


 Helvetica N...



 Step 1 of 7



Hands-on Lab: Create Tables using SQL Scripts and Load Data into Tables 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

The database used in this lab is an internal database. You will be working on a sample HR database. This HR database schema consists of 5 tables called **EMPLOYEES**, **JOB_HISTORY**, **JOBS**, **DEPARTMENTS** and **LOCATIONS**. Each table has a few rows of sample data. The following diagram shows the tables for the HR database:

SAMPLE HR DATABASE TABLES

EMPLOYEES

EMP_ID	F_NAME	L_NAME	SSN	B_DATE	SEX	ADDRESS	JOB_ID	SALARY	MANAGER_ID	DEP_ID
E1001	John	Thomas	123456	1976-01-09	M	5631 Rice, OakPark,IL	100	100000	30001	2
E1002	Alice	James	123457	1972-07-31	F	980 Berry Ln, Elgin,IL	200	80000	30002	5
E1003	Steve	Wells	123458	1980-08-10	M	291 Springs, Gary,IL	300	50000	30002	5

JOB_HISTORY

EMPL_ID	START_DATE	JOBS_ID	DEPT_ID
E1001	2000-01-30	100	2
E1002	2010-08-16	200	5
E1003	2016-08-10	300	5

JOBS

JOB_ID	JOB_TITLE	MIN_SALARY	MAX_SALARY
100	Sr. Architect	60000	100000
200	Sr. Software Developer	60000	80000
300	Jr. Software Developer	40000	60000

DEPARTMENTS

DEPT_ID	DEP_NAME	MANAGER_ID	LOC_ID
2	Architect Group	30001	L0001
5	Software Development	30002	L0002
7	Design Team	30003	L0003
5	Software	30004	L0004

LOCATIONS

LOC_ID	DEP_ID
L0001	2
L0002	5
L0003	7

Objectives

After completing this lab, you will be able to use phpMyAdmin with MySQL to:

- Create a database.
- Create tables using SQL scripts
- Load data into tables

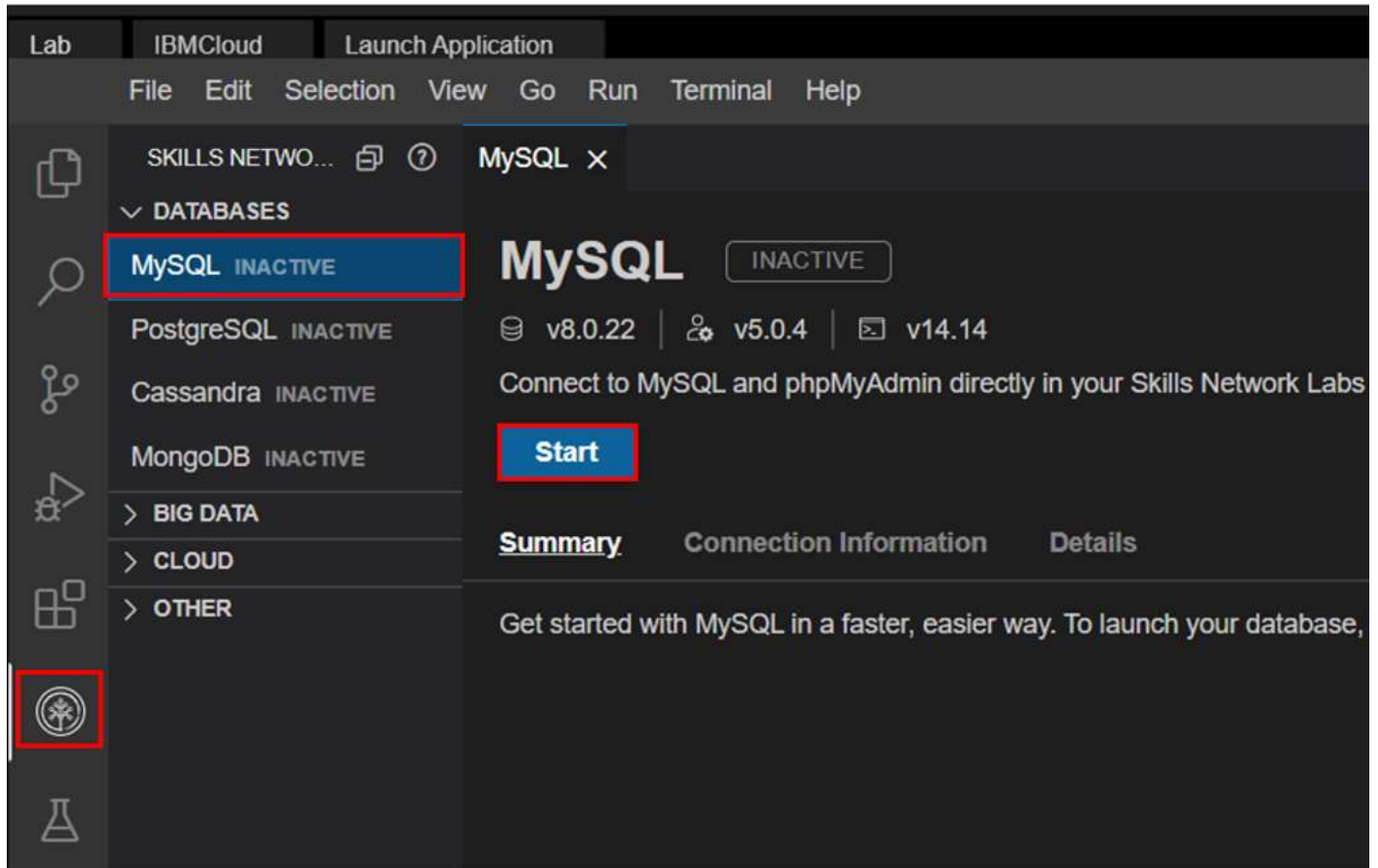
Exercise

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

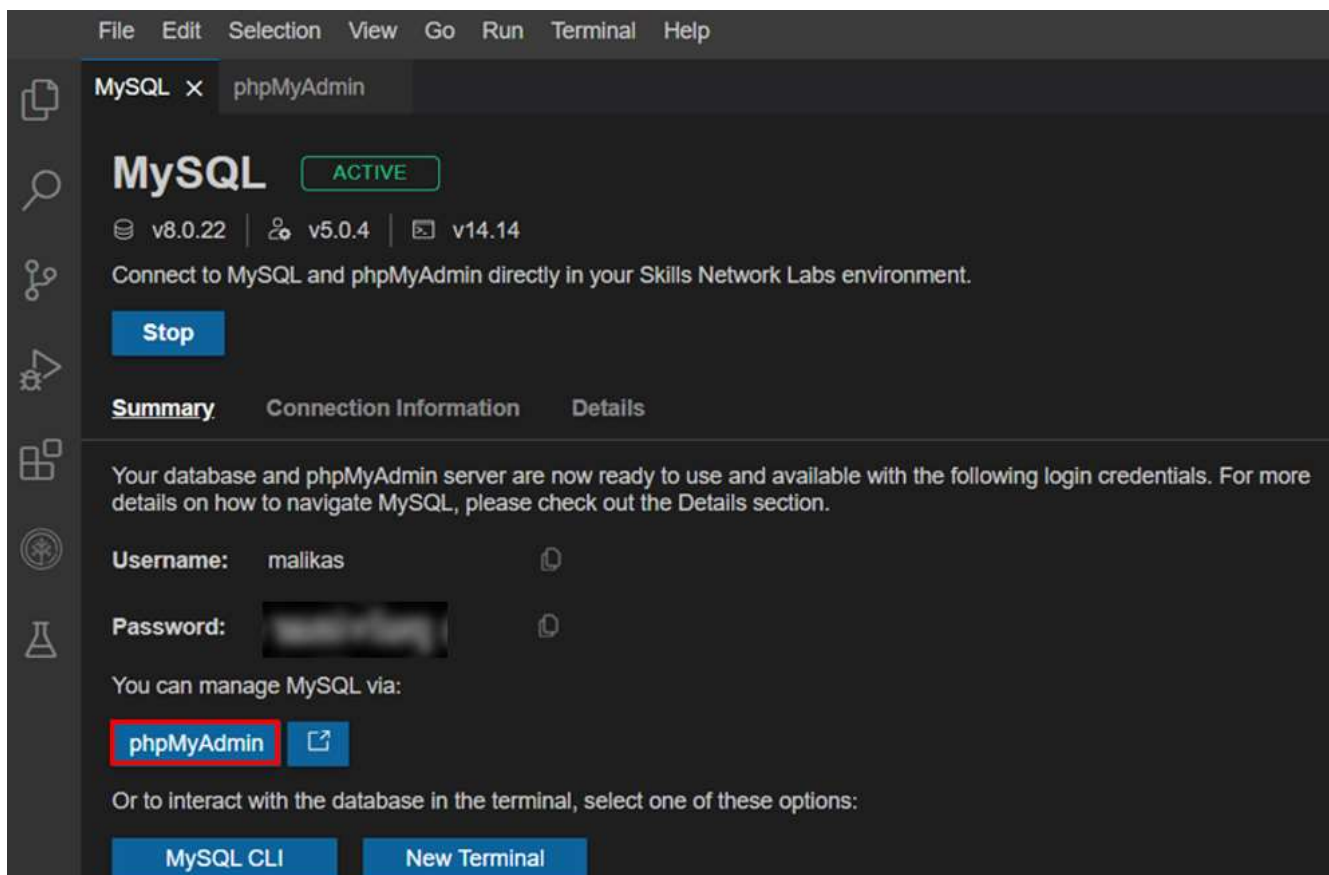
Task A: Create a database

1. Click on **Skills Network Toolbox**. In **Database** section, click **MySQL**.

To start the MySQL click **Start**.



2. Once **MySQL** has started, click on **phpMyAdmin** button to open **phpMyAdmin** in the same window.



3. You will see the phpMyAdmin GUI tool.

The screenshot shows the phpMyAdmin web interface. The browser address bar displays the URL: `sandipsahajo-8080.theiadocker-27.proxy.cognitiveclass.ai`. The phpMyAdmin logo is at the top left. Below it are navigation icons for Home, Servers, Databases, SQL, and Status. There are tabs for 'Recent' and 'Favorites'. On the left sidebar, a tree view shows the database structure: 'New' (with a green plus icon), 'information_schema', 'mysql', 'performance_schema', 'sakila', and 'sys'. Each item has a plus icon to its left. The right pane shows the 'General settings' panel for the selected server 'mysql:3306'. It includes a 'Server connection collation' dropdown set to 'utf8' and a 'More settings' link. Below this is the 'Appearance settings' panel, which includes a 'Language' dropdown set to 'English' and a 'Theme' dropdown set to 'pmahomme'.

4. In the tree-view, click **New** to create a new empty database. Then enter **HR** 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

Databases

Create database

Database	Collation	Master replication	Action
<input type="checkbox"/> information_schema	utf8_general_ci	✓ Replicated	<input type="button" value="Check privileges"/>
<input type="checkbox"/> mysql	utf8mb4_0900_ai_ci	✓ Replicated	<input type="button" value="Check privileges"/>
<input type="checkbox"/> Mysq!_learners	utf8mb4_0900_ai_ci	✓ Replicated	<input type="button" value="Check privileges"/>
<input type="checkbox"/> performance_schema	utf8mb4_0900_ai_ci	✓ Replicated	<input type="button" value="Check privileges"/>
<input type="checkbox"/> sys	utf8mb4_0900_ai_ci	✓ Replicated	<input type="button" value="Check privileges"/>

Total: 5

☐ Check all
 With selected:

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

- [Enable statistics](#)

Exercise 1: Create tables using SQL scripts

In this exercise, you will learn how to execute a script containing the CREATE TABLE commands for all the tables rather than create each table manually by typing the DDL commands in the SQL editor.

1. Download the script file to your computer:

- [HRDatabaseCreateTablesScript.sql](#)

- Select the HR database. Later click on the Import tab.
- Click on **choose file**. Browse for the file and upload it .
- Later scroll down and click on **Go**.

Recent Favorites

New

HR

information_schema

mysql

Mysql_learners

New

PETSALE

performance_schema

sys

Structure SQL Search Query Export Import Open

Importing into the database "HR"

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: HR_Databa...es_Script.sql (Max: 2,048KiB)

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

Character set of the file:

Partial import:

☒ Allow the interruption of an import in case the script detects it is close to the PHP timeout limit. (

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

Other options:

☒ Enable foreign key checks

Format:

Console

- The script then gets imported successfully.

The screenshot shows the phpMyAdmin interface for a MySQL server (mysql:3306) and the HR database. The left sidebar displays the database structure, including the HR database and its tables: DEPARTMENTS, EMPLOYEES, JOBS, JOB_HISTORY, and LOCATIONS. The main panel shows the SQL tab with a list of recent queries and their results. The queries are as follows:

- Query 1:** Import has been successfully finished, 10 queries executed. (HR_Database_Create_Tables_Scrip)
- Query 2:** MySQL returned an empty result set (i.e. zero rows). (Query took 0.0033 seconds.)
`DROP TABLE IF EXISTS EMPLOYEES`
- Query 3:** Note: #1051 Unknown table 'HR.EMPLOYEES'
- Query 4:** MySQL returned an empty result set (i.e. zero rows). (Query took 0.0024 seconds.)
`DROP TABLE IF EXISTS JOB_HISTORY`
- Query 5:** Note: #1051 Unknown table 'HR.JOB_HISTORY'
- Query 6:** MySQL returned an empty result set (i.e. zero rows). (Query took 0.0051 seconds.)
`DROP TABLE IF EXISTS JOBS`
- Query 7:** Note: #1051 Unknown table 'HR.JOBS'
- Query 8:** returned an empty result set (i.e. zero rows). (Query took 0.0037 seconds.)

- Click on any of the tables and you will see its Table Definition (that is, its list of columns, data types, etc).

The screenshot displays the phpMyAdmin interface. On the left, a tree view shows the database structure with 'HR' selected. The main panel shows the 'Table structure' for the 'EMPLOYEES' table. The table has 11 columns:

#	Name	Type	Collation	Attributes	Null	Default	Comments
1	EMP_ID	char(9)	utf8mb4_0900_ai_ci		No	None	
2	F_NAME	varchar(15)	utf8mb4_0900_ai_ci		No	None	
3	L_NAME	varchar(15)	utf8mb4_0900_ai_ci		No	None	
4	SSN	char(9)	utf8mb4_0900_ai_ci		Yes	NULL	
5	B_DATE	date			Yes	NULL	
6	SEX	char(1)	utf8mb4_0900_ai_ci		Yes	NULL	
7	ADDRESS	varchar(30)	utf8mb4_0900_ai_ci		Yes	NULL	
8	JOB_ID	char(9)	utf8mb4_0900_ai_ci		Yes	NULL	
9	SALARY	decimal(10,2)			Yes	NULL	
10	MANAGER_ID	char(9)	utf8mb4_0900_ai_ci		Yes	NULL	
11	DEP_ID	char(9)	utf8mb4_0900_ai_ci		No	None	

Below the table structure, there are options to 'Check all', 'With selected', 'Browse', 'Change', 'Drop', and 'Prior'. There are also buttons for 'Print', 'Move columns', and 'Normalize'. A section for 'Indexes' is visible at the bottom, showing a 'PRIMARY' index on 'EMP_ID'.

Exercise 2: Load data into tables

In this exercise, you will learn how data can be loaded into MySQL. You could manually insert each row into the table one by one, but that would take a long time. Instead, MySQL (and almost every other database) allows you to load data from .CSV files.

The steps below explain the process of loading data into the tables you created earlier in exercise 1.

1. Download the 5 .csv files below to your local computer:

- [Departments.csv](#)
- [Employees.csv](#)
- [Jobs.csv](#)
- [Locations.csv](#)
- [JobsHistory.csv](#)

To load each table do the following steps.

- Select each table .
- Click on Import tab.
- Select the **csv** file and click on **Go** to load the csv file.

Once the tables are loaded , you will get a message that the records are inserted successfully.

Further you can click on browse and view the data of each table.

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

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Changelog

Date	Version	Changed by	Change Description
2022-08-03	0.4	Sathya Priya	Updated CSV Links
2022-07-27	0.3	Lakshmi Holla	Updated HTML tag
2022-04-07	0.2	Malika Singla	Updated screenshot
2021-11-01	0.1	Lakshmi Holla, Malika Singla	Initial Version

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