

Hands-on Lab: Create Tables and Load Data 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.

Objectives

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

- Create a database.
- Create tables.
- Load data into tables manually using the phpMyAdmin GUI.
- Load data into tables using a text/script file.

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

Books database has been used in this lab.

The following diagram shows the structure of the **myauthors** table from the Books database:

myauthors	
author_id	int
first_name	varchar(100)
middle_name	varchar(50)
last_name	varchar(100)

In the table, **author_id** is an integer, **first_name** is a string that stores a maximum of 100 characters, **middle_name** is a string that stores a maximum of 50 characters, and **last_name** is a string that stores a maximum of 100 characters.

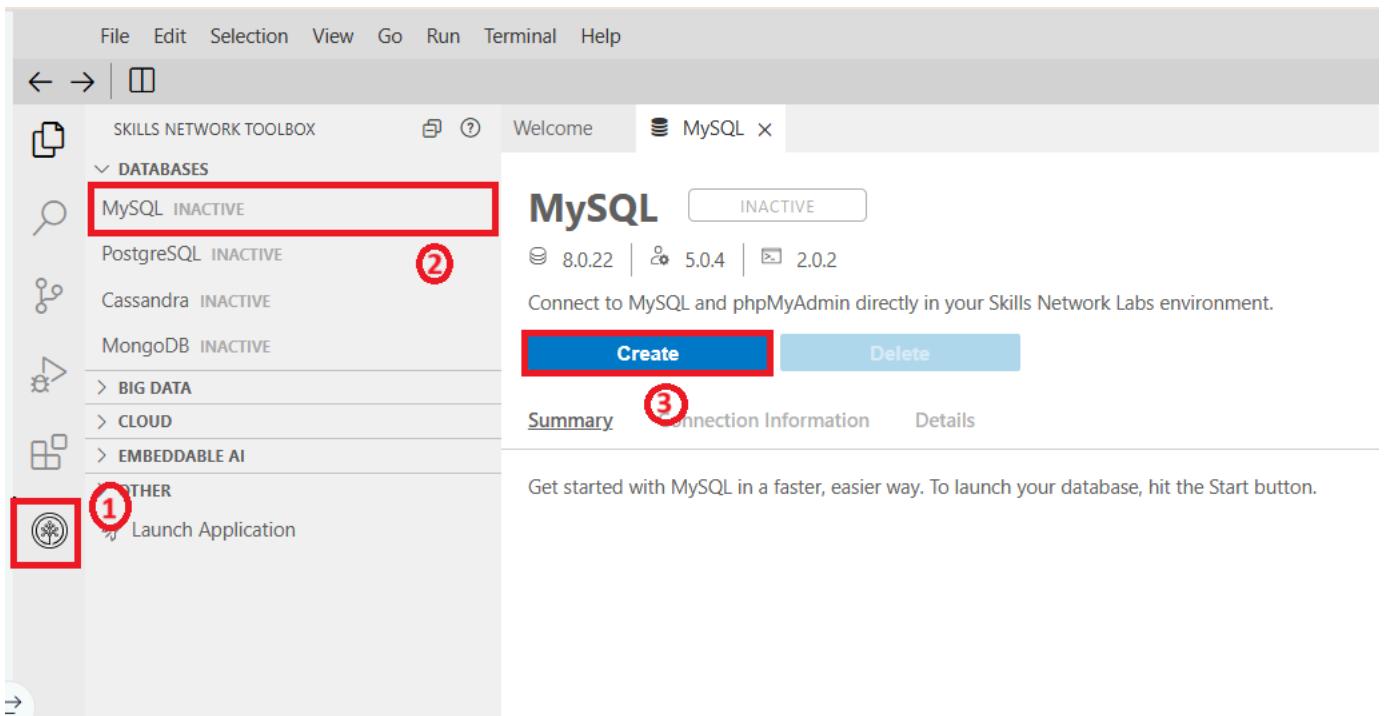
Task A: Create a database

Start the MySQL service session using the `Start MySQL in IDE` button directive.

[Open MySQL Page in IDE](#)

If the icon doesn't start the MySQL database, follow the steps below.

1. Click the Skills Network extension button on the left side of the window.
2. Open the DATABASES menu and click MySQL.
3. Click Create. MySQL may take a few moments to start.



4. Open the phpMyAdmin tool in a new tab in your browser.

This screenshot shows the MySQL summary page. At the top, it says 'MySQL ACTIVE'. Below that, it lists the same version information: 8.0.22, 5.0.4, and 2.0.2. A note says 'Connect to MySQL and phpMyAdmin directly in your Skills Network Labs environment.' There are 'Create' and 'Delete' buttons. The 'Summary' tab is active. Below the tabs, a message says 'Your database and phpMyAdmin server are now ready to use and available with the following login credentials. To navigate MySQL, please check out the Details section.' It then says 'You can manage MySQL via:' followed by a 'phpMyAdmin' link and a 'New Terminal' link. A red box and arrow highlight the 'phpMyAdmin' link.

5. You will see the phpMyAdmin GUI tool.

The screenshot shows the phpMyAdmin interface. On the left, there is a sidebar with a tree view of databases. The tree starts with a 'New' node, which has a '+' sign next to it. Below 'New' are several database names: 'information_schema', 'mysql', 'performance_schema', 'sakila', and 'sys'. Each of these database names has a '+' sign next to it, indicating they can be expanded. At the top of the sidebar, there are two buttons: 'Recent' and 'Favorites'. Above the sidebar, there is a header bar with navigation icons (back, forward, search, etc.) and the URL 'sandipsahajo-8080.theiadocker-27.proxy.cognitivec...'. To the right of the sidebar, there are three tabs: 'Databases' (selected), 'SQL', and 'Status'. The main area is divided into two sections: 'General settings' and 'Appearance settings'. In the 'General settings' section, there is a setting for 'Server connection collation' set to 'utf8r'. There is also a link labeled 'More settings'. In the 'Appearance settings' section, there is a 'Language' setting set to 'English' and a 'Theme' setting set to 'pmahomme' with a dropdown arrow.

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

The screenshot shows two windows side-by-side. On the left is the phpMyAdmin interface with a sidebar containing databases like information_schema, mysql, performance_schema, sakila, and sys. A red box labeled '1' highlights the 'New' button under the 'Databases' section. On the right is a MySQL server configuration window titled 'Server: mysql:3306'. It shows a 'Databases' tab selected, with a 'Create database' button and a text input field containing 'Books'. A red box labeled '2' highlights the 'Books' input field. Below this, a table lists existing databases with their collation settings. A note at the bottom encourages enabling statistics for the database.

Recent Favorites

New

information_schema

mysql

performance_schema

sakila

sys

Server: mysql:3306

Databases SQL Status

Databases

Create database

Books

Database	Collation
information_schema	utf8_general_ci
mysql	utf8mb4_0900_ai_ci
performance_schema	utf8mb4_0900_ai_ci
sakila	utf8mb4_0900_ai_ci
sys	utf8mb4_0900_ai_ci

Total: 5

Check all With selected:

Note: Enabling the database statistics helps to provide better performance and analysis features.

- Enable statistics

Task B: Create tables

- In the Create table interface for the empty database **Books**, enter **myauthors** as the table name and **4** for the Number of columns. This is the first step to creating the table **myauthors** that was shown earlier in this lab.

Then click **Go**.

The screenshot shows the phpMyAdmin interface. On the left, the database tree lists several databases: Books, information_schema, mysql, performance_schema, sakila, and sys. A 'New' icon is also present. On the right, the main panel shows the 'Structure' tab selected. The top navigation bar indicates the server is 'mysql:3306' and the current database is 'Books'. A message box states 'No tables found in database.' Below it, a 'Create table' button is visible. In the 'Name:' field, the text 'myauthors' is entered and highlighted with a red box.

2. Enter the table definition for the **myauthors** table as shown in the image below with highlighted boxes. Then click **Save**.

← → ⌂ ⌂ sandipsahajo-8080.theiadocker-27.proxy.cognitive

phpMyAdmin

Recent Favorites

- New
- Books
- information_schema
- mysql
- performance_schema
- sakila
- sys

Server: mysql:3306 » Database: Books

Table name: myauthors

Name	Type
author_id	INT
first_name	VARCHAR
middle_name	VARCHAR
last_name	VARCHAR

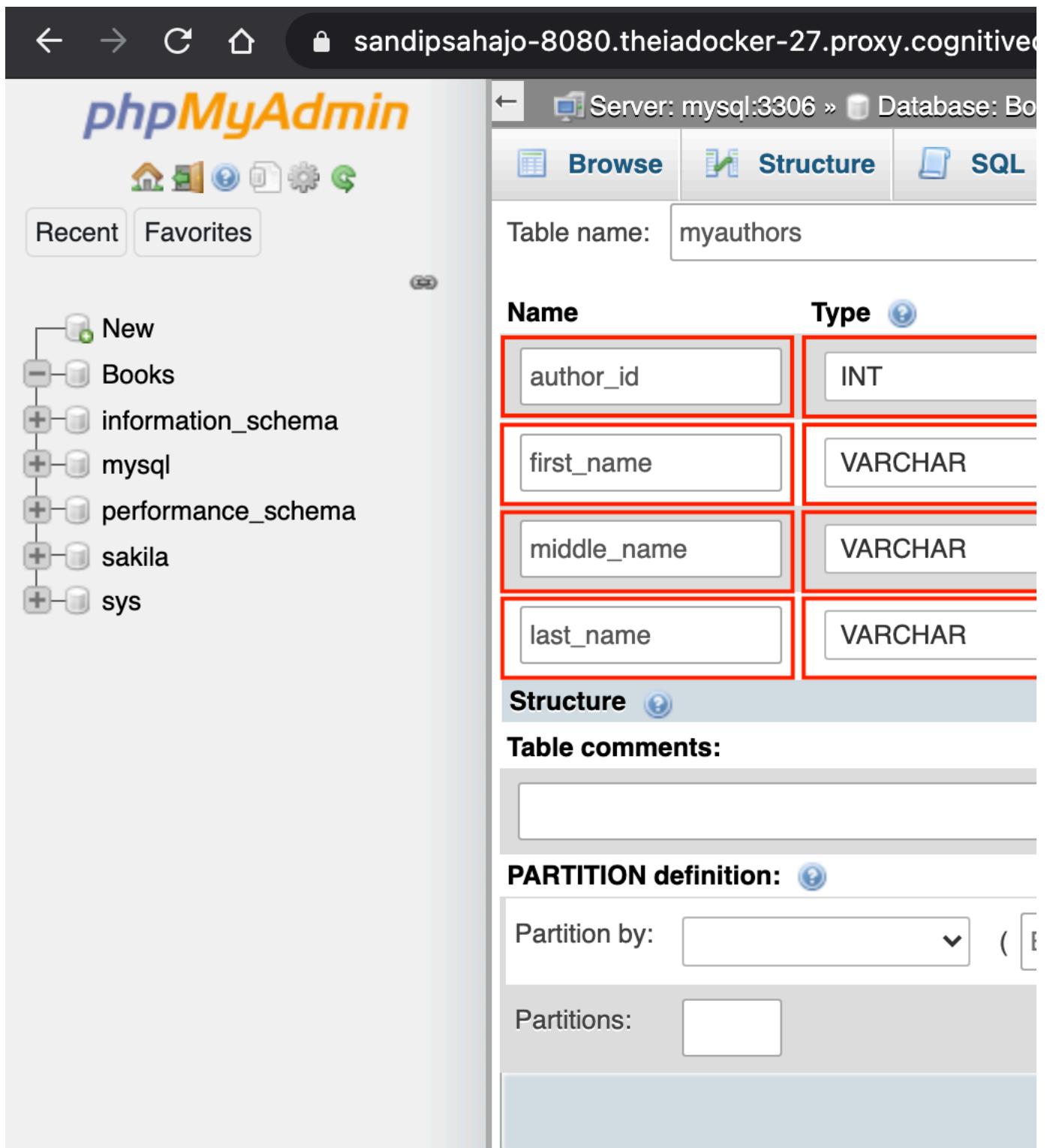
Structure

Table comments:

PARTITION definition:

Partition by: ([])

Partitions: []



3. The Table structure for the **myauthors** table will appear.

The screenshot shows the phpMyAdmin interface. On the left, the database tree is visible with the Books database selected. The Books database contains a table named myauthors, which has four columns: author_id, first_name, middle_name, and last_name. The middle_name column is currently highlighted with a yellow background.

Table structure

#	Name	Type	Collation
1	author_id	int	
2	first_name	varchar(100)	utf8mb4_general_ci
3	middle_name	varchar(50)	utf8mb4_general_ci
4	last_name	varchar(100)	utf8mb4_general_ci

Action Buttons:

- Print
- Move columns
- Normalize
- Add
- 1 column(s)
- after last_name

Task C: Load data into tables manually using the phpMyAdmin GUI

1. Sometimes, you may want to load a few data rows of data, but you may not have a SQL script on hand to do that. In this case, you can manually load the data into phpMyAdmin. Since this is a manual process, it is better for inserting a small amount of data rather than a large amount.

To load data manually, go to the **Insert** tab for the **myauthors** table. Enter data for 2 rows of the **myauthors** table as shown in the image below with highlighted boxes. Then click **Go** at the bottom.

phpMyAdmin



Recent Favorites

- +/- New
- +/- Books
 - +/- New
 - +/- myauthors
- +/- information_schema
- +/- mysql
- +/- performance_schema
- +/- sakila
- +/- sys

← Server: mysql:3306 » Database: Books » T

Browse Structure SQL Se

Column	Type	Function
--------	------	----------

author_id	int	
-----------	-----	--

first_name	varchar(100)	
------------	--------------	--

middle_name	varchar(50)	
-------------	-------------	--

last_name	varchar(100)	
-----------	--------------	--

Ignore

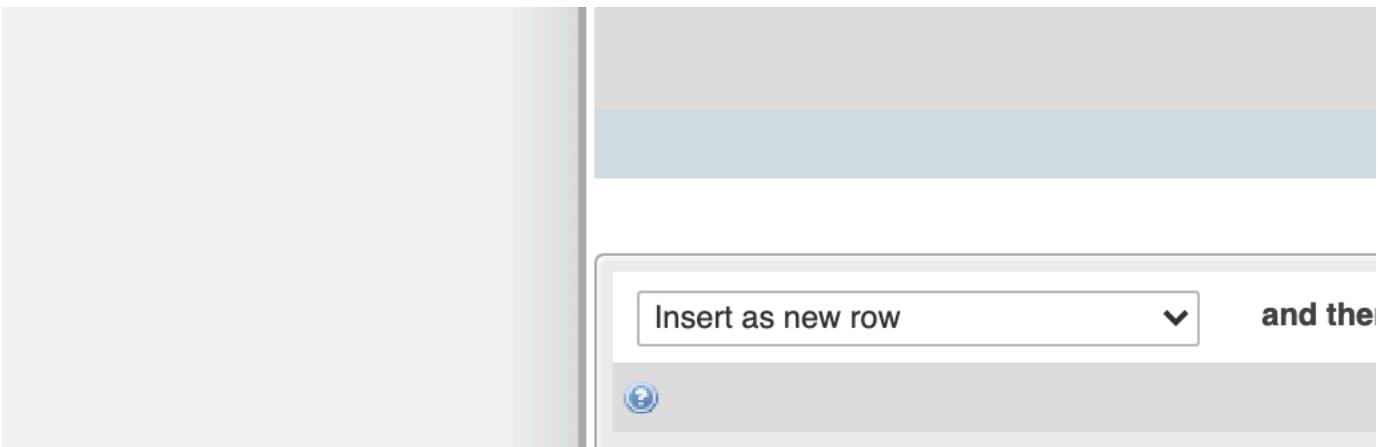
Column	Type	Function
--------	------	----------

author_id	int	
-----------	-----	--

first_name	varchar(100)	
------------	--------------	--

middle_name	varchar(50)	
-------------	-------------	--

last_name	varchar(100)	
-----------	--------------	--



2. Notification of the successful insertion of 2 rows to the **myauthors** table will appear.

```
INSERT INTO `myauthors` (`author_id`, `first_name`, `middle_name`, `last_name`) VALUES (1, 'Merritt', null, 'Eric'), (2, 'Linda', null, 'Mui')
```

3. Go to the **Browse** tab for the **myauthors** table to check the newly inserted rows.

The screenshot shows the phpMyAdmin interface with the **Browse** tab selected. A warning message says "Current selection does not contain a unique column". Below it, a success message says "Showing rows 0 - 1 (2 total, Query took 0.0004 sec)". The SQL query shown is "SELECT * FROM `myauthors`". The table data shows two rows:

author_id	first_name	middle_name	last_name
1	Merritt		Eric
2	Linda		Mui

Task D: Load data into tables using a text/script file

1. Now you will use a SQL script to import the remainder of the **myauthors** table data. A SQL script file contains commands and statements that perform operations on your database, and can be useful when importing a large amount of data.

Download the SQL script below to your local computer:

- o [mysql_table-myauthors_insert-data.sql](#)

2. Go to **Import** tab for the **myauthors** table. Click **Choose File** and load the **mysql_table-myauthors_insert-data.sql** file from your local computer storage.
The rest of the settings can be left as they are because you are importing a SQL script that is encoded with UTF-8.

Then click **Go**. Notification of import success will appear.

phpMyAdmin

Server: mysql:3306 » Database: Books » T

Recent Favorites

New Books New myauthors information_schema mysql performance_schema sakila sys

Importing into the table "my

File to import:

File may be compressed (gzip, bzip2, zip) or uncompr
A compressed file's name must end in .[format].[com

Browse your computer: 1 mysql_table..

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 scr

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

Other options:

Enable foreign key checks

Format:

SQL

Format-specific options:

SQL compatibility mode:

Do not use AUTO_INCREMENT for zero

 Import has been successfully finished, 1376 queries executed. (mysql_table-myauthors_inse

3. Go to the **Browse** tab for the **myauthors** table again to check the newly inserted rows appear along with previously inserted 2 rows.

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

Author: [Sandip Saha Joy](#)



Skills Network

Other Contributor(s)

- Kathy An

© IBM Corporation 2021. All rights reserved.