

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.

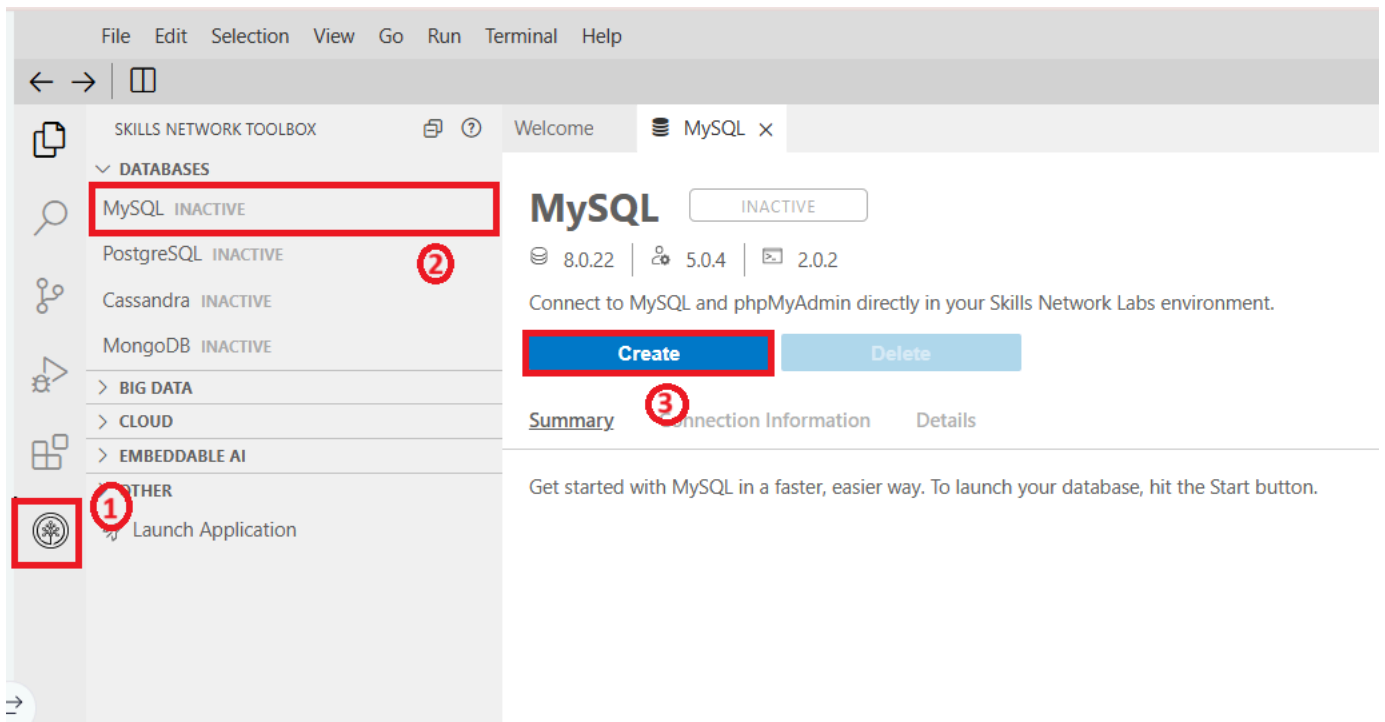
Task A: Create a database

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

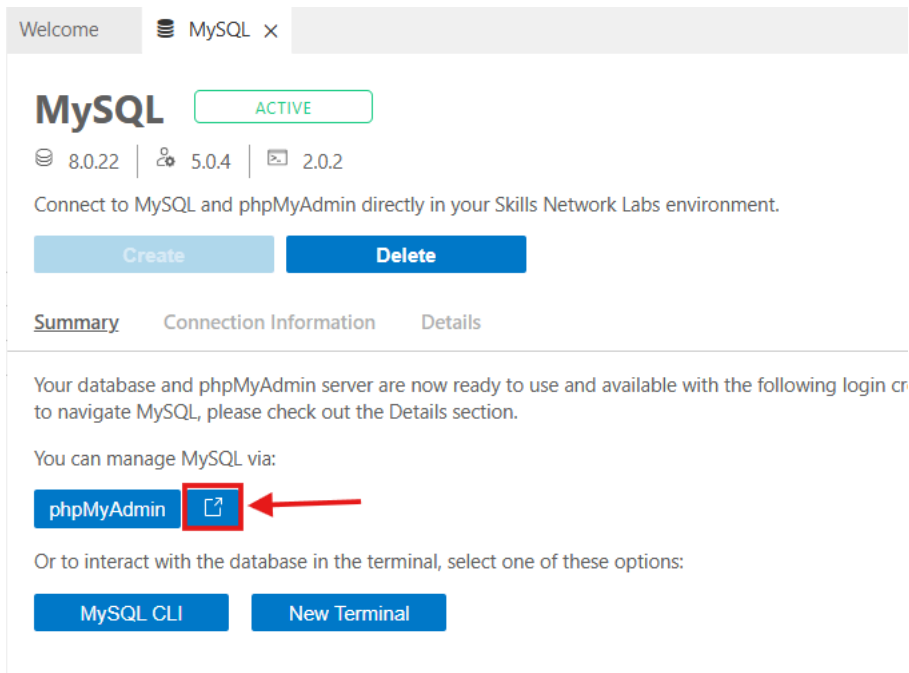
Open MySQL Page in IDE

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.

The screenshot shows the phpMyAdmin web interface. The browser address bar displays 'sandipsahajo-8080.theiadocker-27.proxy.cognitive'. The interface includes a left sidebar with a tree view of databases: 'New', 'information_schema', 'mysql', 'performance_schema', 'sakila', and 'sys'. The main content area is divided into two panels. The top panel, 'General settings', shows 'Server connection collation' set to 'utf8r' and a 'More settings' link. The bottom panel, 'Appearance settings', shows 'Language' set to 'English' and 'Theme' set to 'pmahomme'.

phpMyAdmin

Recent Favorites

New

information_schema

mysql

performance_schema

sakila

sys

Server: mysql:3306

Databases SQL Status

General settings

Server connection collation: utf8r

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.

phpMyAdmin

Server: mysql:3306

Databases SQL Status

Databases

Create database ?

Books utf8mb4_0900_ai_ci

	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:

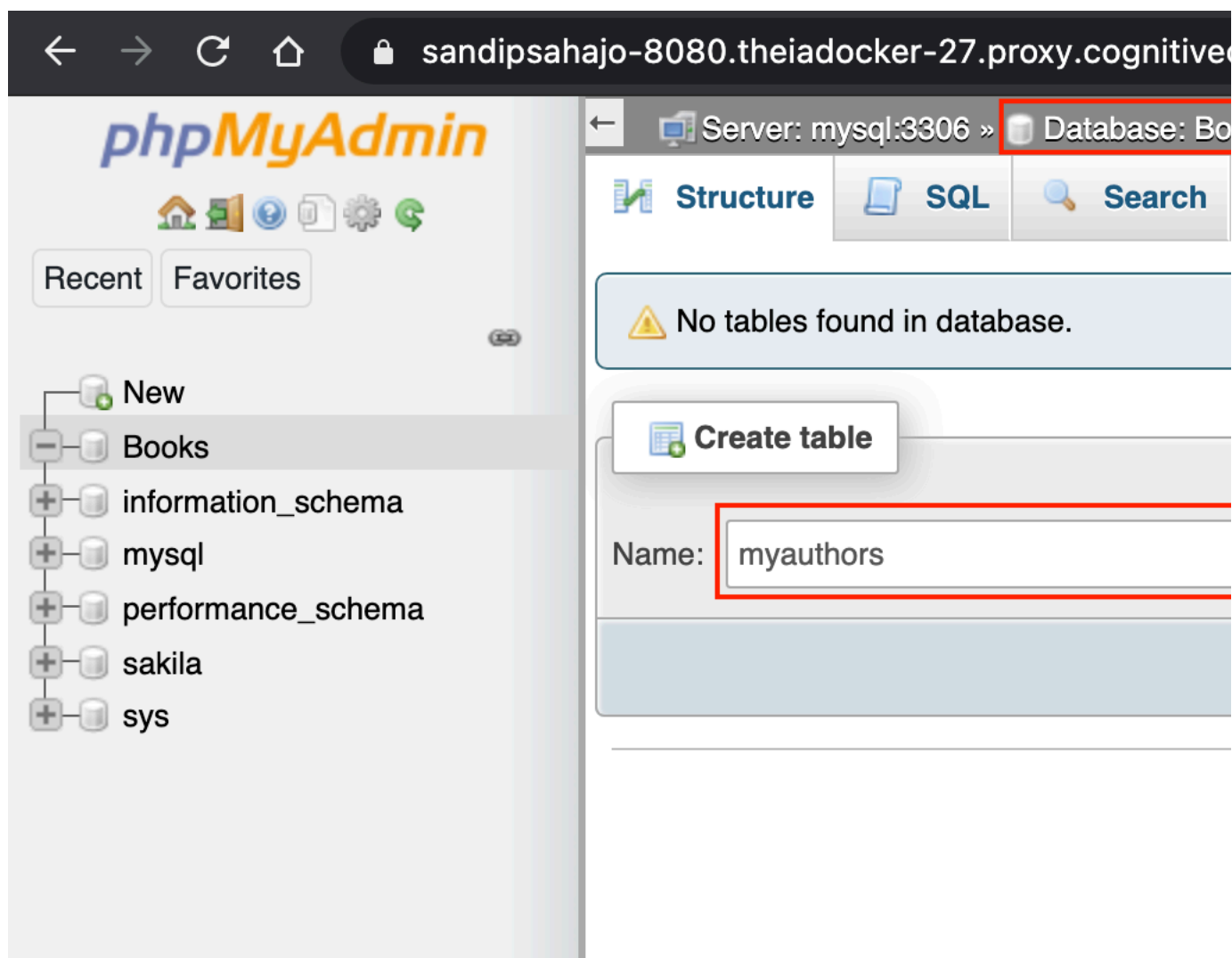
Note: Enabling the database statistics helps you to monitor the database performance.

- 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 the 'phpMyAdmin' logo, navigation icons, and a tree view of databases including 'New', 'Books', 'information_schema', 'mysql', 'performance_schema', 'sakila', and 'sys'. The main panel on the right is titled 'Server: mysql:3306 » Database: Bo'. It has tabs for 'Browse', 'Structure', and 'SQL'. The 'Table name' field contains 'myauthors'. Below this, a table lists the columns and their data types:

Name	Type
author_id	INT
first_name	VARCHAR
middle_name	VARCHAR
last_name	VARCHAR

Below the table structure, there are sections for 'Table comments:' (with an empty text box) and 'PARTITION definition:' (with a dropdown for 'Partition by:' and an empty 'Partitions:' field).

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

The screenshot shows the phpMyAdmin interface. On the left, the database 'mysql' is expanded, showing a tree of databases including 'information_schema', 'mysql', 'performance_schema', 'sakila', and 'sys'. The 'myauthors' table is selected. On the right, the 'Table structure' tab is active, displaying the table's schema. The table has four columns: 'author_id' (int), 'first_name' (varchar(100) utf8m), 'middle_name' (varchar(50) utf8m), and 'last_name' (varchar(100) utf8m). Below the table structure, there are options to 'Check all' and 'With selected:'. At the bottom, there are buttons for 'Print', 'Move columns', 'Normalize', and 'Add'. The 'Add' button is highlighted, and a dropdown menu shows '1' column(s) and a text box containing 'after last_n'.

#	Name	Type	Colla
1	author_id	int	
2	first_name	varchar(100) utf8m	
3	middle_name	varchar(50) utf8m	
4	last_name	varchar(100) utf8m	

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 »

Browse

Structure

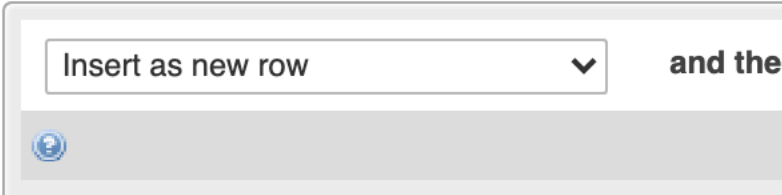
SQL

Se

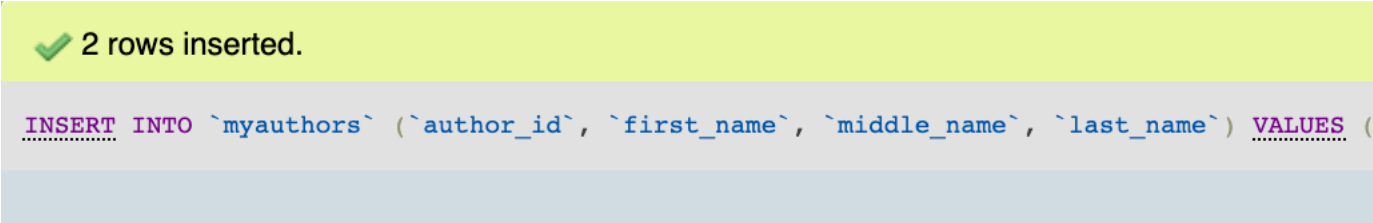
Column	Type	Function
author_id	int	
first_name	varchar(100)	
middle_name	varchar(50)	
last_name	varchar(100)	

☐ Ignore

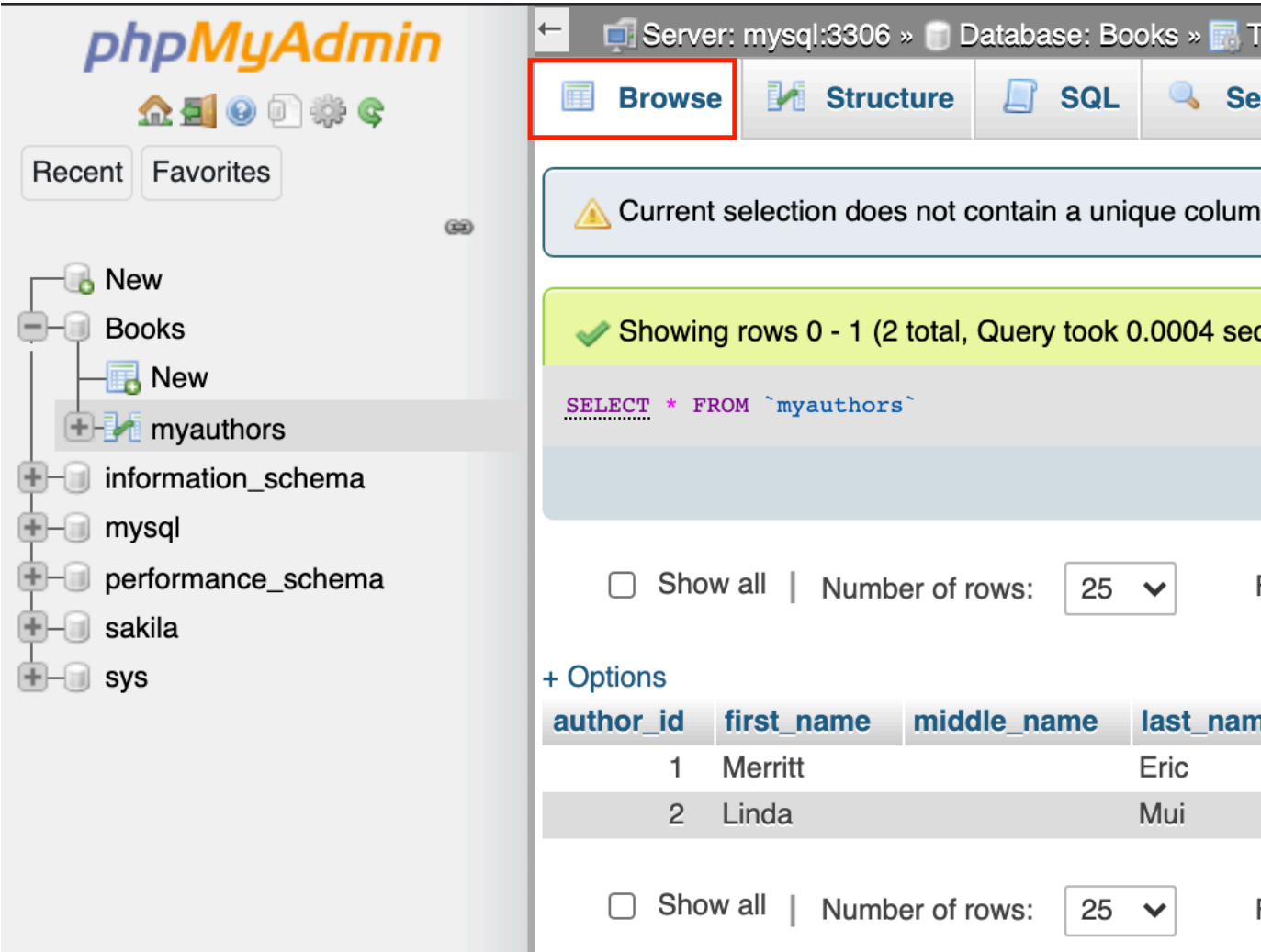
Column	Type	Function
author_id	int	
first_name	varchar(100)	
middle_name	varchar(50)	
last_name	varchar(100)	



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.



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

information_schema

mysql

performance_schema

sakila

sys

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

Browse

Structure

SQL

Se

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..

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 is interrupted.

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

Other options:

☒ Enable foreign key checks

Format:

SQL

Format-specific options:

SQL compatibility mode:

☒ Do not use AUTO_INCREMENT for zero values

about:blank








11/14



Import has been successfully finished, 1376 queries executed. (mysql_table-myauthors_inse

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



Recent Favorites

New

Books

New

myauthors

information_schema

mysql

performance_schema

sakila

sys

Server: mysql:3306 » Database: Books » Tables

BrowseStructureSQLSe

⚠ Current selection does not contain a unique column

✓ Showing rows 0 - 24 (1378 total, Query took 0.000)

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

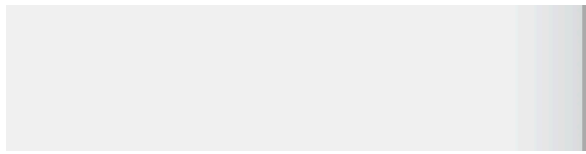
1 > >> | Number of rows: 25

+ 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		McShaffr
24	Norman		Matloff
25	John	E.	Hopcroft

about:blank

13/14



1 ▼

>

>>

| Number of rows:

25 ▼

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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