

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.

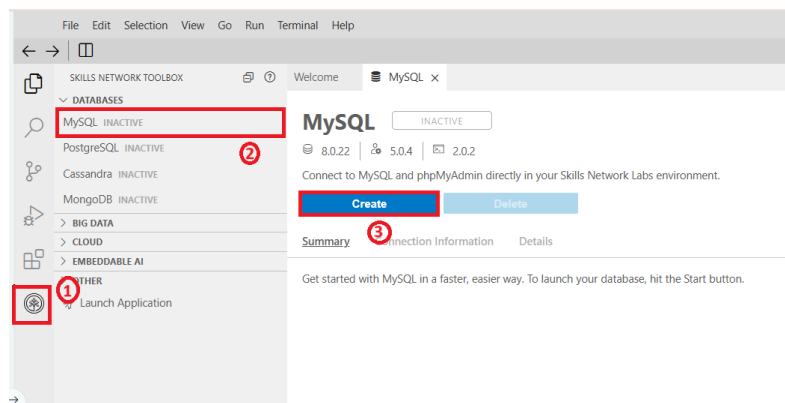
Task A: Create a database

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

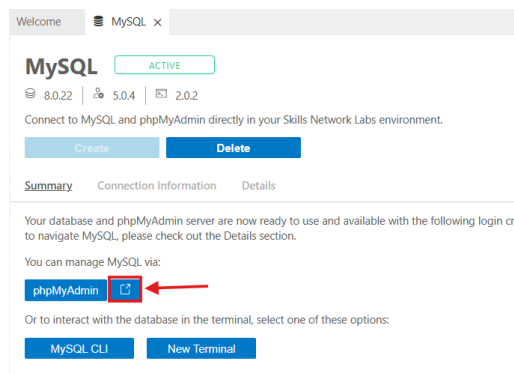
[Open MySQL Page in IDE](#)

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.



5. You will see the phpMyAdmin GUI tool.

← → ↻ 🏠 📌 sandipsahajo-8080.theiadocker-27.proxy.cognitiveclass.ai

phpMyAdmin

🏠 📄 ⚙️ 💾 🔄

Recent Favorites

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

Server: mysql:3306

Databases SQL Status User accounts Export Import Settings

General settings

Server connection collation: 🔍 utf8mb4_unicode_ci ▼

[More settings](#)

Appearance settings

Language 🔍 English ▼

Theme: pmahomme ▼

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.

← → ↻ 🏠 🔒 sandipsahajo-8080.theiadocker-27.proxy.cognitiveclass.ai/server_databases.php?server=1

phpMyAdmin

Recent Favorites

1 New

- information_schema
- mysql
- performance_schema
- sakila
- sys

Server: mysql:3306

Databases SQL Status User accounts Export Import Settings

Databases

Create database ⓘ

2 Books **3** Create

utf8mb4_0900_ai_ci

	Database	Collation	Master replication	Action
<input type="checkbox"/>	information_schema	utf8_general_ci	✓ Replicated	Check privileges
<input type="checkbox"/>	mysql	utf8mb4_0900_ai_ci	✓ Replicated	Check privileges
<input type="checkbox"/>	performance_schema	utf8mb4_0900_ai_ci	✓ Replicated	Check privileges
<input type="checkbox"/>	sakila	utf8mb4_0900_ai_ci	✓ Replicated	Check privileges
<input type="checkbox"/>	sys	utf8mb4_0900_ai_ci	✓ Replicated	Check privileges

Total: 5

⬆️ ☐ 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](#)

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.

← → ↻ 🏠 🔒 sandipsahajo-8080.theiadocker-27.proxy.cognitiveclass.ai/server_databases.php?server=1

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Recent Favorites

New

- Books**
- information_schema
- mysql
- performance_schema
- sakila
- sys

Server: mysql:3306 » Database: Books

Structure SQL Search Query Export Import Operations

⚠️ No tables found in database.

Create table

Name: **1** myauthors Number of columns: **2** 4

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.cognitiveclass.ai/sql.php?db=Books&table=myauthors

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Recent Favorites

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

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

Browse Structure SQL Search Insert Export Import Privi

Table name: myauthors Add 1 column(s) Go

Name	Type	Length/Values	Default	Collation
author_id	INT		None	
first_name	VARCHAR	100	None	
middle_name	VARCHAR	50	None	
last_name	VARCHAR	100	None	

Structure

Table comments: Collation: Storage Engine: InnoDB

PARTITION definition:

Partition by: (Expression or column list)

Partitions:

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

← → ↻ 🏠 🔒 sandipsahajo-8080.theiadocker-27.proxy.cognitiveclass.ai/tbl_structure.php?db=Books&table=myauthors

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Recent Favorites

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

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

Browse Structure SQL Search Insert Export Import Privi

Table structure Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/> 1	author_id	int			No	None			Char
<input type="checkbox"/> 2	first_name	varchar(100)	utf8mb4_0900_ai_ci		No	None			Char
<input type="checkbox"/> 3	middle_name	varchar(50)	utf8mb4_0900_ai_ci		No	None			Char
<input type="checkbox"/> 4	last_name	varchar(100)	utf8mb4_0900_ai_ci		No	None			Char

☐ Check all
 With selected: Browse Change Drop Primary Unique

Print Move columns Normalize

Add 1 column(s) after last_name Go

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

- 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 » Table: myauthors

Browse Structure SQL Search Insert Export Import Privileges Op

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

☐ Ignore

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

Insert as new row and then Go back to previous page

Preview SQL Reset Go

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'), ('2', 'Linda', '', 'Mui');
```

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

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

Browse Structure SQL Search Insert Export Import

⚠ Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are disabled.

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

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

☐ Show all | Number of rows: 25 | Filter rows: Search this table

+ 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 table

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

- 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](#)
- 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.

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

Browse Structure SQL Search Insert Export Import Privileges Operations

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.zip**

Browse your computer: **Choose File** mysql_table...sert-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)*

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

✔ Import has been successfully finished, 1376 queries executed. (mysql_table-myauthors_insert-data.sql)

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

phpMyAdmin

Recent

Favorites

New

Books

New

myauthors

information_schema

mysql

performance_schema

sakila

sys

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

Browse

Structure

SQL

Search

Insert

Export

Import

⚠ Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are disabled.

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

SELECT * FROM `myauthors`

1 > >>

Number of rows: 25

Filter rows: Search this table

+ Options

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		Aumasson
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

1 > >>

Number of rows: 25

Filter rows: Search this table

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

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Other Contributor(s)

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