

MySQL Windows Installation

For C# and Dapper

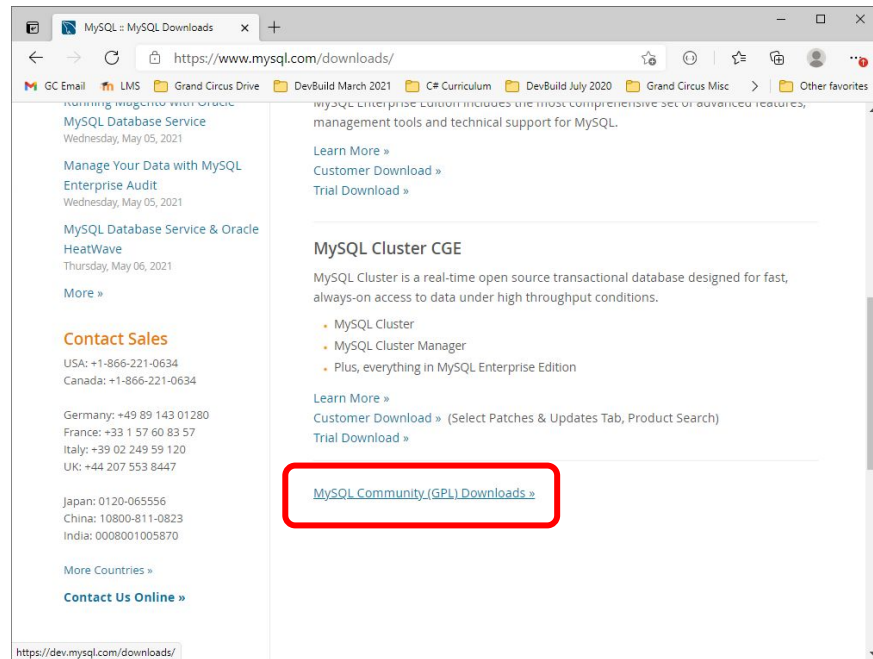


Download MySQL Community Edition

Go to the MySQL Downloads page at

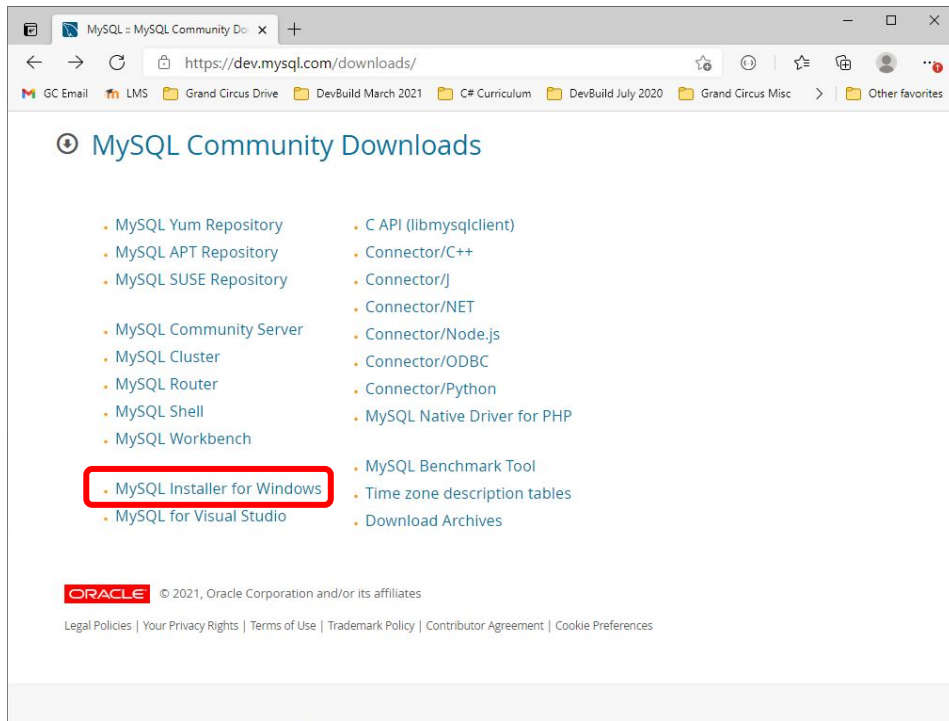
<https://www.mysql.com/downloads/>

Scroll down and click MySQL Community (GPL) Downloads.



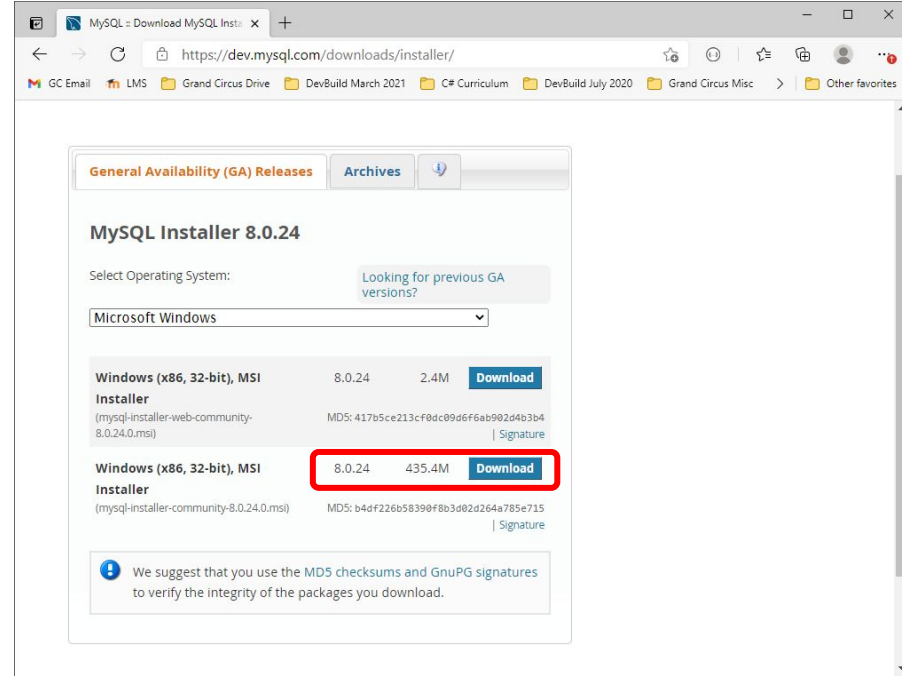
Download MySQL Community Edition

Click MySQL Installer
for Windows



Download MySQL Community Edition

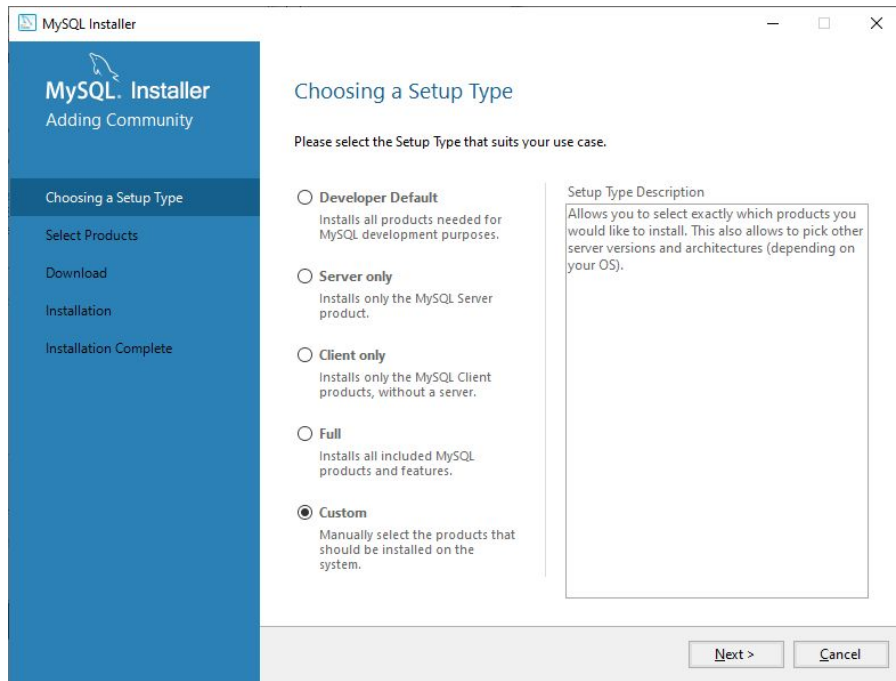
Choose the larger one, as it has the entire download. (The other is just a downloader.) On the next page, click “**No thanks, just start my download.**”



Launch the Installer

If Visual Studio is currently running, shut it down.

Launch the downloaded installer. Click through the initial screens until the installer launches. Choose **Custom** and click **Next**.

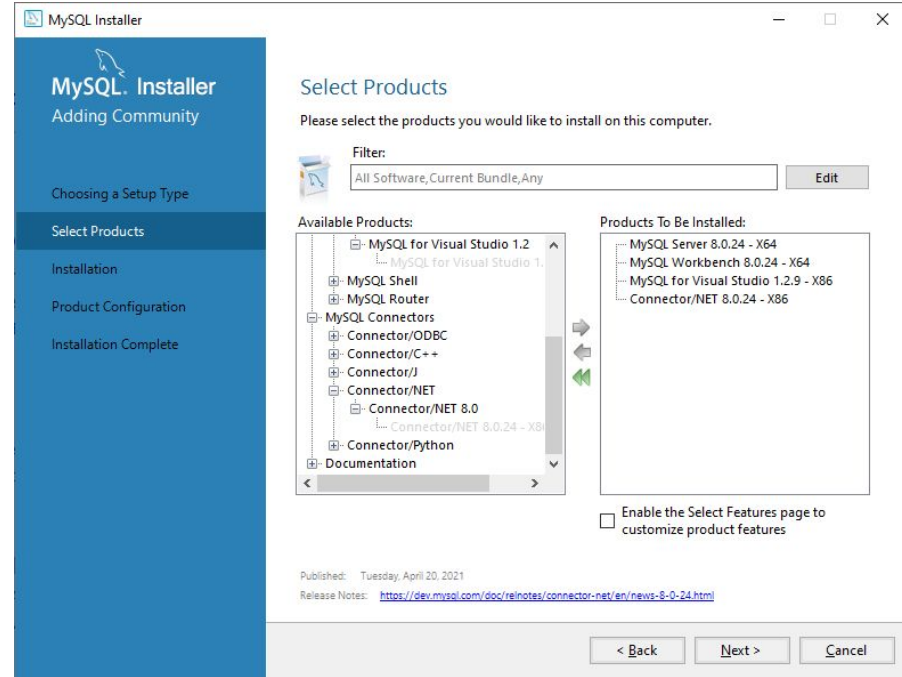


Choose Your Options

Choose the following options.
Make sure to click the arrow to
add them to the list on the right:

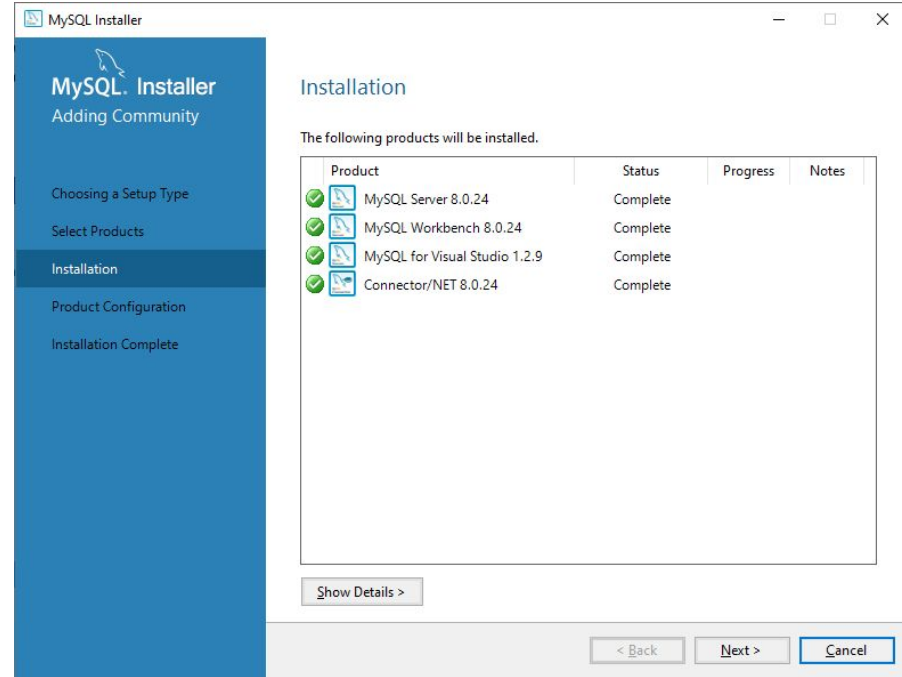
- MySQL Server X64
- MySQL Workbench X64
- MySQL For Visual Studio
- Connector/NET X86

Then click Next; on the next
screen click Execute.



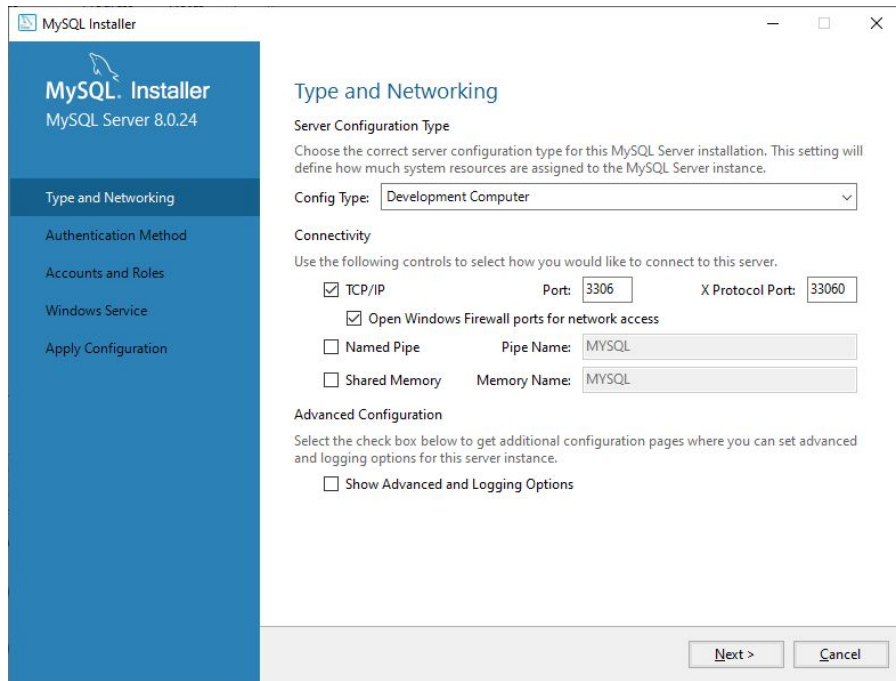
Ready to Configure

After all options show a green checkmark, the installation is finished. Click **Next**; then click **Next** on the following screen as well.



Configure Developer Settings

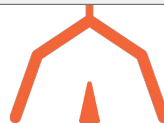
You are now configuring the MySQL server software. For Config Type, choose Development Computer. Then choose TCP/IP, Port 3306, X Protocol Port 33060, and Open Windows Firewall ports for network access. (Note to QL Developers: You might not need the firewall port open.) Click Next.



The screenshot shows the 'MySQL Installer' window for 'MySQL Server 8.0.24'. The left sidebar contains a list of configuration steps: 'Type and Networking' (selected), 'Authentication Method', 'Accounts and Roles', 'Windows Service', and 'Apply Configuration'. The main area is titled 'Type and Networking' and contains the following sections:

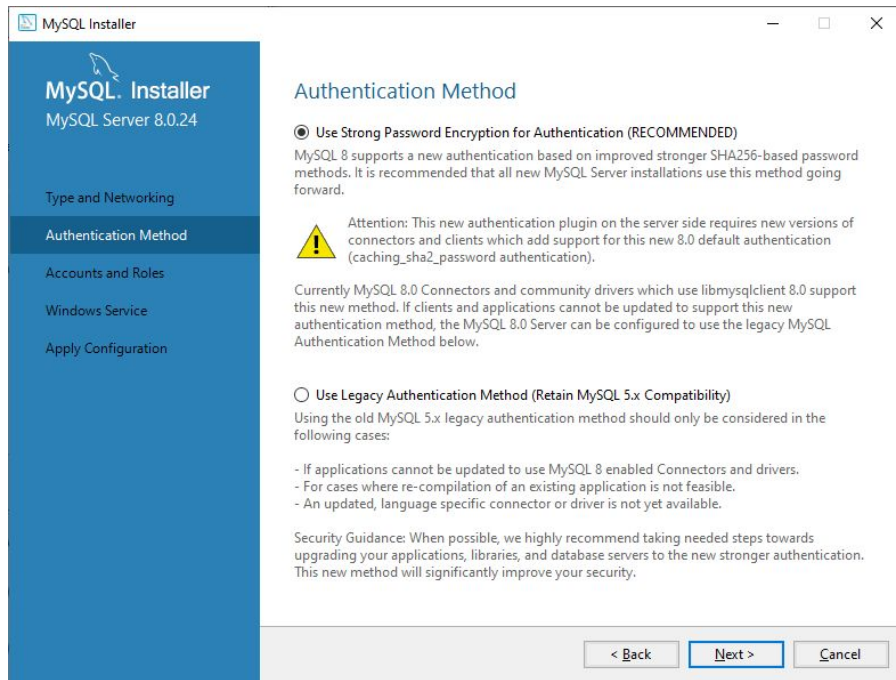
- Server Configuration Type:** A dropdown menu set to 'Development Computer'. Below it, a note states: 'Choose the correct server configuration type for this MySQL Server installation. This setting will define how much system resources are assigned to the MySQL Server instance.'
- Connectivity:** A section with the instruction 'Use the following controls to select how you would like to connect to this server.' It includes:
 - ☒ TCP/IP: Port: 3306, X Protocol Port: 33060
 - ☒ Open Windows Firewall ports for network access
 - ☐ Named Pipe: Pipe Name: MYSQL
 - ☐ Shared Memory: Memory Name: MYSQL
- Advanced Configuration:** A section with the instruction 'Select the check box below to get additional configuration pages where you can set advanced and logging options for this server instance.' It includes:
 - ☐ Show Advanced and Logging Options

At the bottom right, there are 'Next >' and 'Cancel' buttons.



Configure Developer Settings

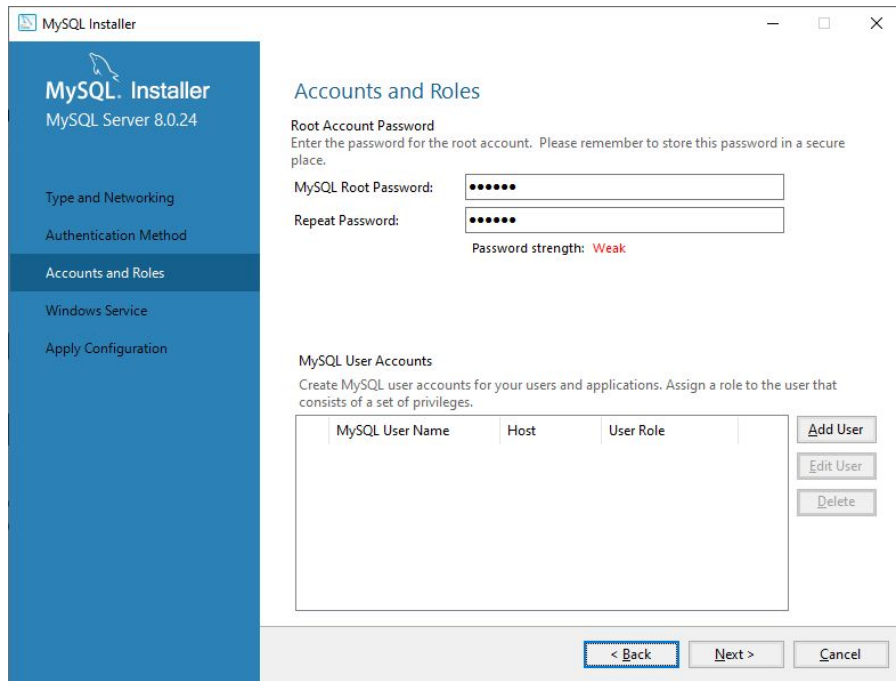
Unless you know that you'll need legacy connections, click the first option, Use Strong Password Encryption.



Configure Developer Settings

Because this is strictly
for development and
training, use a simple
password:

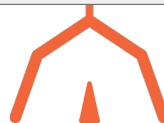
abc123



The screenshot shows the 'MySQL Installer' window for 'MySQL Server 8.0.24'. The left sidebar lists configuration steps: 'Type and Networking', 'Authentication Method', 'Accounts and Roles' (selected), 'Windows Service', and 'Apply Configuration'. The main area is titled 'Accounts and Roles' and contains the following sections:

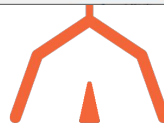
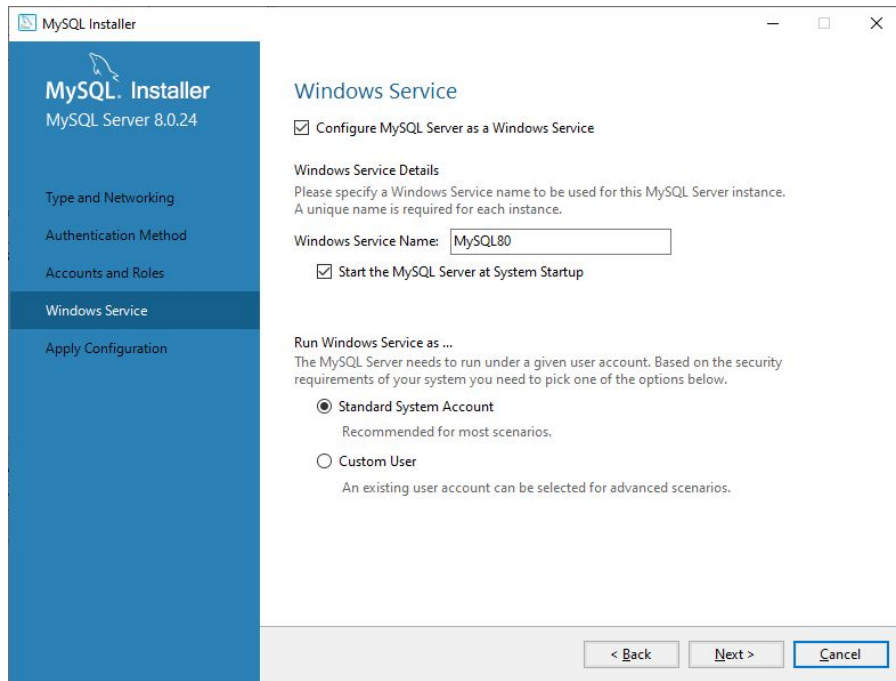
- Root Account Password:** A prompt to 'Enter the password for the root account. Please remember to store this password in a secure place.' It includes two input fields: 'MySQL Root Password:' and 'Repeat Password:', both containing masked characters (dots). Below these fields, the 'Password strength' is indicated as 'Weak' in red text.
- MySQL User Accounts:** A section with the instruction 'Create MySQL user accounts for your users and applications. Assign a role to the user that consists of a set of privileges.' It features a table with columns 'MySQL User Name', 'Host', and 'User Role'. To the right of the table are three buttons: 'Add User', 'Edit User', and 'Delete'.

At the bottom of the window, there are three buttons: '< Back' (highlighted with a blue border), 'Next >', and 'Cancel'.



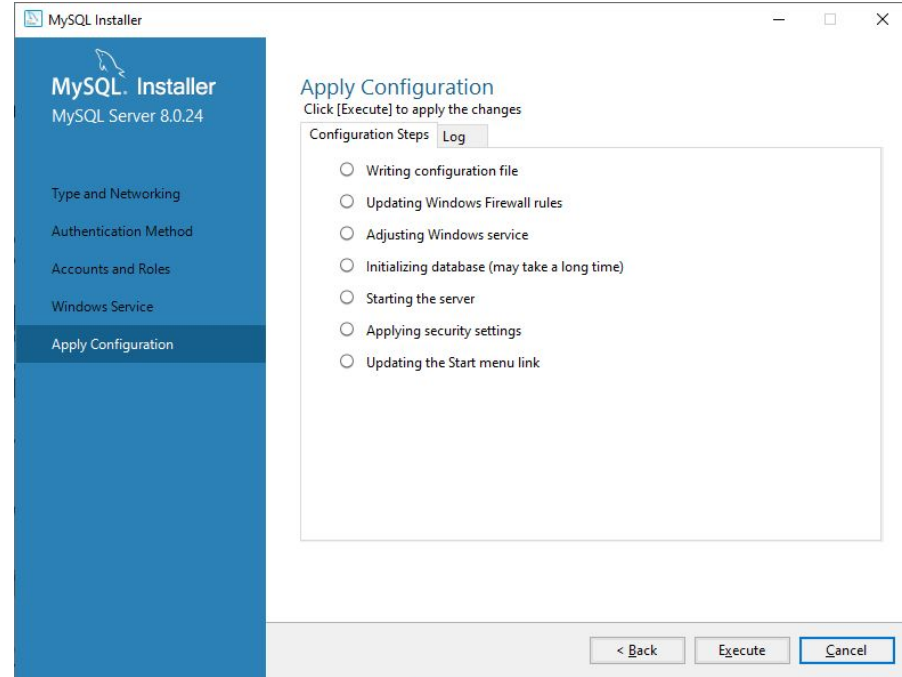
Configure Developer Settings

Choose the option
Configure MySQL Server as a Windows Service. Accept the default name. Check **Start the MySQL Server at System Startup.** Choose **Standard System Account.**



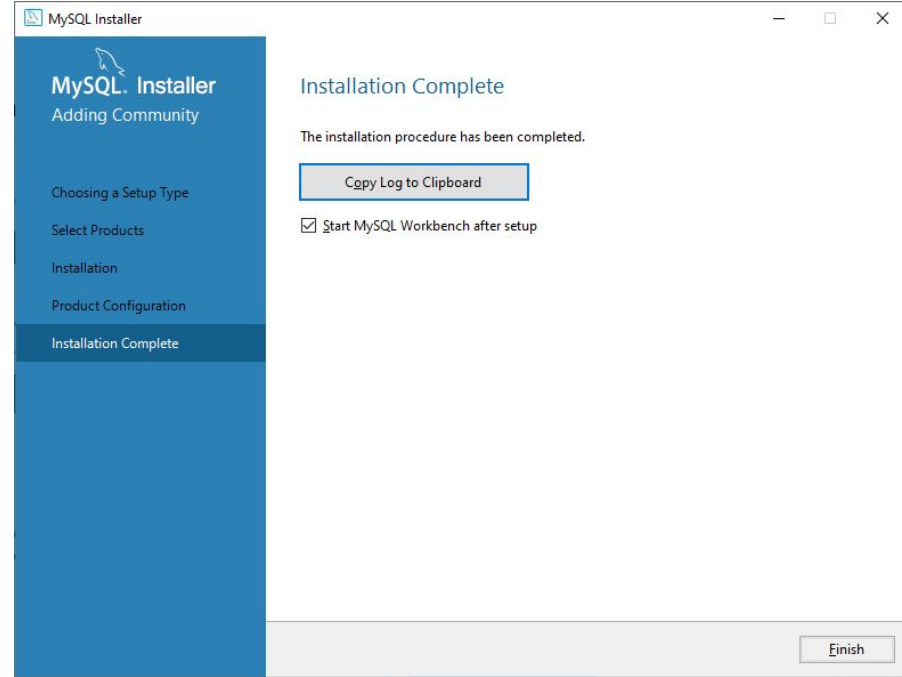
Configure Developer Settings

Click **Execute**. After a green checkmark appears next to each, click **Finish**. Back to Product Configuration, click **Next**.



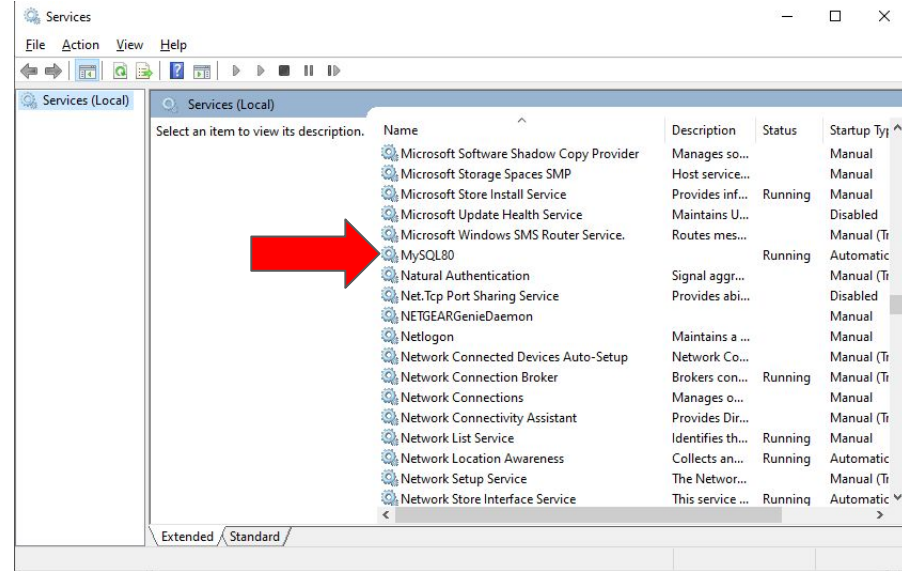
Installation is Complete

Check the box Start MySQL Workbench after setup
Finish.



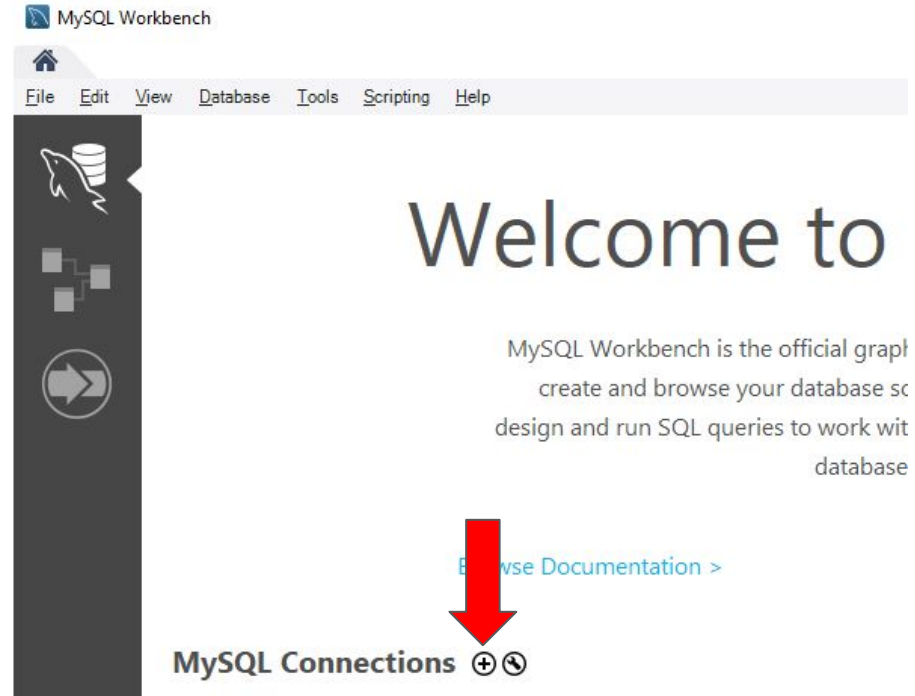
Verify Installation

In the Windows search bar, type Services and launch Services App. Verify that MySQL80 is running.



Test a Connection in Workbench

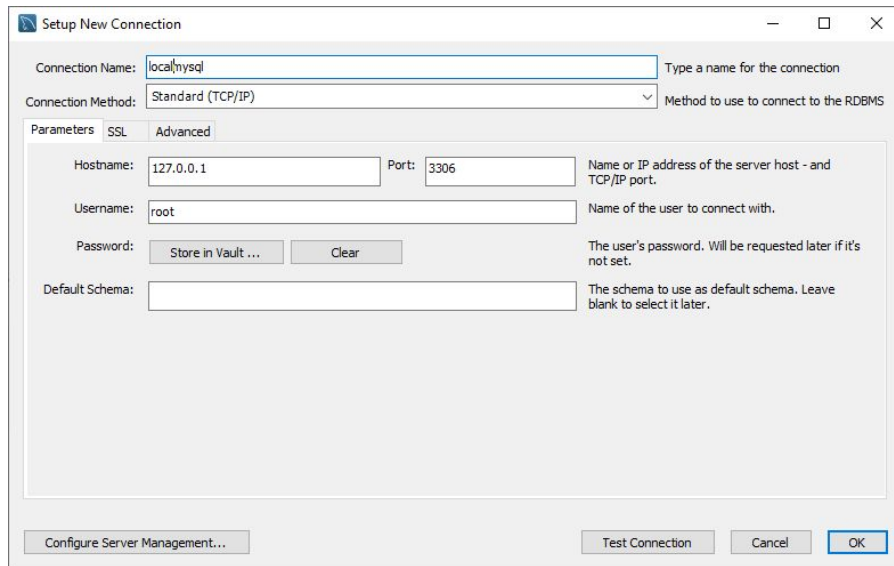
Switch to MySQL Workbench. (If it didn't launch, from Windows search type MySQL to find it.) Click the + sign next to MySQL Connections.



Test a Connection in Workbench

Provide a name for your connection: **localmysql**. For Connection Method, choose **Standard (TCP/IP)**. Under Parameters:

- Hostname: 127.0.0.1
- Port: 3306
- Username: root



The screenshot shows the 'Setup New Connection' dialog box in MySQL Workbench. The 'Connection Name' field is set to 'localmysql'. The 'Connection Method' is set to 'Standard (TCP/IP)'. Under the 'Parameters' tab, the 'Hostname' is '127.0.0.1', the 'Port' is '3306', the 'Username' is 'root', and the 'Default Schema' is empty. The 'Password' field is empty, with 'Store in Vault ...' and 'Clear' buttons. The 'Test Connection' button is highlighted.

Field	Value	Description
Connection Name	localmysql	Type a name for the connection
Connection Method	Standard (TCP/IP)	Method to use to connect to the RDBMS
Hostname	127.0.0.1	Name or IP address of the server host - and TCP/IP port.
Port	3306	
Username	root	Name of the user to connect with.
Password		The user's password. Will be requested later if it's not set.
Default Schema		The schema to use as default schema. Leave blank to select it later.

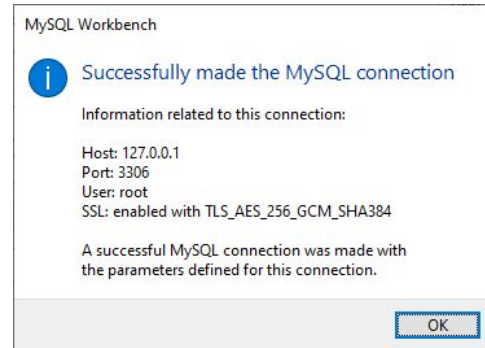
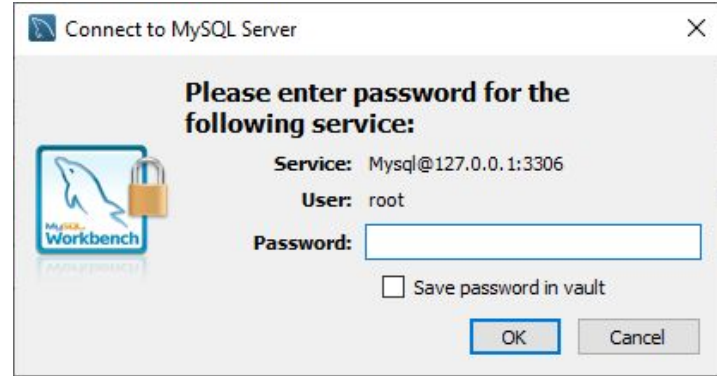


Test a Connection in Workbench

Click **Test Connection**.

Enter the password you entered earlier, abc123. Click OK and you should see a message that the connection was successful.

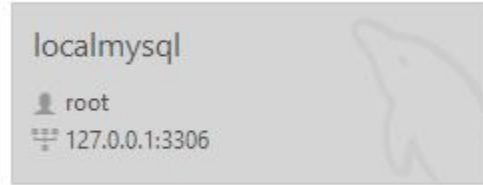
Click OK, then OK again.



Create a Small Database

Click on the new connection box to open a connection.

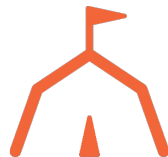
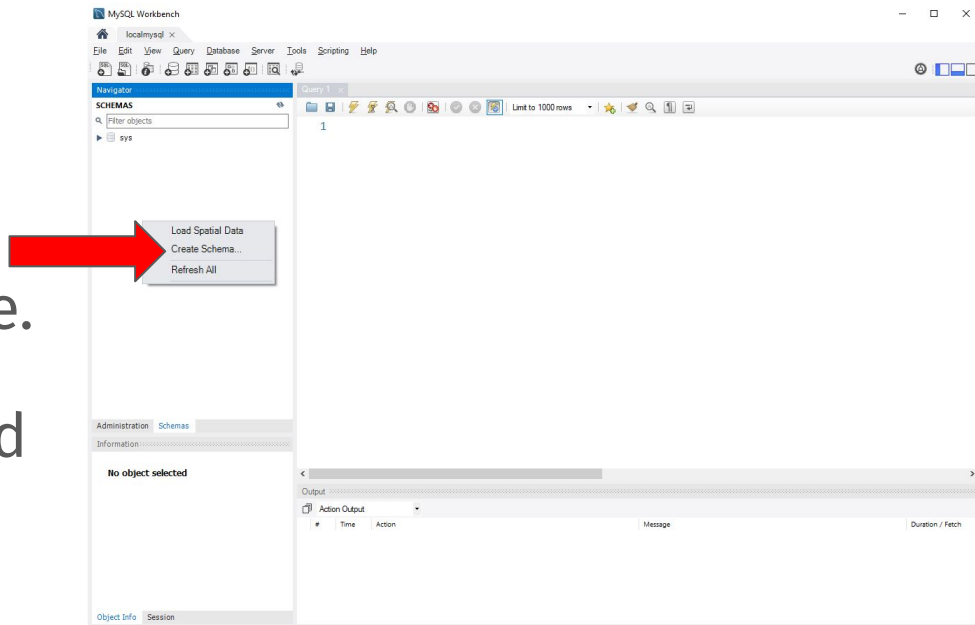
Enter the password (abc123) if asked.



Create a Small Database

In MySQL, databases are called Schemas. This is not standard; most database servers use the term database.

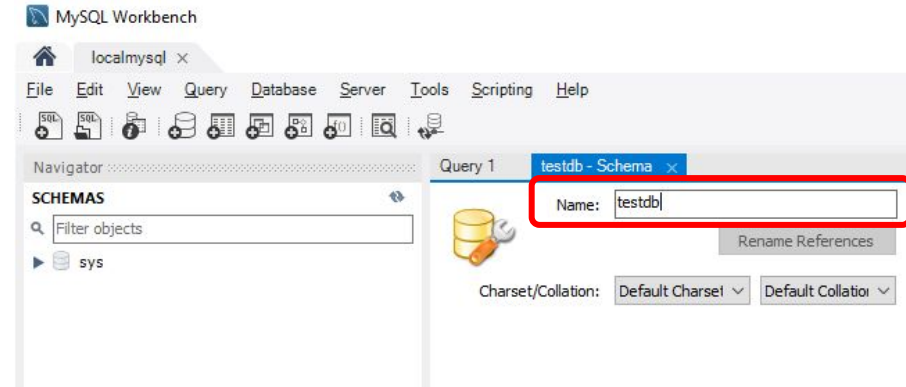
Right-click in the pane labeled Schemas and click **Create Schema**.



Create a Small Database

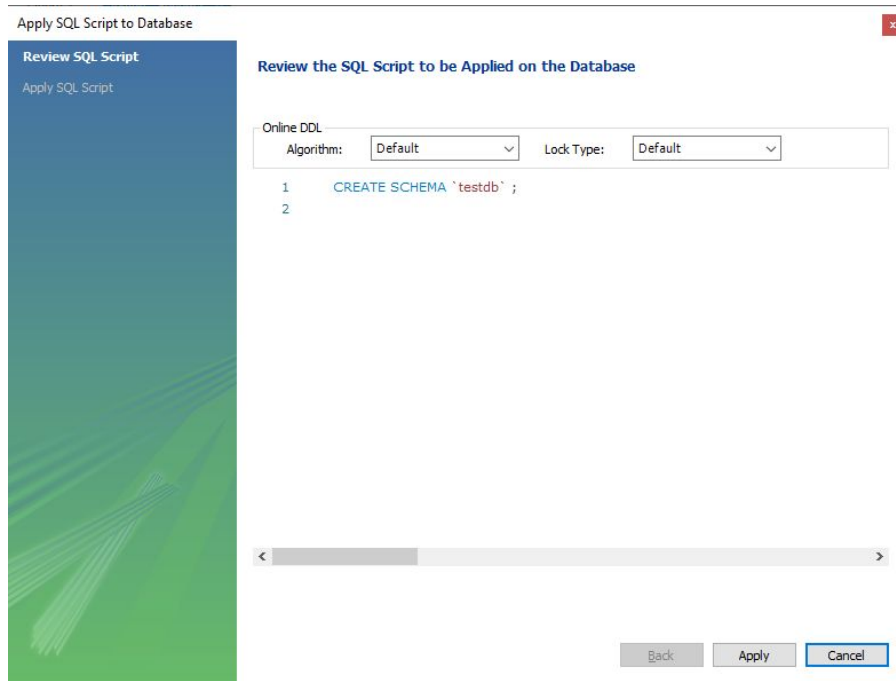
Call the database testdb. Accept the defaults for Charset/collation.

Then click Apply (found in the lower-right).



Create a Small Database

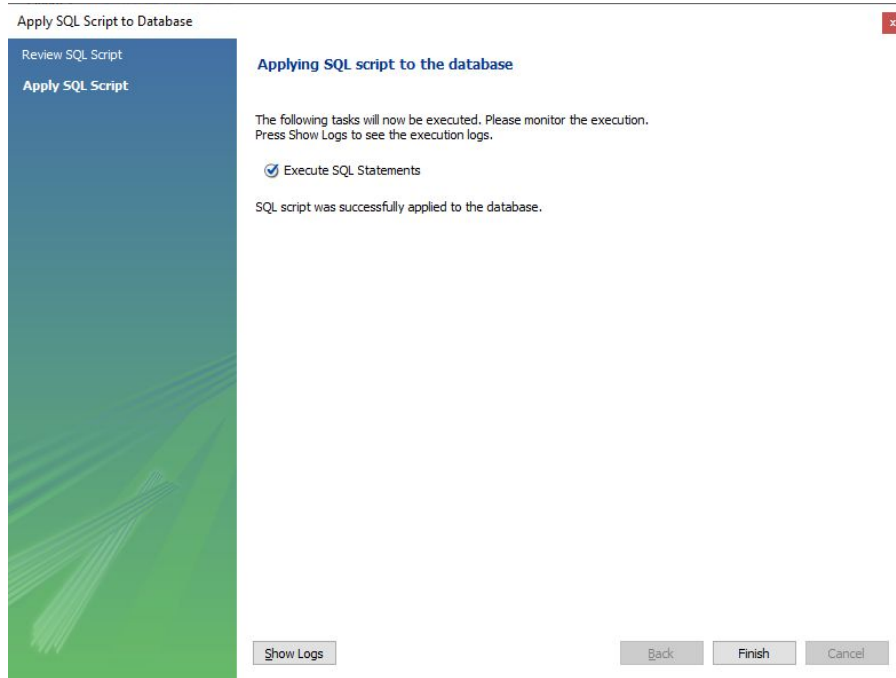
A window will open showing the SQL code that Workbench will run. Click **Apply**.



Create a Small Database

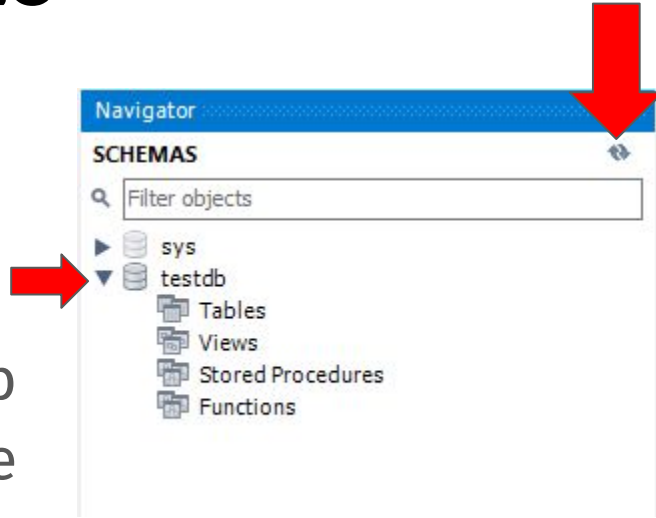
You should see a message,
“SQL Script was successfully
applied to the database.”

Click **Finish**.



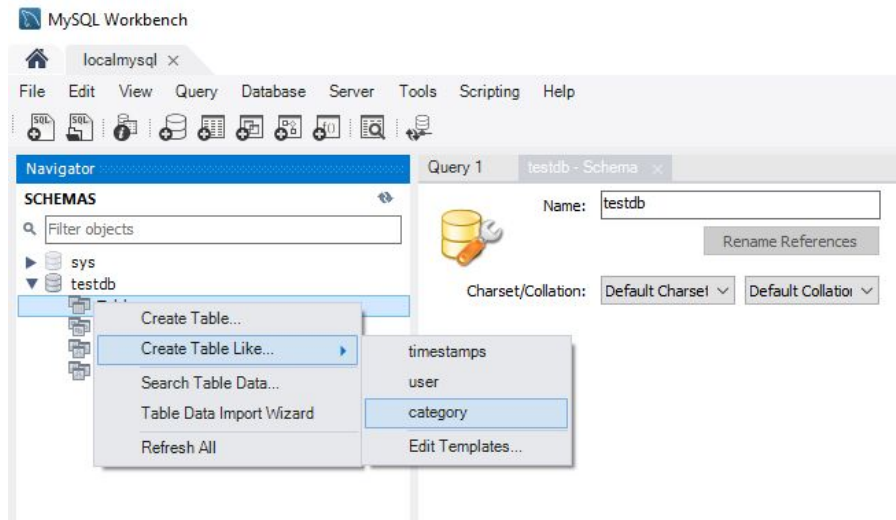
Create a Small Table

Next you will create a simple table inside this new database. In the pane labeled Schemas, you should now see your testdb database. (If you don't, click the yin-yang refresh symbol to the right.) Expand the testdb as shown here.



Create a Small Table

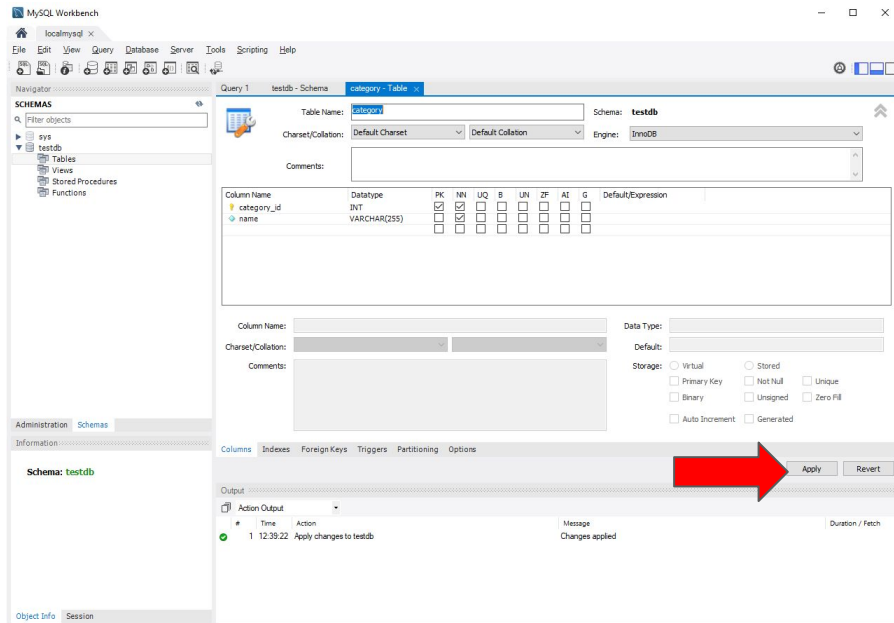
Right click on Tables
and click **Create Table
Like**; then click
category.



Create a Small Table

Accept all the defaults.

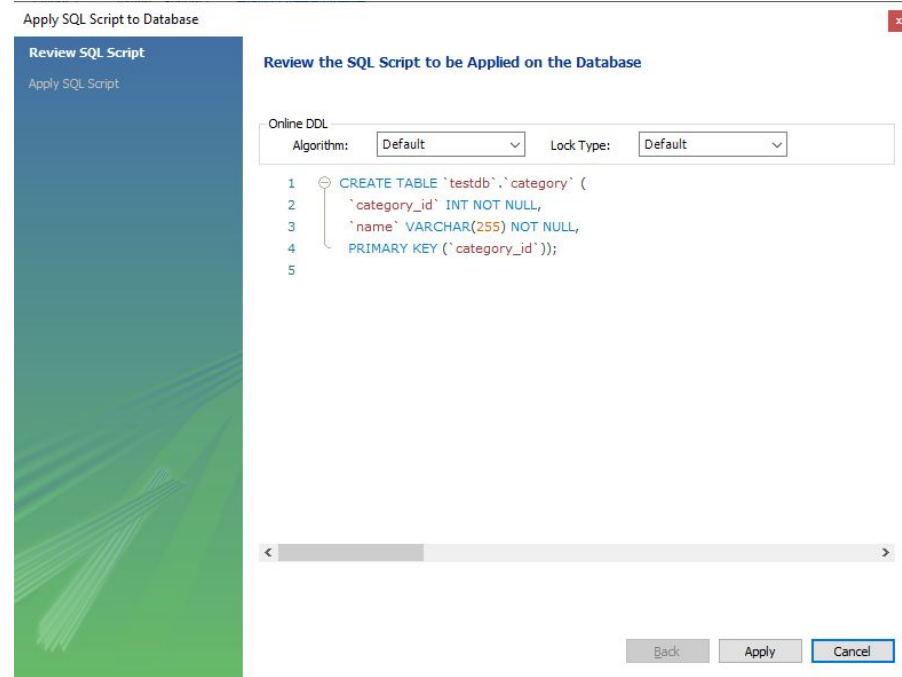
Click Apply.



Create a Small Table

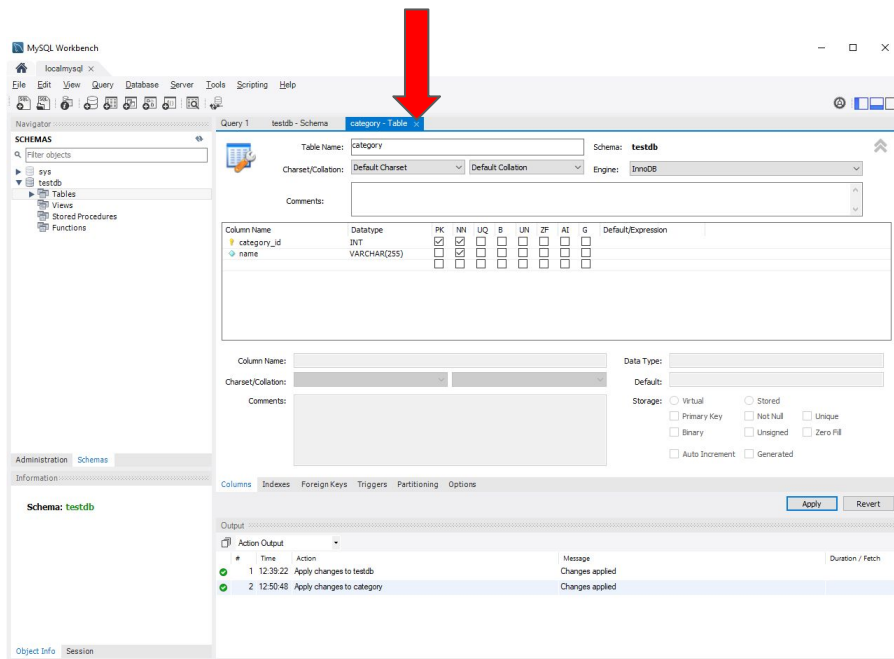
A window will open displaying the SQL code. Click **Apply**.

You should then see a message, “SQL Script was successfully applied to the database.” Click **Finish**.



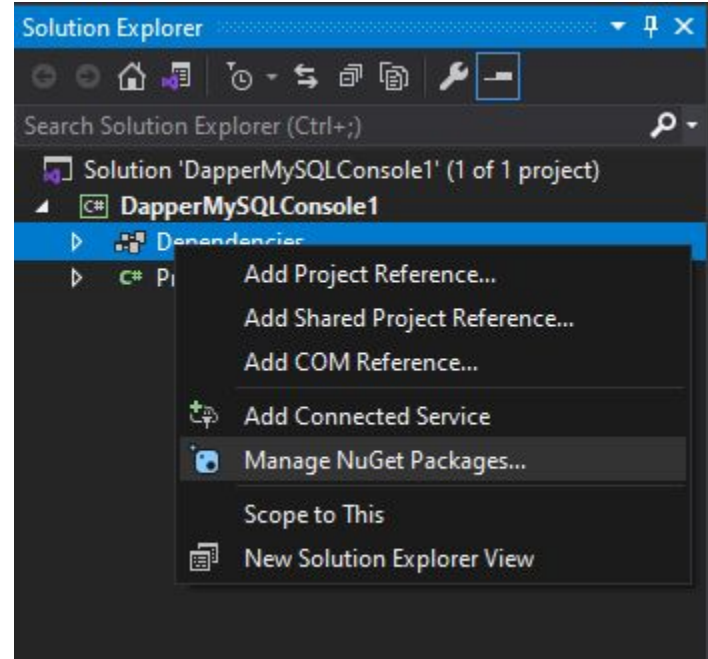
Create a Small Table

The table designer will still be open. You may close it now by clicking the X on its tab.



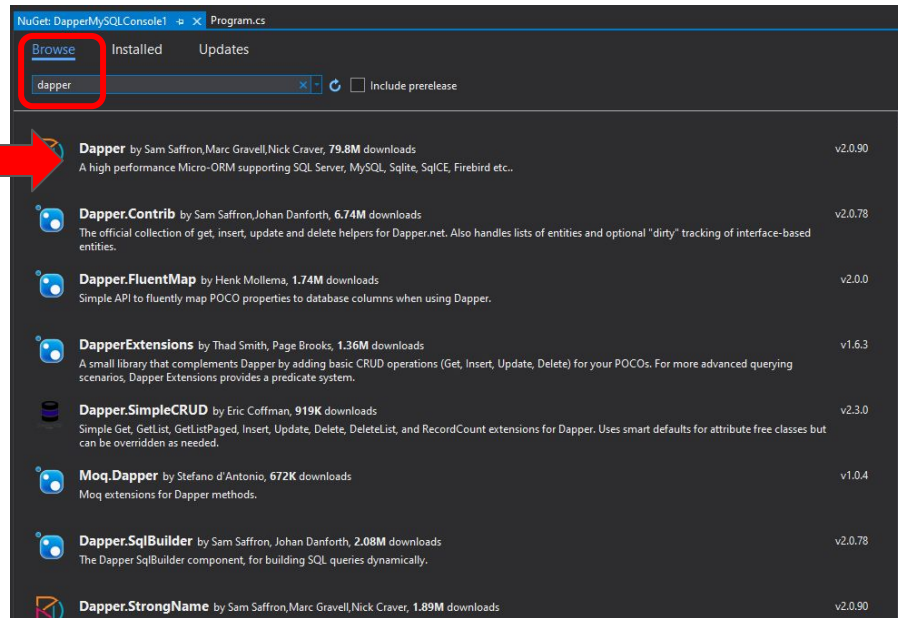
Test the Connection in a C# Program

Start Visual Studio. Create a new C# console application. In the solution explorer, right-click on the project's Dependencies, and click Manage NuGet Packages.



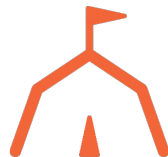
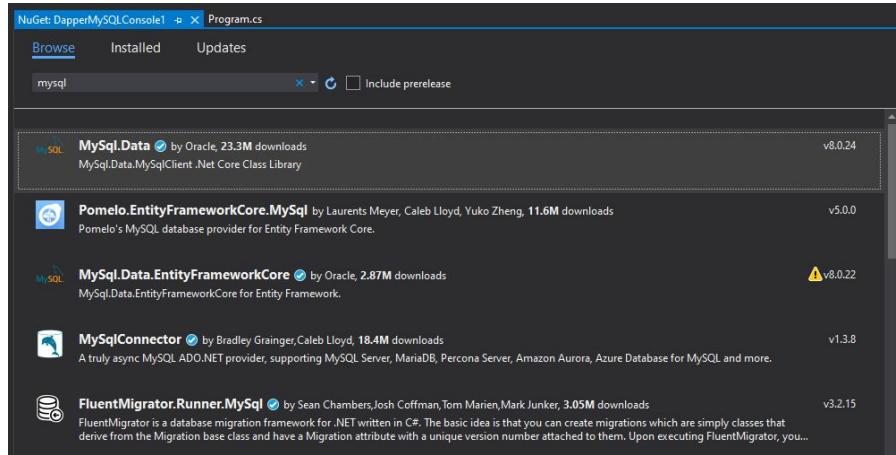
Test the Connection in a C# Program

Click on Browse. Type “dapper” in the search box and press Enter. Then click on Dapper and click **Install**. Click OK in the popup window.



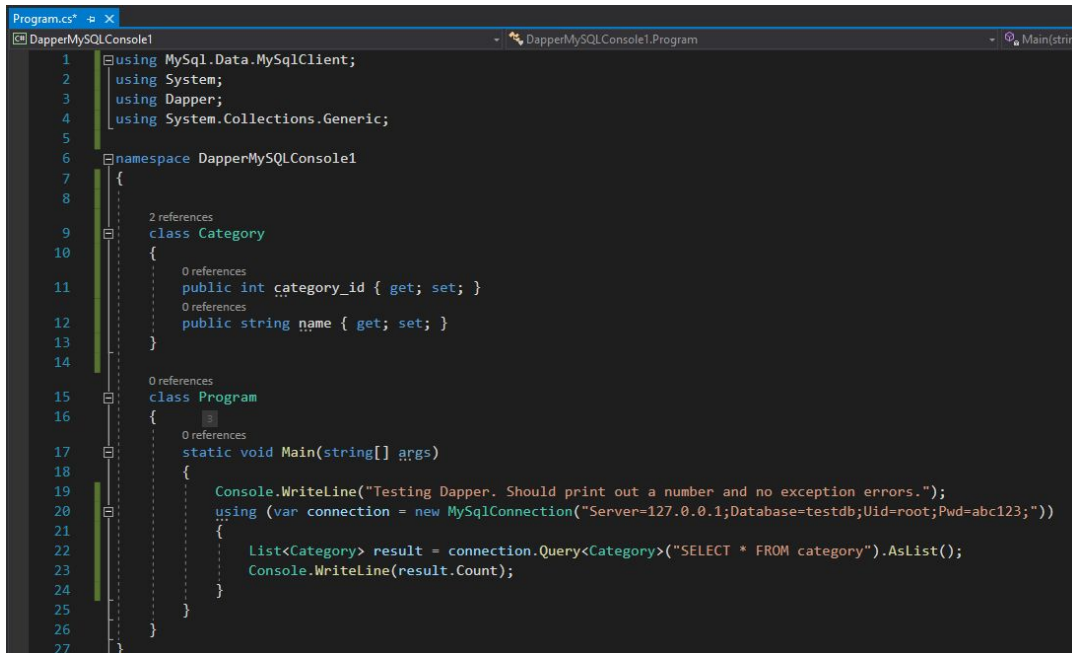
Test the Connection in a C# Program

In the same NuGet window, type MySQL. Choose MySQL.Data and click Install. Click **OK**; then click **I Accept**. Then close the NuGet tab.



Test the Connection in a C# Program

Add the code as shown in [this cheatsheet](#). Make sure the string on line 20 has the correct ip address, username, and password.

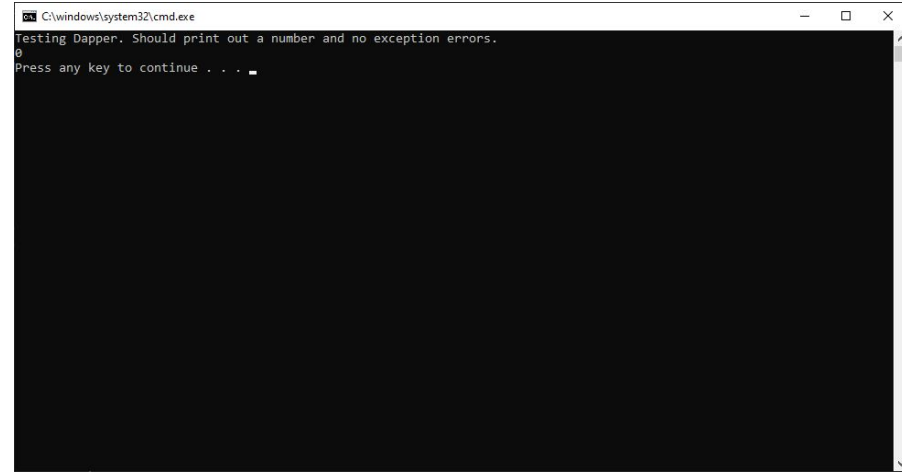


```
Program.cs* x
DapperMySQLConsole1
1 using MySql.Data.MySqlClient;
2 using System;
3 using Dapper;
4 using System.Collections.Generic;
5
6 namespace DapperMySQLConsole1
7 {
8
9     2 references
10    class Category
11    {
12        0 references
13        public int category_id { get; set; }
14        0 references
15        public string name { get; set; }
16    }
17
18    0 references
19    class Program
20    {
21        0 references
22        static void Main(string[] args)
23        {
24            Console.WriteLine("Testing Dapper. Should print out a number and no exception errors.");
25            using (var connection = new MySqlConnection("Server=127.0.0.1;Database=testdb;Uid=root;Pwd=abc123;"))
26            {
27                List<Category> result = connection.Query<Category>("SELECT * FROM category").AsList();
28                Console.WriteLine(result.Count);
29            }
30        }
31    }
32 }
```



Test the Connection in a C# Program

Run the program without debugging. You should see a console and after a brief pause a number printed out. You should not see any exception errors.



```
C:\windows\system32\cmd.exe
Testing Dapper. Should print out a number and no exception errors.
0
Press any key to continue . . .
```

