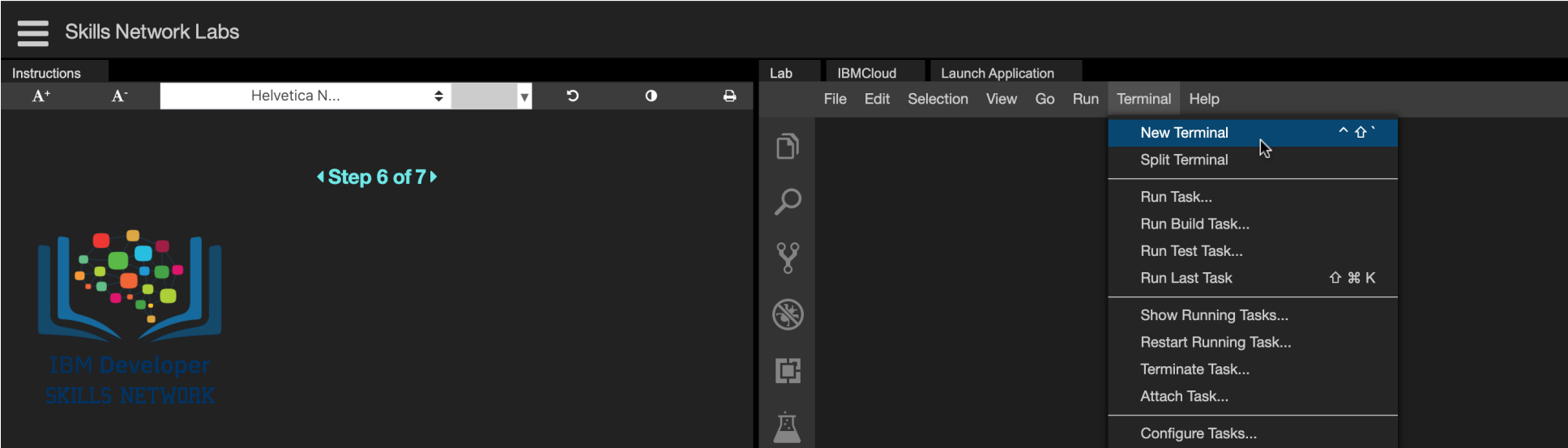Here you will be creating and inserting data into the below mentioned table.

chicago_socioeconomic_data

Here you will be using the following dump file for this purpose.

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
```


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.
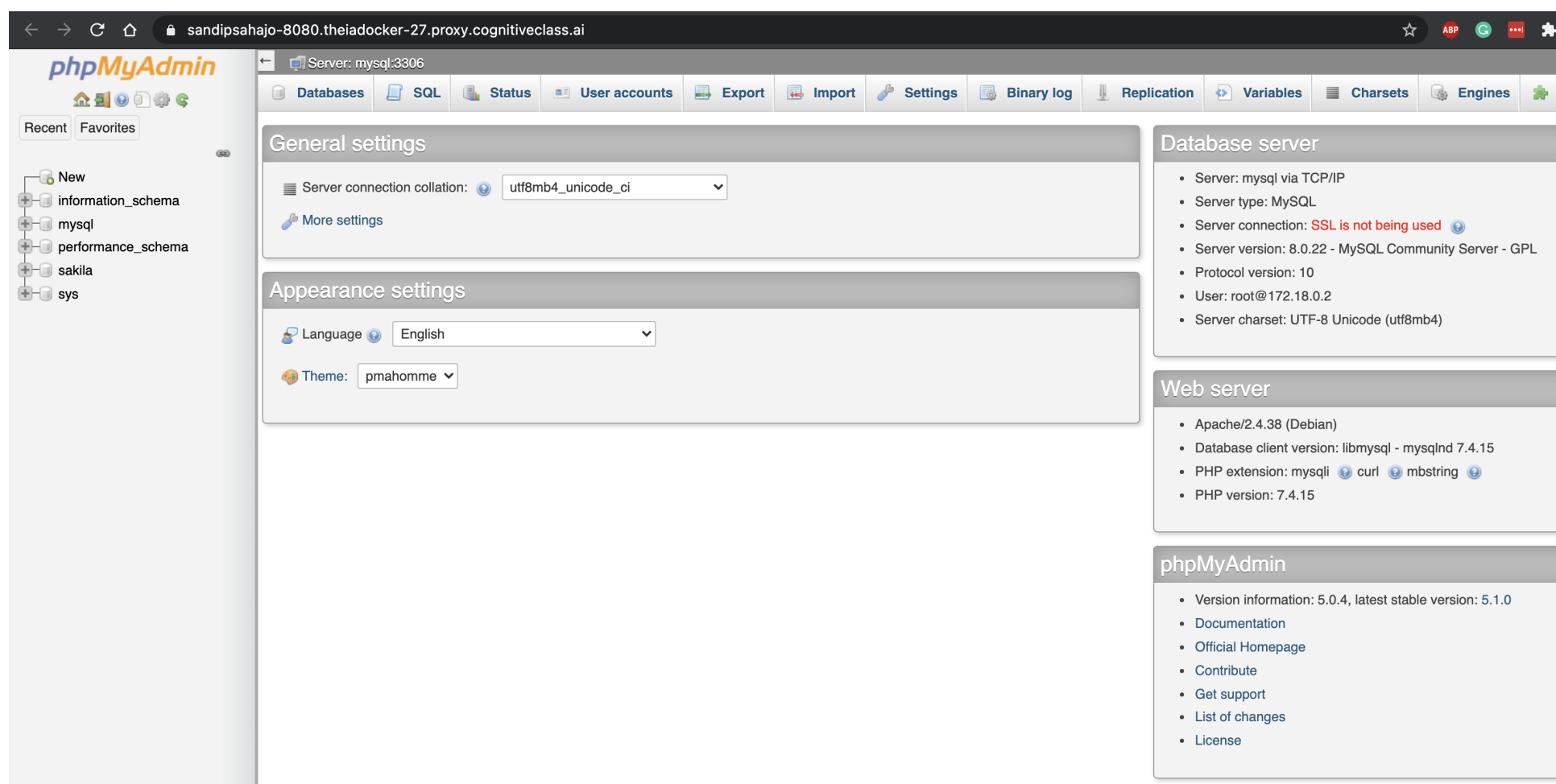

4. You will see the phpMyAdmin GUI tool.

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.

Databases	SQL	Status	User accounts	Export	Import	Settings	Binary log	Replication	Variables	Charsets	▼ More

Databases

Create database ❓

Mysql_learners	utf8mb4_0900_ai_ci ▾	Create

☐	Database ▲	Collation	Master replication	Action
☐	information_schema	utf8_general_ci	✔ Replicated	🔲 Check privileges
☐	mysql	utf8mb4_0900_ai_ci	✔ Replicated	🔲 Check privileges
☐	performance_schema	utf8mb4_0900_ai_ci	✔ Replicated	🔲 Check privileges
☐	sys	utf8mb4_0900_ai_ci	✔ Replicated	🔲 Check privileges
Total: 4				

⬆ ☐ Check all   *With selected:* 🗑 Drop

> ⚠ Note: Enabling the database statistics here might cause heavy traffic between the web server and the MySQL server.

- **Enable statistics**

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.

🔲 Server: mysql:3306 » 🔲 Database: Mysql_learners

Structure	SQL	Search	Query	Export	Import	Operations	Privileges	Routines	Events	Triggers	Designer

File to import:

File may be compressed (gzip, bzip2, zip) or uncompressed.
A compressed file's name must end in **.[format].[compression]**. Example: **.sql.zip**

Browse your computer: [Choose File] chicago_so...mic_data.sql (Max: 2,048KiB)

You may also drag and drop a file on any page.

Character set of the file: [utf-8 ▾]

Partial import:

☑ Allow the interruption of an import in case the script detects it is close to the PHP timeout limit. *(This might be a good way to import large files, however it can break transactions.)*

Skip this number of queries (for SQL) starting from the first one: [0]

Other options:

☑ Enable foreign key checks

Format:

[SQL ▾]

Format-specific options:

SQL compatibility mode: [NONE ▾]

☑ Do not use AUTO_INCREMENT for zero values

The table is created and the data is loaded successfully.

Problems

Problem 1

How many rows are in the dataset?

▶ Click here for the solution

Problem 2

How many community areas in Chicago have a hardship index greater than 50.0?

▶ Click here for the solution

Problem 3

What is the maximum value of hardship index in this dataset?

▶ Click here for the solution

Problem 4

Which community area which has the highest hardship index?

▶ Click here for the solution

Problem 5

Which Chicago community areas have per-capita incomes greater than $60,000?

▶ Click here for the solution

Author(s)

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Changelog

Date	Version	Changed by	Change Description
2021-11-01	0.1	Lakshmi Holla, Malika Singla	Initial Version