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▼
Step 3 of 10



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, **authorid** is an integer, **firstname** is a string that stores a maximum of 100 characters, **middlename** is a string that stores a maximum of 50 characters, and **lastname** 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:

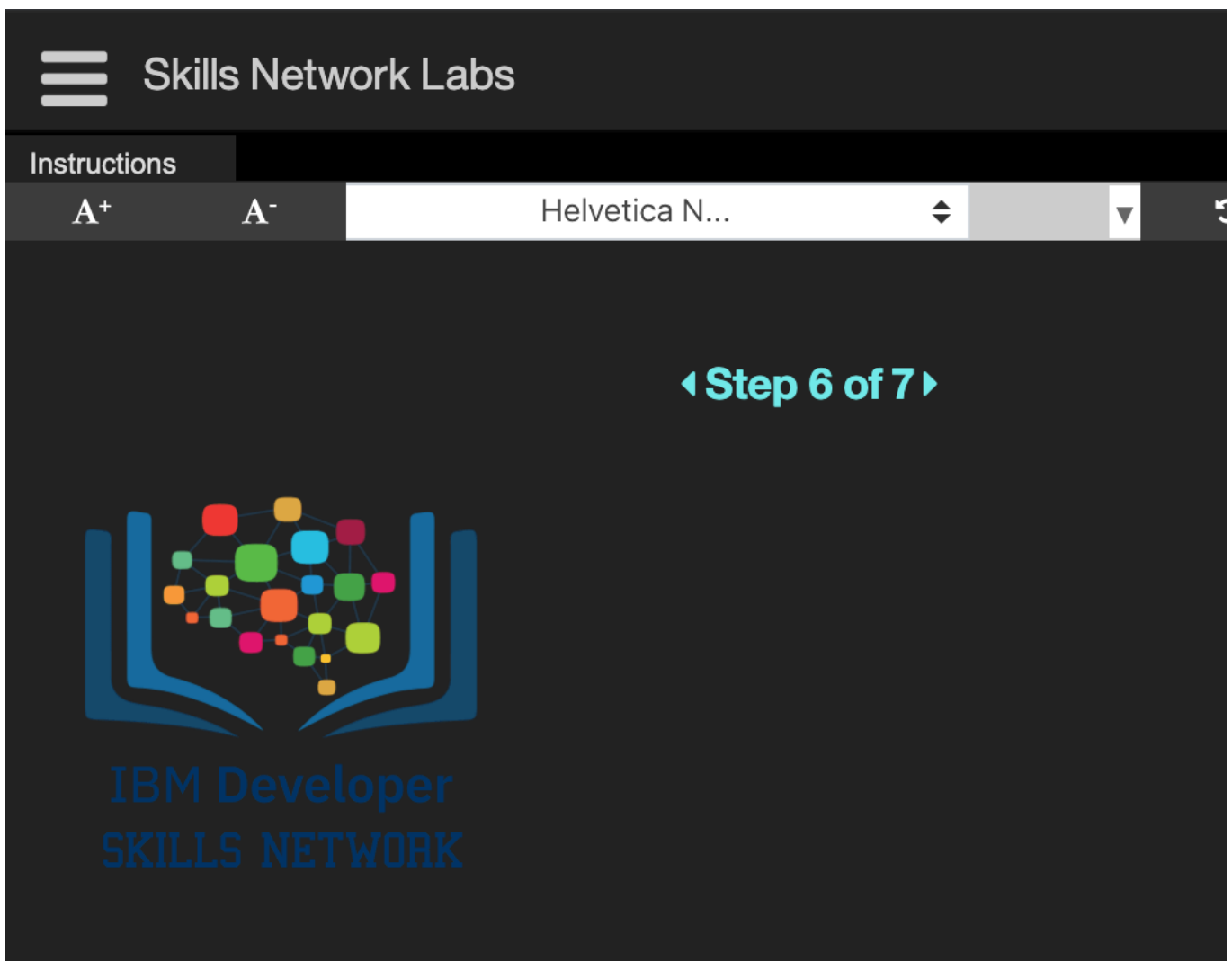
- Create a database.
- Create tables.
- Load data into tables manually using the phpMyAdmin GUI.
- Load data into tables using a text/script file.

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.

```
start_mysql
```

```
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 root

You can access your MySQL database via:
• The browser at: https://sandipsahajo-8080.theiadocker-27.proxy
• CommandLine: mysql --host=127.0.0.1 --port=3306 --user=root --password=
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 userna

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

4. You will see the phpMyAdmin GUI tool.

sandipsahajo-8080.theiadocker-27.proxy.cognitive

phpMyAdmin

Recent

Favorites

New

information_schema

mysql

performance_schema

sakila

sys

←

Server: mysql:3306

Databases

SQL

Status

General settings

Server connection collation: utf8

More settings

Appearance settings

Language English

Theme: pmahomme

https://labs.cognitiveclass.ai/tools/theiadocker/?md_instructions_url=https%3A%2F%2Fcf-courses-data.s3.us.cloud-object-storage.appdomain.cloud%2FIBM-...

4/13

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. The left sidebar has a 'New' button highlighted with a red box and labeled '1'. The main panel shows the 'Databases' tab. The 'Create database' form has 'Books' entered in the name field, highlighted with a red box and labeled '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:

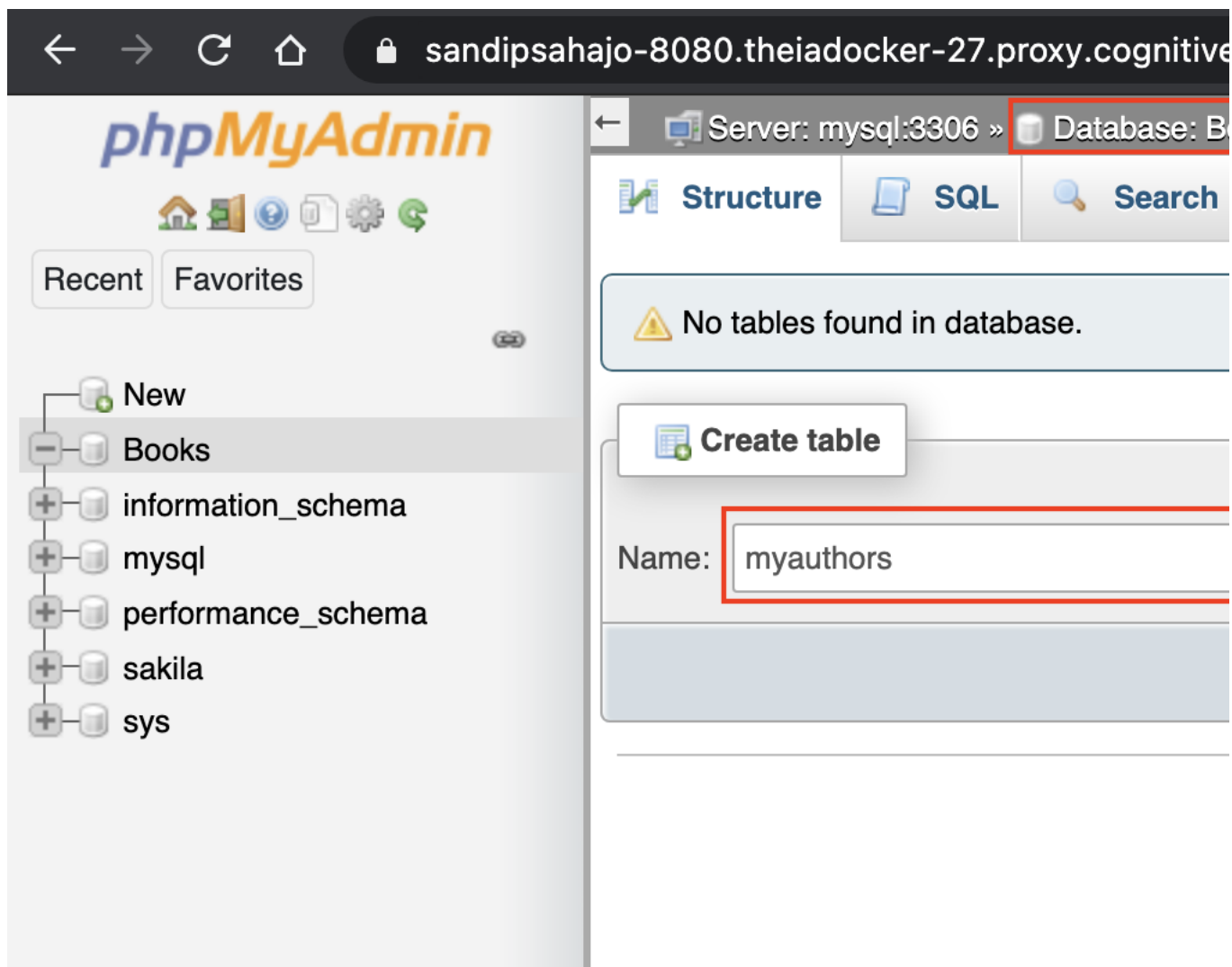
Note: Enabling the database statistics for the selected databases.

- 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, the database navigation pane shows a tree structure with 'New' at the top, followed by '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). Below the table structure, there is a 'Table comments:' section with a text input field. At the bottom, there is a 'PARTITION definition:' section with a 'Partition by:' dropdown menu and a 'Partitions:' text input field.

phpMyAdmin

Recent Favorites

New

Books

information_schema

mysql

performance_schema

sakila

sys

Server: mysql:3306 » Database: B

Browse Structure SQL

Table name: myauthors

Name	Type
author_id	INT
first_name	VARCHAR
middle_name	VARCHAR
last_name	VARCHAR

Structure

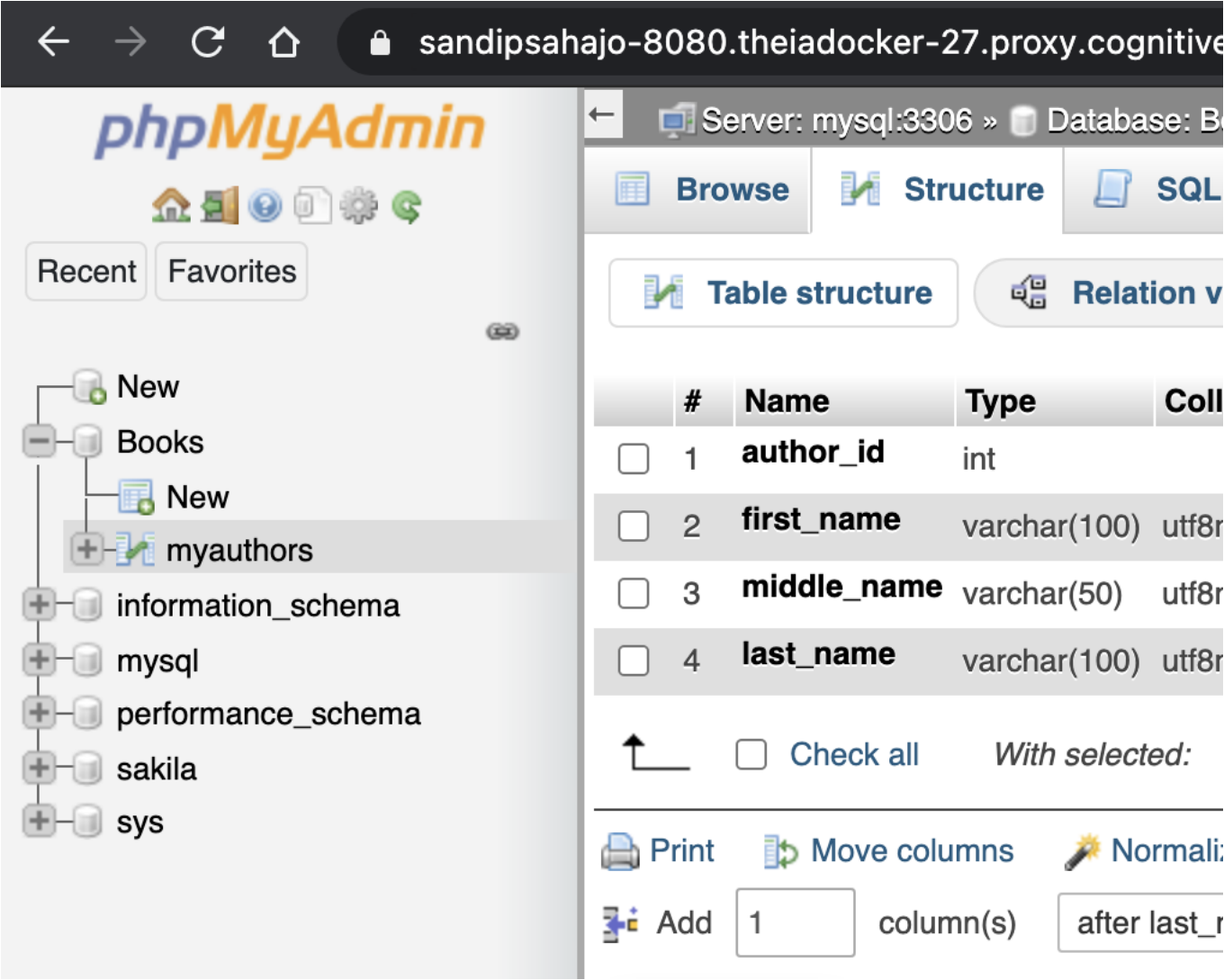
Table comments:

PARTITION definition:

Partition by: (

Partitions:

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



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.



last_name

varchar(100)

☐ Ignore

Column	Type	Function
author_id	int	

first_name

varchar(100)

middle_name

varchar(50)

last_name

varchar(100)

Insert as new row

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
```

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 »

Browse Structure SQL

⚠ Current selection does not contain a unique column

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

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

☐ Show all | Number of rows: 25

+ Options

author_id	first_name	middle_name	last_name
1	Merritt		Eric
2	Linda		Mui

☐ Show all | Number of rows: 25

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:

- [mysqltable-myauthorsinsert-data.sql](#)

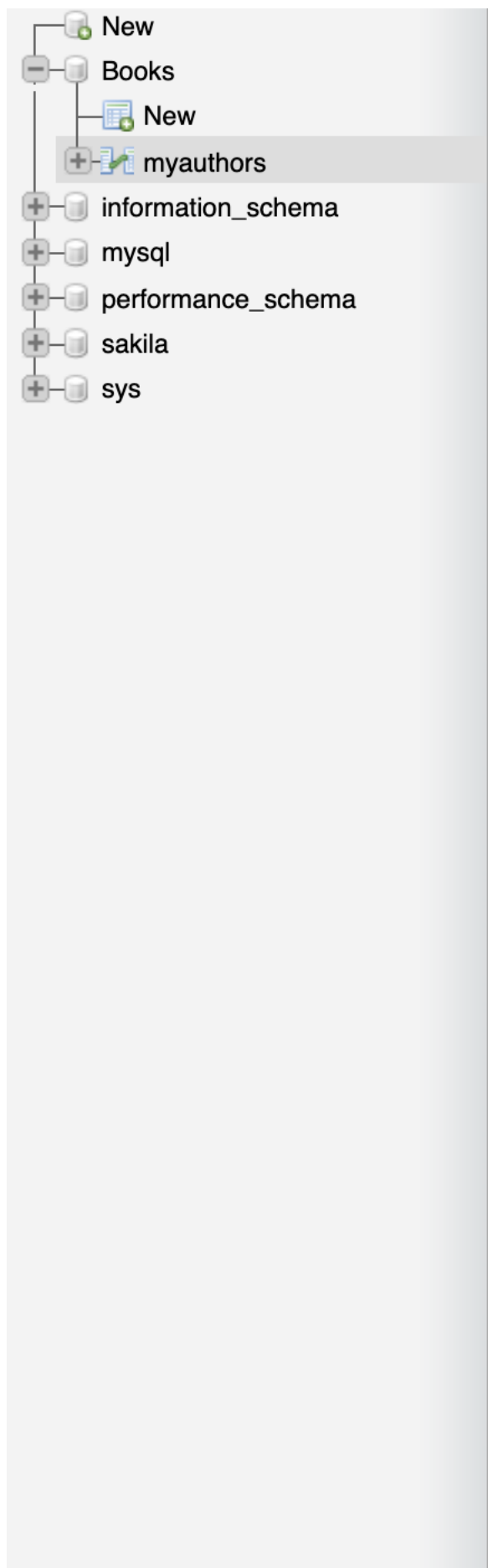
- Go to **Import** tab for the **myauthors** table. Click **Choose File** and load the **mysqltable-myauthorsinsert-data.sql** file from your local computer storage. The rest of the settings can be left as they are because you are importing a SQL script that is encoded with UTF-8.

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

Server: mysql:3306 » Database: Books »

Browse Structure SQL

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: 1 Choose File 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 server is busy.

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

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_in)

phpMyAdmin



Recent

Favorites

New

Books

New

myauthors

information_schema

mysql

performance_schema

sakila

sys

Server: mysql:3306 » Database: Books »

Browse

Structure

SQL

S

⚠ Current selection does not contain a unique column

✔ Showing rows 0 - 24 (1378 total, Query took 0.00)

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		Papadopoulos
4	Paul	C.van	Oorschoot
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		McQuinn
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		McShaffery
24	Norman		Matloff
25	John	F.	Honorf

1

>

>>

|

Number of rows:

25

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

Author(s)

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Other Contributor(s)

- Kathy An

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

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