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:

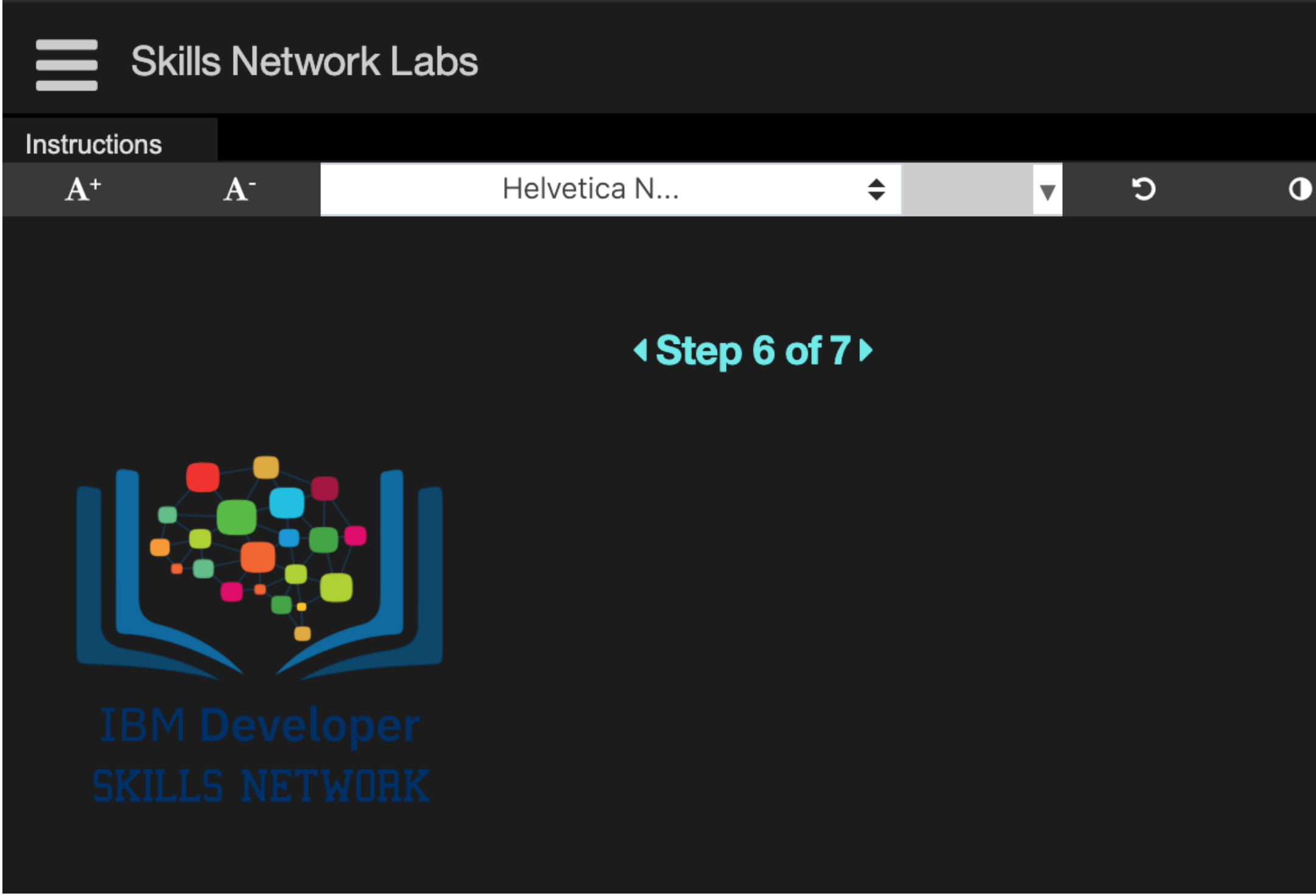
- Create a database.
- Create tables.
- Load data into tables manually using the phpMyAdmin GUI.
- Load data into tables using a text/script file.

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.

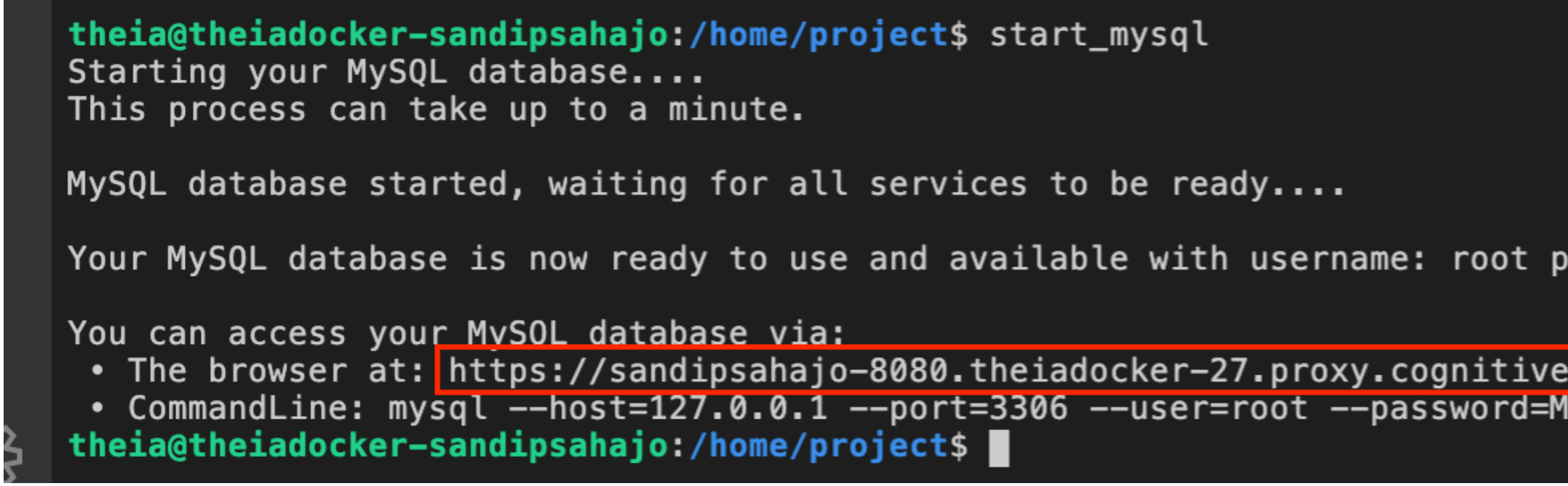


2. Start MySQL service session in the Cloud IDE using the command below in the terminal. Find your MySQL service session password from the highlighted location of the terminal shown in the image below. Note down your MySQL service session password because you may need to use it later in the lab.

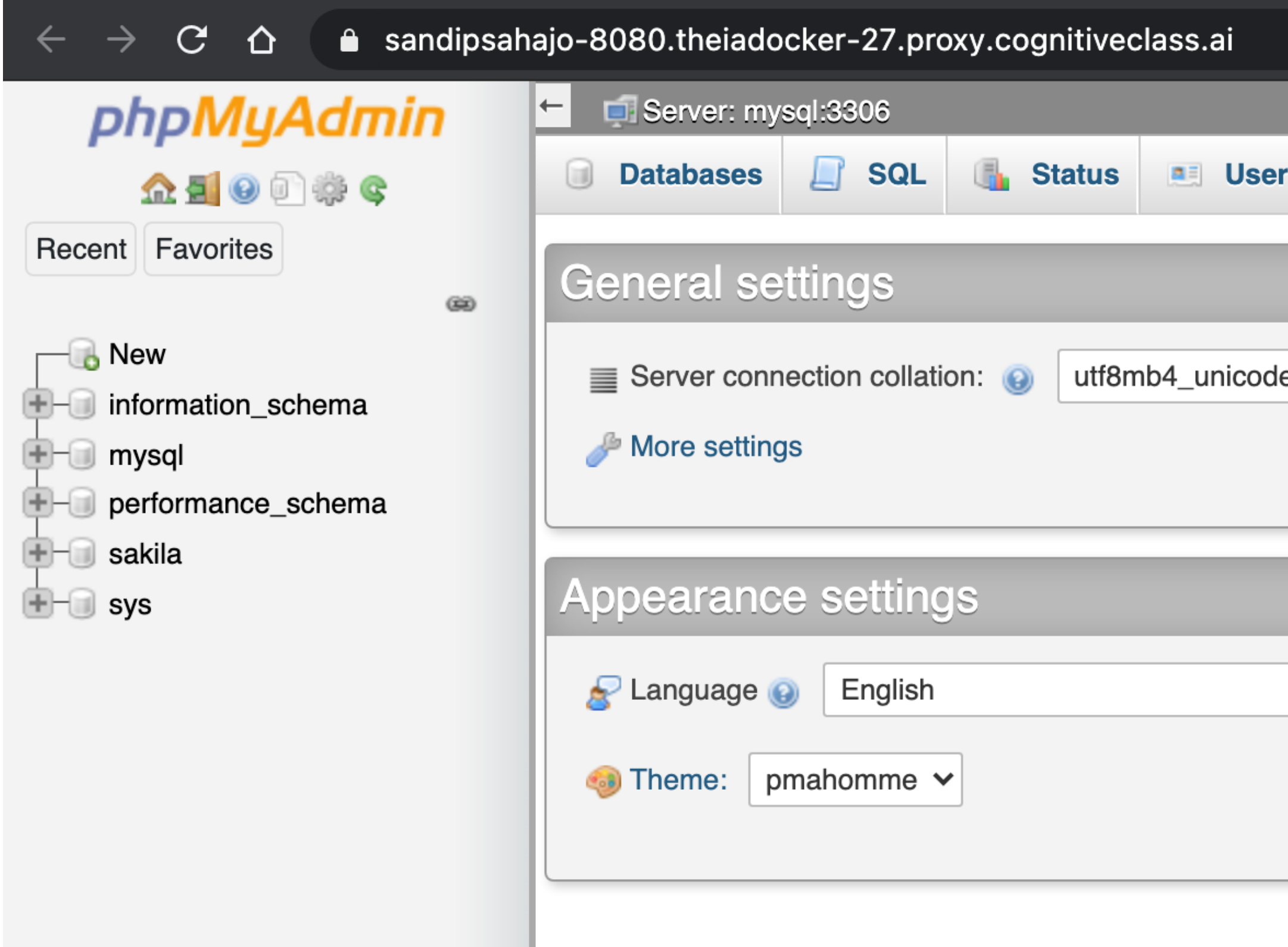
```
1. 1
1. start_mysql
```
Copied!

```
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: root p

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



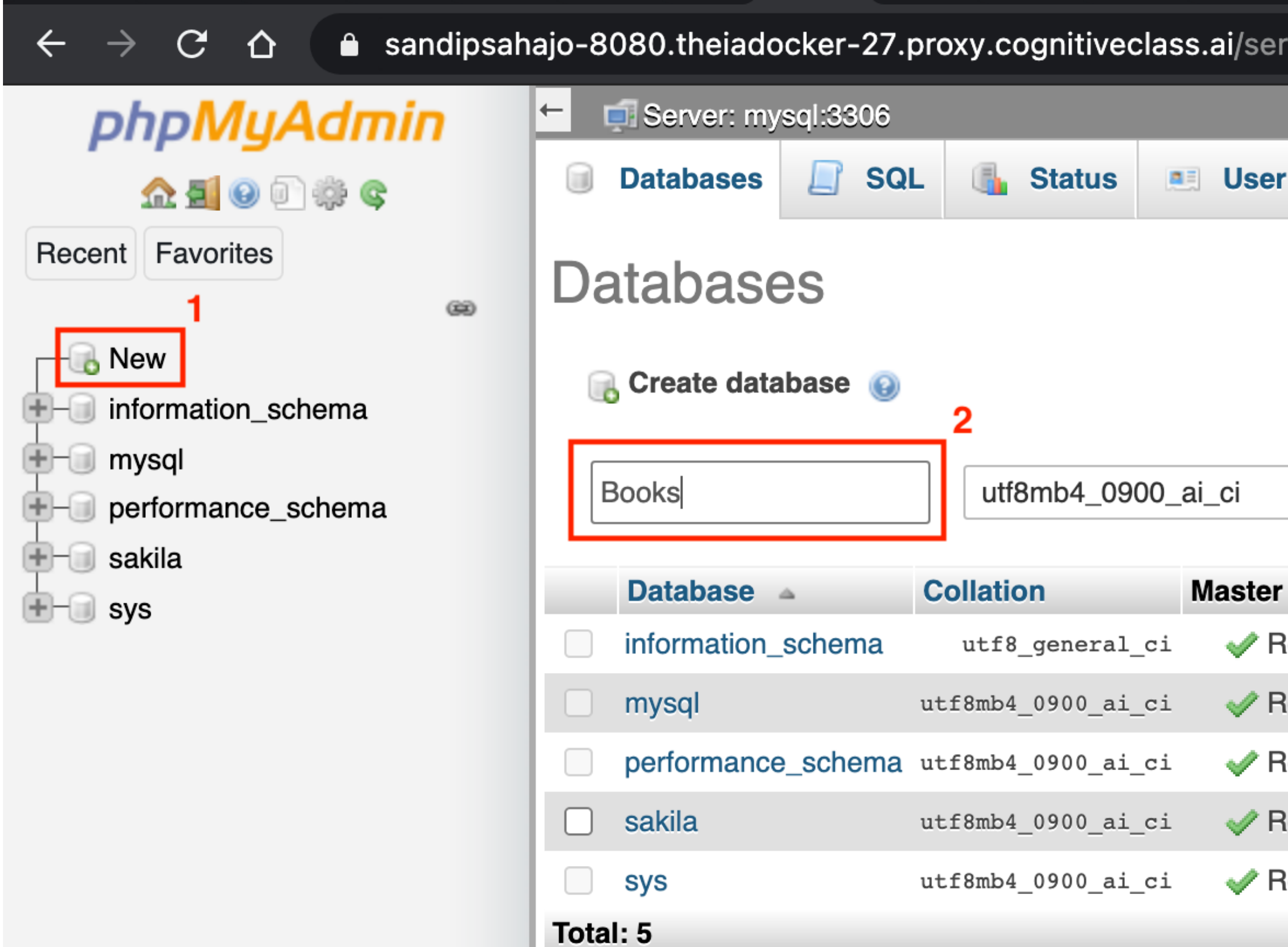
4. You will see the phpMyAdmin GUI tool.


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
General settings
Server connection collation:
utf8mb4_unicode
More settings
Appearance settings
Language
English
Theme:
pmahomme

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.


sandipsahajo-8080.theiadocker-27.proxy.cognitiveclass.ai/ser
phpMyAdmin
Recent
Favorites
1
New
information_schema
mysql
performance_schema
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Databases
SQL
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Databases
Create database
2
Books
utf8mb4_0900_ai_ci
Database
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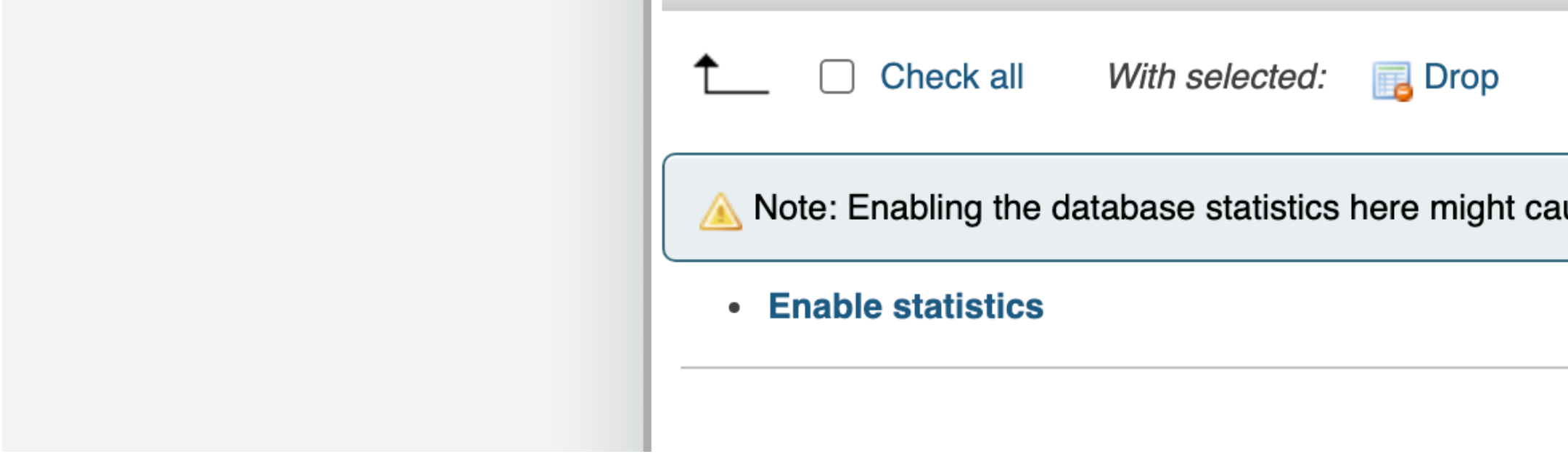
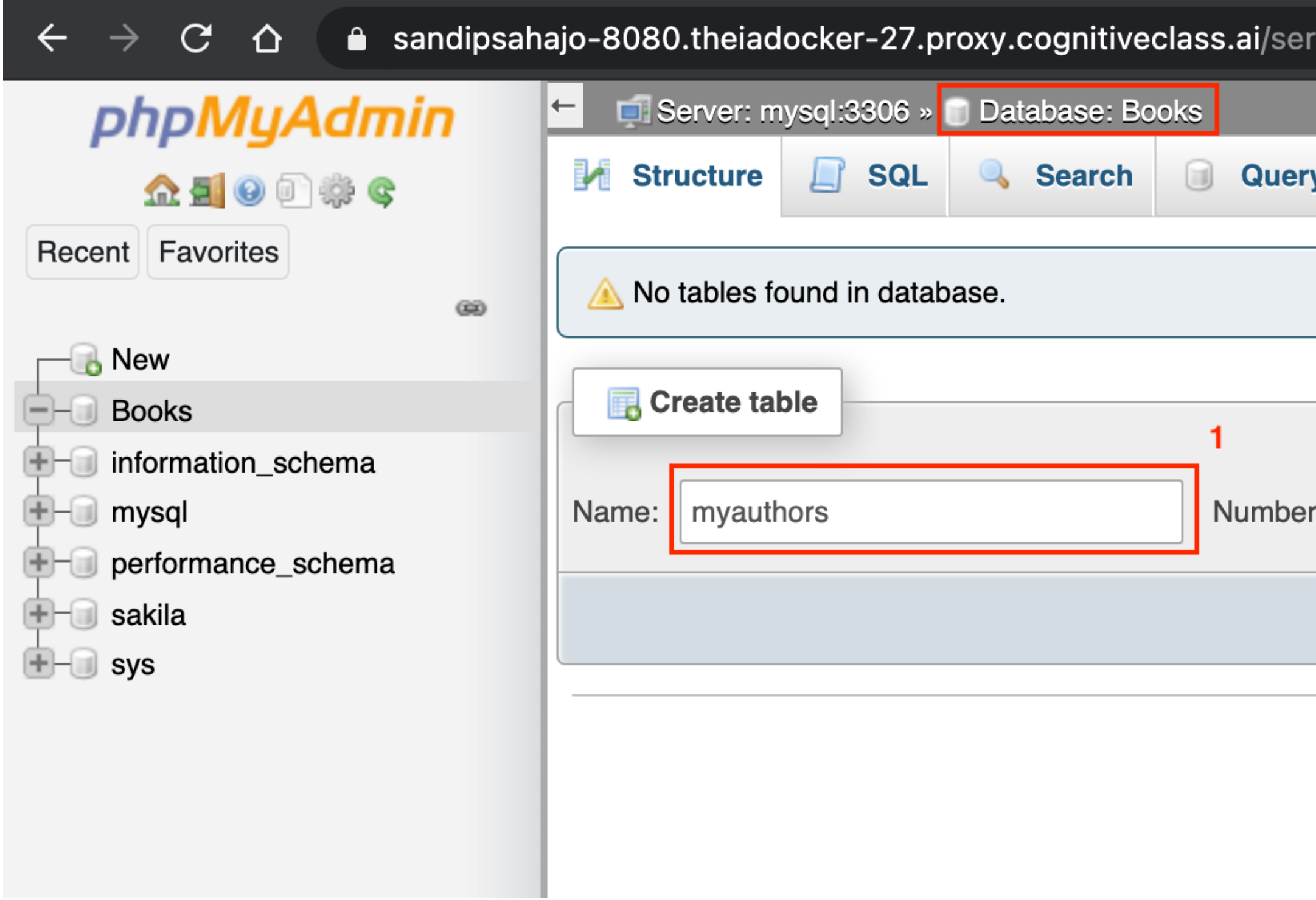
Master
information_schema utf8_general_ci
mysql utf8mb4_0900_ai_ci
performance_schema utf8mb4_0900_ai_ci
sakila utf8mb4_0900_ai_ci
sys utf8mb4_0900_ai_ci
Total: 5



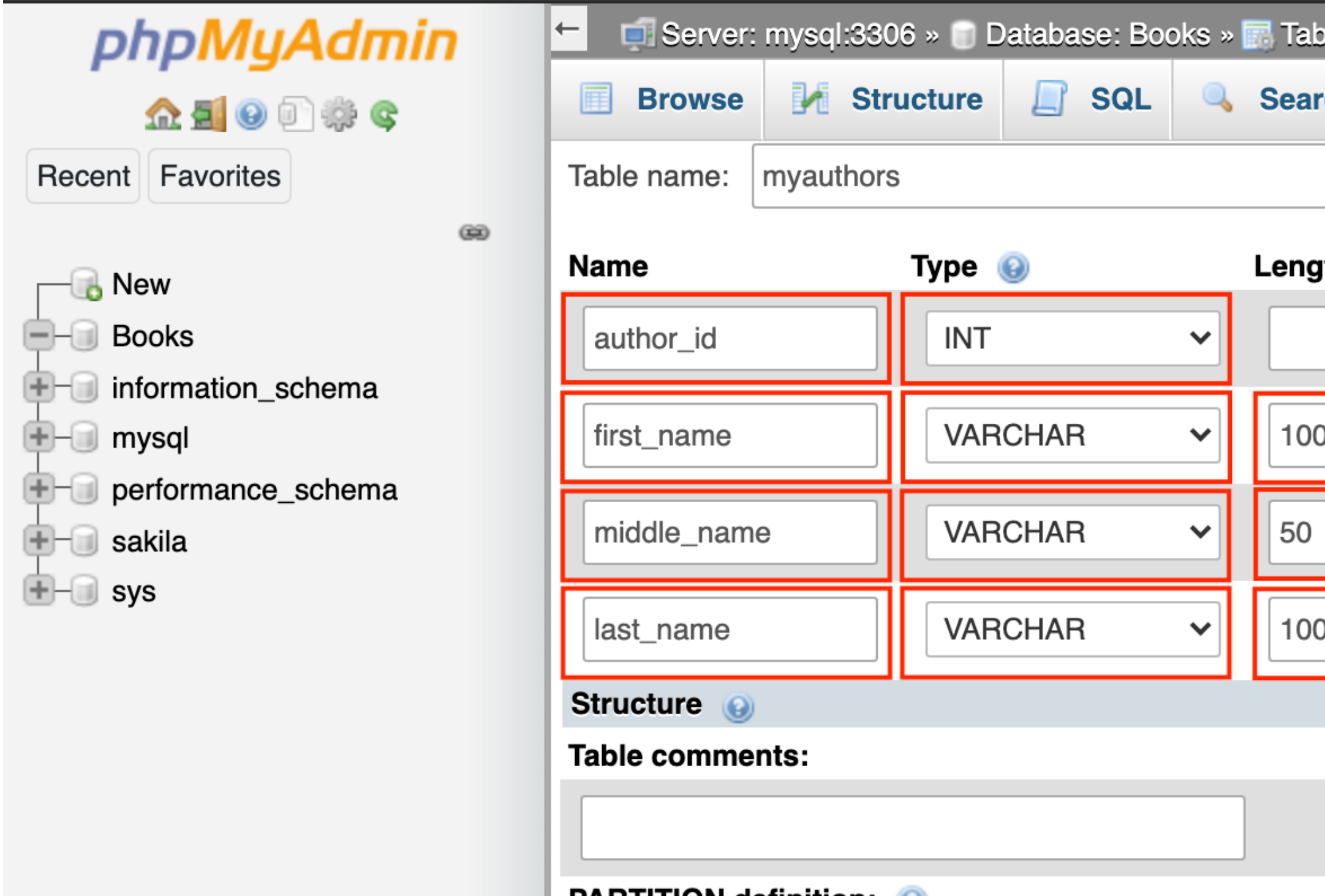
Task B: Create tables

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.

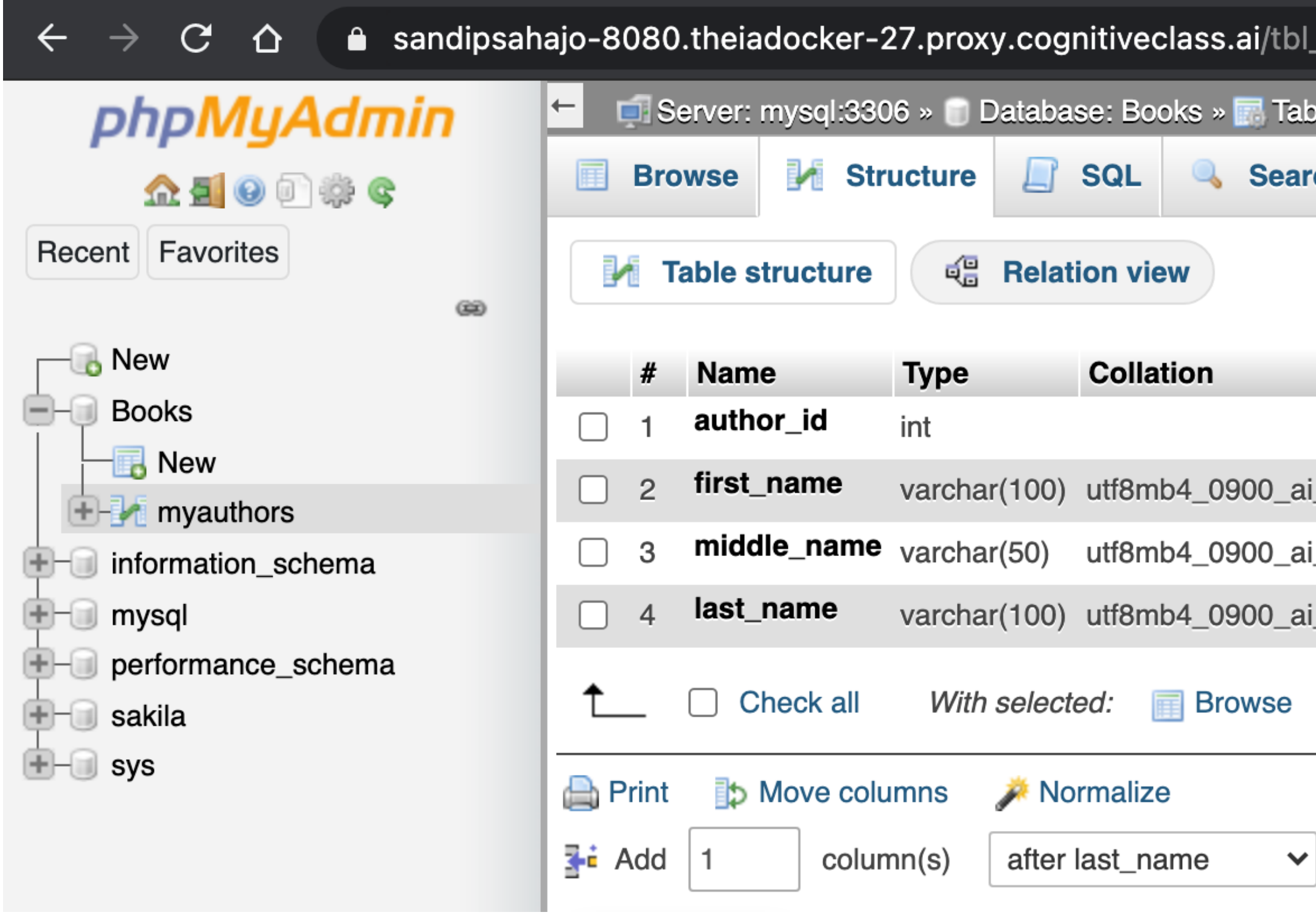
   Then click **Go**.



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


sandipsahajo-8080.theiadocker-27.proxy.cognitiveclass.ai/sql
phpMyAdmin
Recent
Favorites
New
Books
information_schema
mysql
performance_schema
sakila
sys
Server: mysql:3306 » Database: Books » Tab
Browse
Structure
SQL
Sear
Table name: myauthors
Name
Type
Leng
author_id
INT
first_name
VARCHAR
100
middle_name
VARCHAR
50
last_name
VARCHAR
100
Structure
Table comments:

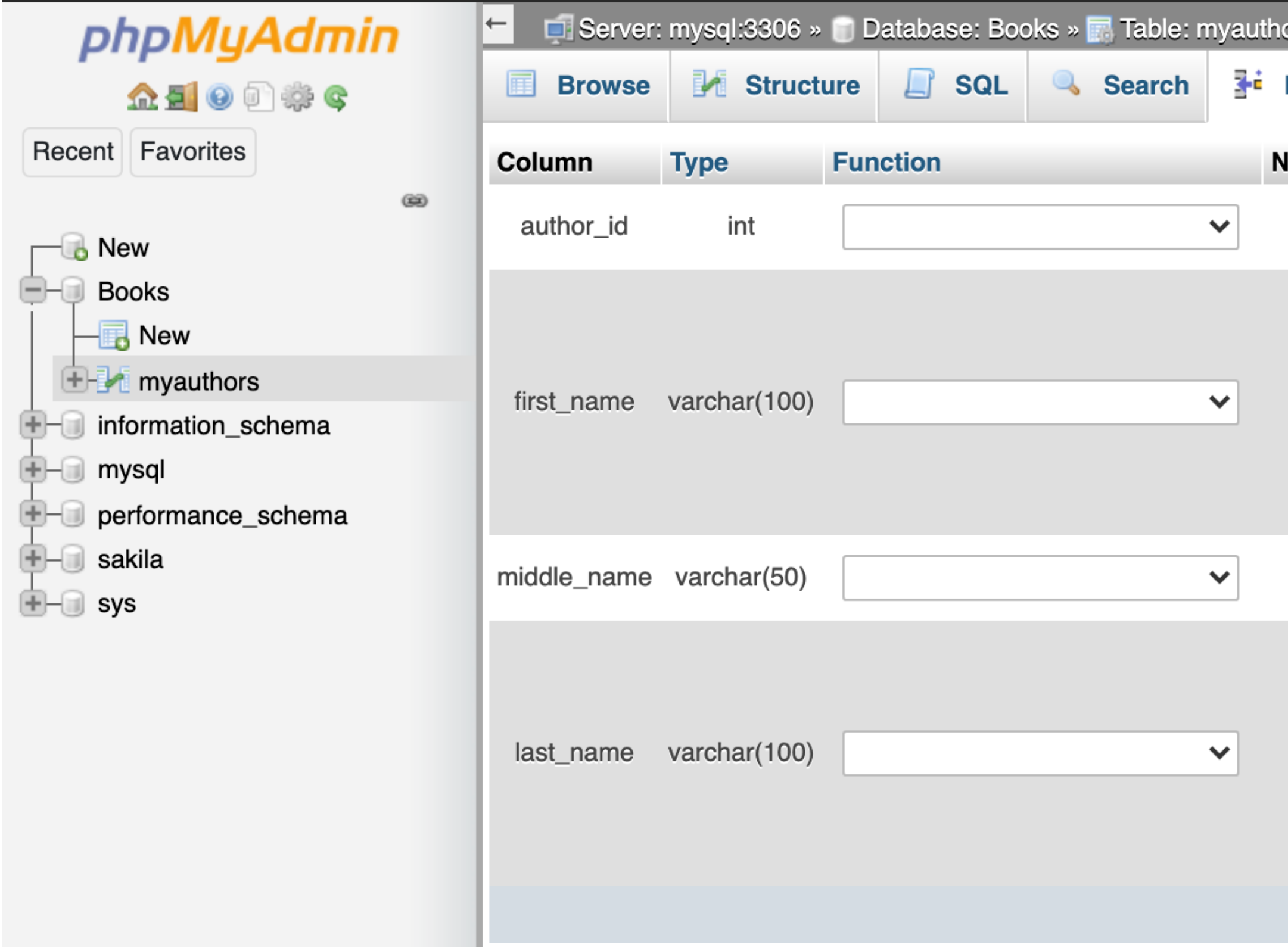
3. The Table structure for the **myauthors** table will appear. Proceed to Task C.



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

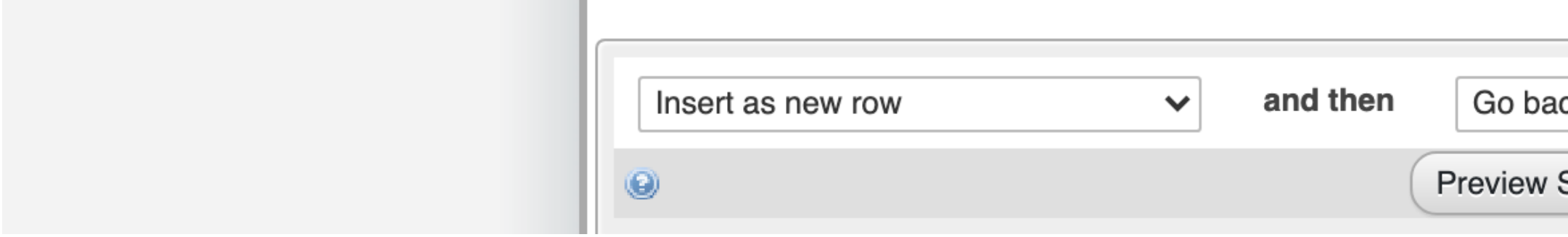
1. Sometimes, you may want to load a few data rows of data, but you may not have a SQL script on hand to do that. In this case, you can manually load the data into phpMyAdmin. Since this is a manual process, it is better for inserting a small amount of data rather than a large amount.

   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.


phpMyAdmin
Recent
Favorites
New
Books
New
myauthors
information_schema
mysql
performance_schema
sakila
sys
Server: mysql:3306 » Database: Books » Table: myautho
Browse
Structure
SQL
Search
Column
Type
Function
author_id
int
first_name
varchar(100)
middle_name
varchar(50)
last_name
varchar(100)

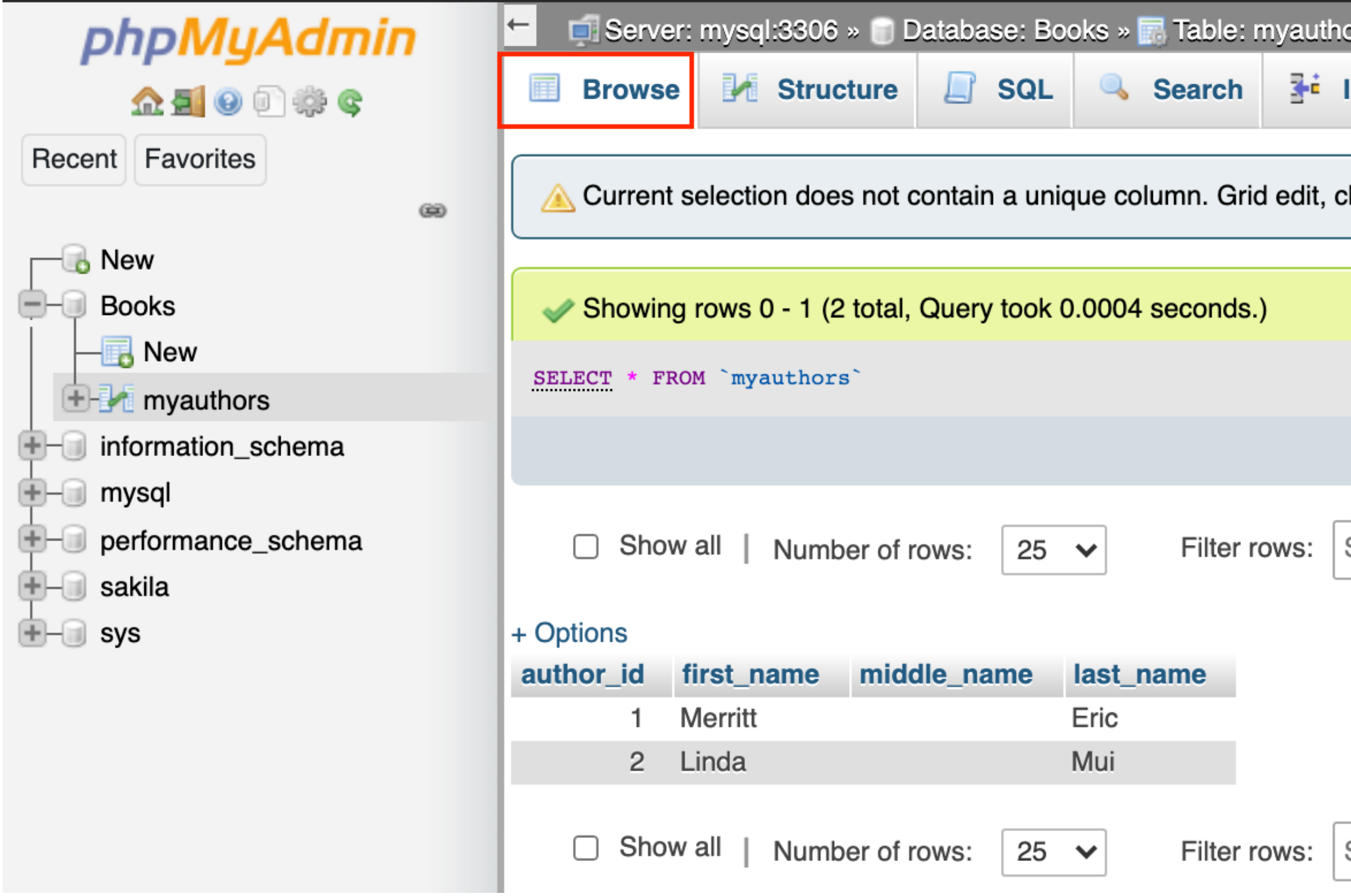
Ignore

Column	Type	Function	N
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.

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



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

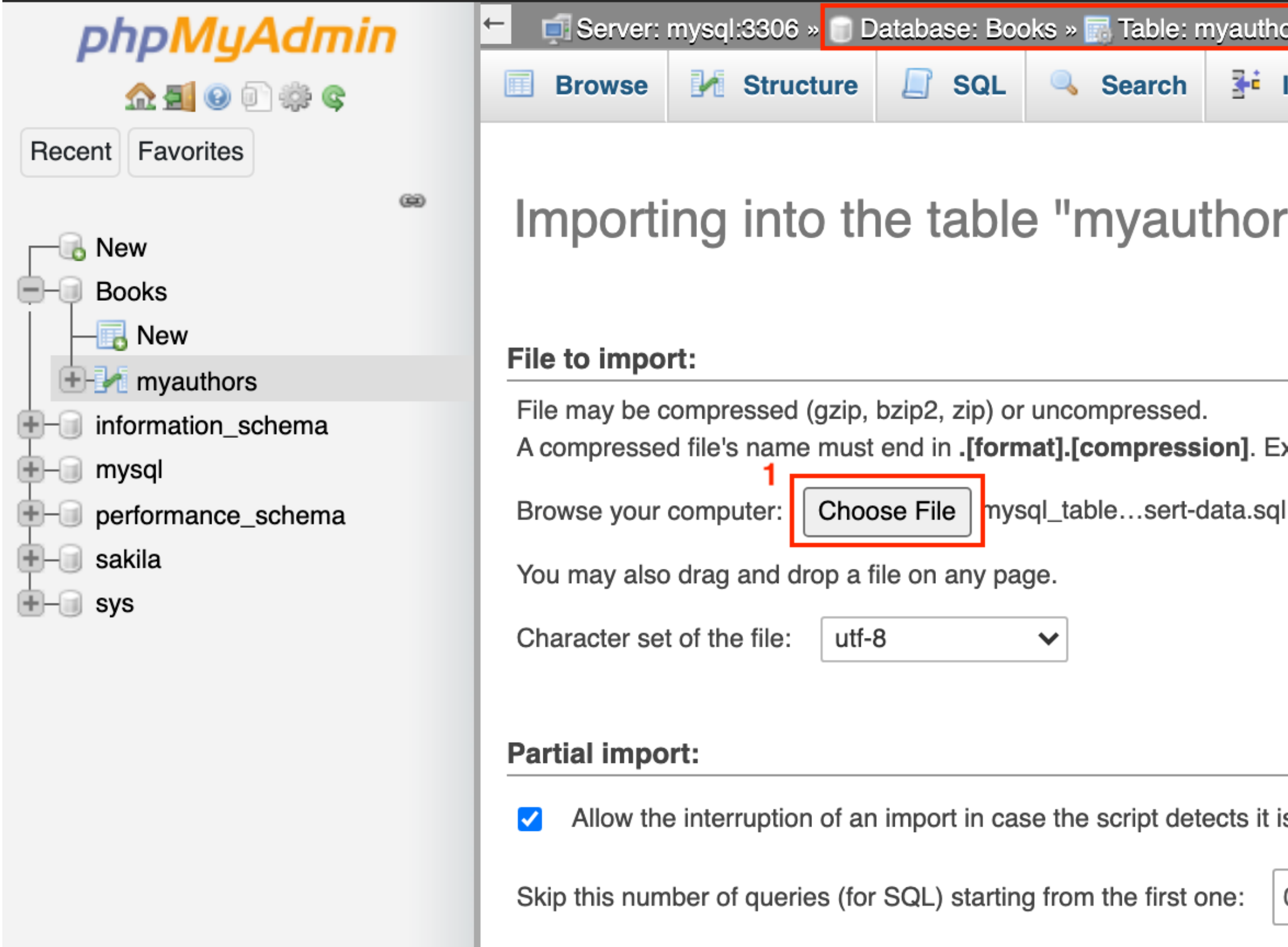
operations on your database, and can be useful when importing a large amount of data.

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
Recent
Favorites
New
Books
New
myauthors
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sakila
sys
Server: mysql:3306 »
Database: Books »
Table: myautho
Browse
Structure
SQL
Search
Importing into the table "myauthor
File to import:
File may be compressed (gzip, bzip2, zip) or uncompressed.
A compressed file's name must end in .[format].[compression]. Ex
1
Browse your computer:
Choose File
mysql_table…sert-data.sql
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
Skip this number of queries (for SQL) starting from the first one:

Other options:

- [x] Enable foreign key checks

Format:

SQL

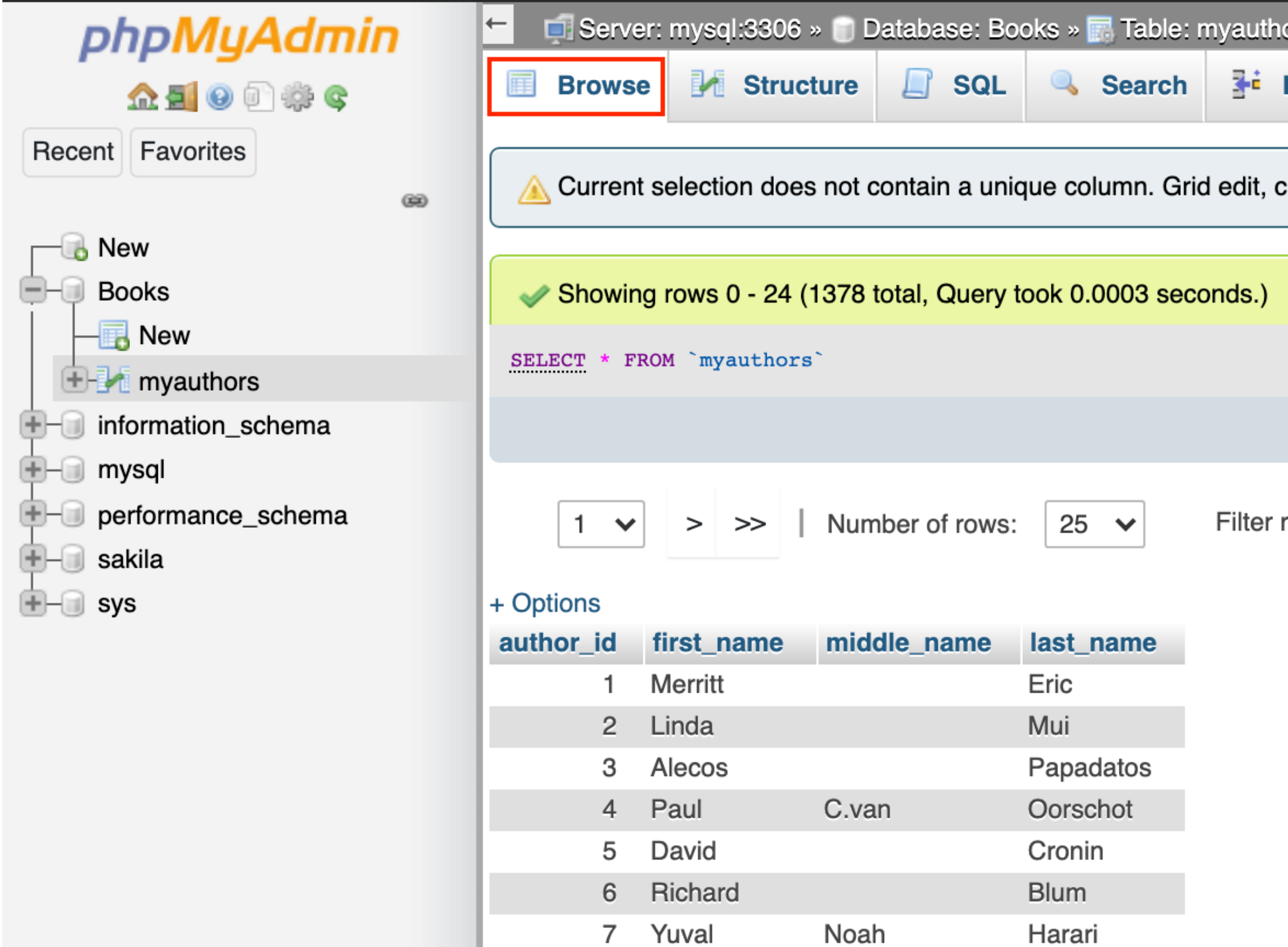
Format-specific options:

SQL compatibility mode:

- [x] 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
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Books
New
myauthors
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sys
Server: mysql:3306 » Database: Books » Table: myautho
Browse
Structure
SQL
Search
Current selection does not contain a unique column. Grid edit, c
Showing rows 0 - 24 (1378 total, Query took 0.0003 seconds.)
SELECT * FROM `myauthors`
1
>
>>
Number of rows:
25
Filter r
+ 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 r

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