



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.

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.

Objectives

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

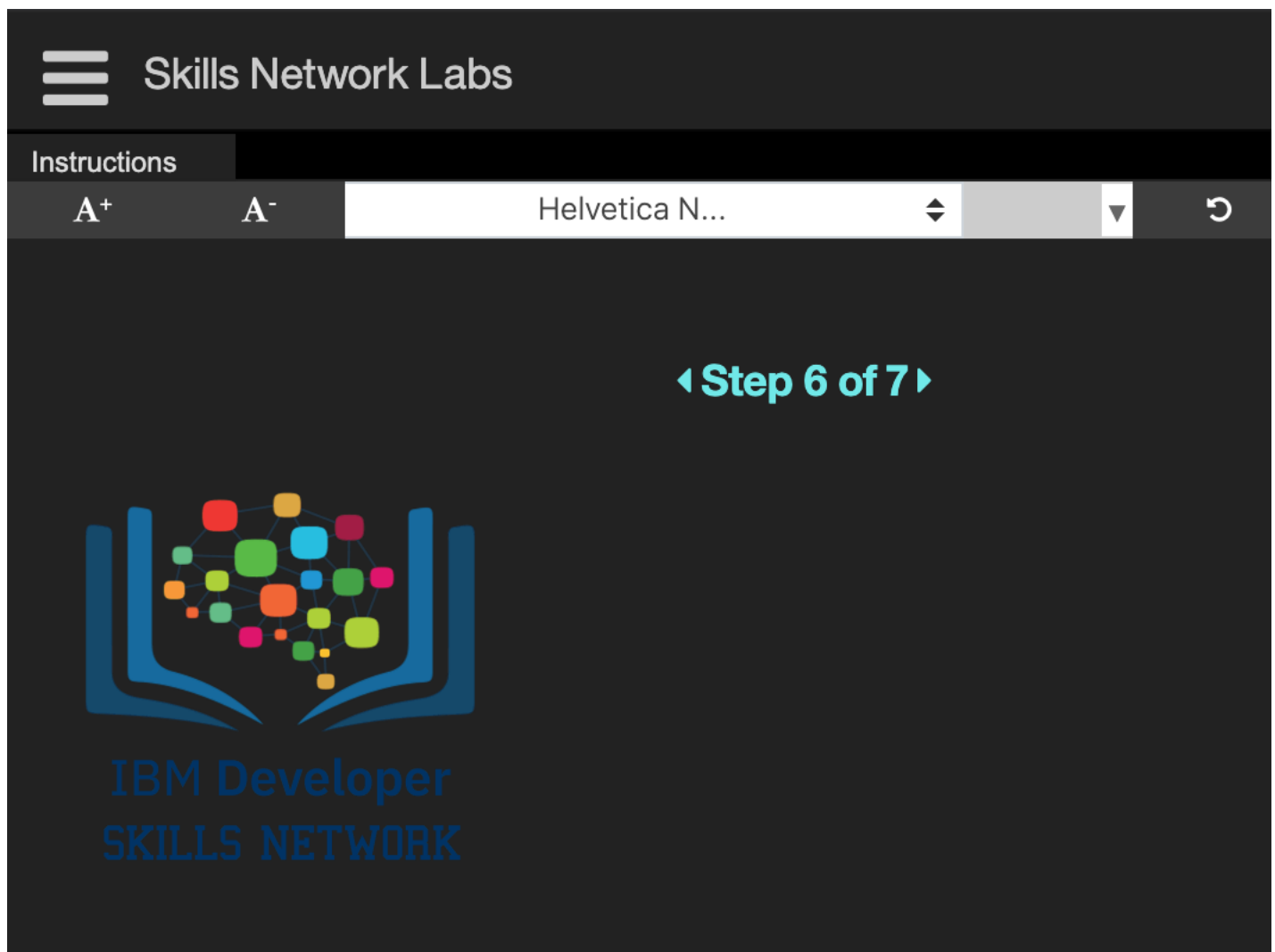
- Create a database.
- Create tables.
- Load data into tables manually using the phpMyAdmin GUI.
- Load data into tables using a text/script file.

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. 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.

```
1. 1
1. start_mysql
```

Copied!

```
theia@theiadocker-sandipsahajo:/home/project$ start_mysql
Starting your MySQL database....
This process can take up to a minute.

MySQL database started, waiting for all services to be ready....

Your MySQL database is now ready to use and available with username:

You can access your MySQL database via:
  • The browser at: https://sandipsahajo-8080.theiadocker-27.proxy.co
  • CommandLine: mysql --host=127.0.0.1 --port=3306 --user=root --pas
theia@theiadocker-sandipsahajo:/home/project$
```

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.

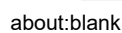
```
theia@theiadocker-sandipsahajo:/home/project$ start_mysql
Starting your MySQL database....
This process can take up to a minute.

MySQL database started, waiting for all services to be ready....

Your MySQL database is now ready to use and available with username:

You can access your MySQL database via:
  • The browser at: https://sandipsahajo-8080.theiadocker-27.proxy.c
  • CommandLine: mysql --host=127.0.0.1 --port=3306 --user=root --pas
theia@theiadocker-sandipsahajo:/home/project$
```

4. You will see the phpMyAdmin GUI tool.



5. 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.

Proceed to Task B.

The screenshot shows the phpMyAdmin interface. On the left sidebar, the 'New' button is highlighted with a red box and a red '1'. On the right, the 'Databases' section is active. The 'Create database' form has 'Books' entered in the name field, which is highlighted with a red box and a red '2'. The collation is set to 'utf8mb4_0900_ai_ci'. Below the form, a table lists existing databases:

Database	Collation
<input type="checkbox"/> information_schema	utf8_general_ci
<input type="checkbox"/> mysql	utf8mb4_0900_ai_ci
<input type="checkbox"/> performance_schema	utf8mb4_0900_ai_ci
<input type="checkbox"/> sakila	utf8mb4_0900_ai_ci
<input type="checkbox"/> sys	utf8mb4_0900_ai_ci

Total: 5

Check all With selected:

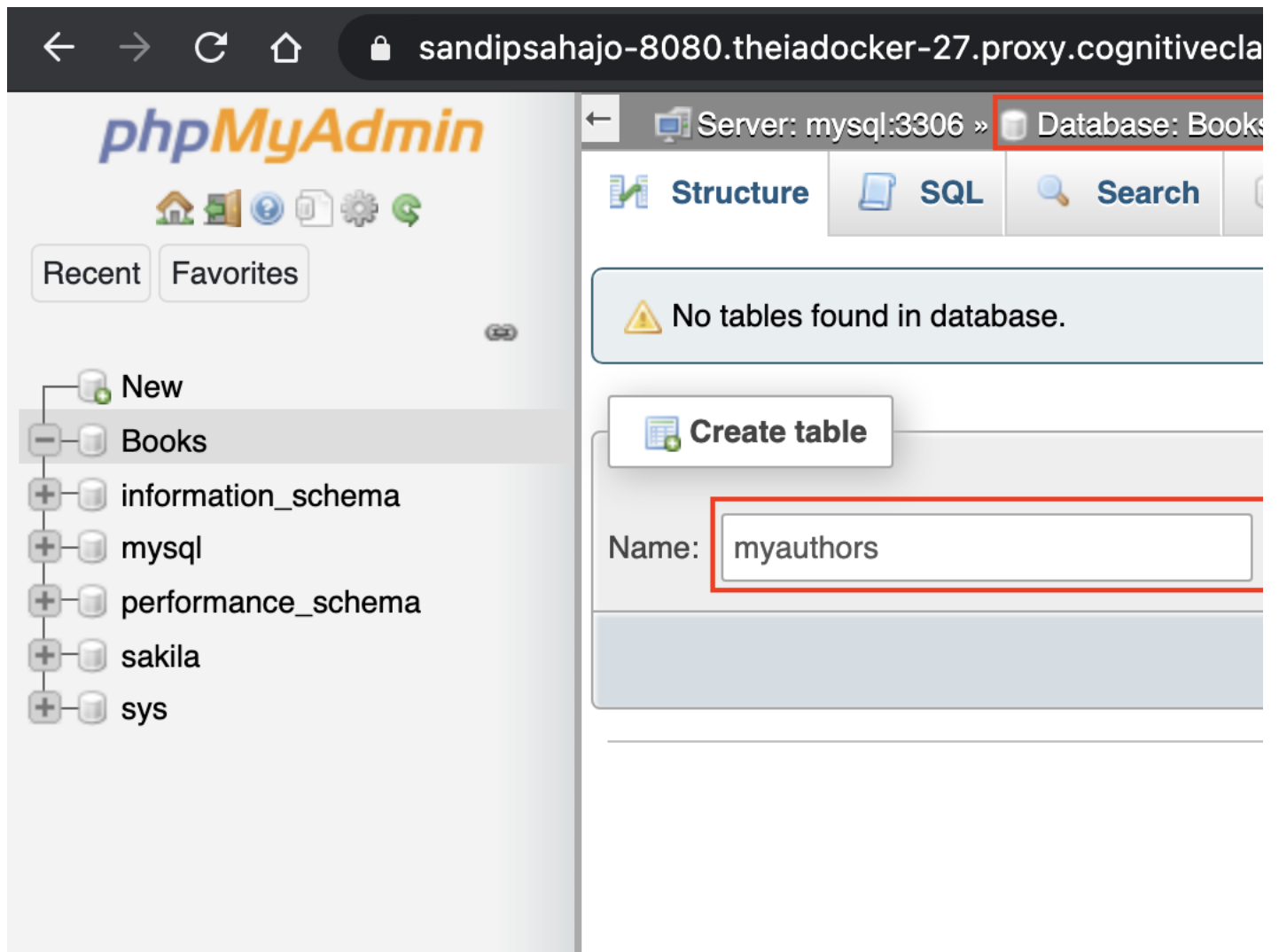
Note: Enabling the database statistics here

- 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**.



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

The screenshot shows the phpMyAdmin web interface. On the left is a sidebar with a tree view of databases: New, Books, information_schema, mysql, performance_schema, sakila, and sys. The 'mysql' database is selected. The main panel shows the 'Structure' tab for the 'myauthors' table. The table structure is displayed in a table with two columns: 'Name' and 'Type'. The columns are: author_id (INT), first_name (VARCHAR), middle_name (VARCHAR), and last_name (VARCHAR). Each row is highlighted with a red border. Below the table structure, there are sections for 'Table comments:' (a text input field) and 'PARTITION definition:' (a dropdown for 'Partition by:' and a text input for 'Partitions:').

phpMyAdmin

Recent Favorites

Server: mysql:3306 » Database: Books

Browse Structure SQL

Table name: myauthors

Name	Type
author_id	INT
first_name	VARCHAR
middle_name	VARCHAR
last_name	VARCHAR

Structure

Table comments:

PARTITION definition:

Partition by: (Exp)

Partitions:

3. The Table structure for the **myauthors** table will appear. Proceed to Task C.

The screenshot shows the phpMyAdmin interface. On the left is the database navigation tree with 'myauthors' selected. The top navigation bar includes 'Browse', 'Structure', and 'SQL' tabs, with 'Structure' being the active tab. Below the tabs are 'Table structure' and 'Relation view' buttons. The main area displays the table structure for 'myauthors' with the following columns:

	#	Name	Type	Collation
<input type="checkbox"/>	1	author_id	int	
<input type="checkbox"/>	2	first_name	varchar(100)	utf8mb4
<input type="checkbox"/>	3	middle_name	varchar(50)	utf8mb4
<input type="checkbox"/>	4	last_name	varchar(100)	utf8mb4

Below the table structure, there are controls for selecting columns: an upward arrow, a 'Check all' checkbox, and a 'With selected:' dropdown. At the bottom, there are buttons for 'Print', 'Move columns', and 'Normalize'. Below these is an 'Add' button followed by a text input containing '1', the text 'column(s)', and another text input containing '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.

Recent

Favorites

New

Books

New

myauthors

information_schema

mysql

performance_schema

sakila

sys

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

Browse

Structure

SQL

Search

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)	

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'
```

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

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

Browse Structure SQL Search

⚠ Current selection does not contain a unique column. (0 rows)

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

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

☐ Show all | Number of rows: 25 ▼ Filter

+ Options

author_id	first_name	middle_name	last_name
1	Merritt		Eric
2	Linda		Mui

☐ Show all | Number of rows: 25 ▼ Filter

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.





Recent Favorites

New

Books

New

myauthors

information_schema

mysql

performance_schema

sakila

sys

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

BrowseStructureSQLSearch

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]**.

Browse your computer:

Choose File

 mysql_table...se

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 fails.

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

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-)*

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

Recent

Favorites

New

Books

New

myauthors

information_schema

mysql

performance_schema

sakila

sys

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

Browse

Structure

SQL

Search

⚠ Current selection does not contain a unique column. (0 rows)

✓ Showing rows 0 - 24 (1378 total, Query took 0.0003 s)

SELECT * FROM `myauthors`

1

>

>>

Number of rows: 25

+ 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

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

Author(s)

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Other Contributor(s)

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Changelog

Date	Version	Changed by	Change Description
2021-03-15	1.0	Sandip Saha Joy	Created initial version
2021-10-18	1.1	Kathy An	Updated lab instructions

24	Norman	Matloff
25	John	E. Hopcroft

1

>

>>

|

Number of rows:

25