

# 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.

The screenshot shows the Skills Network Toolbox interface. On the left, there's a sidebar with icons for Databases, Big Data, Cloud, EMBEDDABLE AI, and OTHER. The 'OTHER' section is highlighted with a red box and contains a 'Launch Application' button. The main area shows a list of databases: MySQL (INACTIVE), PostgreSQL (INACTIVE), Cassandra (INACTIVE), and MongoDB (INACTIVE). The MySQL entry is also highlighted with a red box. To its right, there's a detailed view for MySQL with version information (8.0.22, 5.0.4, 2.0.2), a 'Create' button (also highlighted with a red box), and tabs for Summary, Connection Information, and Details. A note at the bottom says: 'Get started with MySQL in a faster, easier way. To launch your database, hit the Start button.'

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

## MySQL

ACTIVE

8.0.22 | 5.0.4 | 2.0.2

Connect to MySQL and phpMyAdmin directly in your Skills Network Labs environment.

[Create](#)[Delete](#)[Summary](#) [Connection Information](#) [Details](#)

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.

You can manage MySQL via:

[phpMyAdmin](#)

Or to interact with the database in the terminal, select one of these options:

[MySQL CLI](#)[New Terminal](#)

5. You will see the phpMyAdmin GUI tool.

The screenshot shows the phpMyAdmin interface. On the left, there's a tree-view sidebar with 'Recent' and 'Favorites' buttons. The sidebar lists databases: 'New', 'information\_schema', 'mysql', 'performance\_schema', 'sakila', and 'sys'. The 'mysql' database is expanded. At the top, the URL is 'sandipsahajo-8080.theiadocker-27.proxy.cognitiveclass.ai'. The main area has tabs for 'Server: mysql:3306', 'Databases', 'SQL', 'Status', and 'User accounts'. The 'Databases' tab is active. Below it, the 'General settings' section shows 'Server connection collation: utf8mb4\_unicode\_ci' with a 'More settings' link. The 'Appearance settings' section shows 'Language: English' and 'Theme: pmahomme'. A vertical scrollbar is visible on the right side of the main content area.

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 the phpMyAdmin interface for a MySQL server. On the left, a sidebar lists existing databases: information\_schema, mysql, performance\_schema, sakila, and sys. A red box labeled '1' highlights the 'New' button. The main area is titled 'Databases' and contains a 'Create database' form. A red box labeled '2' highlights the 'Database' input field, which has 'Books' typed into it. Below the form is a table of databases, showing their names, collations, and replication status. The table includes rows for information\_schema, mysql, performance\_schema, sakila, and sys, all marked as 'Replicated'. A note at the bottom right of the table area says: 'Note: Enabling the database statistics here might cause heavy traffic!' followed by a bullet point 'Enable statistics'.

Database	Collation	Master replication
information_schema	utf8_general_ci	Replicated
mysql	utf8mb4_0900_ai_ci	Replicated
performance_schema	utf8mb4_0900_ai_ci	Replicated
sakila	utf8mb4_0900_ai_ci	Replicated
sys	utf8mb4_0900_ai_ci	Replicated

## Task B: Create tables

1. 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. The top navigation bar displays the URL: `sandipsahajo-8080.theiadocker-27.proxy.cognitiveclass.ai/server_database`. Below the URL, the title "phpMyAdmin" is visible. The left sidebar lists databases: Books, information\_schema, mysql, performance\_schema, sakila, and sys. The "Books" database is selected and expanded, showing its tables. The main content area shows the "Database: Books" tab selected. A message box indicates "No tables found in database." A "Create table" dialog is open, prompting for a table name. The input field contains "myauthors", which is highlighted by a red box. To the right of the input field, the text "Number of columns: 1" is displayed.

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

← → C ⌂ sandipsahajo-8080.theiadocker-27.proxy.cognitiveclass.ai/sql.php?db=

# phpMyAdmin

Server: mysql:3306 » Database: Books » Table: myauth

Browse Structure SQL Search

Table name: myauthors

New Books information\_schema mysql performance\_schema sakila sys

Name	Type	Length/Values
author_id	INT	
first_name	VARCHAR	100
middle_name	VARCHAR	50
last_name	VARCHAR	100

**Structure**

**Table comments:**

**Collation:**

**PARTITION definition:**

Partition by: ( Expression or column list )

Partitions:

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

The screenshot shows the phpMyAdmin interface with the following details:

- Server:** mysql:3306
- Database:** Books
- Table:** myauthors

The "Structure" tab is selected. The table structure is displayed as follows:

#	Name	Type	Collation	Attributes
1	author_id	int		
2	first_name	varchar(100)	utf8mb4_0900_ai_ci	
3	middle_name	varchar(50)	utf8mb4_0900_ai_ci	
4	last_name	varchar(100)	utf8mb4_0900_ai_ci	

Below the table structure, there are several buttons and input fields:

- Print
- Move columns
- Normalize
- Add
- 1 column(s)
- after last\_name
- Go

### 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**

Server: mysql:3306 » Database: Books » Table: myauthors

Browse Structure SQL Search Insert

Column	Type	Function	Null	Value
author_id	int		✓	1 Merrit
first_name	varchar(100)		✓	
middle_name	varchar(50)		✓	
last_name	varchar(100)		✓	Eric

Ignore

Column	Type	Function	Null	Value
author_id	int		✓	2 Linda
first_name	varchar(100)		✓	
middle_name	varchar(50)		✓	
last_name	varchar(100)		✓	Mui

Insert as new row and then Go back to previous

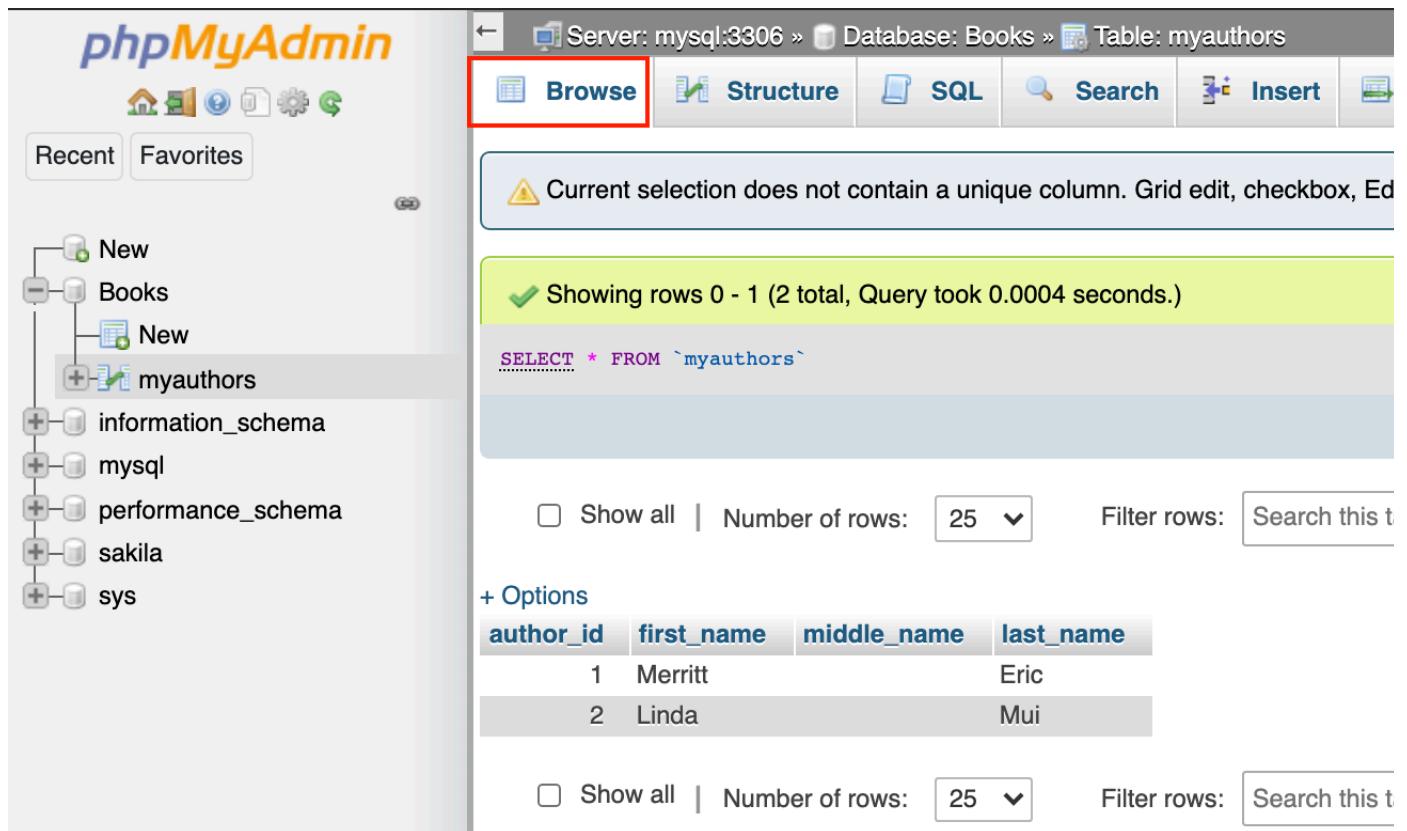
Preview SQL Reset

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

 2 rows inserted.

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

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



phpMyAdmin

Server: mysql:3306 » Database: Books » Table: myauthors

Recent Favorites

New Books New myauthors information\_schema mysql performance\_schema sakila sys

Browse Structure SQL Search Insert

Current selection does not contain a unique column. Grid edit, checkbox, Ed

Showing rows 0 - 1 (2 total, Query took 0.0004 seconds.)

```
SELECT * FROM `myauthors`
```

Show all Number of rows: 25 Filter rows: Search this t

+ Options

author_id	first_name	middle_name	last_name
1	Merritt		Eric
2	Linda		Mui

Show all Number of rows: 25 Filter rows: Search this t

## 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:

- [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 » Table: myauthors

**Browse** **Structure** **SQL** **Search** **Insert**

**Importing into the table "myauthors"**

**File to import:**

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

**1** Browse your computer: **Choose File** **mysql\_table...sert-data.sql** (Max: 2,04)

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 limit.

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:

Do not use `AUTO_INCREMENT` for zero values

**Import has been successfully finished, 1376 queries executed. (mysql\_table-myauthors\_insert-data.sql)**

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

**phpMyAdmin**

Server: mysql:3306 » Database: Books » Table: myauthors

**Browse** **Structure** **SQL** **Search** **Insert**

Current selection does not contain a unique column. Grid edit, checkbox, Ed

Showing rows 0 - 24 (1378 total, Query took 0.0003 seconds.)

```
SELECT * FROM `myauthors`
```

author_id	first_name	middle_name	last_name
1	Merritt		Eric
2	Linda		Mui
3	Alecos		Papadatos
4	Paul	C.van	Oorschot
5	David		Cronin
6	Richard		Blum
7	Yuval	Noah	Harari
8	Paul		Albitz
9	David		Beazley
10	John	Paul	Shen
11	Andrew		Miller
12	Melanie		Swan
13	Neal		Ford
14	Nir		Shavit
15	Tim		Kindberg
16	Mike		McQuaid
17	Brian	P.	Hogan
18	Jean-Philippe		Aumann
19	Lance		Fortnow
20	Richard	C.	Jeffrey
21	William	L.	Simon
22	Magnus	Lie	Hetland
23	Mike		McShaffry
24	Norman		Matloff
25	John	E.	Hopcroft

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

Author: [Sandip Saha Joy](#)



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Other Contributor(s)

• Kathy An

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