

# Relational Database Systems

## Install MySQL on Windows

Database Systems  
Install MySQL on Windows

**Introduction:**

The goal of this document is to serve as a walkthrough of the installation of MySQL in Windows.

Database Systems  
Install MySQL on Windows

Step 1:

Download the MySQL Installer from <https://dev.mysql.com/downloads/installer/>

Look for the full version (larger download), not the web installer.

(ex: mysql-installer-community-8.0.39.0.msi)

The screenshot shows the MySQL Installer download page. At the top, there are tabs for "General Availability (GA) Releases" (highlighted in orange), "Archives", and a help icon. Below the tabs, the title "MySQL Installer 8.0.39" is displayed. A note states: "Note: MySQL 8.0 is the final series with MySQL Installer. As of MySQL 8.1, use a MySQL product's MSI or Zip archive for installation. MySQL Server 8.1 and higher also bundle MySQL Configurator, a tool that helps configure MySQL Server." Under "Select Version:", a dropdown menu shows "8.0.39". Under "Select Operating System:", a dropdown menu shows "Microsoft Windows". Two download options are listed:

- Windows (x86, 32-bit), MSI Installer** (mysql-installer-web-community-8.0.39.0.msi)  
Version: 8.0.39 | Size: 2.1M | **Download** | MD5: d8499da0b2c4b5dfa81a5c5185af9238 | Signature
- Windows (x86, 32-bit), MSI Installer** (mysql-installer-community-8.0.39.0.msi)  
Version: 8.0.39 | Size: 303.6M | **Download** | MD5: 353c5e5ab9350d0e9ddcb42264229b5d | Signature

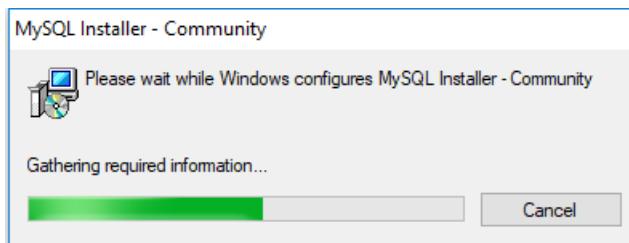
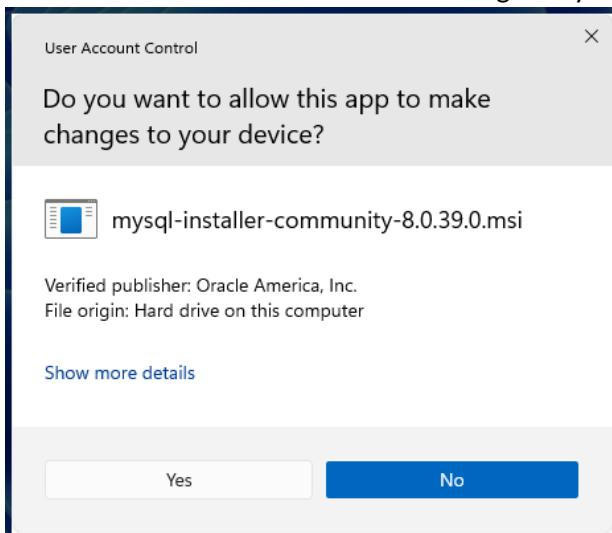
A note at the bottom suggests using MD5 checksums and GnuPG signatures for package integrity verification.

Step 2:

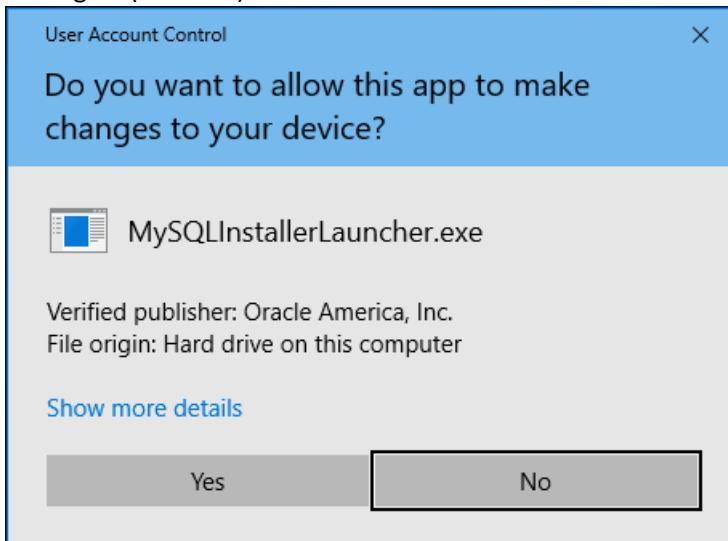
Run the MySQL 8 Installer (ex: mysql-installer-community-8.0.39.0.msi)

Database Systems  
Install MySQL on Windows

Allow User Account Control to make changes to your device - YES

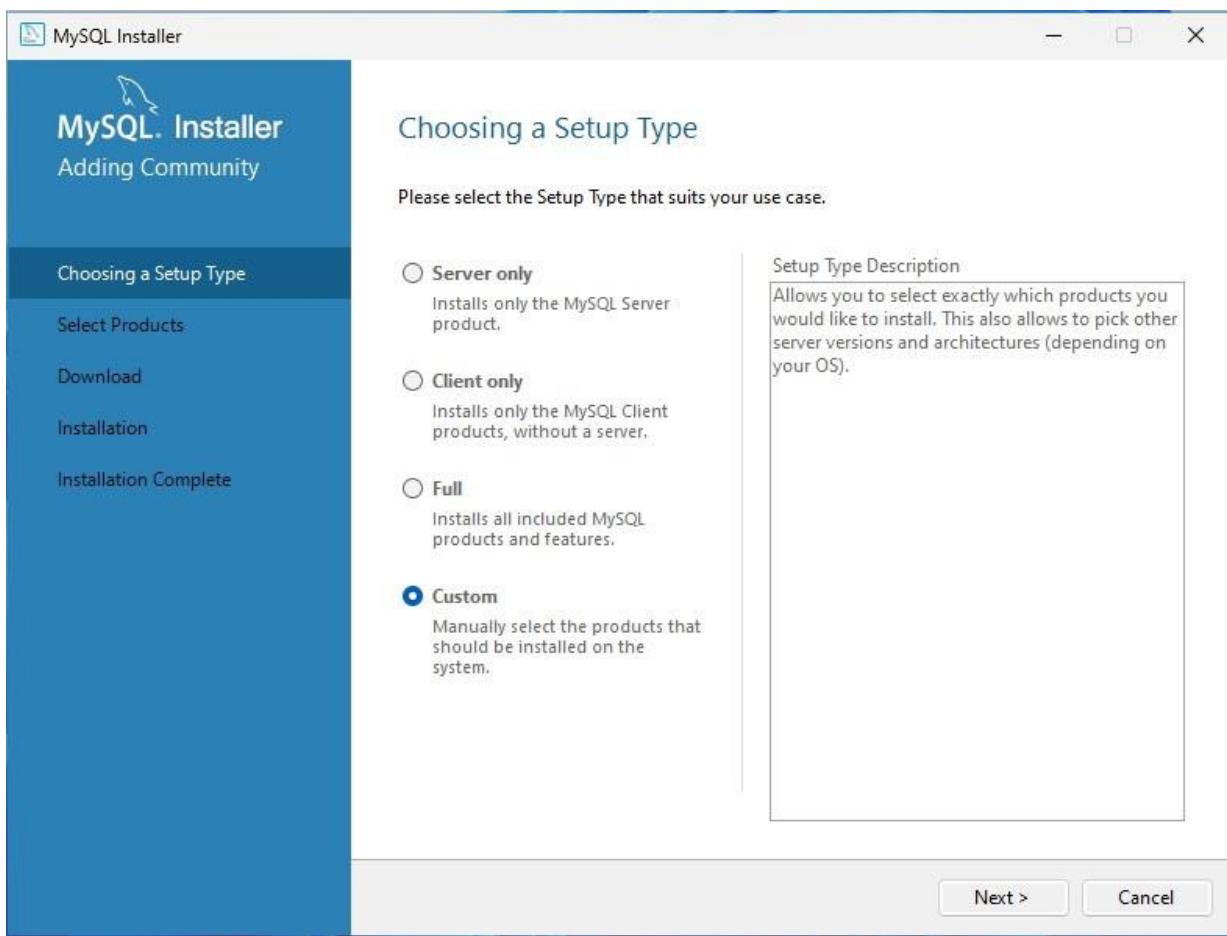


And again (click YES):



Database Systems  
Install MySQL on Windows

For Setup Type, choose "Custom".



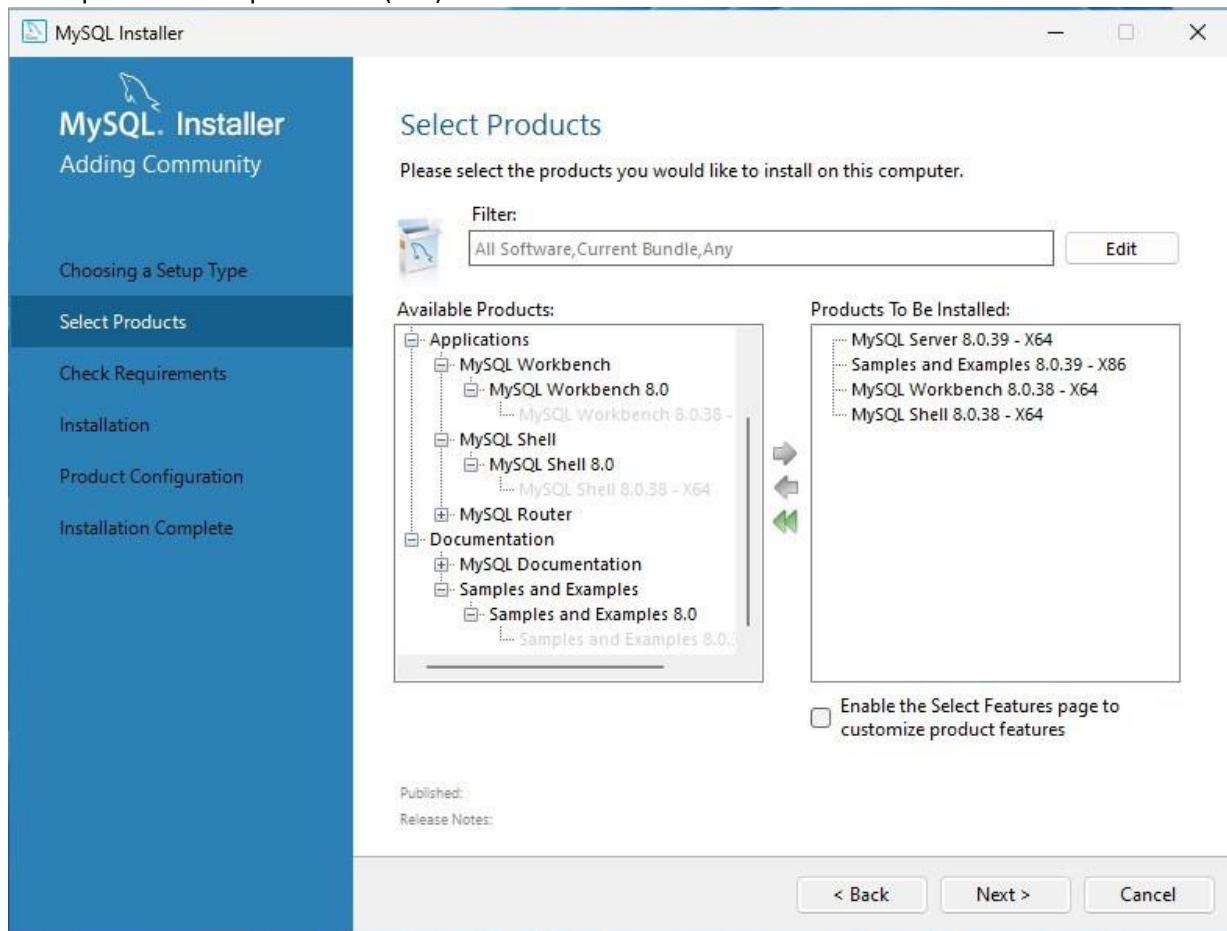
Database Systems  
Install MySQL on Windows

**Note:** Your version may be newer than the ones provided here. Ex: 8.0.41 instead of 8.0.39.

Please use the latest version of MySQL.

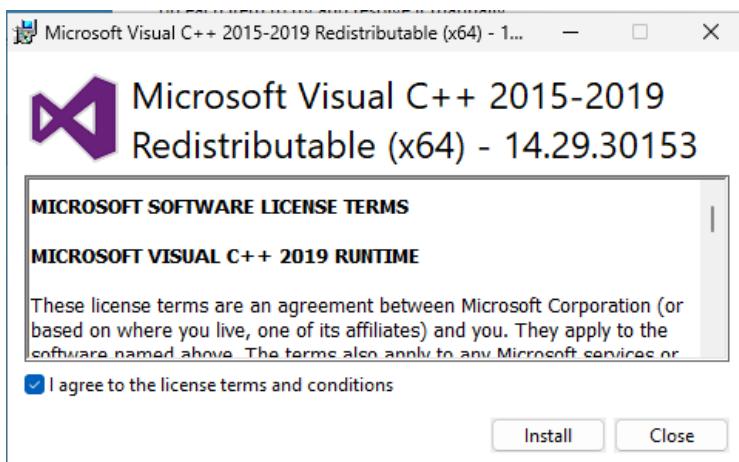
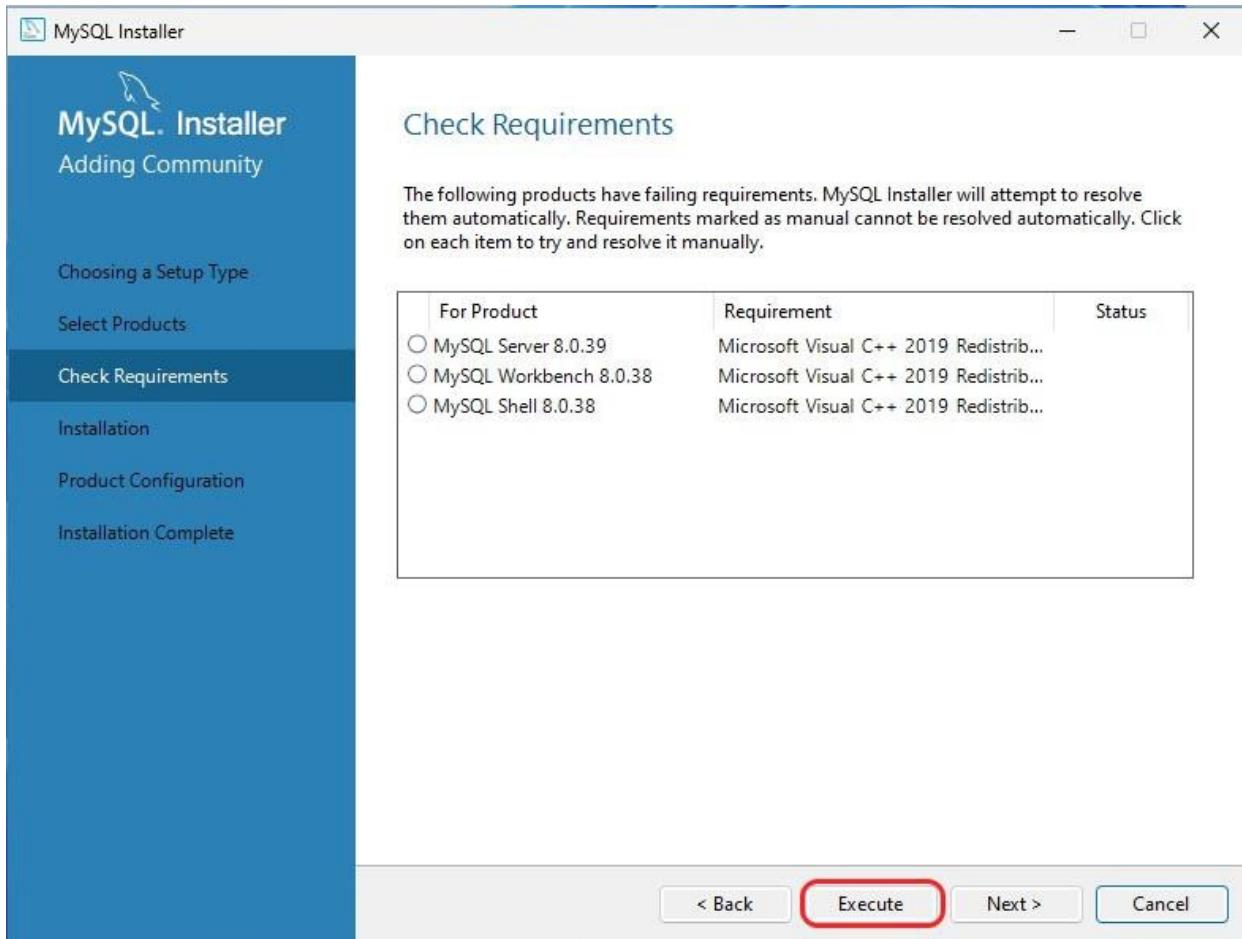
Include the following (4) in the install:

- MySQL Server 8.0.39 (X64)
- MySQL Workbench 8.0.39 (X64)
- MySQL Shell 8.0.39 (X64)
- Samples and Examples 8.0.39 (X86)



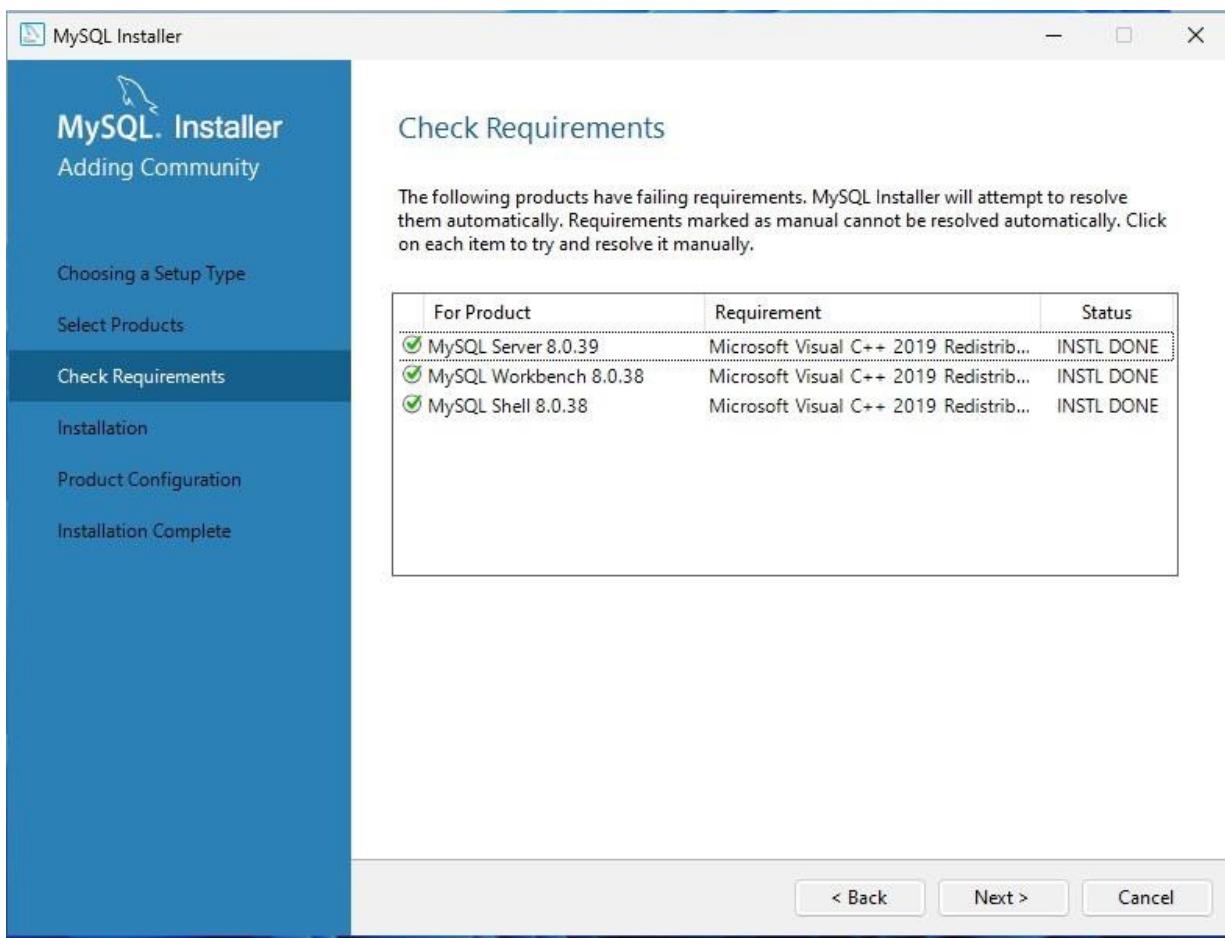
Database Systems  
Install MySQL on Windows

Install Microsoft Visual C++ Redistributable if required – click "Execute", Agree to Terms and Conditions and Install:



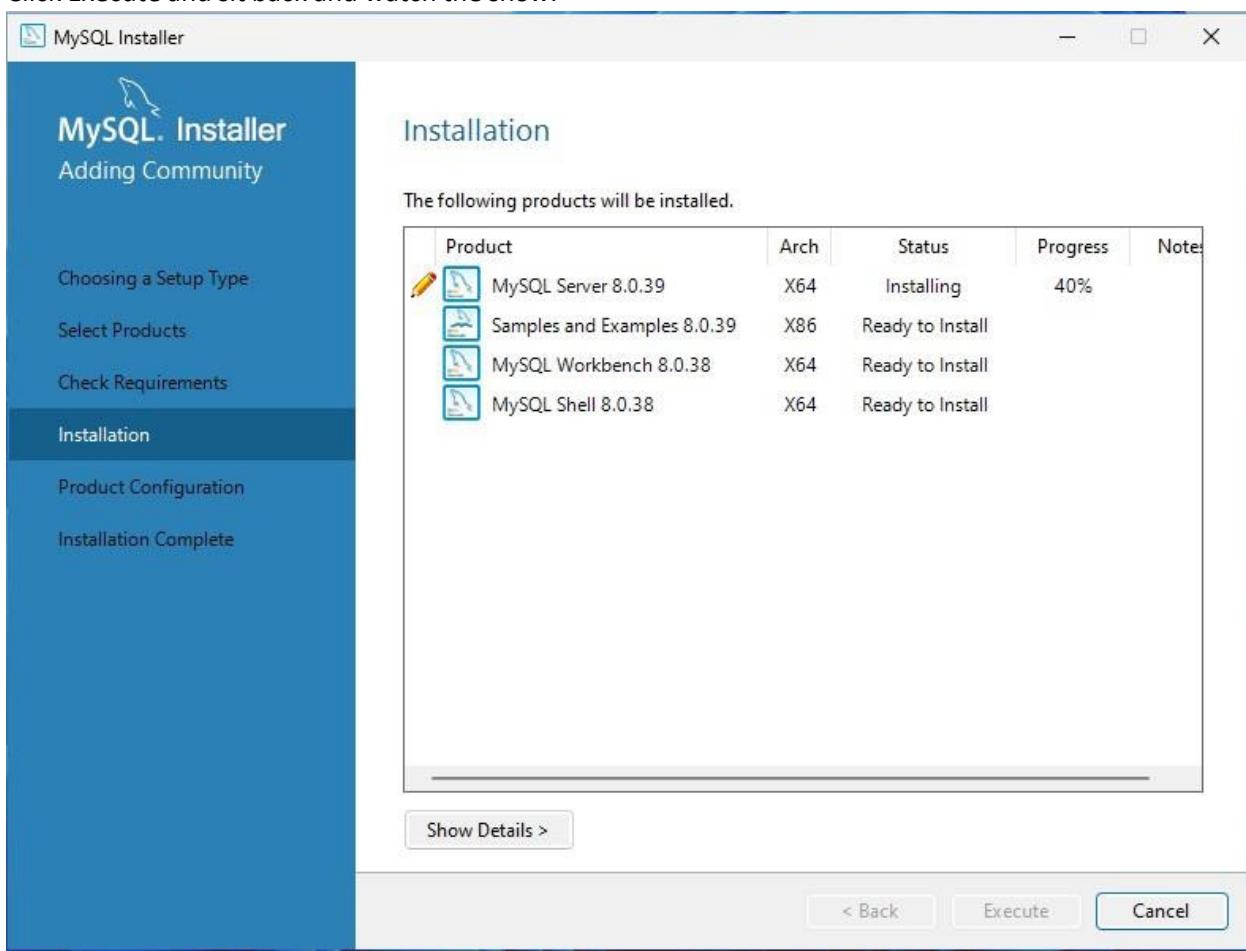
Database Systems  
Install MySQL on Windows

Click "Next" once the Redistributables have installed



Database Systems  
Install MySQL on Windows

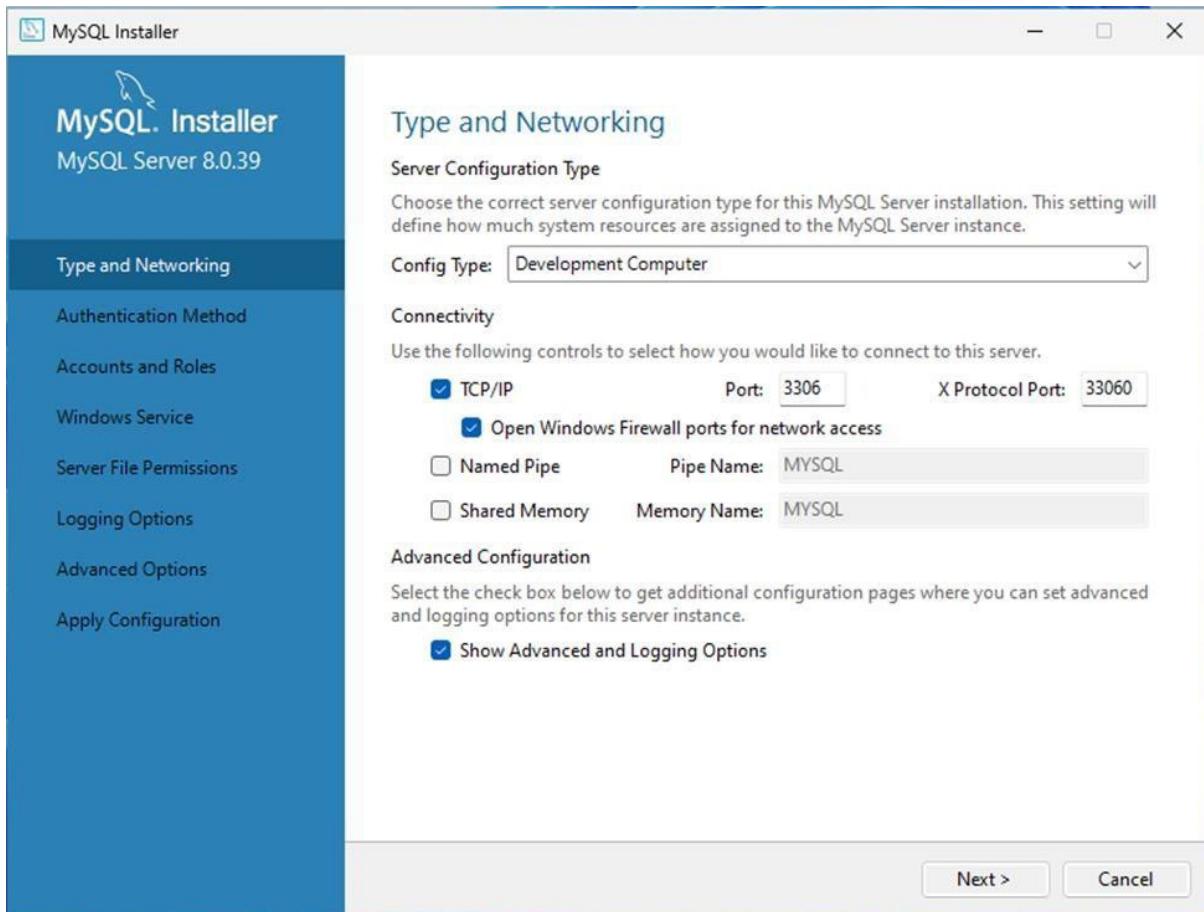
Click Execute and sit back and watch the show:



**Note:** This portion of the install wizard changes **frequently**. If your steps are slightly different than the ones shown here, you should be able to accept the defaults and continue with the installation.

Database Systems  
Install MySQL on Windows

Keep Development Computer as Config Type, Keep all other defaults  
**EXCEPT** click "Show Advanced and Logging Options"



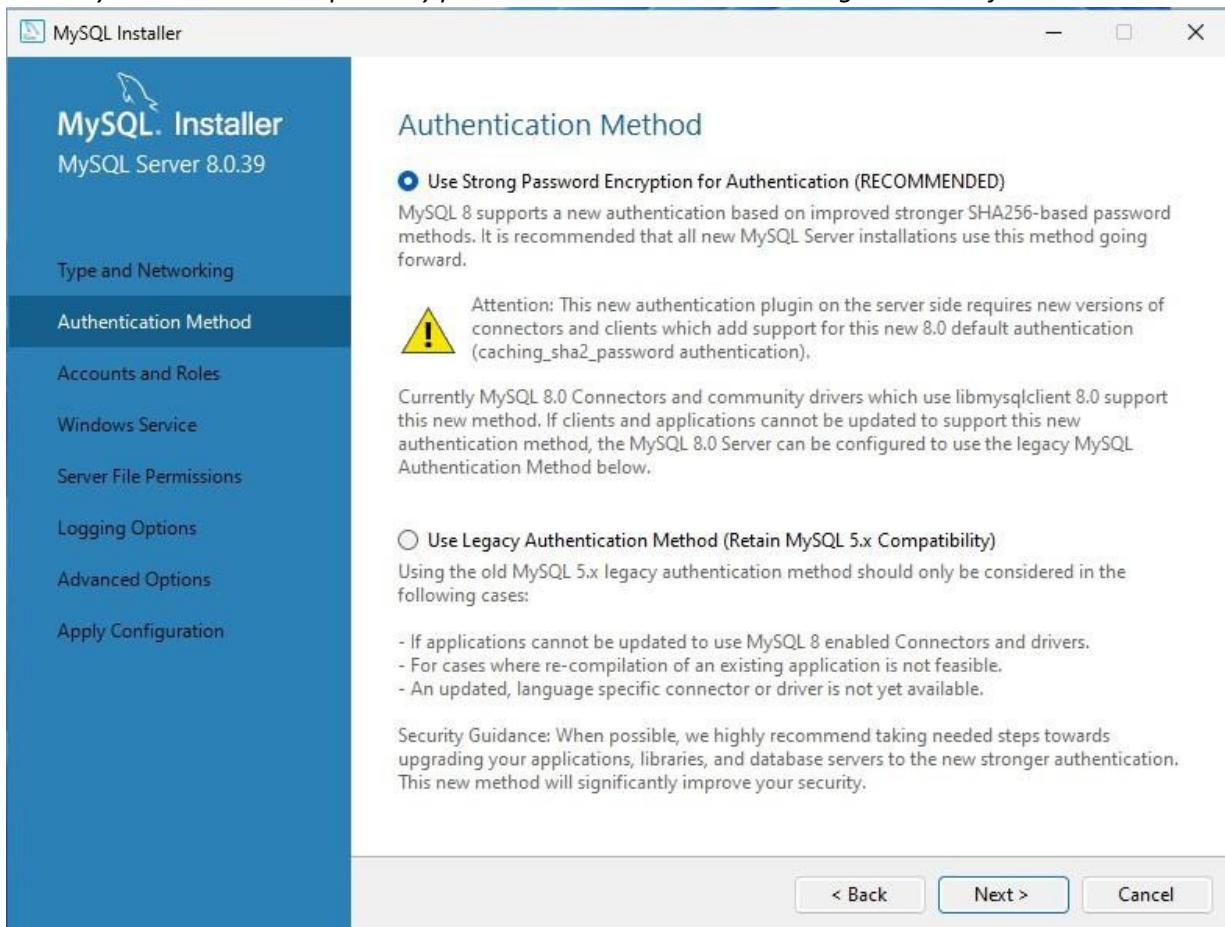
## Database Systems

### Install MySQL on Windows

Authentication Method – Use Strong Password Encryption:

Notice: the many warnings about strong encryption.

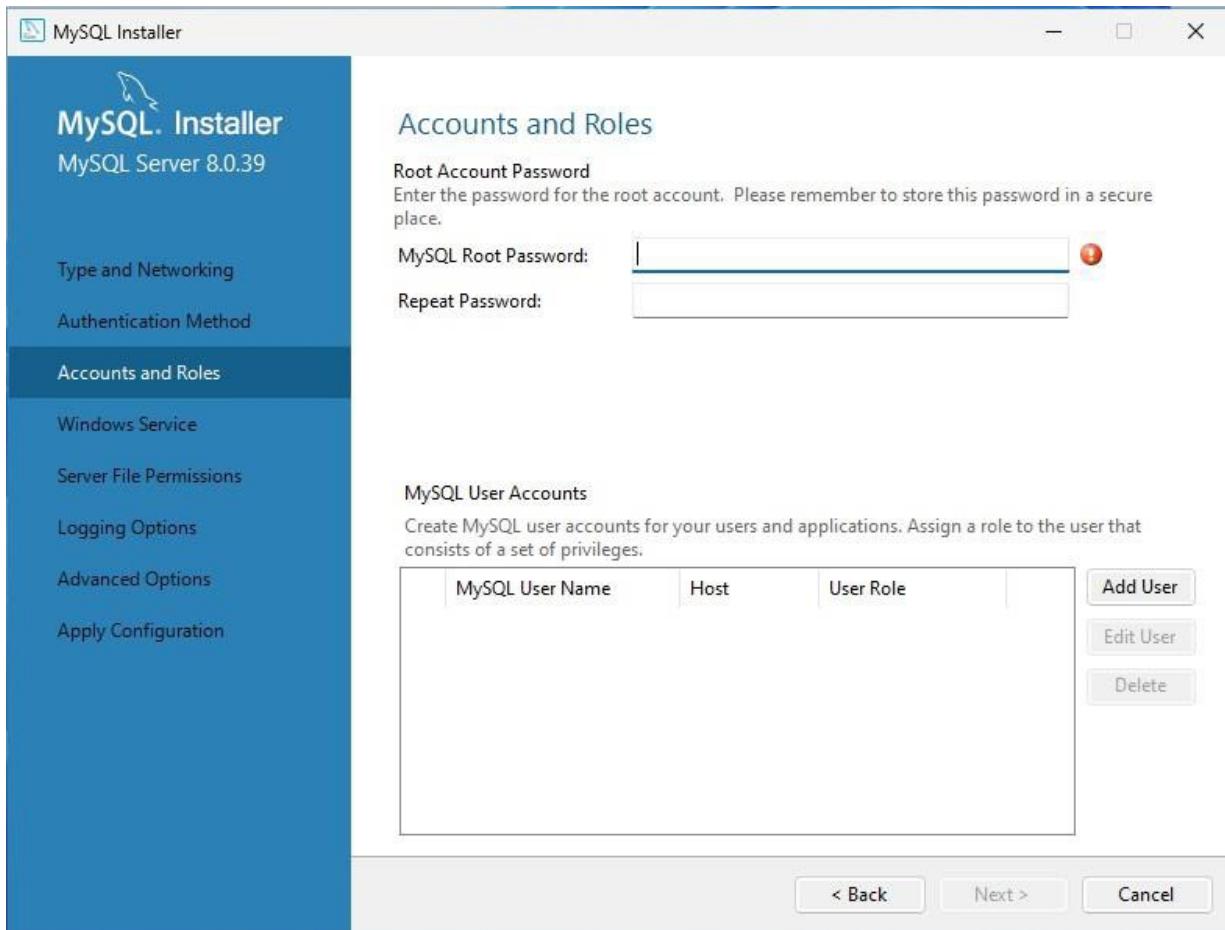
*This may cause some incompatibility problems but will see how to change this later if needed.*



Database Systems  
Install MySQL on Windows

Create a root password.

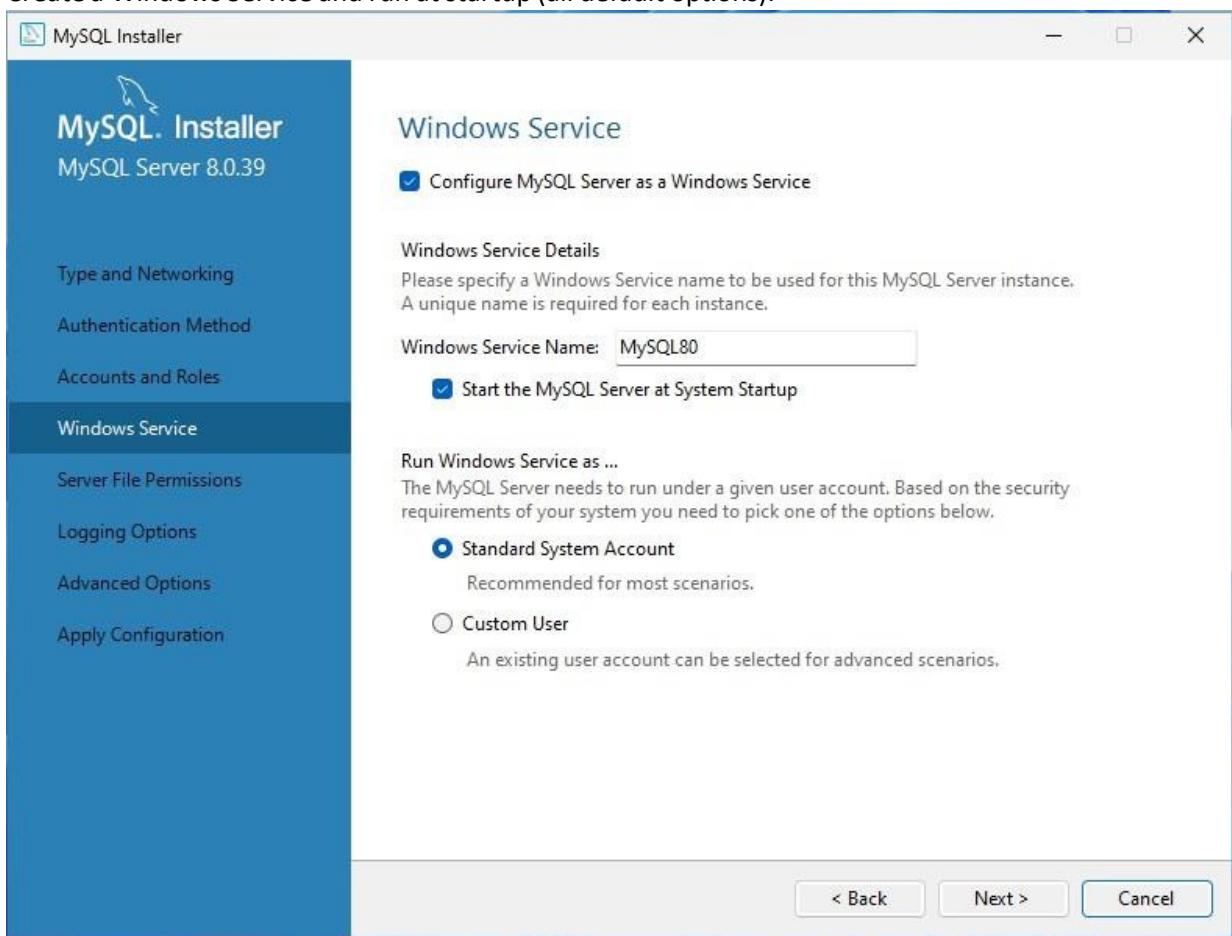
**IMPORTANT:** Write down your password so you can remember it!



## Database Systems

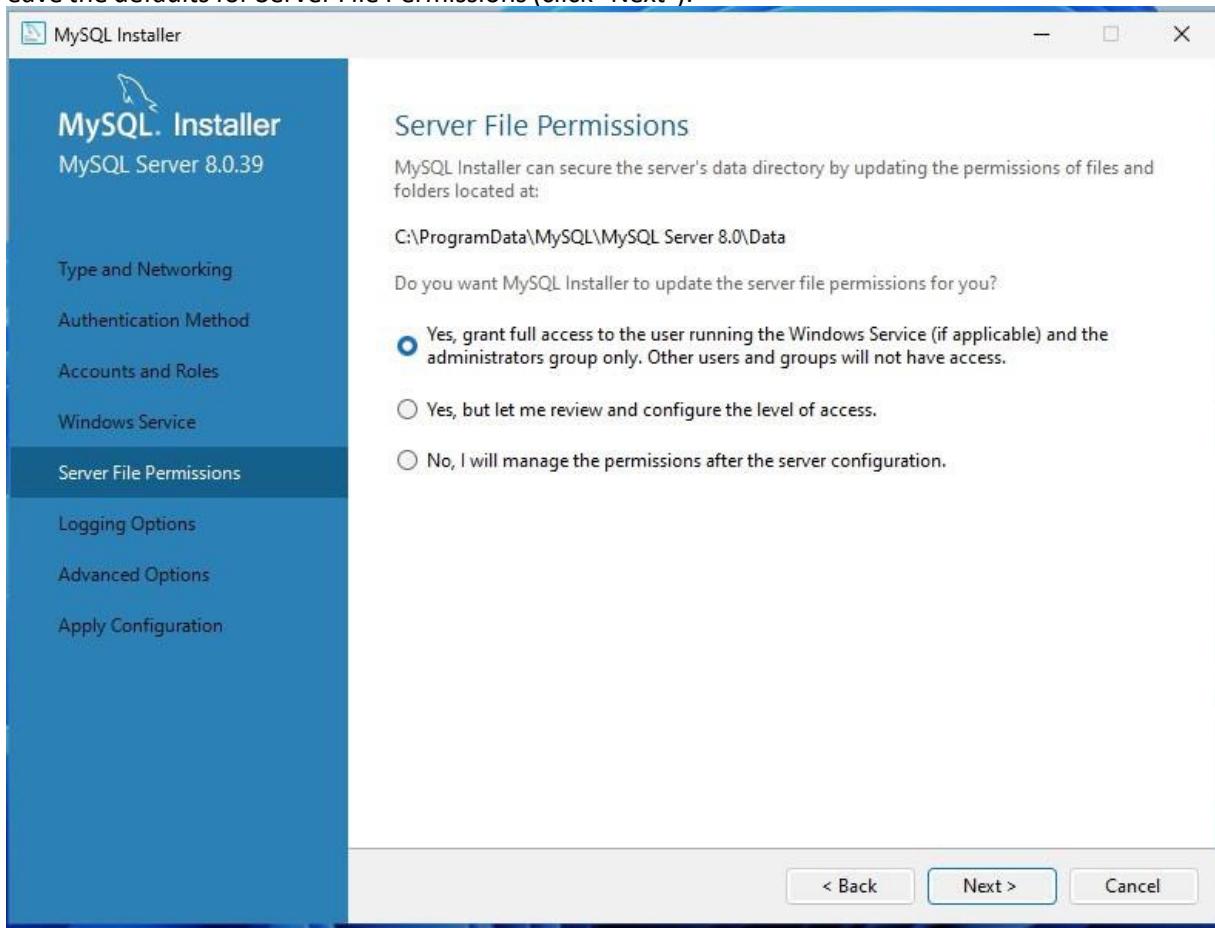
### Install MySQL on Windows

Create a Windows Service and run at startup (all default options):



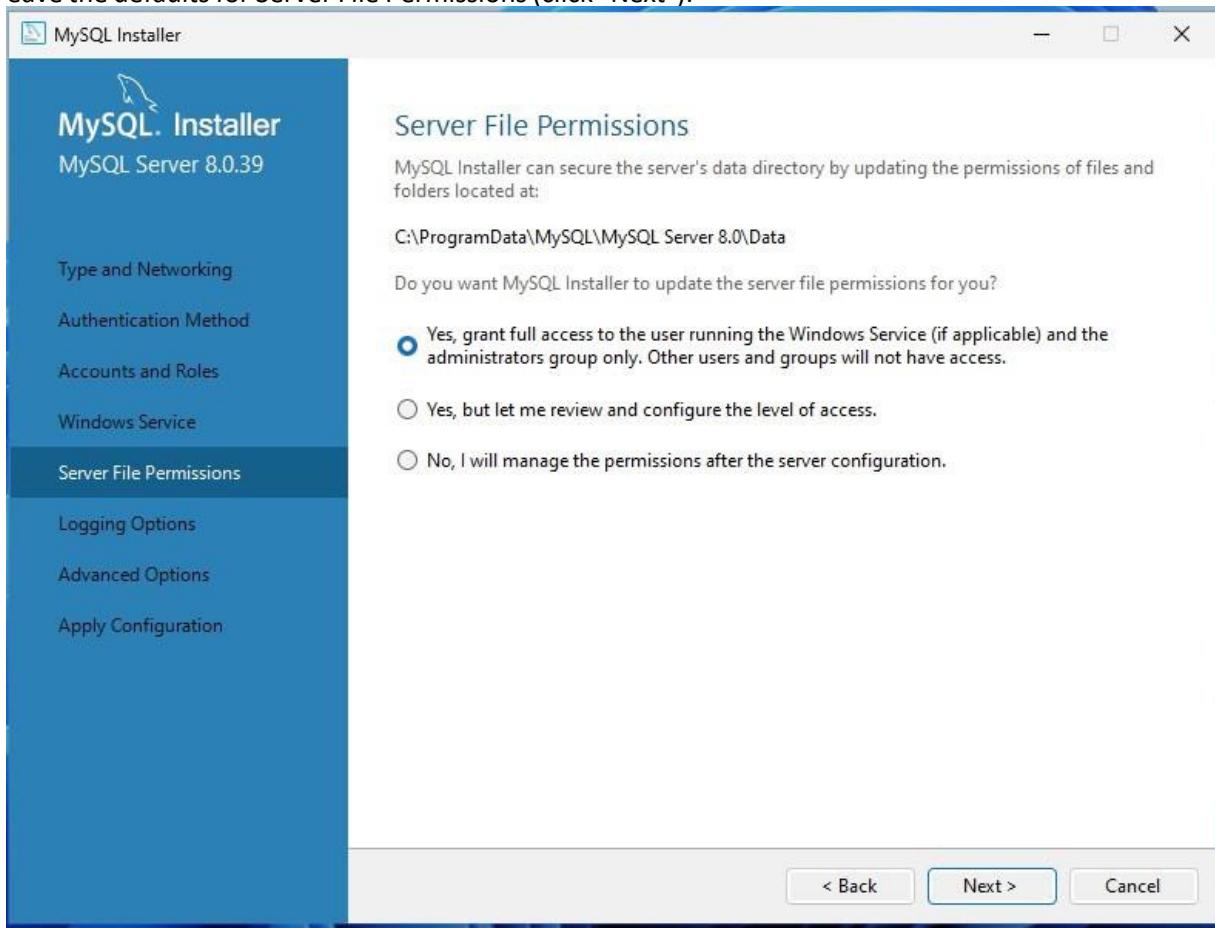
COMP 2714 Relational Database Systems  
Install MySQL on Windows

Leave the defaults for Server File Permissions (click "Next"):



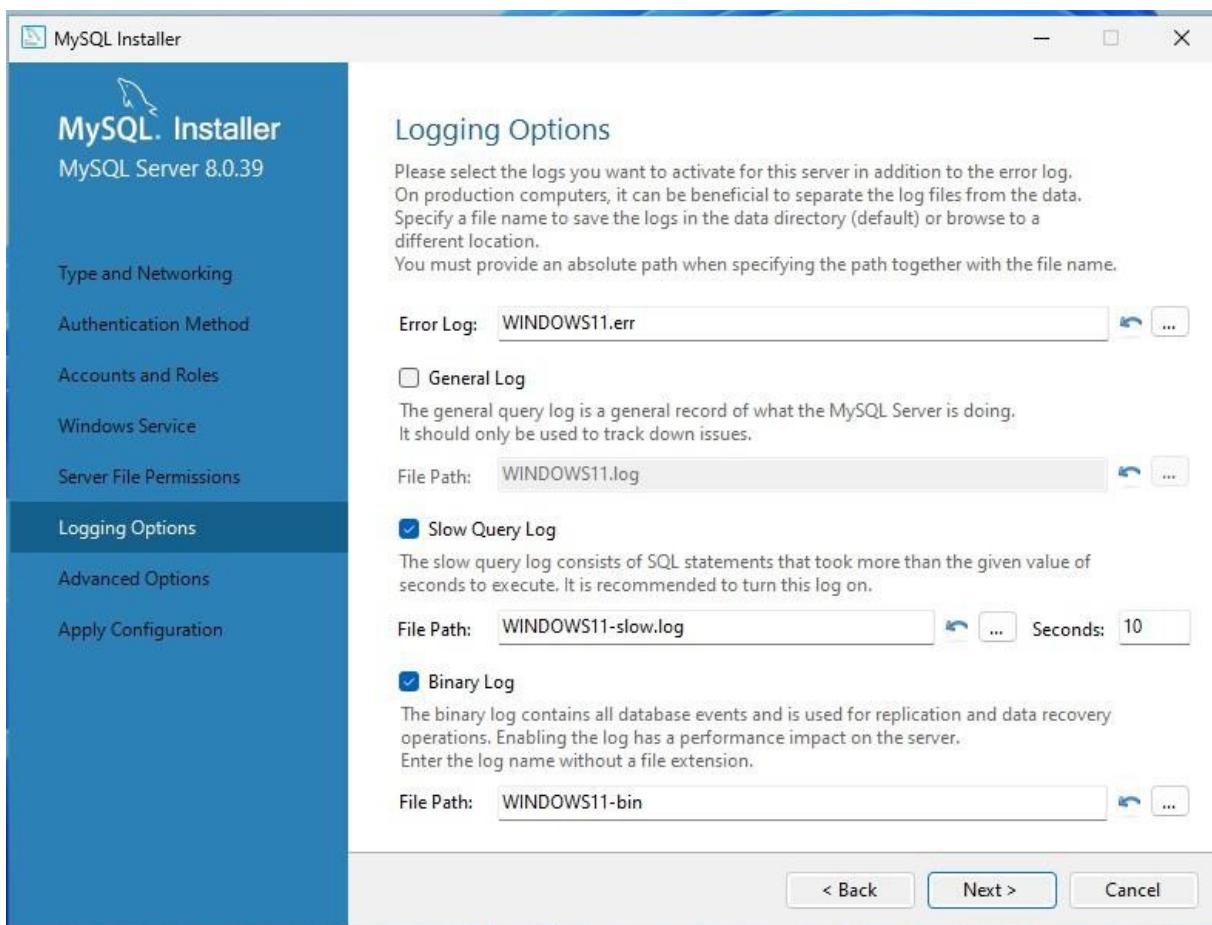
COMP 2714 Relational Database Systems  
Install MySQL on Windows

Leave the defaults for Server File Permissions (click "Next"):



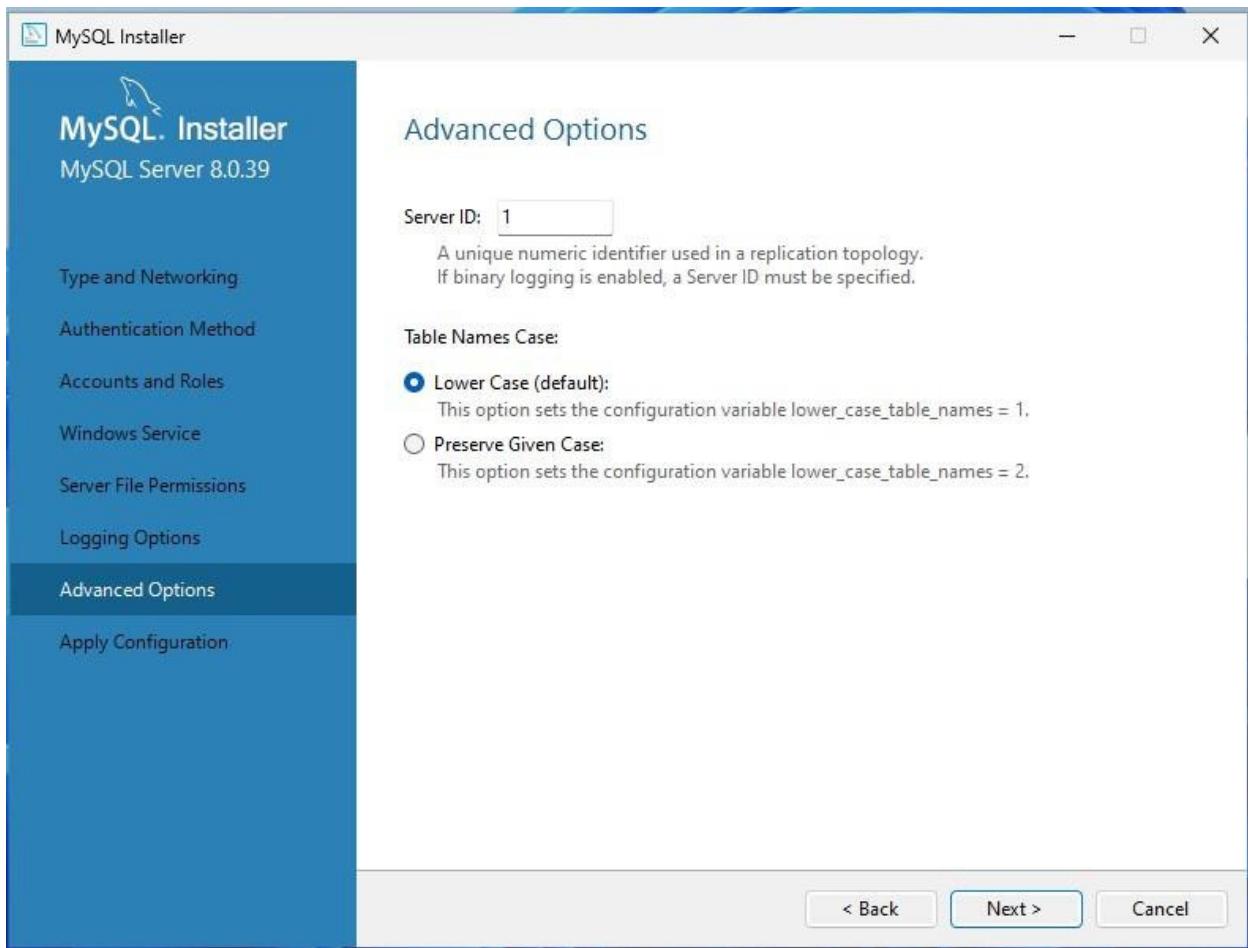
The defaults should also be ok for logging.

Binary and Slow Query logs should be enabled and General log should be disabled.

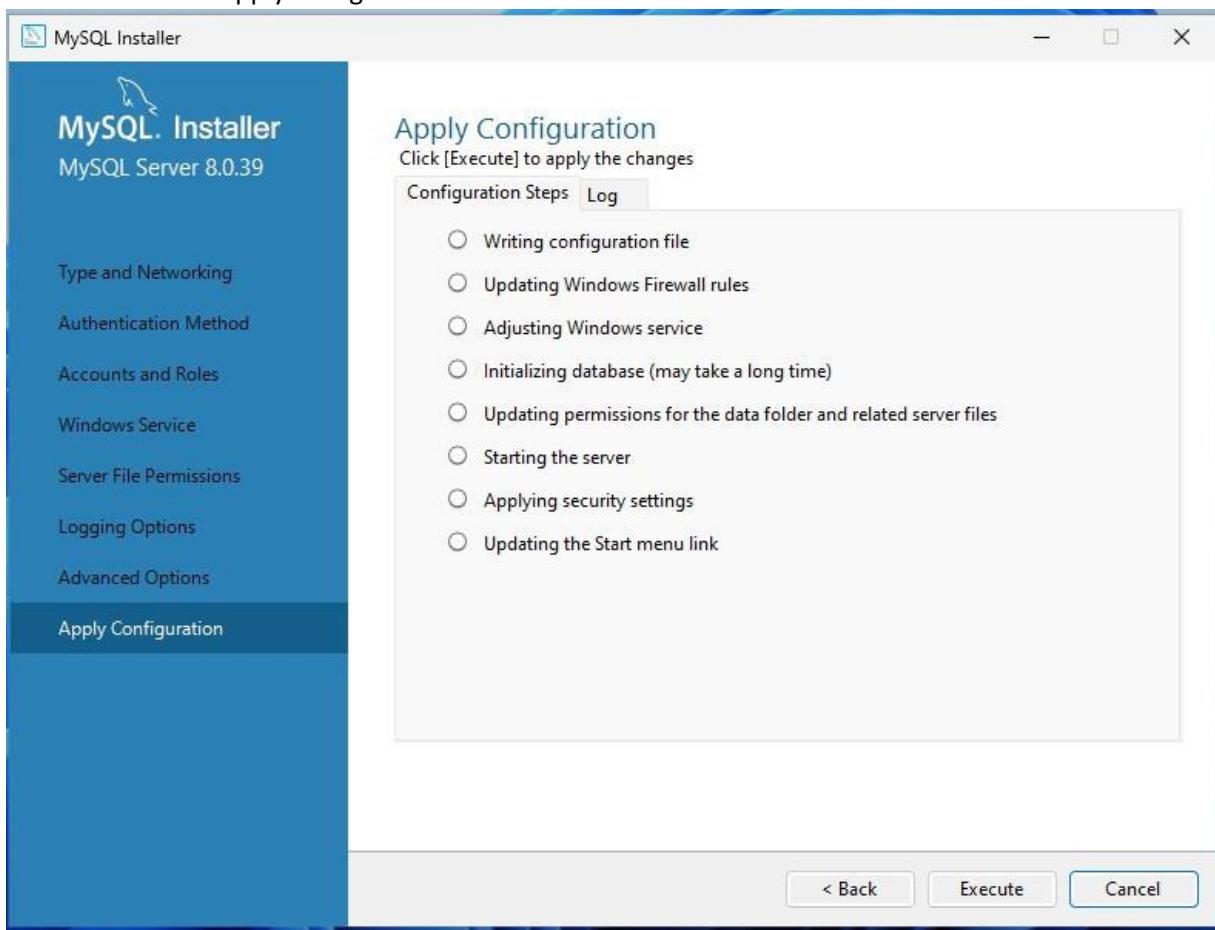


For case sensitivity it should be Lower Case (default):

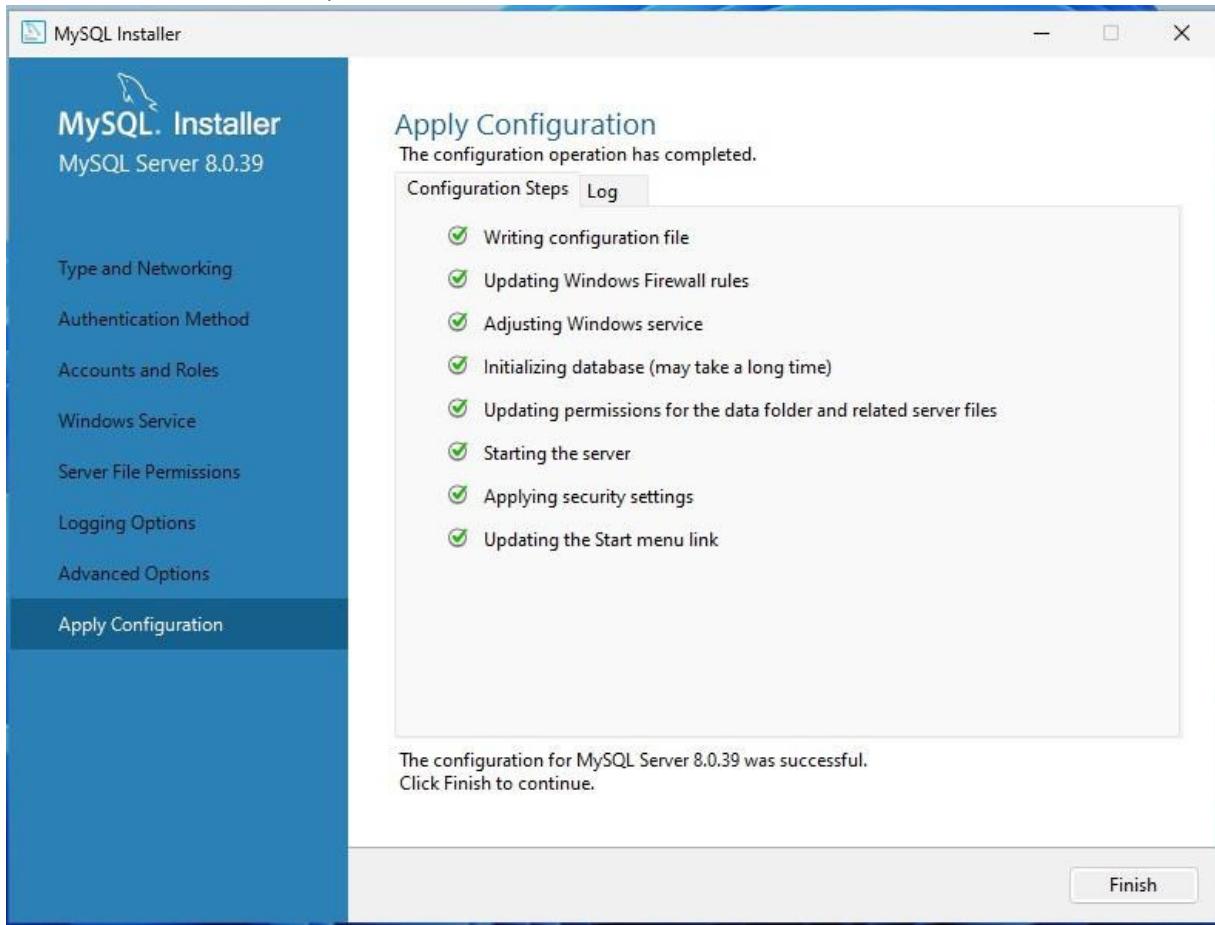
Server ID can be left as 1.



Click "Execute" to apply configuration:

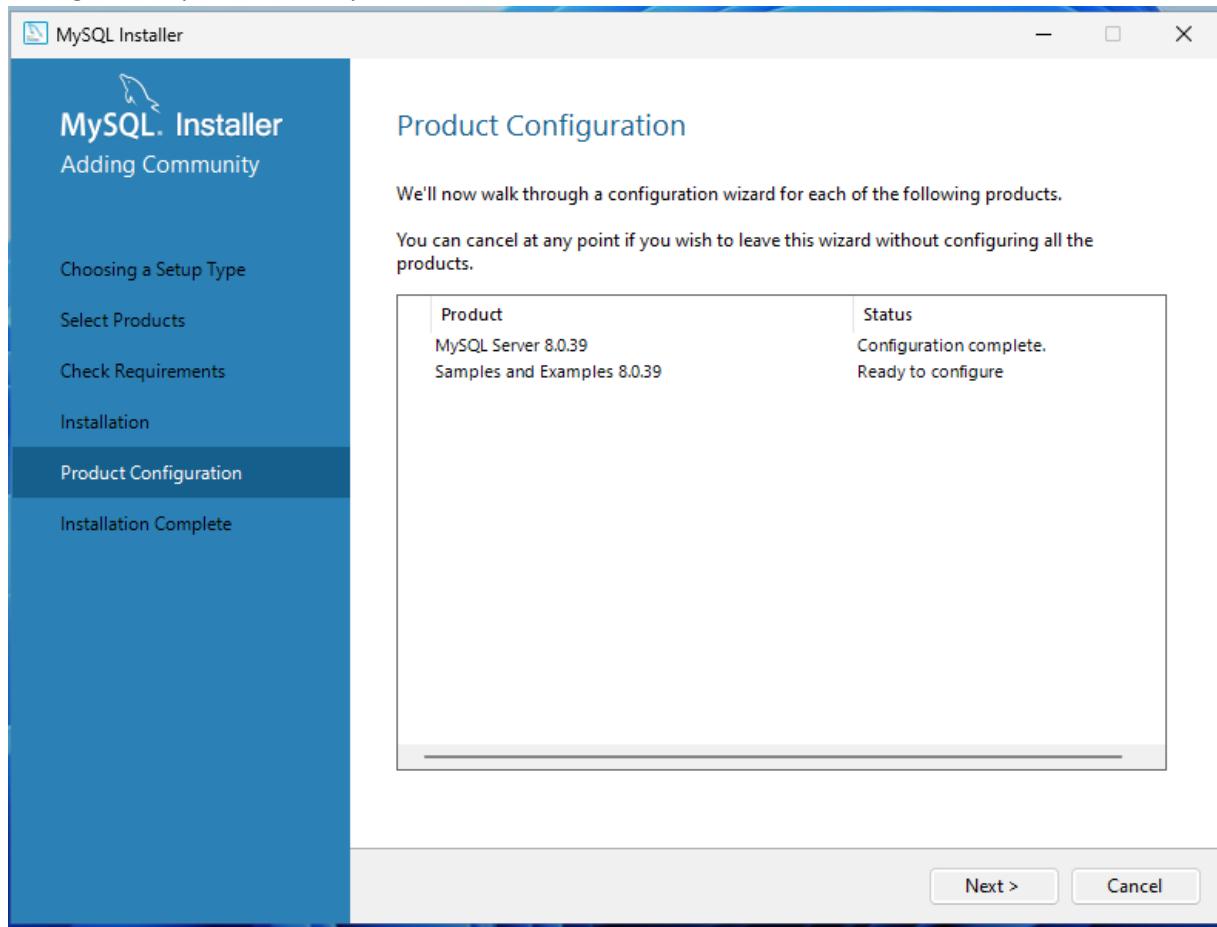


If it worked – it should complete as follows; click "Finish":

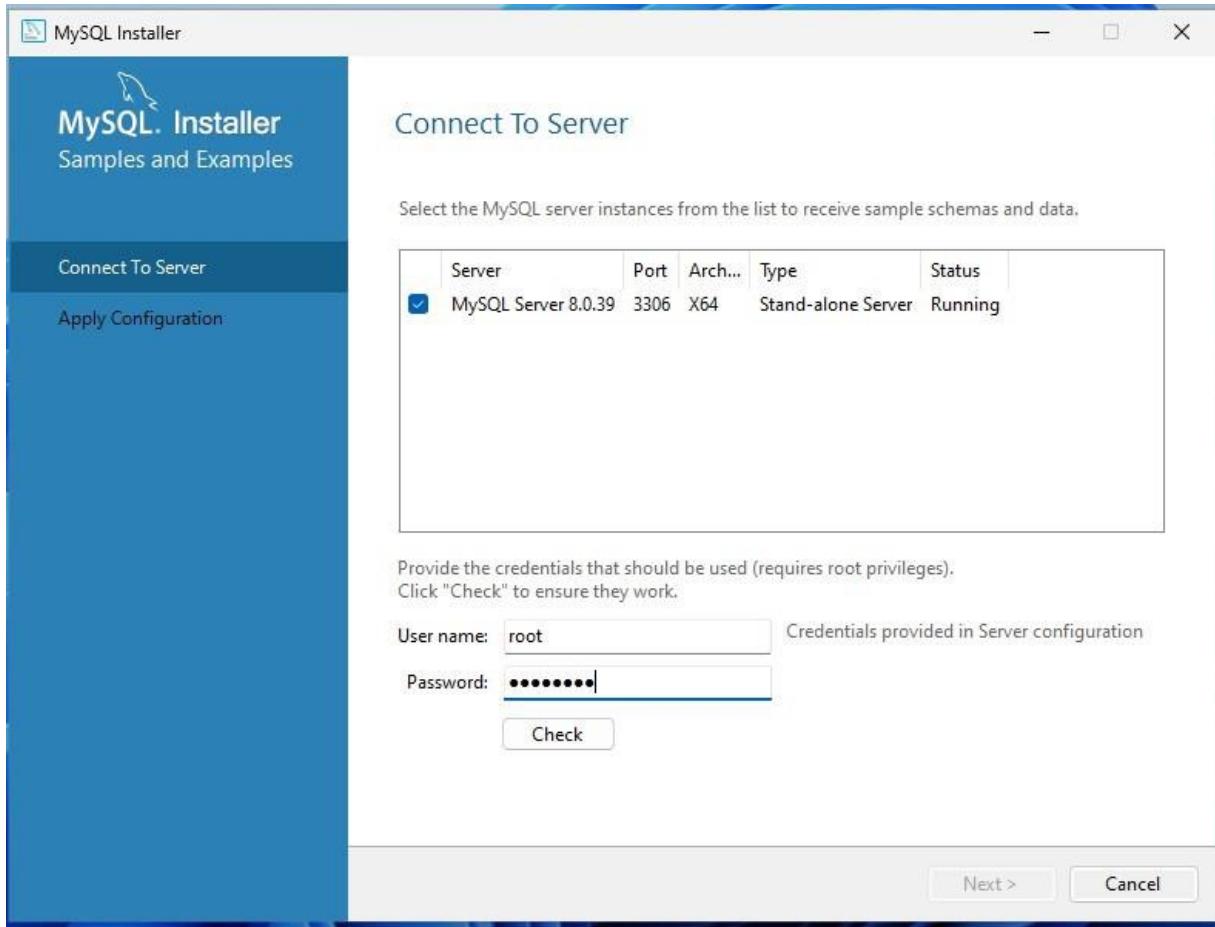


**Step 3:**

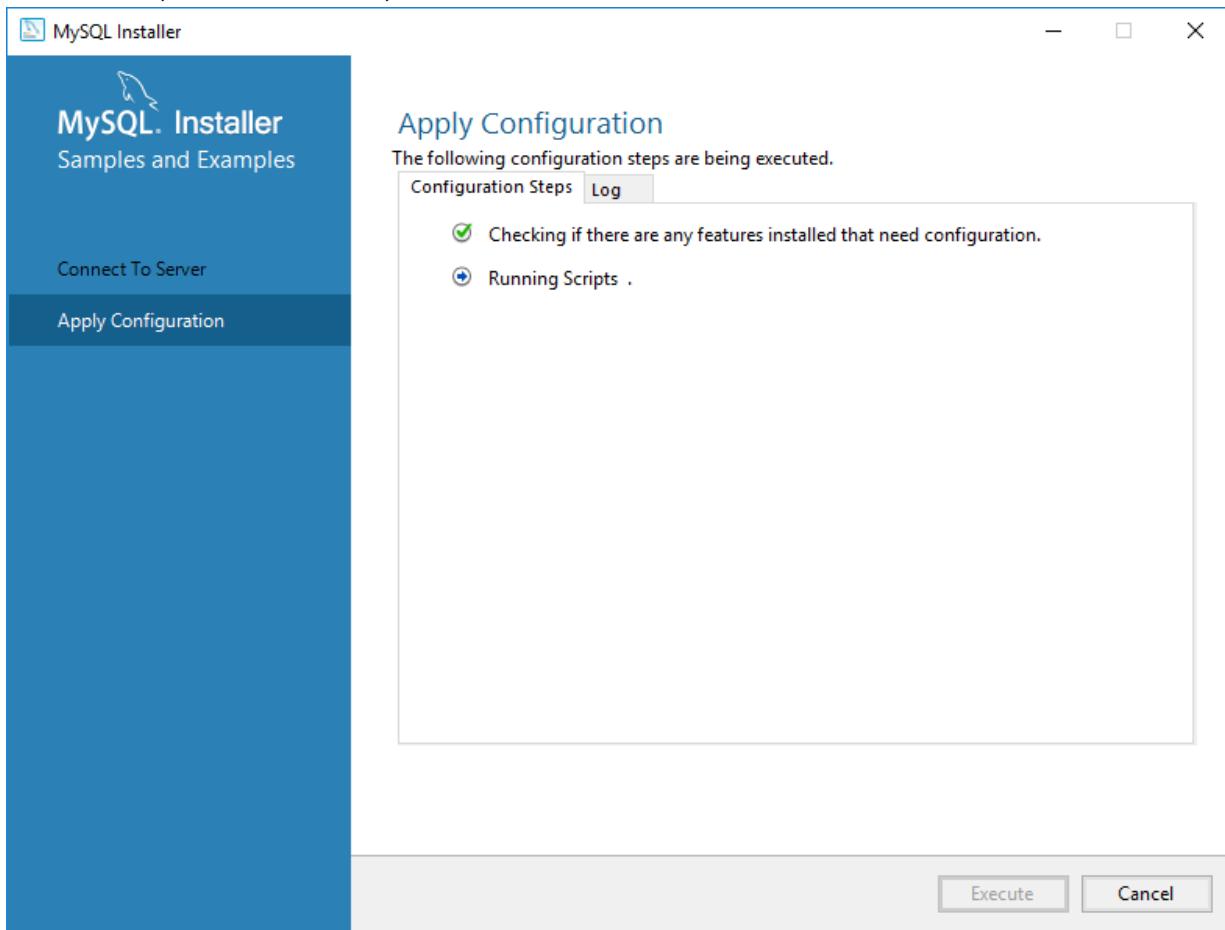
Configure Samples and Examples, click "Next":



Remember your password? Type it here and click "Check", then click "Next":



Click Execute, wait until finished, click Finish:



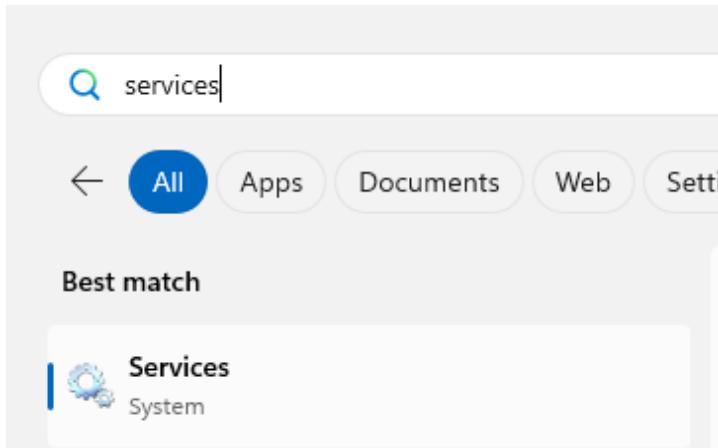
**Step 4:**

Check to see if MySQL was installed.

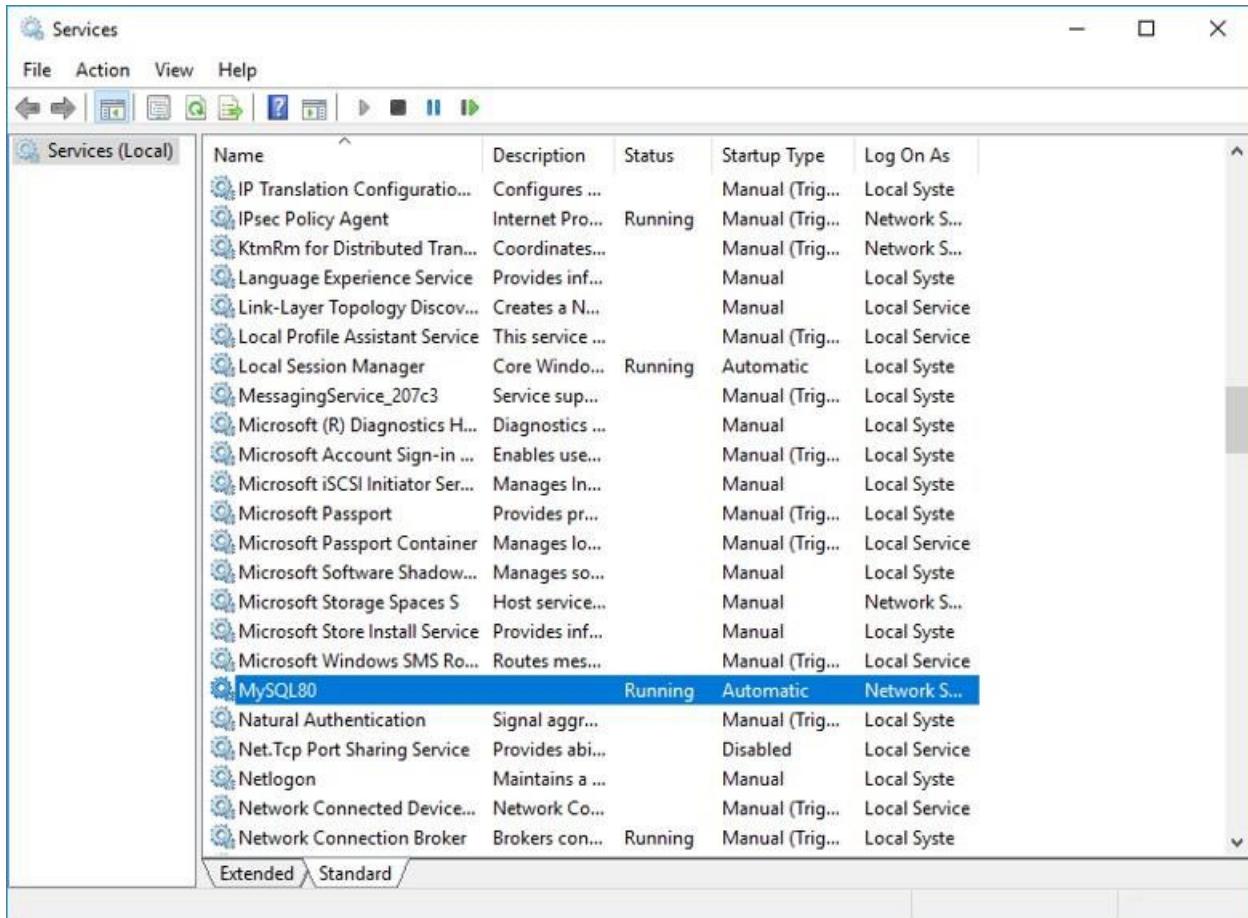
We've already created a sample database, but we're going to check the Windows Service is running and that we can connect to MySQL via the Command Prompt.

Next check to see if MySQL Server is running as a Windows Service:

Click Start Menu, type `services`, click Services Desktop App:



Find MySQL80 – Verify that Status = Running and Startup Type = Automatic:

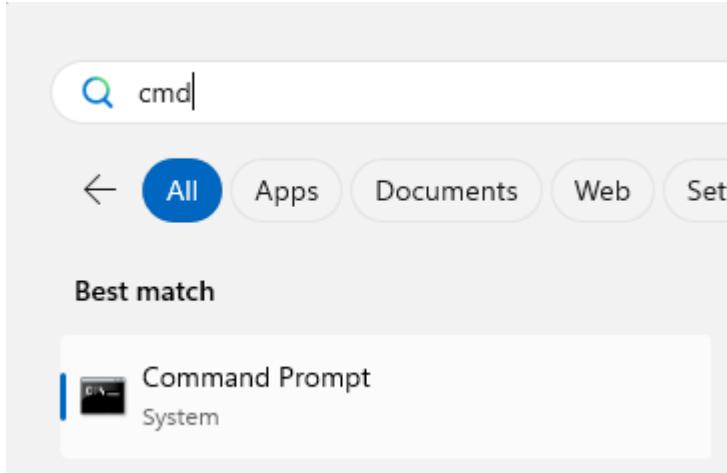


The screenshot shows the Windows Services snap-in window. The title bar reads "Services". The menu bar includes "File", "Action", "View", and "Help". Below the menu is a toolbar with icons for Refresh, Stop, Start, Pause, Continue, Stop and Restart, Start and Stop, and Refresh All. The main area is a table titled "Services (Local)". The columns are "Name", "Description", "Status", "Startup Type", and "Log On As". The "Name" column lists various Windows services. The "MySQL80" service is highlighted with a blue selection bar. Its details are: Name: MySQL80, Description: Provides inf..., Status: Running, Startup Type: Automatic, Log On As: Network S... At the bottom of the table, there are two tabs: "Extended" and "Standard", with "Standard" selected.

Name	Description	Status	Startup Type	Log On As
IP Translation Configuration	Configures ...	Manual (Trig...	Local Syste	
IPsec Policy Agent	Internet Pro...	Running	Manual (Trig...	Network S...
KtmRm for Distributed Tran...	Coordinates...	Manual (Trig...	Network S...	
Language Experience Service	Provides inf...	Manual	Local Syste	
Link-Layer Topology Discov...	Creates a N...	Manual	Local Service	
Local Profile Assistant Service	This service ...	Manual (Trig...	Local Service	
Local Session Manager	Core Windo...	Running	Automatic	Local Syste
MessagingService_207c3	Service sup...	Manual (Trig...	Local Syste	
Microsoft (R) Diagnostics H...	Diagnostics ...	Manual	Local Syste	
Microsoft Account Sign-in ...	Enables use...	Manual (Trig...	Local Syste	
Microsoft iSCSI Initiator Ser...	Manages In...	Manual	Local Syste	
Microsoft Passport	Provides pr...	Manual (Trig...	Local Syste	
Microsoft Passport Container	Manages lo...	Manual (Trig...	Local Service	
Microsoft Software Shadow...	Manages so...	Manual	Local Syste	
Microsoft Storage Spaces S	Host service...	Manual	Network S...	
Microsoft Store Install Service	Provides inf...	Manual	Local Syste	
Microsoft Windows SMS Ro...	Routes mes...	Manual (Trig...	Local Service	
MySQL80	Running	Automatic	Network S...	
Natural Authentication	Signal aggr...	Manual (Trig...	Local Syste	
Net.Tcp Port Sharing Service	Provides abi...	Disabled	Local Service	
Netlogon	Maintains a ...	Manual	Local Syste	
Network Connected Device...	Network Co...	Manual (Trig...	Local Service	
Network Connection Broker	Brokers con...	Running	Manual (Trig...	Local Syste

Verify you can connect to mysql via the Command Prompt:

Click Start Menu – type cmd and click Command Prompt Desktop App:



At the prompt, type the following `mysql -u root -p`

This:

- connects to the localhost (since we didn't specify another host with `-h` option)
- specifies we want to connect with user `root` (with the `-u` option)
- and forces a prompt for the password (with the `-p` option)

If you get the following error message:

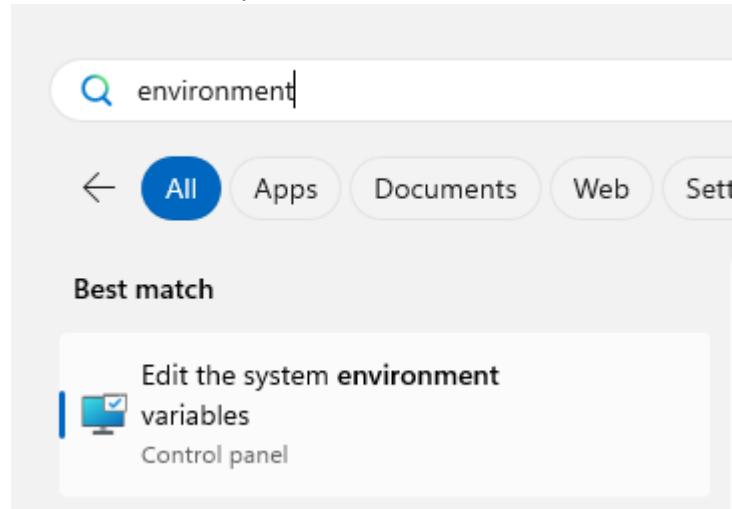
'mysql' is not recognized as an internal or external command, operable program or batch file.

follow the instructions below to add the mysql bin folder to the environment variables for the command prompt:

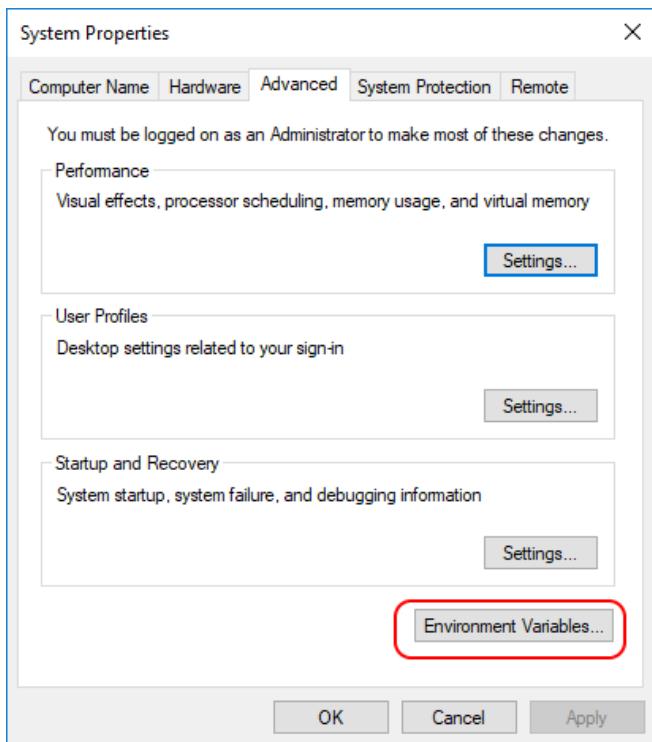
Add MySQL to environment variables:

Click Start Menu – type environment

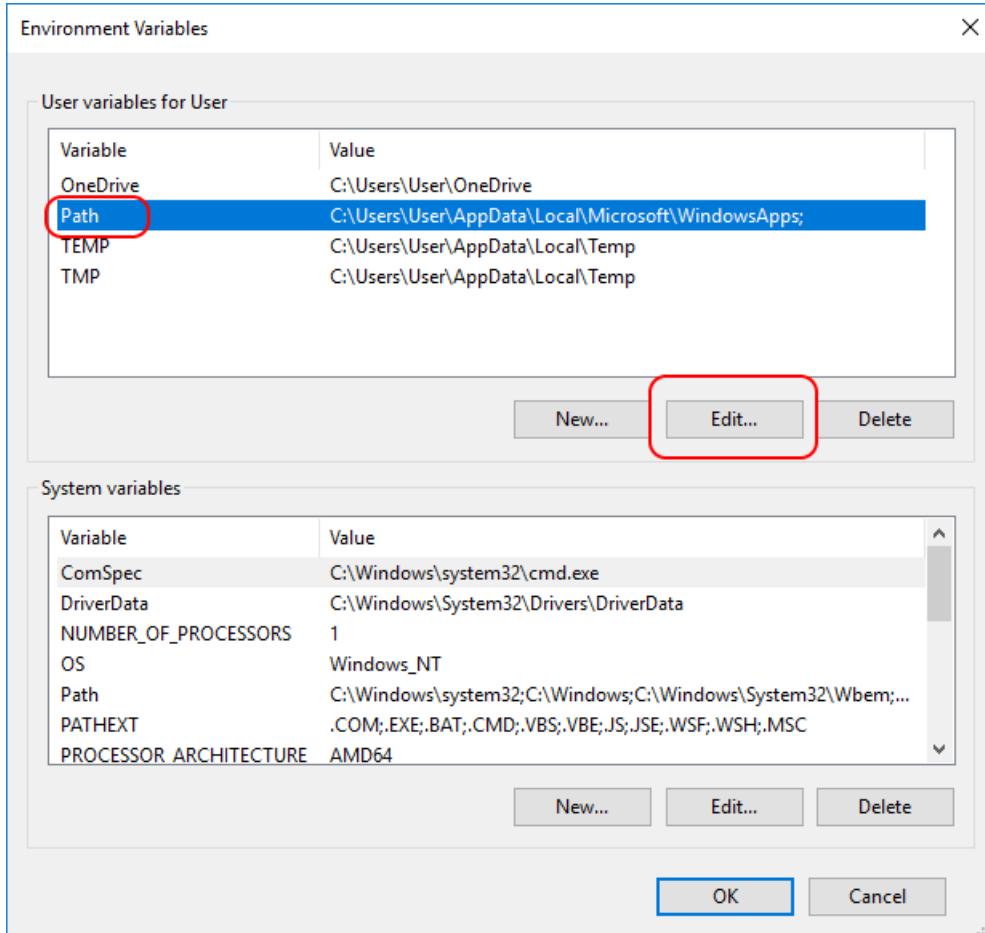
and click "Edit the system environment variables" Control Panel App:



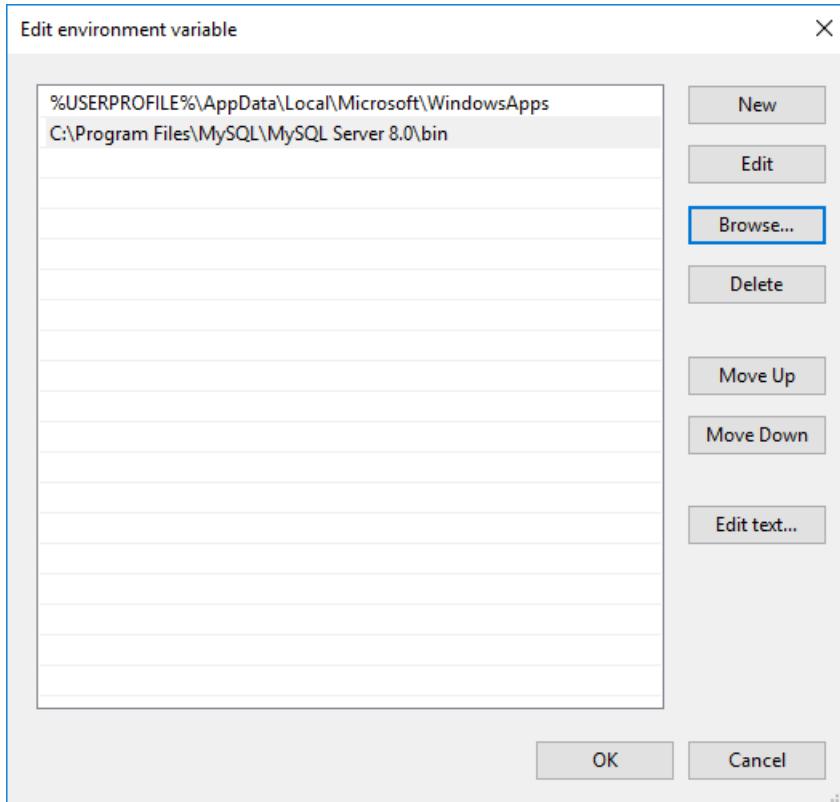
Click Environment Variables:



Click Path, Click Edit:



Click New, Click Browse, find C:\Program Files\MySQL\MySQL Server 8.0\bin\, click OK:



**Note:** That's C:\Program Files\MySQL\MySQL **Server** 8.0\bin\

NOT C:\Program Files\MySQL\MySQL **Shell** 8.0\bin\

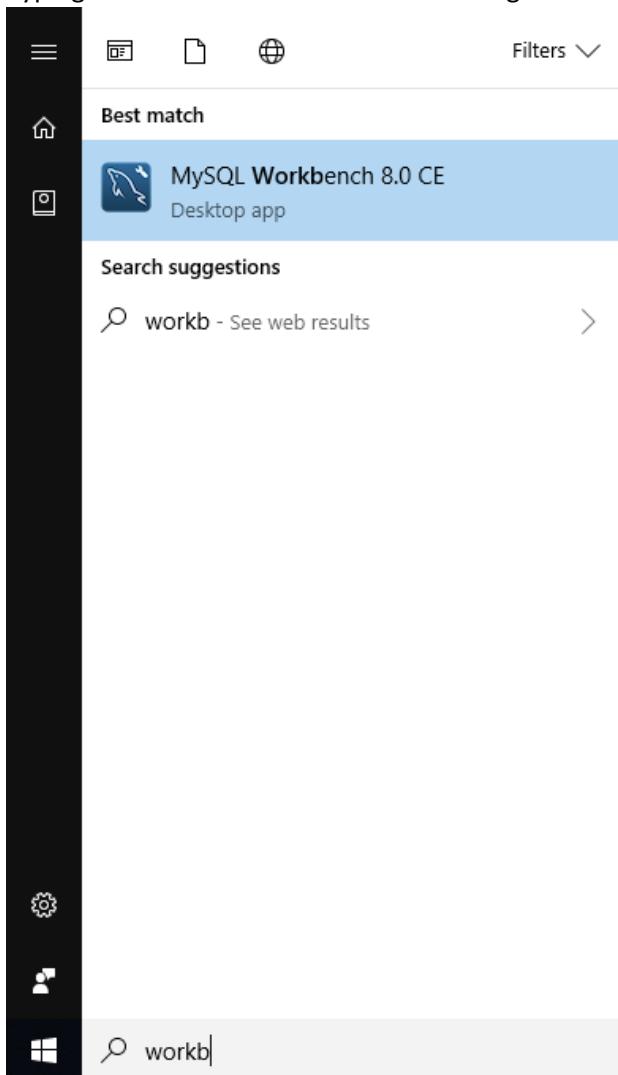
If you already have C:\Program Files\MySQL\MySQL Shell 8.0\bin\ it's ok to have both "**Shell**" and "**Server**" in the path environment variable.

Click Ok, 3 times to close the environment variables windows.

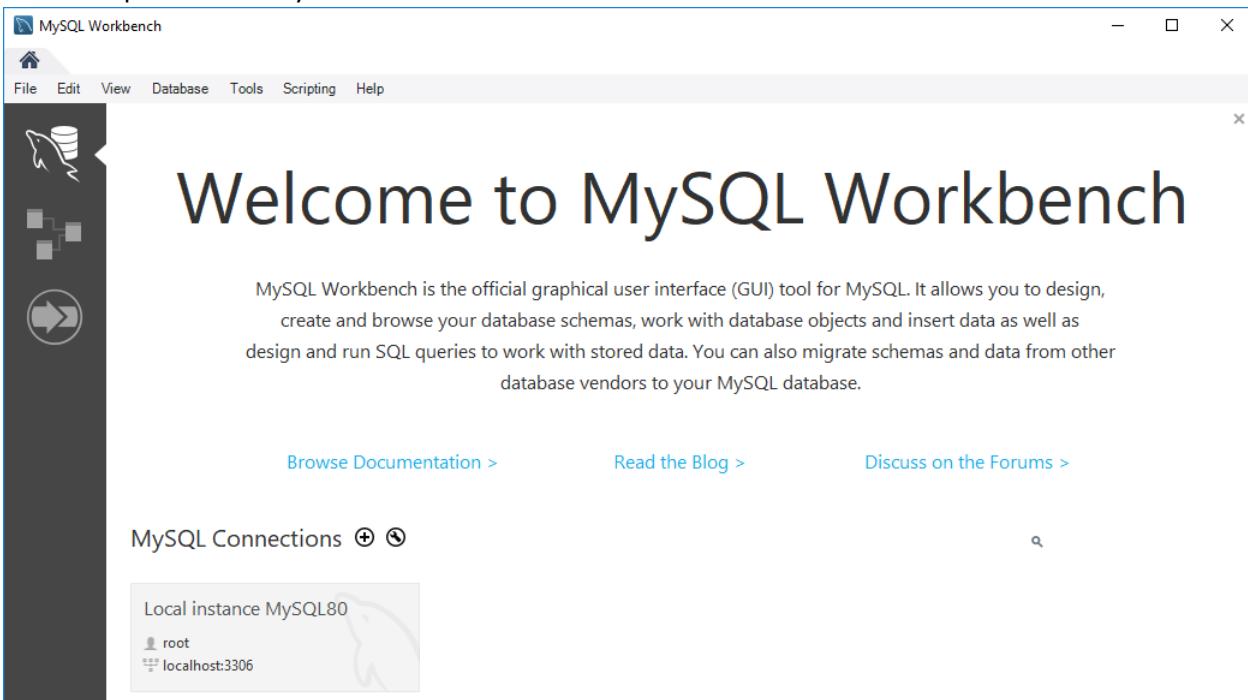
Step 5:

Open MySQL Workbench

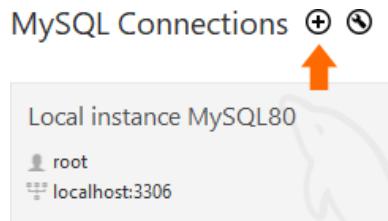
Typing `workb` in the start menu was enough to find it for me.



The startup screen for MySQL Workbench looks like this:



If you don't have a "Local instance MySQL80" connection button on the bottom right create a new connection by clicking the + next to MySQL Connections.



Creating a “Local instance MySQL80” connection button:

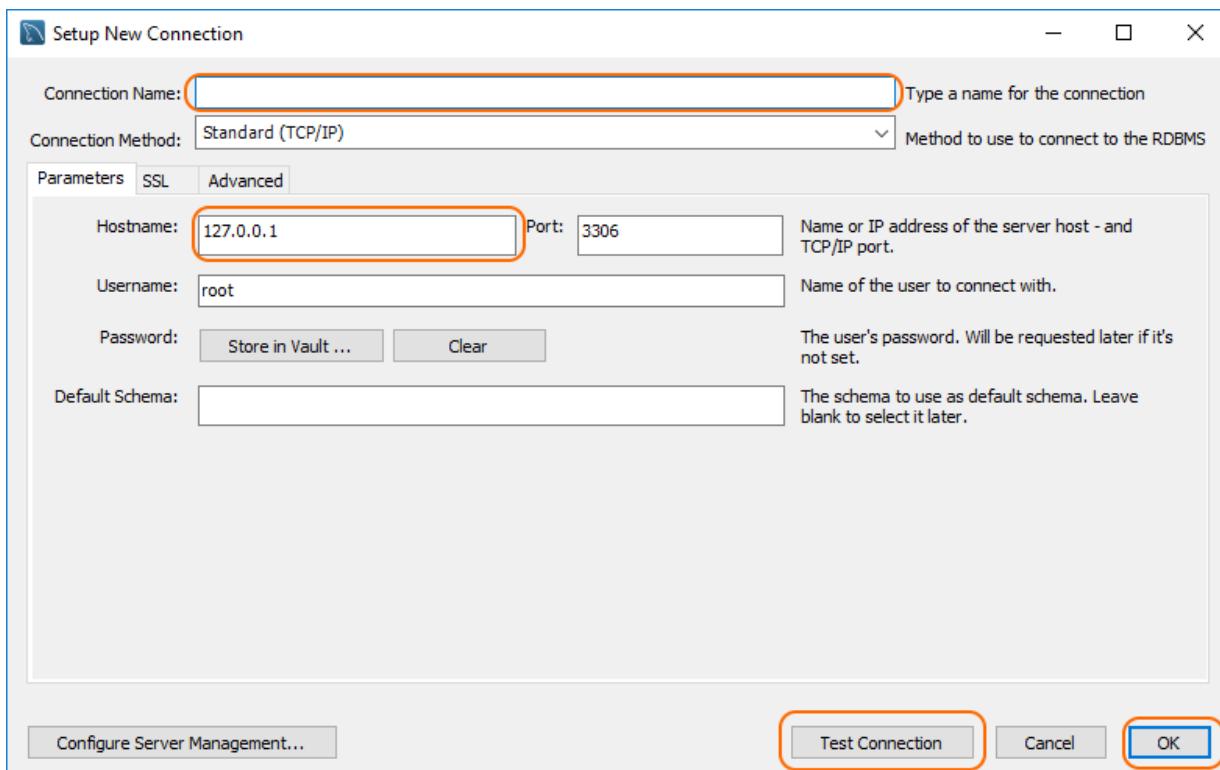
Give your new connection a name: Local instance MySQL80

Leave the Hostname as 127.0.0.1 (or you can use localhost – same thing).

Keep the default port 3306.

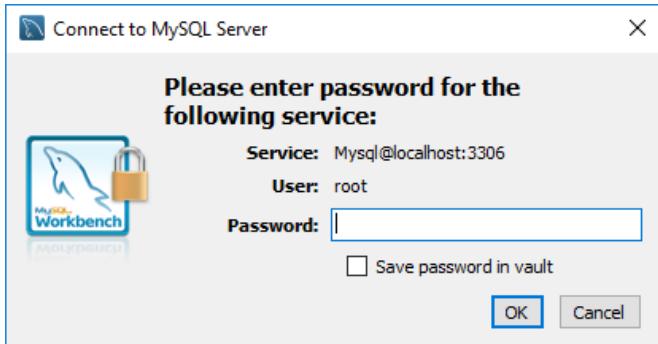
Click Test Connect to see if it works (it will prompt you for a password).

Click Ok.

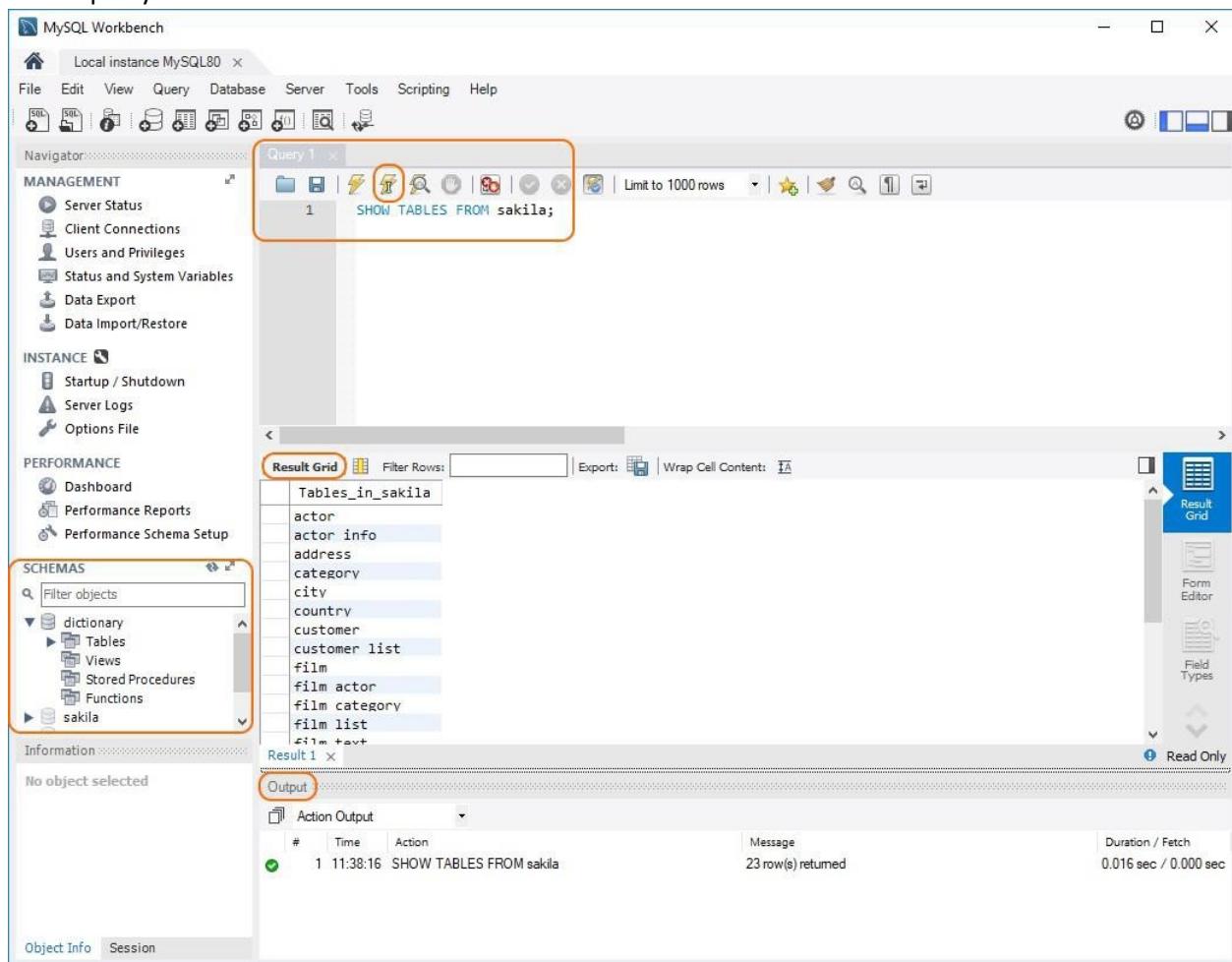


Open up Local instance MySQL80.

Double click the “Local instance MySQL80” connection button and enter your root password when prompted.



Once open you should see a screen like this:



At this point I'll point out 4 main parts of the screen.

1. There is a Schema (or Database) Section on the bottom right that shows all the databases, tables, views, procedures and functions with the databases.
2. At the top there is a Query Section for typing in your queries or opening an SQL file. You can click on the lightning bolt with the cursor to execute a single query at a time.
3. Once you execute a query (for example a SELECT or SHOW TABLES) you'll see the results in the Result Grid below the Query Section
4. The Output Section shows additional information about the queries that have run. It will show the number of rows returned, how long the query took to execute or it will show an error and a hint to find your syntax error in your query.

There is a query editor window that will let you type SQL commands and run them.

Let's practice running a command.

In the query editor window type the following command:

```
SHOW VARIABLES LIKE 'version';
```

Note: the MySQL keywords such as SHOW, VARIABLES and LIKE are case **INSENSITIVE**.

This means you can type them in all uppercase like this: SHOW VARIABLES LIKE 'version'; or in all lowercase like this: show variables like 'version'; and it makes no difference.



To run a command, click the lightning bolt with a cursor on it (掣).

Run the command.

Submit a screenshot with the version that is shown on the screen.

Filename: **01\_MySQL\_Version\_Workbench.jpg**

**Submit**

The screenshot shows the MySQL Workbench interface. On the left, the Navigator pane lists databases: bad\_design\_1 - Table, person - Table, pet - Table, and pet. The Administration tab is selected in the bottom-left. In the center, the Query Editor window displays the following:

```
1   show variables like 'version';
```

Below the query, the results are shown in a table:

Variable_name	Value
version	8.0.11

The right side of the interface contains various toolbars and panels for result grid, form editor, field types, query stats, and execution plan.

**Step 6:**

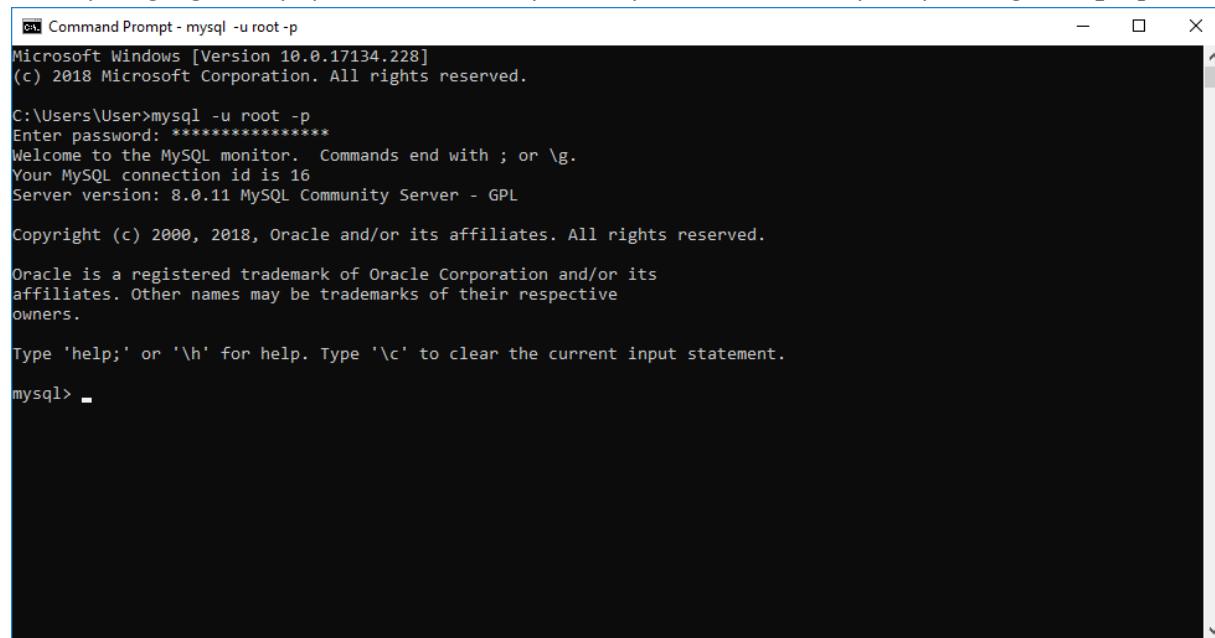
Run MySQL from the Command Line.

If a Command Prompt window is still running, close it and restart it.

At the prompt, type the following `mysql -u root -p`

It will prompt for a password (still remember it?).

If everything is good mysql should welcome you and you should see the prompt change to `mysql>`



The screenshot shows a Microsoft Windows Command Prompt window titled "Command Prompt - mysql -u root -p". The window displays the MySQL monitor interface. The text output includes:

```
C:\ Command Prompt - mysql -u root -p
Microsoft Windows [Version 10.0.17134.228]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\User>mysql -u root -p
Enter password: *****
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 16
Server version: 8.0.11 MySQL Community Server - GPL

Copyright (c) 2000, 2018, Oracle and/or its affiliates. All rights reserved.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> ■
```

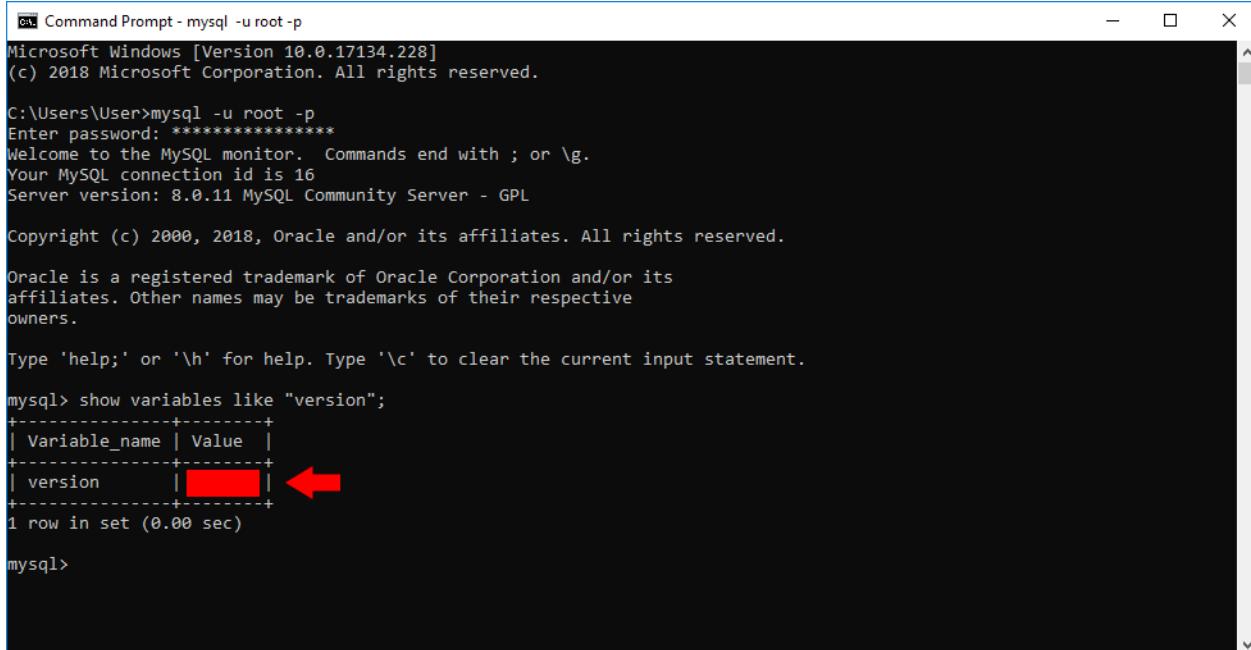
At the new mysql> prompt type:

```
show variables like "version";
```

Submit a screenshot with the version that is shown on the screen.

**Submit**

Filename: **02\_SQL\_Version\_Command\_Line.jpg**



```
Command Prompt - mysql -u root -p
Microsoft Windows [Version 10.0.17134.228]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\User>mysql -u root -p
Enter password: *****
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 16
Server version: 8.0.11 MySQL Community Server - GPL

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show variables like "version";
+-----+-----+
| Variable_name | Value |
+-----+-----+
| version      | 8.0.11 |
+-----+-----+
1 row in set (0.00 sec)

mysql>
```

Note: if you are still logged in at the mysql> prompt you can exit with the quit command.

Type quit to exit the MySQL Command Line Client tool.