



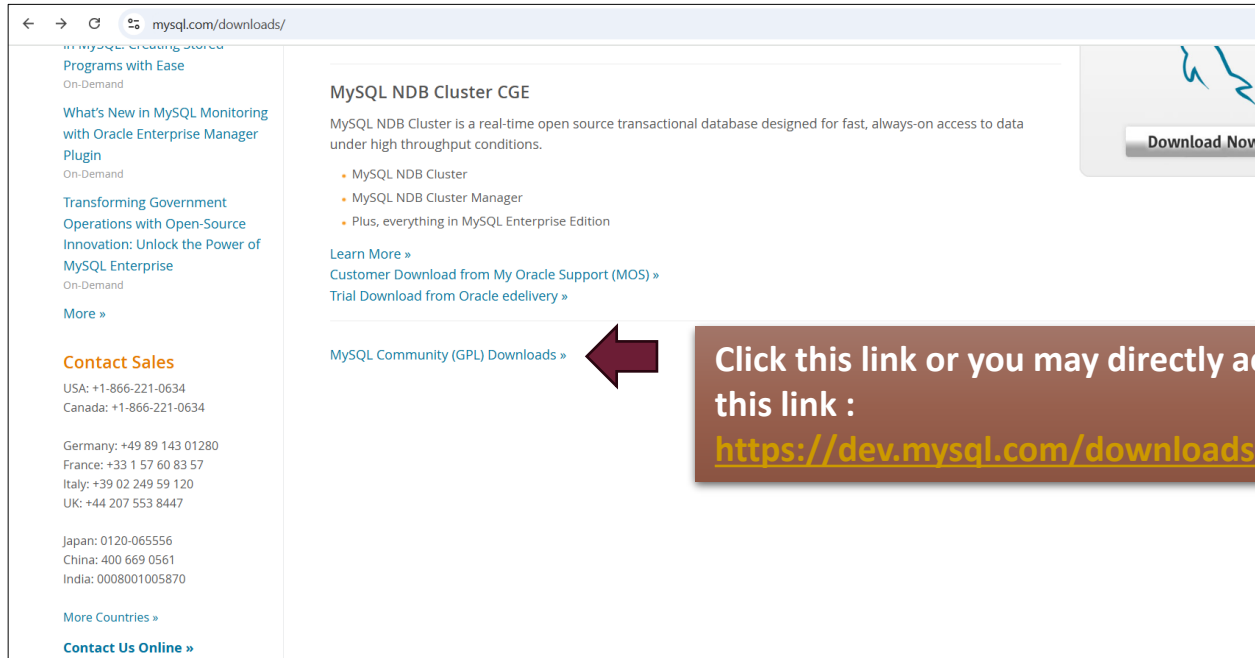
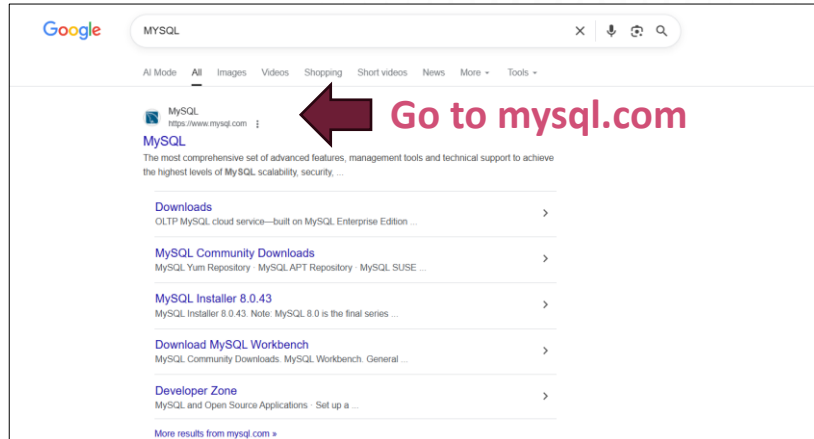
SECD2523 DATABASE

SQL INSTALLATION

Week 3

Step 1

Download MySQL Installer



Step 1

Download MySQL Installer

MySQL Community Downloads

- MySQL Yum Repository
 - MySQL APT Repository
 - MySQL SUSE Repository
 - MySQL Community Server
 - MySQL NDB Cluster
 - MySQL Router
 - MySQL Shell
 - MySQL Operator
 - MySQL NDB Operator
 - MySQL Workbench
 - MySQL Installer for Windows
- C API (libmysqlclient)
 - Connector/C++
 - Connector/J
 - Connector/Python
 - MySQL Native Driver for PHP
 - MySQL Benchmark Tool
 - Time zone description tables
 - Download Archives

For Mac users, click on this
MySQL Community Server

For Windows users, click on this
MySQL Installer for Windows

MySQL Enterprise Edition for Developers

Free for learning, developing,
and prototyping.



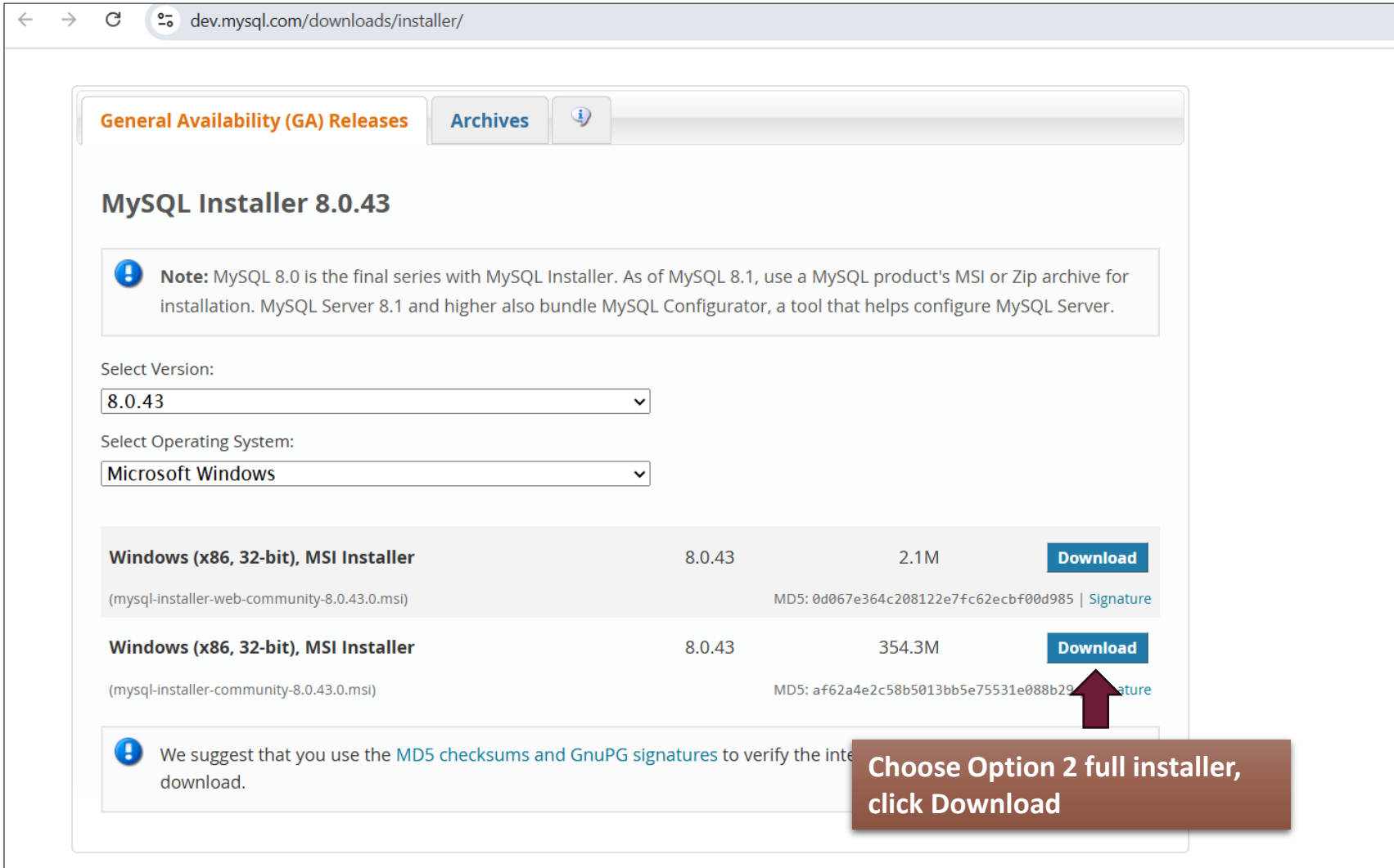
Download Now »

Installing MySQL on Windows



Step 1

Download MySQL Installer (Windows)



The screenshot shows the MySQL Downloads page for Windows installers. The browser address bar shows `dev.mysql.com/downloads/installer/`. The page has two tabs: "General Availability (GA) Releases" (selected) and "Archives". The main heading is "MySQL Installer 8.0.43". 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." Below the note, there are two dropdown menus: "Select Version:" with "8.0.43" selected, and "Select Operating System:" with "Microsoft Windows" selected. A table lists two download options:

Platform	Version	Size	Action
Windows (x86, 32-bit), MSI Installer	8.0.43	2.1M	Download
<small>(mysql-installer-web-community-8.0.43.0.msi)</small>			
Windows (x86, 32-bit), MSI Installer	8.0.43	354.3M	Download
<small>(mysql-installer-community-8.0.43.0.msi)</small>			

Below the table, a note says: "We suggest that you use the [MD5 checksums](#) and [GnuPG signatures](#) to verify the integrity of the download." A red arrow points from a callout box to the "Download" button for the 354.3M installer.

Choose Option 2 full installer, click Download

Step 1

Download MySQL Installer (Windows)

← → ↻ dev.mysql.com/downloads/file/?id=544662

MySQL Community Downloads

Login Now or Sign Up for a free account.

An Oracle Web Account provides you with the following advantages:

- Fast access to MySQL software downloads
- Download technical White Papers and Presentations
- Post messages in the MySQL Discussion Forums
- Report and track bugs in the MySQL bug system

Login »
using my Oracle Web account

Sign Up »
for an Oracle Web account

MySQL.com is using Oracle SSO for authentication. If you already have an Oracle Web account, click the Login link. Otherwise, you can signup for a free account by clicking the Sign Up link and following the instructions.

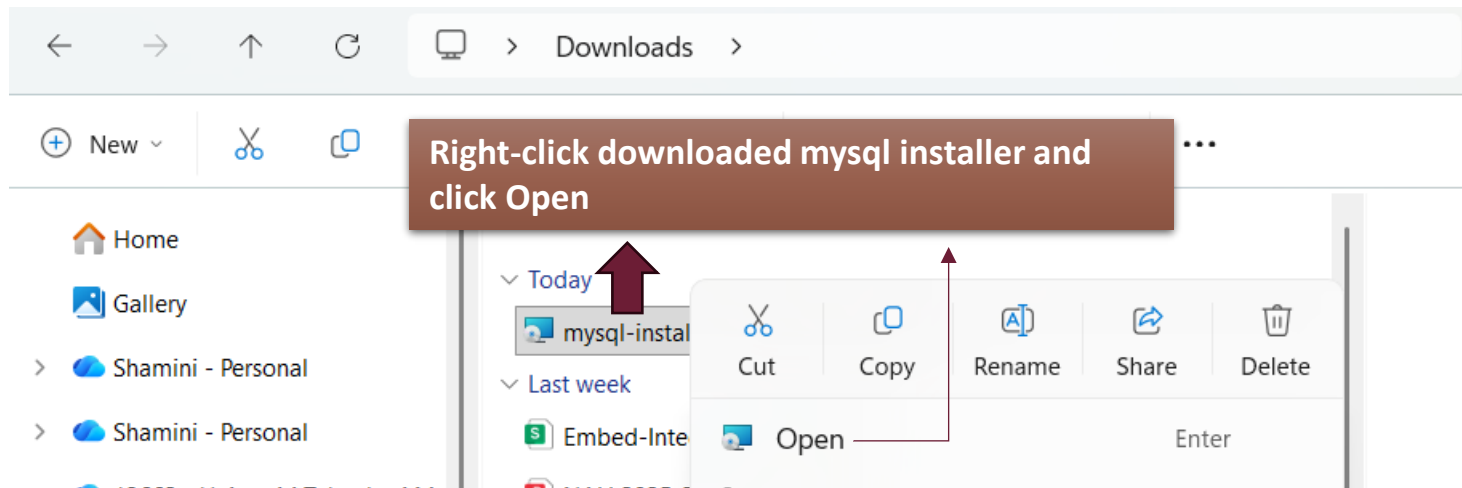
No thanks, just start my download.



Click Download

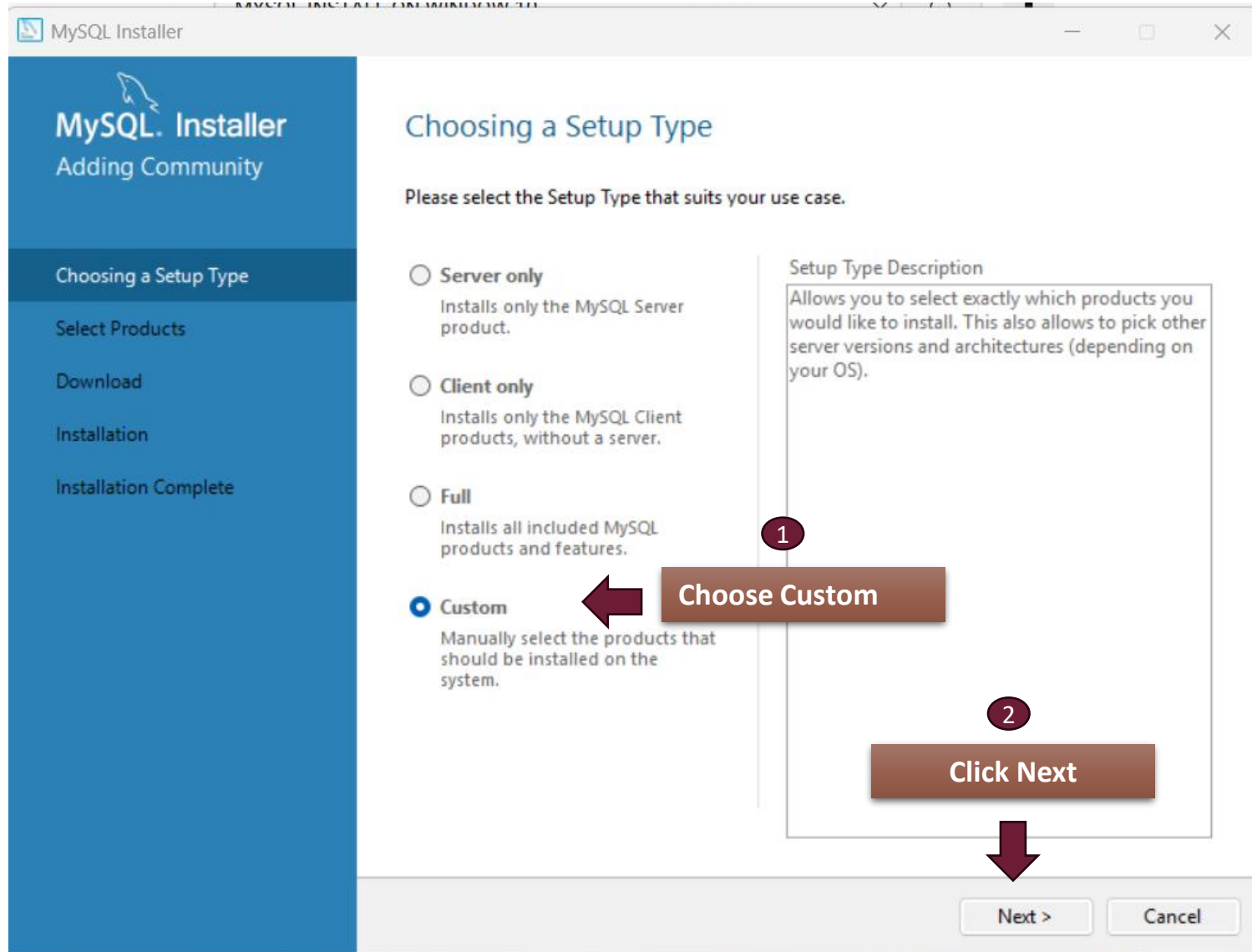
Step 1

Download MySQL Installer (Windows)



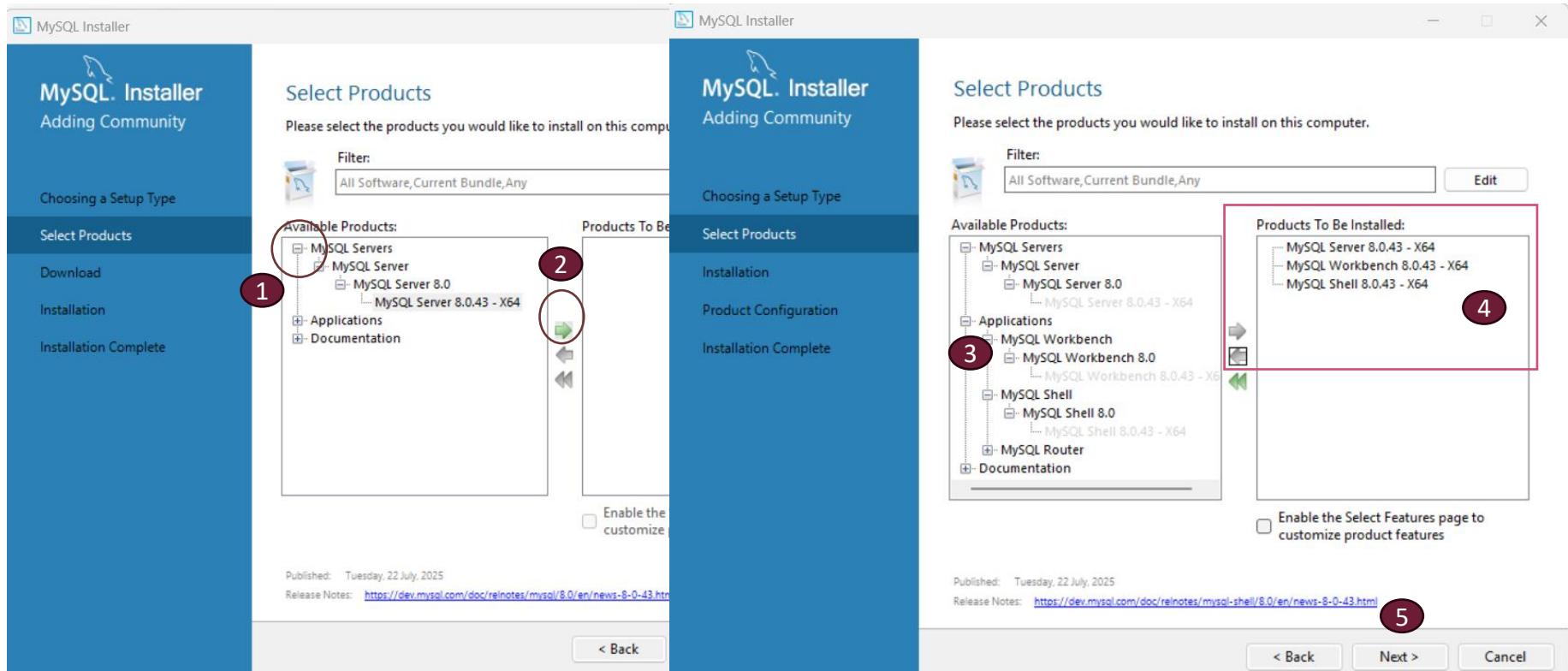
Step 2

Run the Installer (Windows)



Step 2

Run the Installer (Windows)

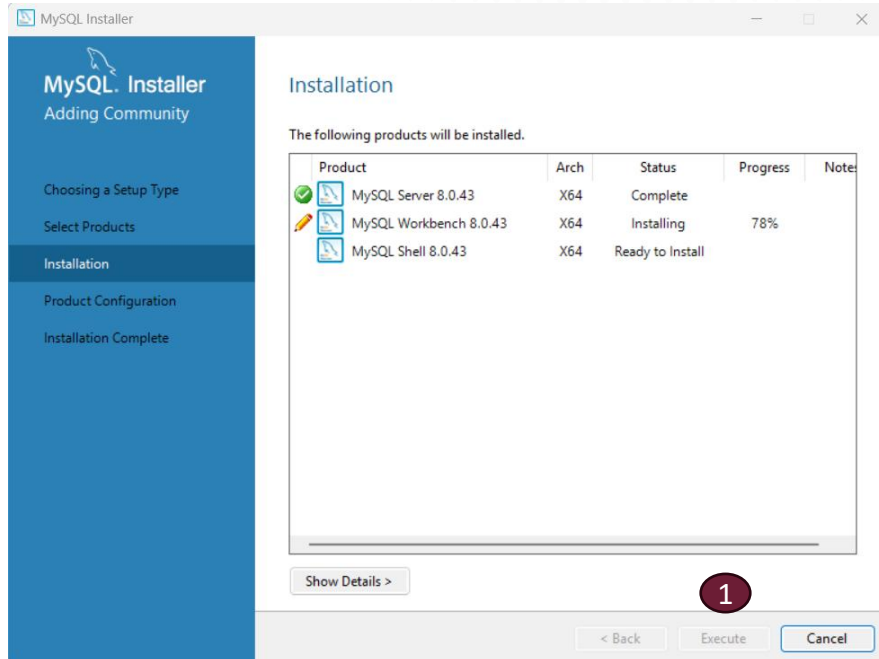


Choose the available products to be installed and click the Green Arrow

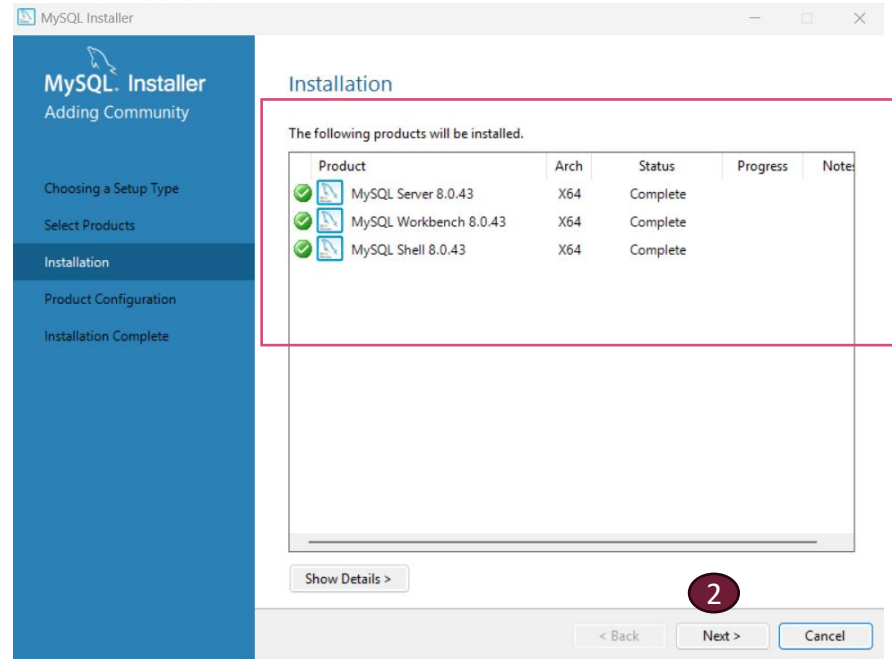
Make sure to add:
MySQL Server
MySQL Workbench
MySQL Shell
Then Click Next

Step 2

Run the Installer (Windows)



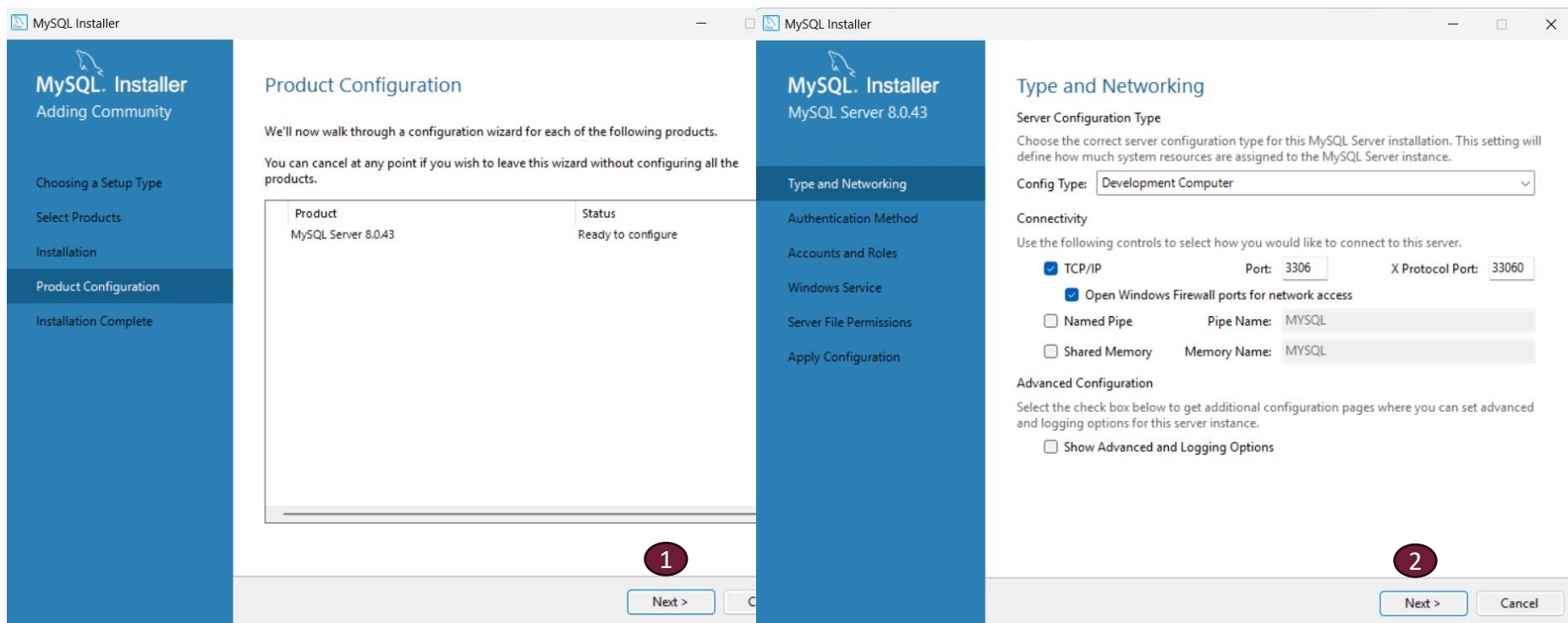
Make sure click Execute



The installed products shall show the status **COMPLETE** and Proceed Next

Step 3

Configure MySQL Server (Windows)



The image shows two screenshots of the MySQL Installer window. The left screenshot is the 'Product Configuration' screen, and the right screenshot is the 'Type and Networking' screen. Both screens have a blue sidebar on the left with the MySQL logo and the text 'MySQL. Installer Adding Community'. The sidebar contains a list of steps: 'Choosing a Setup Type', 'Select Products', 'Installation', 'Product Configuration' (highlighted), and 'Installation Complete'. The main area of the left screenshot shows a table with the following data:

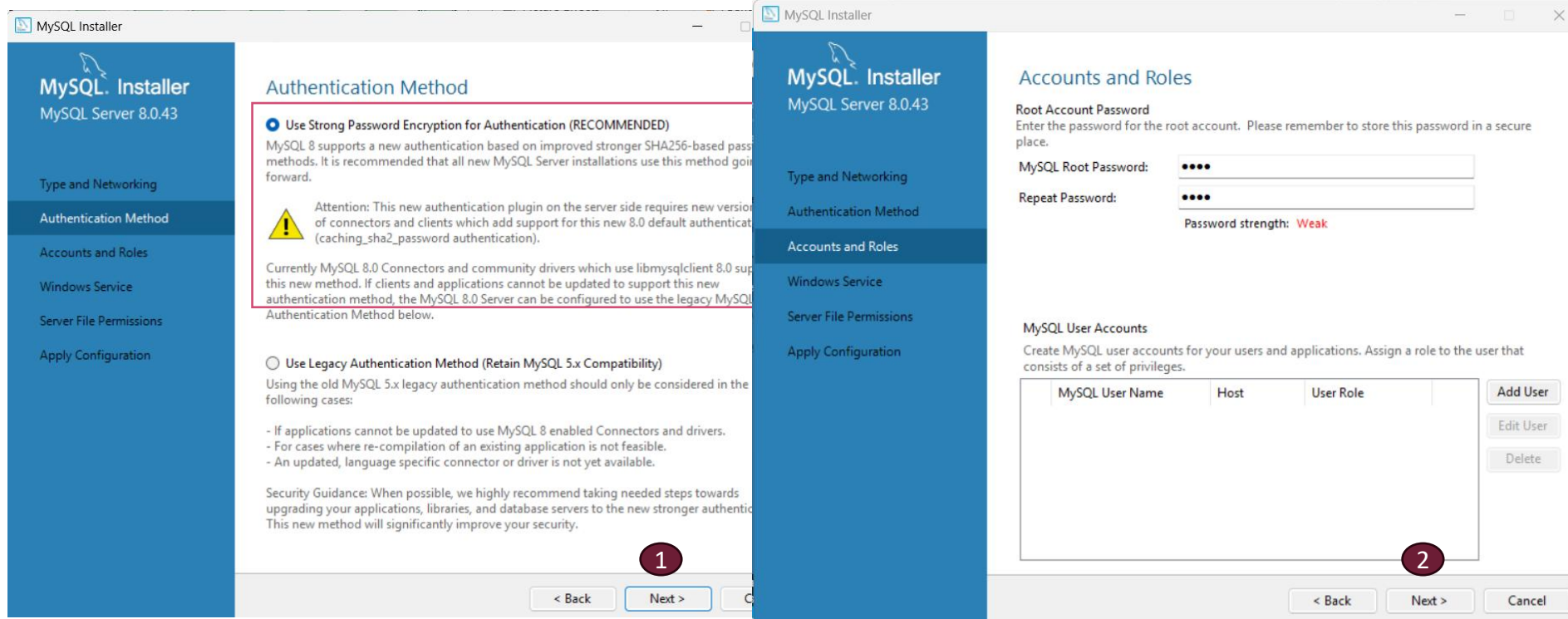
Product	Status
MySQL Server 8.0.43	Ready to configure

Below the table is a 'Next >' button. The right screenshot shows the 'Type and Networking' screen. It has a 'Server Configuration Type' dropdown set to 'Development Computer'. Under 'Connectivity', the 'TCP/IP' checkbox is checked, and the 'Port' is set to '3306'. The 'X Protocol Port' is set to '33060'. The 'Open Windows Firewall ports for network access' checkbox is also checked. Below this, there are two unchecked checkboxes: 'Named Pipe' and 'Shared Memory'. The 'Pipe Name' is set to 'MYSQL' and the 'Memory Name' is set to 'MYSQL'. At the bottom, there is an 'Advanced Configuration' section with a checkbox for 'Show Advanced and Logging Options' which is unchecked. A 'Next >' button is at the bottom right.

Maintain the Server Configuration as it is

Step 3

Configure MySQL Server (Windows)



The image shows two screenshots of the MySQL Installer for Windows 8.0.43. The left screenshot is the 'Authentication Method' screen, and the right screenshot is the 'Accounts and Roles' screen.

Authentication Method

Use Strong Password Encryption for Authentication (RECOMMENDED)

MySQL 8 supports a new authentication based on improved stronger SHA256-based password methods. It is recommended that all new MySQL Server installations use this method going forward.

Attention: This new authentication plugin on the server side requires new versions of connectors and clients which add support for this new 8.0 default authentication method (caching_sha2_password authentication).

Currently MySQL 8.0 Connectors and community drivers which use libmysqlclient 8.0 support this new method. If clients and applications cannot be updated to support this new authentication method, the MySQL 8.0 Server can be configured to use the legacy MySQL Authentication Method below.

Use Legacy Authentication Method (Retain MySQL 5.x Compatibility)

Using the old MySQL 5.x legacy authentication method should only be considered in the following cases:

- If applications cannot be updated to use MySQL 8 enabled Connectors and drivers.
- For cases where re-compilation of an existing application is not feasible.
- An updated, language specific connector or driver is not yet available.

Security Guidance: When possible, we highly recommend taking needed steps towards upgrading your applications, libraries, and database servers to the new stronger authentication method. This new method will significantly improve your security.

Accounts and Roles

Root Account Password

Enter the password for the root account. Please remember to store this password in a secure place.

MySQL Root Password:

Repeat Password:

Password strength: **Weak**

MySQL User Accounts

Create MySQL user accounts for your users and applications. Assign a role to the user that consists of a set of privileges.

MySQL User Name	Host	User Role

Buttons: Add User, Edit User, Delete

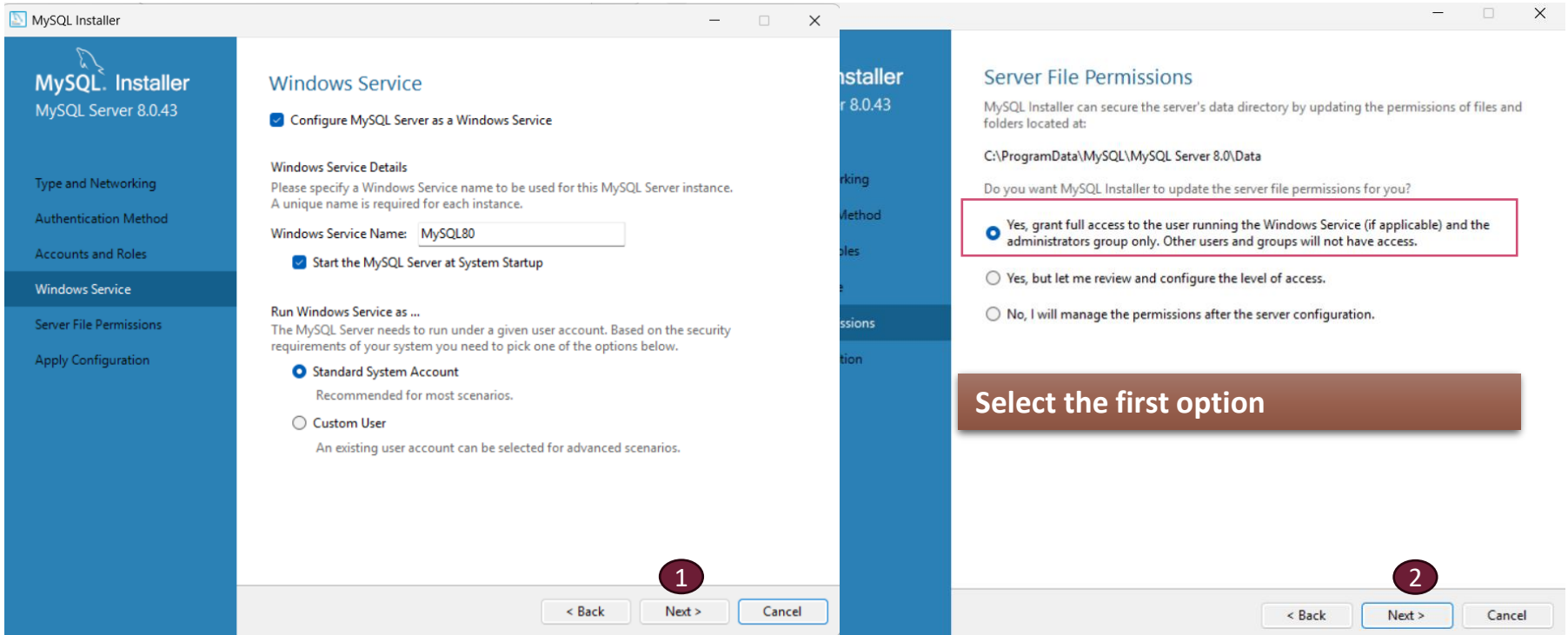
Click Next

Make sure you know your
MySQL root password.
Example : admin123

IMPORTANT

Step 3

Configure MySQL Server (Windows/Mac)



The image shows two screenshots of the MySQL Installer window. The left screenshot is the 'Windows Service' configuration screen, and the right screenshot is the 'Server File Permissions' screen. Both screens have a blue sidebar on the left with navigation links: 'MySQL. Installer', 'Type and Networking', 'Authentication Method', 'Accounts and Roles', 'Windows Service', 'Server File Permissions', and 'Apply Configuration'. The 'Windows Service' screen has a red circle with the number '1' over the 'Next >' button. The 'Server File Permissions' screen has a red circle with the number '2' over the 'Next >' button. A red box highlights the first radio button option on the 'Server File Permissions' screen.

MySQL Installer
MySQL Server 8.0.43

Type and Networking
Authentication Method
Accounts and Roles
Windows Service
Server File Permissions
Apply Configuration

Windows Service

☒ Configure MySQL Server as a Windows Service

Windows Service Details
Please specify a Windows Service name to be used for this MySQL Server instance. A unique name is required for each instance.

Windows Service Name:

☒ Start the MySQL Server at System Startup

Run Windows Service as ...
The MySQL Server needs to run under a given user account. Based on the security requirements of your system you need to pick one of the options below.

☒ Standard System Account
Recommended for most scenarios.

☐ Custom User
An existing user account can be selected for advanced scenarios.

< Back **Next >** Cancel

Server File Permissions

MySQL Installer can secure the server's data directory by updating the permissions of files and folders located at:

C:\ProgramData\MySQL\MySQL Server 8.0\Data

Do you want MySQL Installer to update the server file permissions for you?

☒ Yes, grant full access to the user running the Windows Service (if applicable) and the administrators group only. Other users and groups will not have access.

☐ Yes, but let me review and configure the level of access.

☐ No, I will manage the permissions after the server configuration.

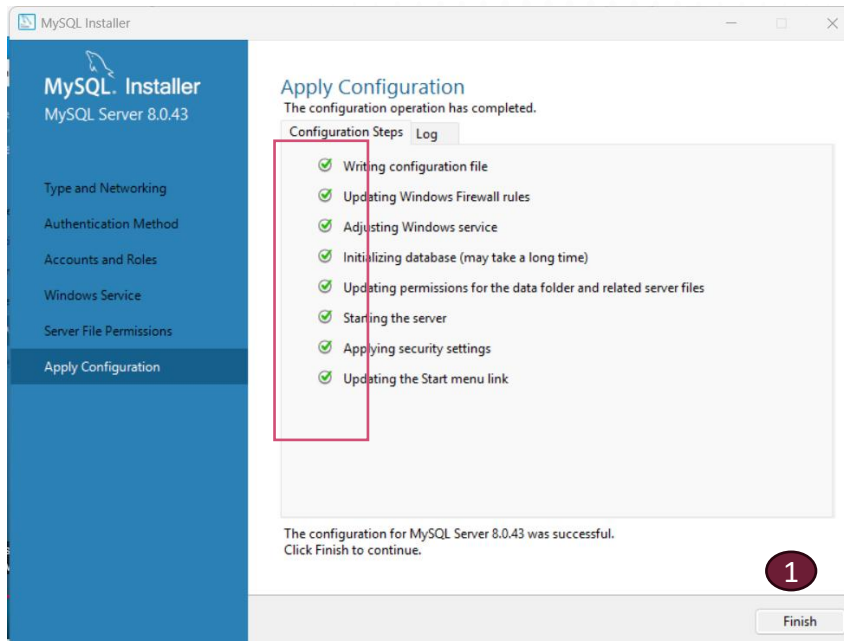
Select the first option

< Back **Next >** Cancel

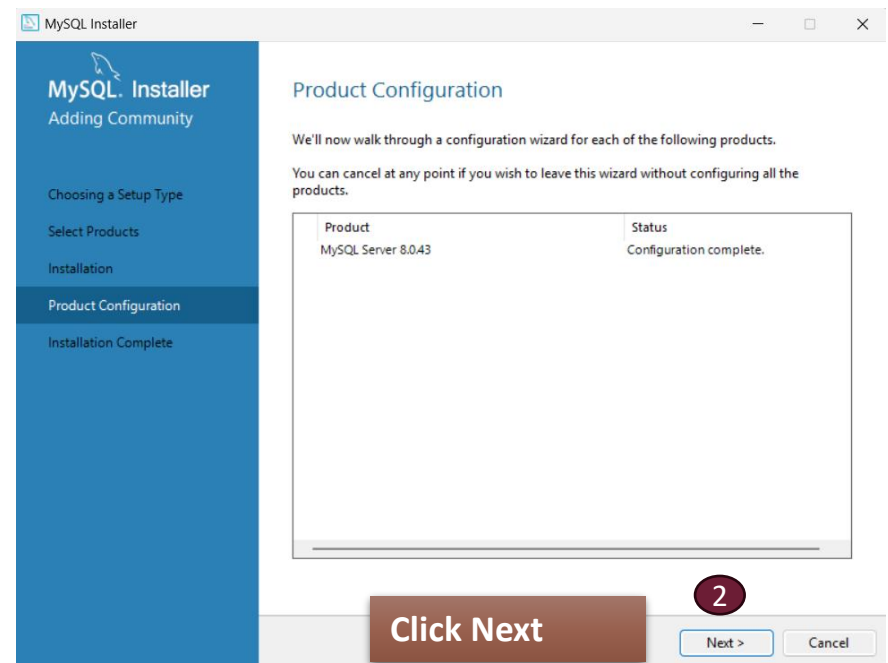
Make sure Windows Service as it is

Step 3

Configure MySQL Server (Windows)

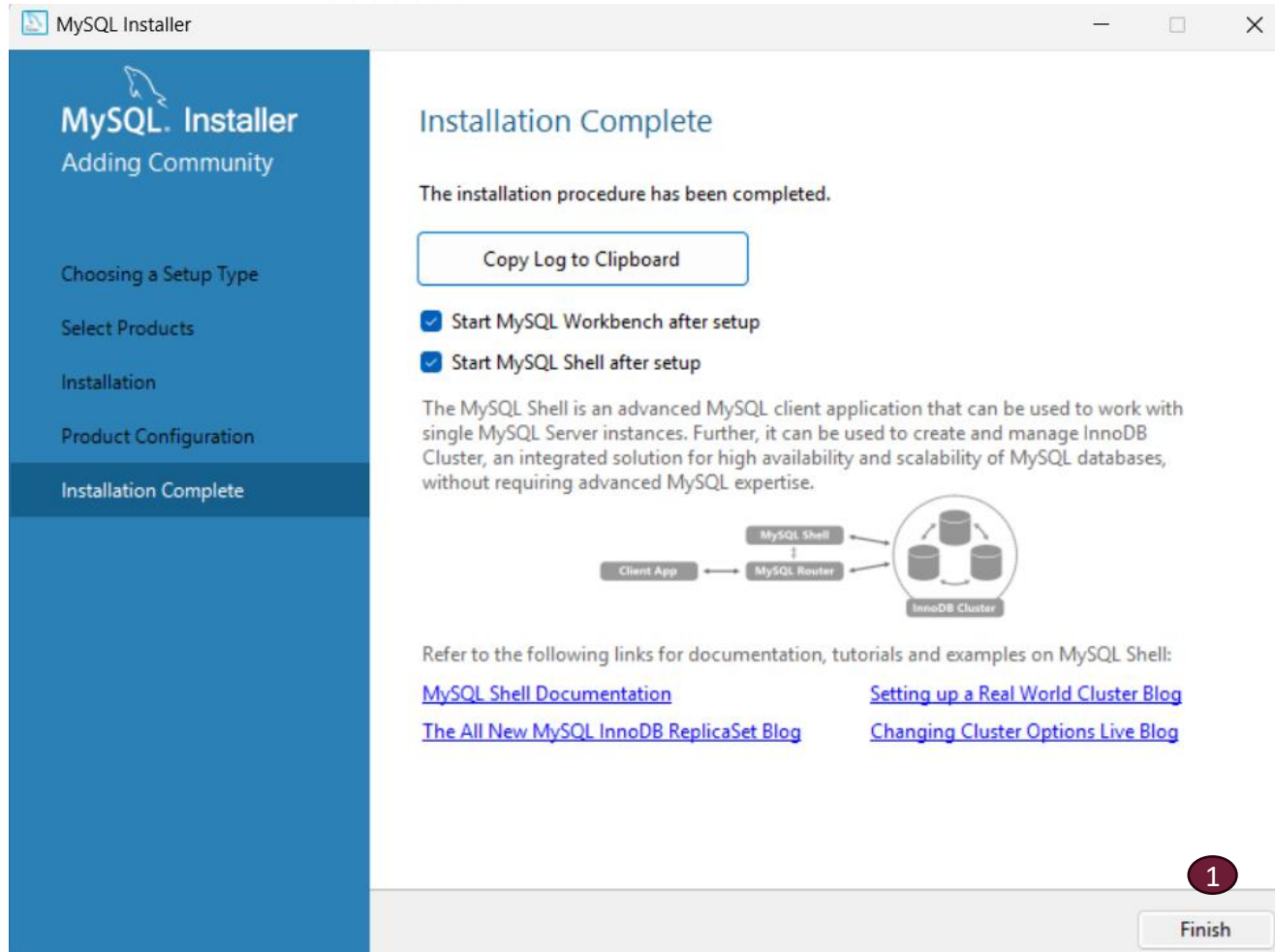


Click Execute and apply the configuration, make sure all configuration steps are complete.



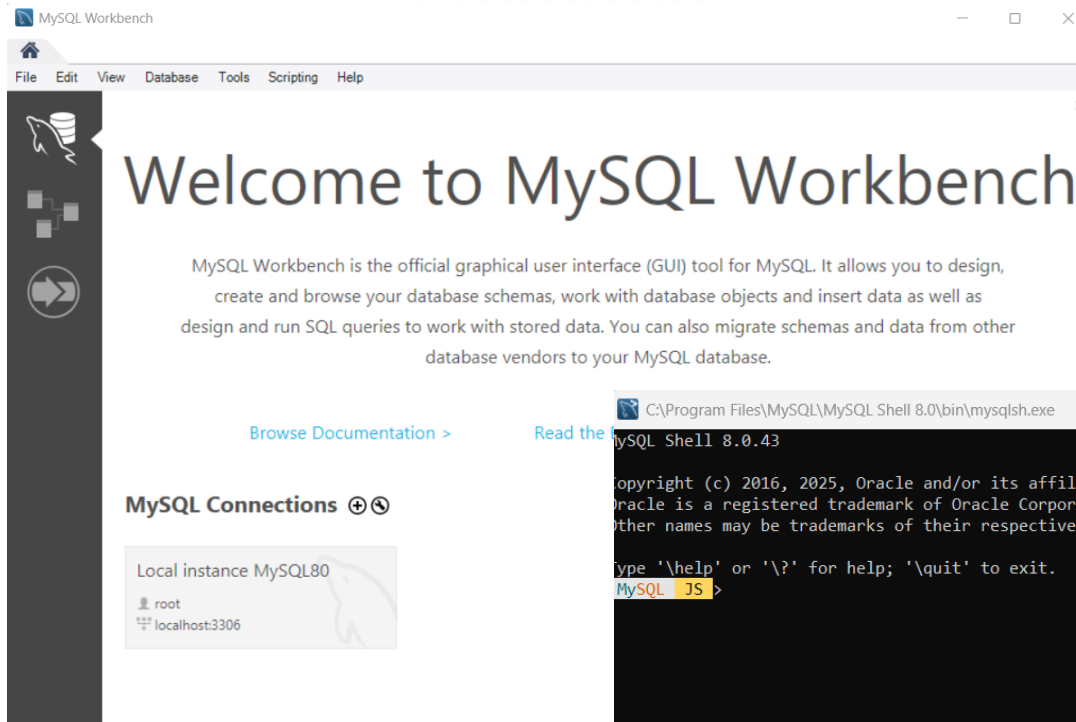
Step 4

Complete Installation (Windows)

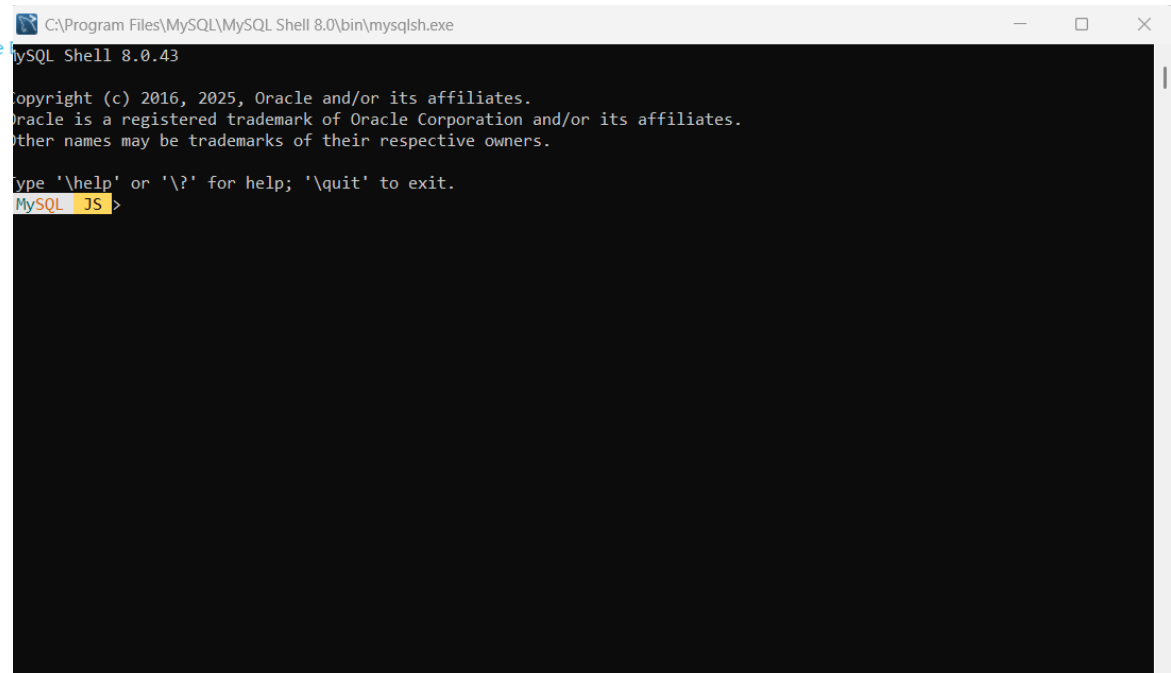


Step 4

Complete Installation (Windows)



You shall now able to access MySQL Workbench and MySQL Shell



Installing MySQL on Mac



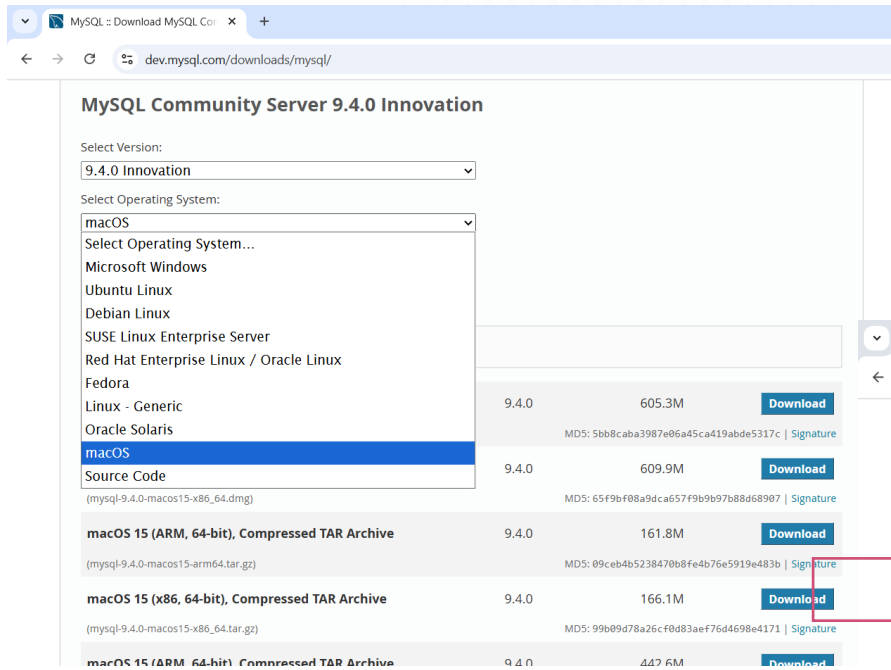
Step 1

Download MySQL Installer (Mac)

You may refer to the following guideline for installation:

<https://zarkomaslaric.notion.site/Zarko-s-Video-Tutorial-MySQL-Installation-on-Mac-14cfe1ebfde2804c933fecff0e02ca51>

And <https://www.youtube.com/watch?v=wpGnJHb2R58&t=336s>



MySQL Community Server 9.4.0 Innovation

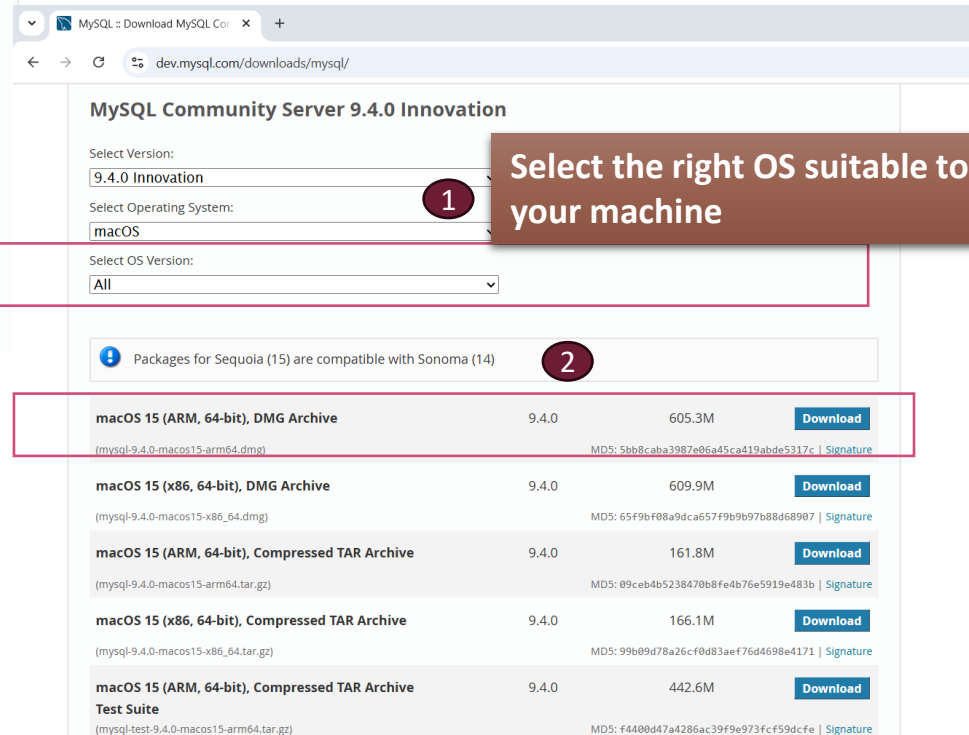
Select Version:
9.4.0 Innovation

Select Operating System:
macOS

Source Code

Version	Size	Download
9.4.0	605.3M	Download
9.4.0	609.9M	Download
9.4.0	161.8M	Download
9.4.0	166.1M	Download
9.4.0	442.6M	Download

Choose the right option, click Download. Suggested.



MySQL Community Server 9.4.0 Innovation

Select Version:
9.4.0 Innovation

Select Operating System:
macOS

Select OS Version:
All

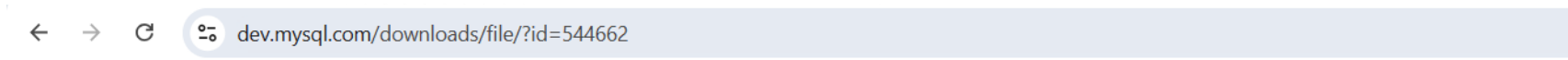
1 Select the right OS suitable to your machine

2 Packages for Sequoia (15) are compatible with Sonoma (14)

Version	Size	Download
macOS 15 (ARM, 64-bit), DMG Archive	9.4.0 605.3M	Download
macOS 15 (x86, 64-bit), DMG Archive	9.4.0 609.9M	Download
macOS 15 (ARM, 64-bit), Compressed TAR Archive	9.4.0 161.8M	Download
macOS 15 (x86, 64-bit), Compressed TAR Archive	9.4.0 166.1M	Download
macOS 15 (ARM, 64-bit), Compressed TAR Archive Test Suite	9.4.0 442.6M	Download

Step 1

Download MySQL Installer (Mac)



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- Fast access to MySQL software downloads
- Download technical White Papers and Presentations
- Post messages in the MySQL Discussion Forums
- Report and track bugs in the MySQL bug system

Login »
using my Oracle Web account

Sign Up »
for an Oracle Web account

MySQL.com is using Oracle SSO for authentication. If you already have an Oracle Web account, click the Login link. Otherwise, you can sign up for a free account by clicking the Sign Up link and following the instructions.

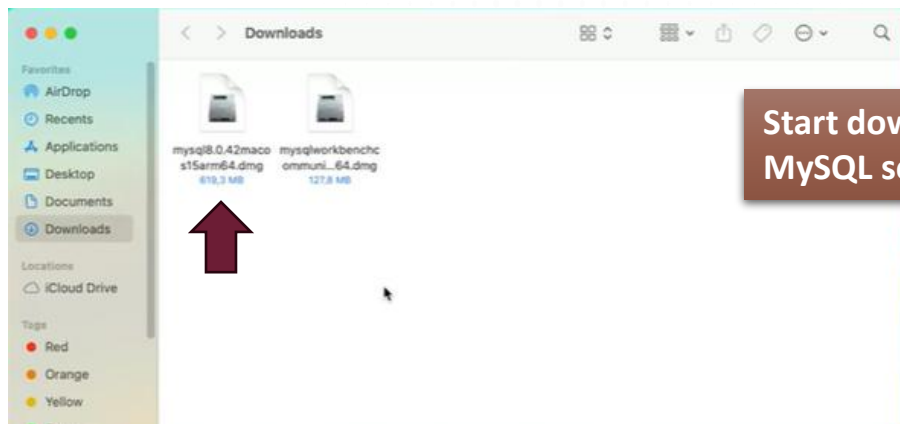
No thanks, just start my download.



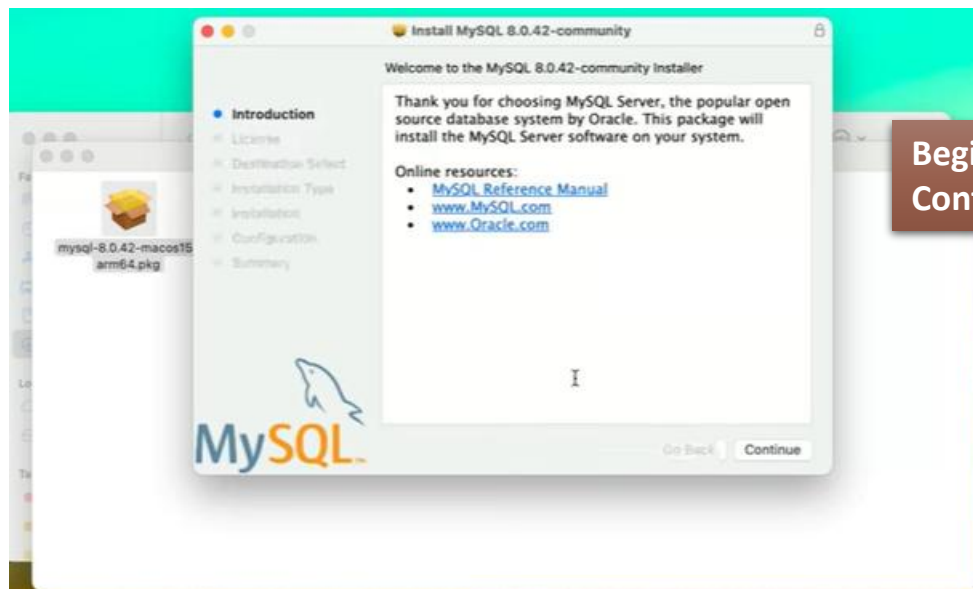
Click Download

Step 1

Download MySQL Installer (Mac)



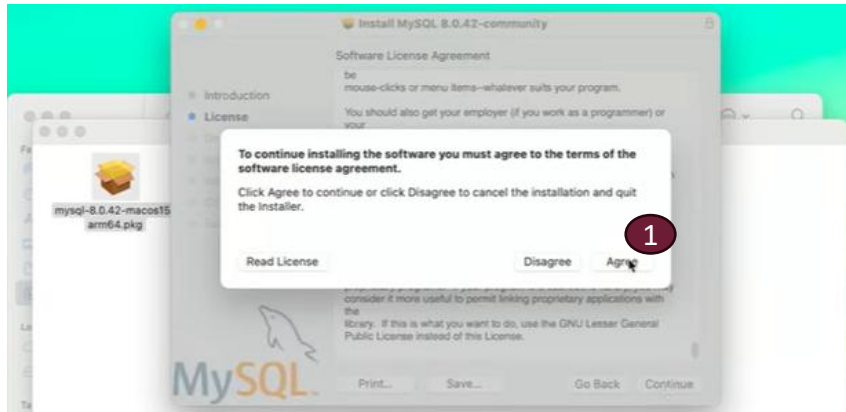
Start downloading MySQL installation (Begin with MySQL server DMG file).



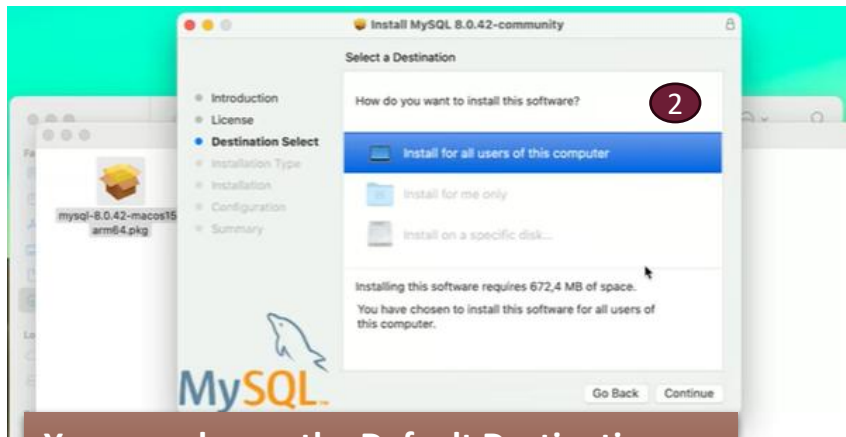
Begin with installation of MySQL, click Continue.

Step 1

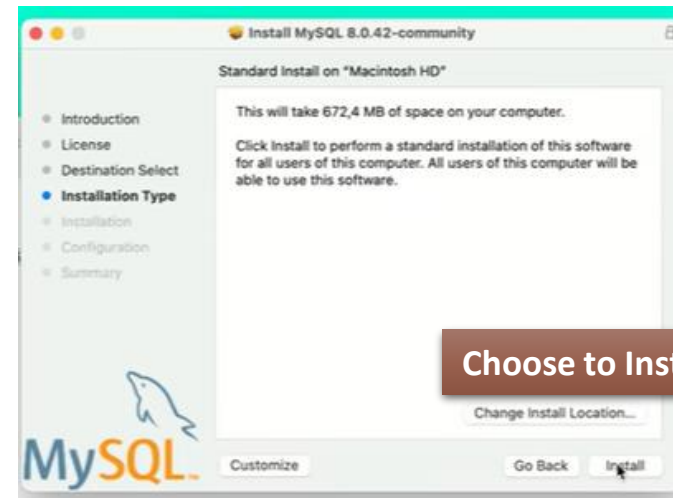
Download MySQL Installer (Mac)



Proceed to Agree the software license agreement.



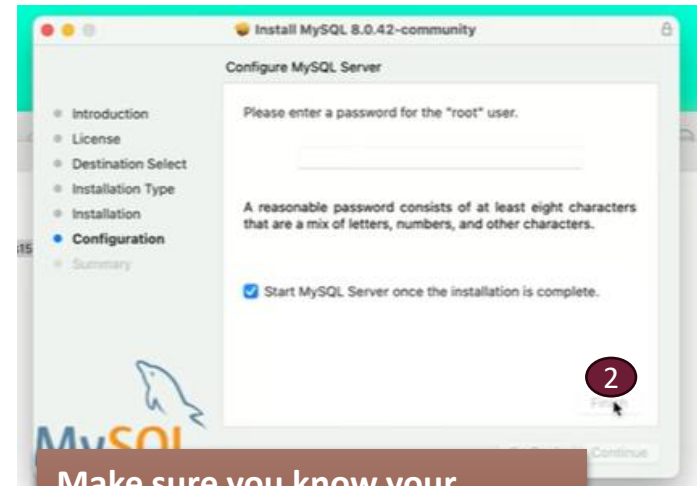
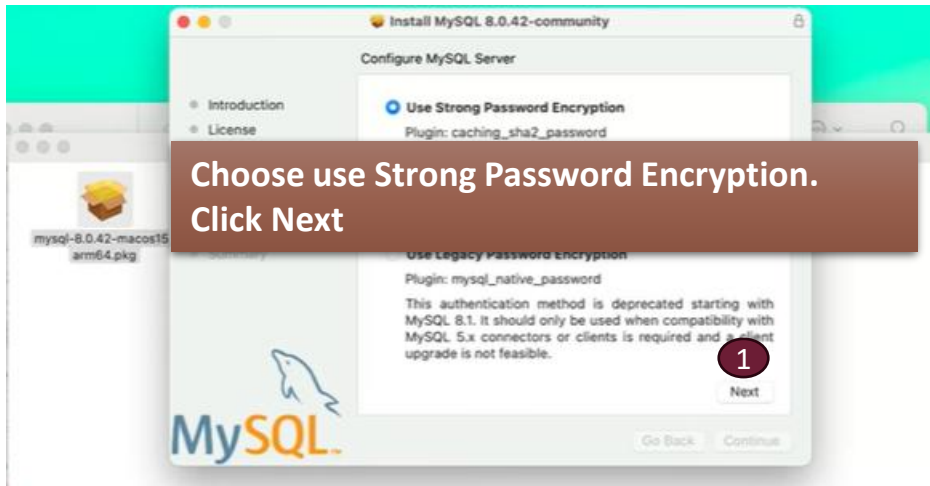
You may choose the Default Destination and proceed to Continue



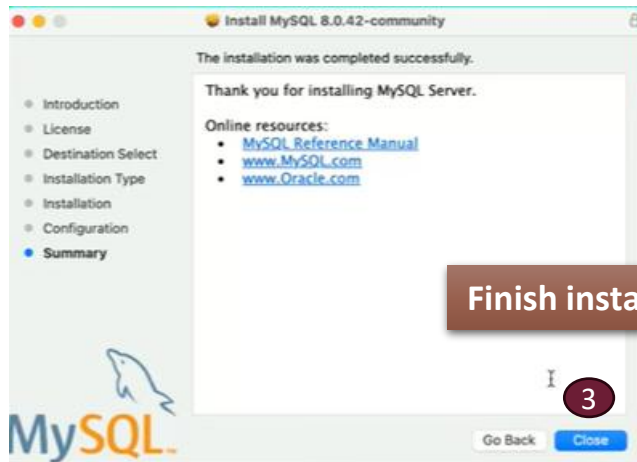
Choose to Install

Step 1

Download MySQL Installer (Mac)

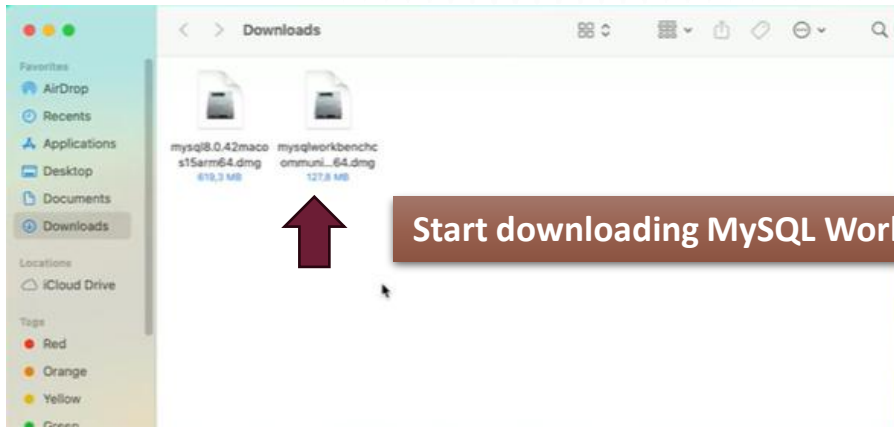


IMPORTANT

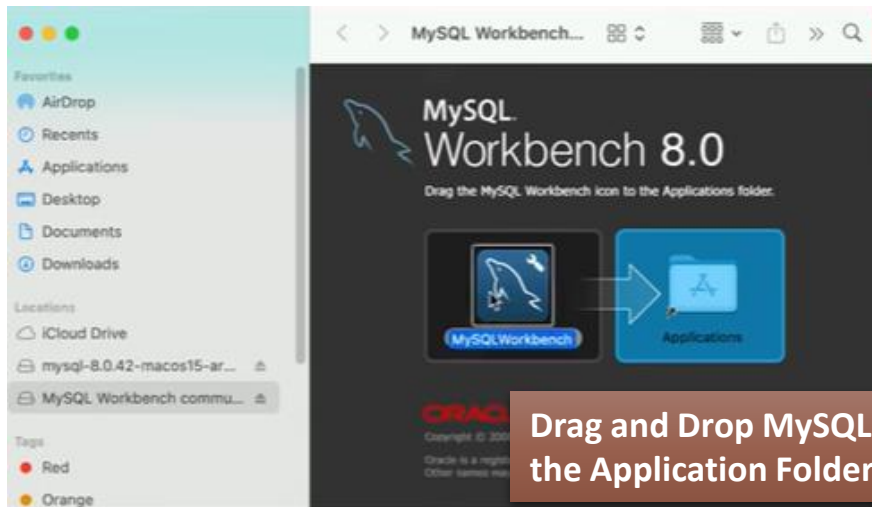


Step 2

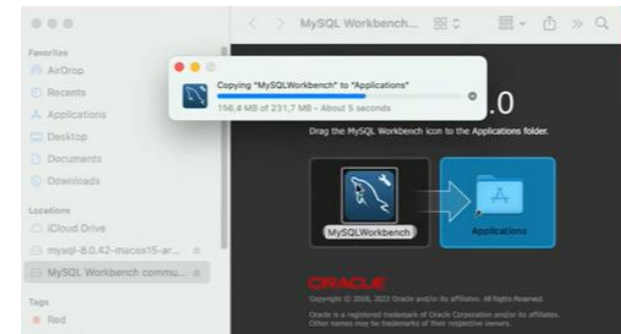
Download MySQL Workbench (Mac)



Start downloading MySQL Workbench.

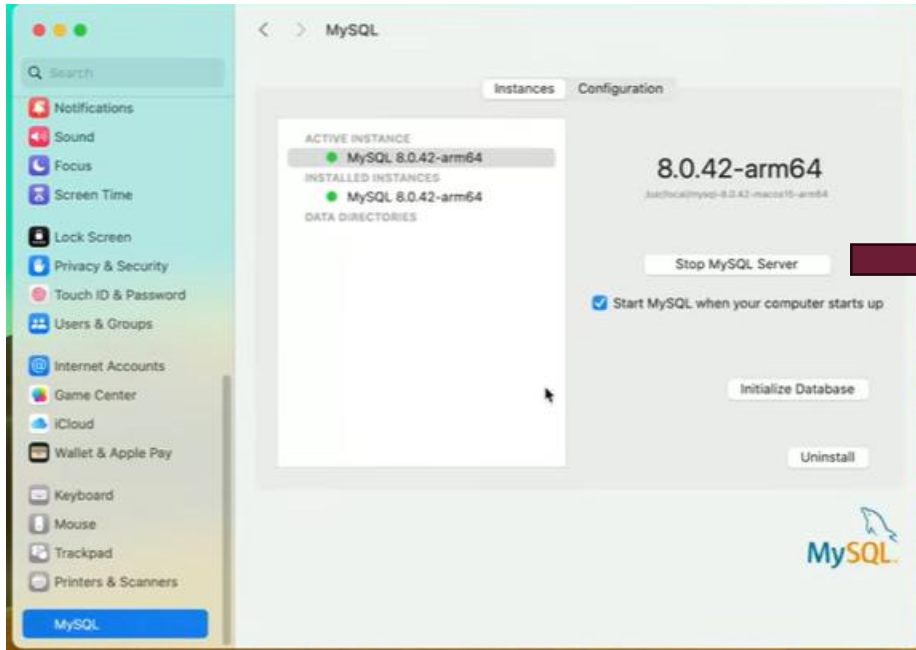


Drag and Drop MySQL Workbench to the Application Folder.



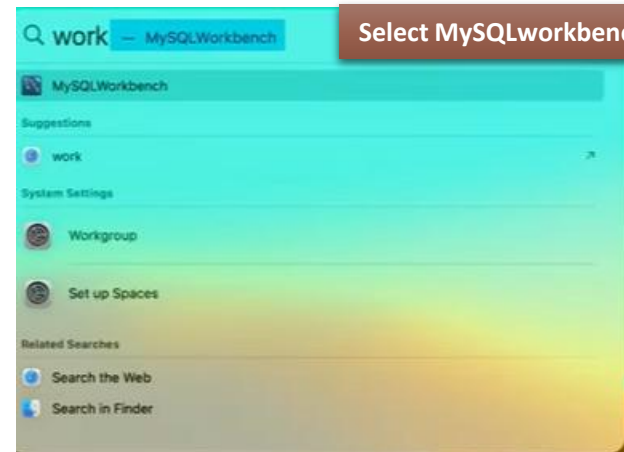
Step 3

Access MySQL (Mac)



MySQL Server Instance is running (In Settings).

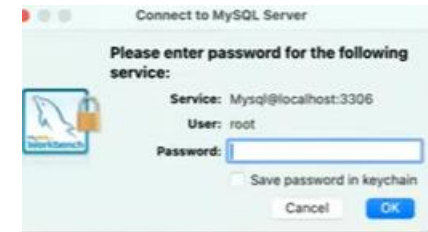
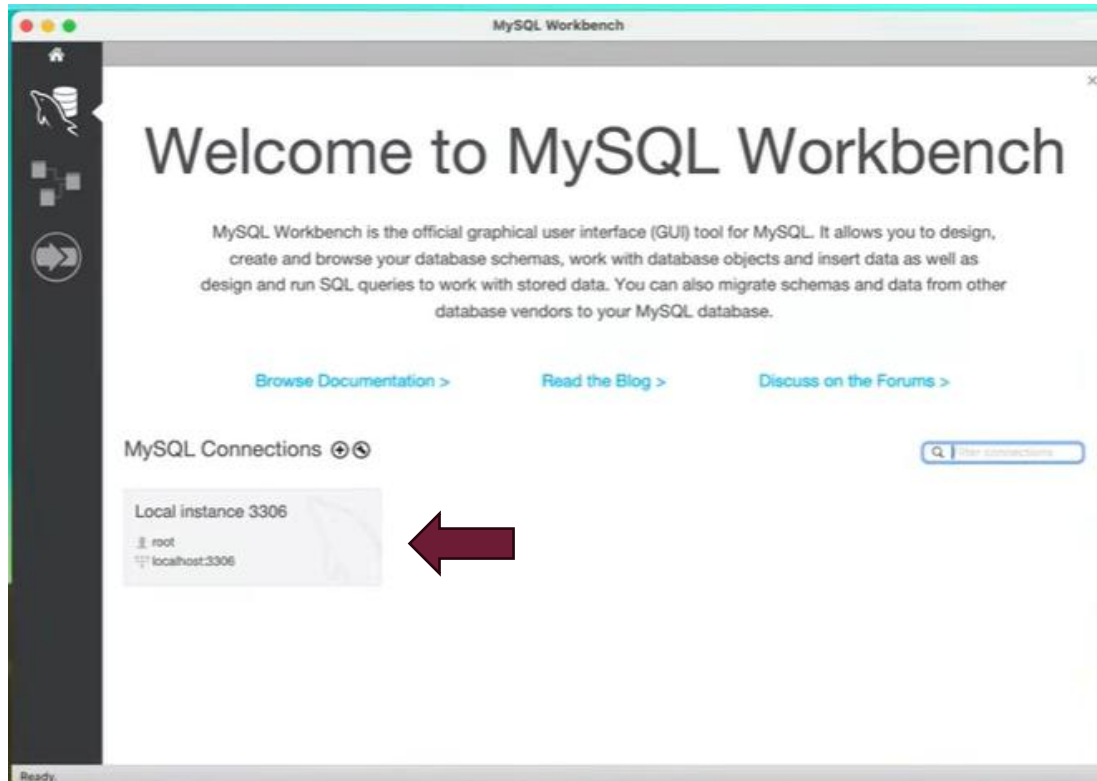
You can start and stop server here



Select MySQLworkbench

Step 3

Access MySQL Workbench (Mac)



Key in the password and access the workbench

Step 4

MySQL Terminal Configuration (Mac)

- Check which terminal you are using with this command:

```
echo $SHELL
```

1

- If you get `/bin/zsh` then execute this line to configure MySQL:

```
Bash
echo "export PATH=\${PATH}:/usr/local/mysql/bin" >> ~/.zshrc
```

Copy

This is based on the output you get

- Otherwise, if you get `/bin/bash` then execute this line instead:

```
echo "export PATH=\${PATH}:/usr/local/mysql/bin" >> ~/.bash_profile
```

2

Command to start MySQL in the terminal:

```
mysql -u root -p
```

```
zarko@Zarko ~ % mysql --version
mysql Ver 8.4.3 for macos14 on arm64 (MySQL Community Server - GPL)
zarko@Zarko ~ % mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.4.3 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
```

4

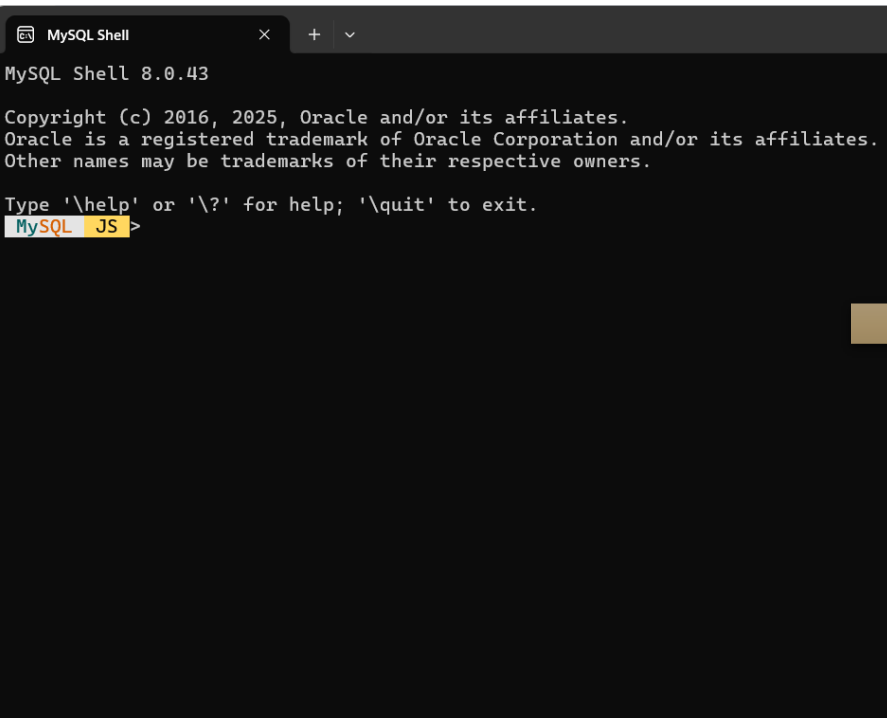
Verification after Installation



MySQL Shell (Windows)

After installation:

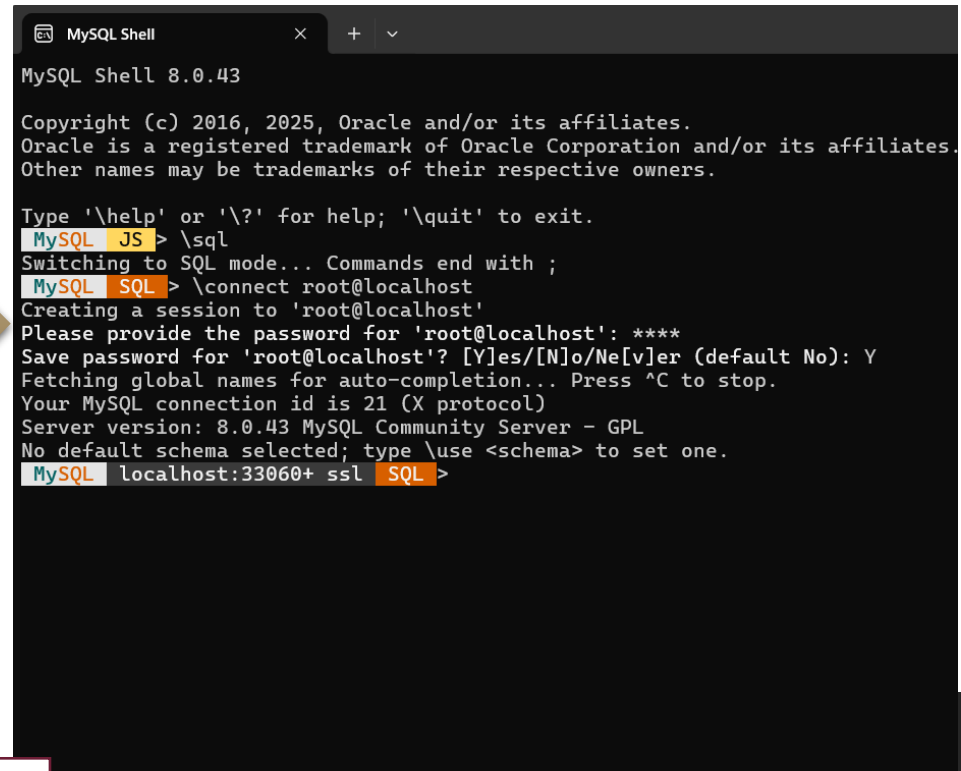
- Test MySQL Shell



```
MySQL Shell 8.0.43

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Type '\help' or '? ' for help; '\quit' to exit.
MySQL JS >
```



```
MySQL Shell 8.0.43

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Other names may be trademarks of their respective owners.

Type '\help' or '? ' for help; '\quit' to exit.
MySQL JS > \sql
Switching to SQL mode... Commands end with ;
MySQL SQL > \connect root@localhost
Creating a session to 'root@localhost'
Please provide the password for 'root@localhost': ****
Save password for 'root@localhost'? [Y]es/[N]o/[e]x (default No): Y
Fetching global names for auto-completion... Press ^C to stop.
Your MySQL connection id is 21 (X protocol)
Server version: 8.0.43 MySQL Community Server - GPL
No default schema selected; type \use <schema> to set one.
MySQL localhost:33060+ ssl SQL >
```

Your **MySQL Shell** is open and successfully switched to **SQL mode**, which means the installation was successful.

1. \sql
2. \connect root@localhost
3. Enter your password
4. Type Y to save password or N that indicated No save password.

MySQL Shell (Mac/Windows)

- Once connected, create your practice database:

Create database student_test;

```
MySQL localhost:33060+ ssl SQL > Create database student_test;  
Query OK, 1 row affected (0.0525 sec)
```

Use student_test;


```
MySQL localhost:33060+ ssl SQL > USE student_test;  
Default schema set to 'student_test'.  
Fetching global names, object names from 'student_test' for auto-completion... Press ^C to stop.  
MySQL localhost:33060+ ssl student_test SQL >
```

This is to create table. Next, insert the data into table.

```
MySQL localhost:33060+ ssl student_test SQL > CREATE TABLE students (  
->     student_id INT PRIMARY KEY,  
->     name VARCHAR(50),  
->     gender CHAR(1),  
->     age INT,  
->     course VARCHAR(50)  
-> );  
Query OK, 0 rows affected (0.1007 sec)  
MySQL localhost:33060+ ssl student_test SQL >
```

MySQL Shell (Mac/Windows)

Insert the following data in MySQL shell.



```
MySQL localhost:33060+ ssl student_test SQL > INSERT INTO students VALUES
-> (1, 'Ali', 'M', 21, 'Computer Science'),
-> (2, 'Sara', 'F', 22, 'Information Systems'),
-> (3, 'John', 'M', 20, 'Software Engineering'),
-> (4, 'Mira', 'F', 23, 'Data Science'),
-> (5, 'Raj', 'M', 24, 'Cybersecurity');

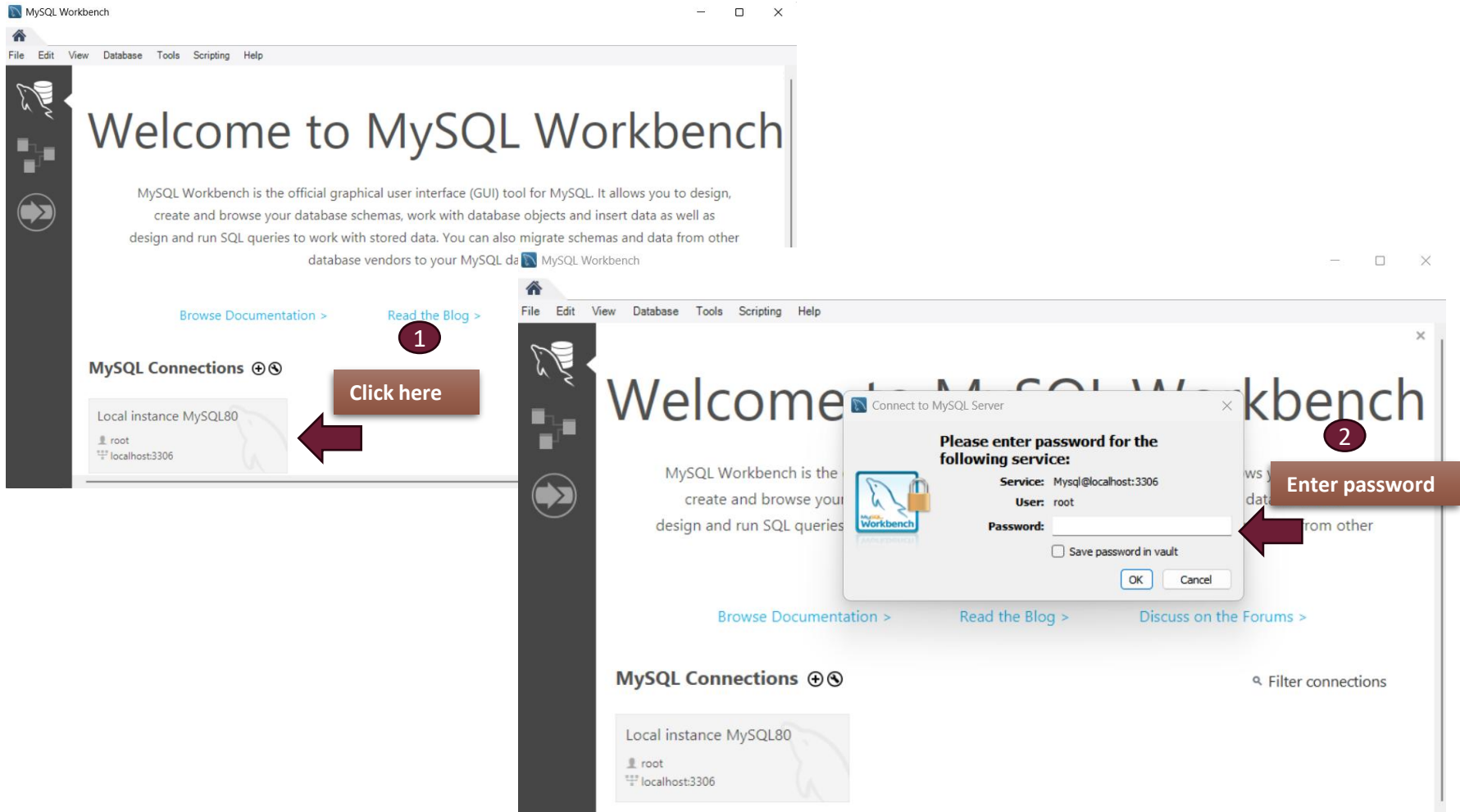
Query OK, 5 rows affected (0.0257 sec)

Records: 5  Duplicates: 0  Warnings: 0
```

MySQL WorkBench (Mac/Windows)

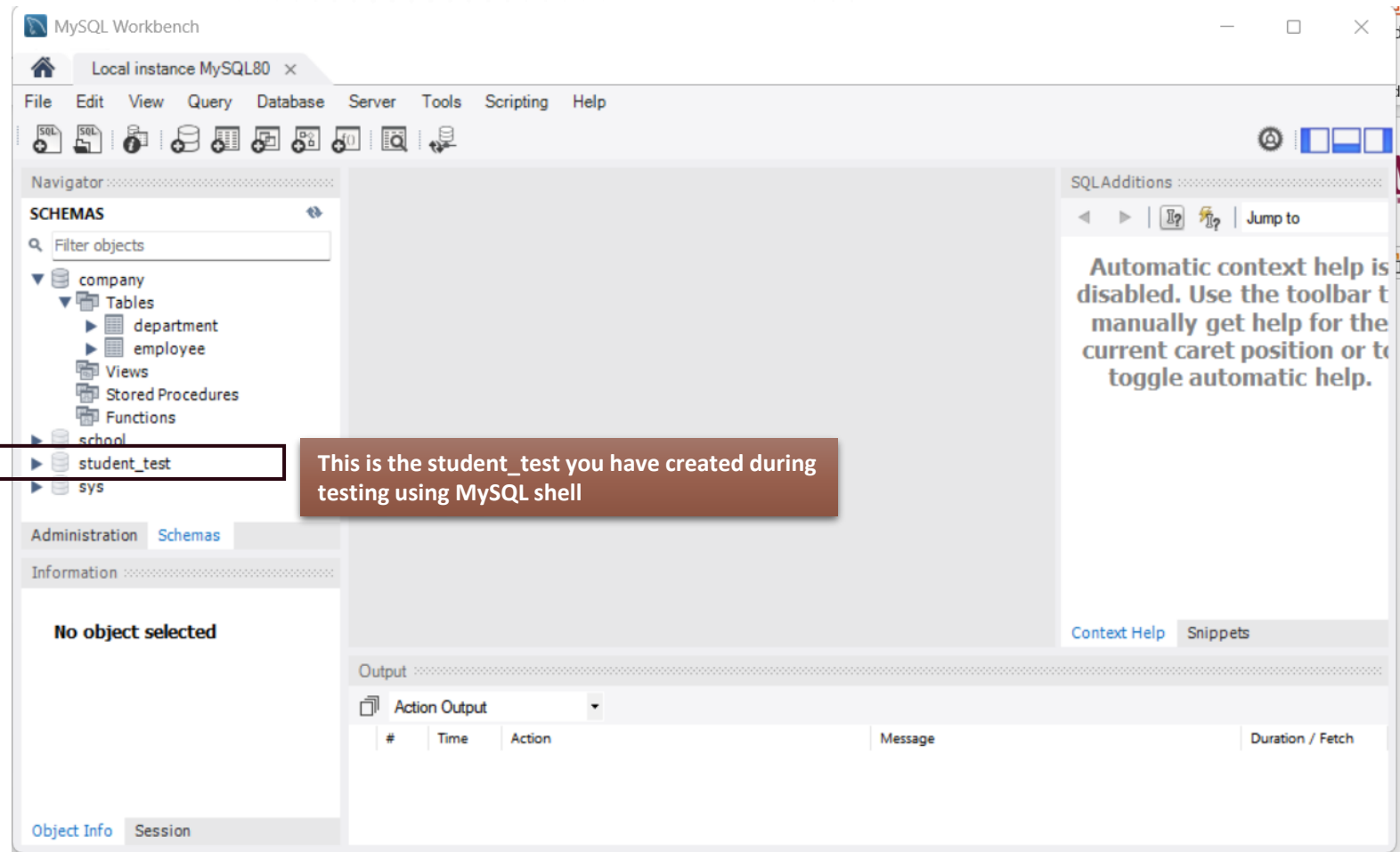
After installation:

- Test MySQL WorkBench



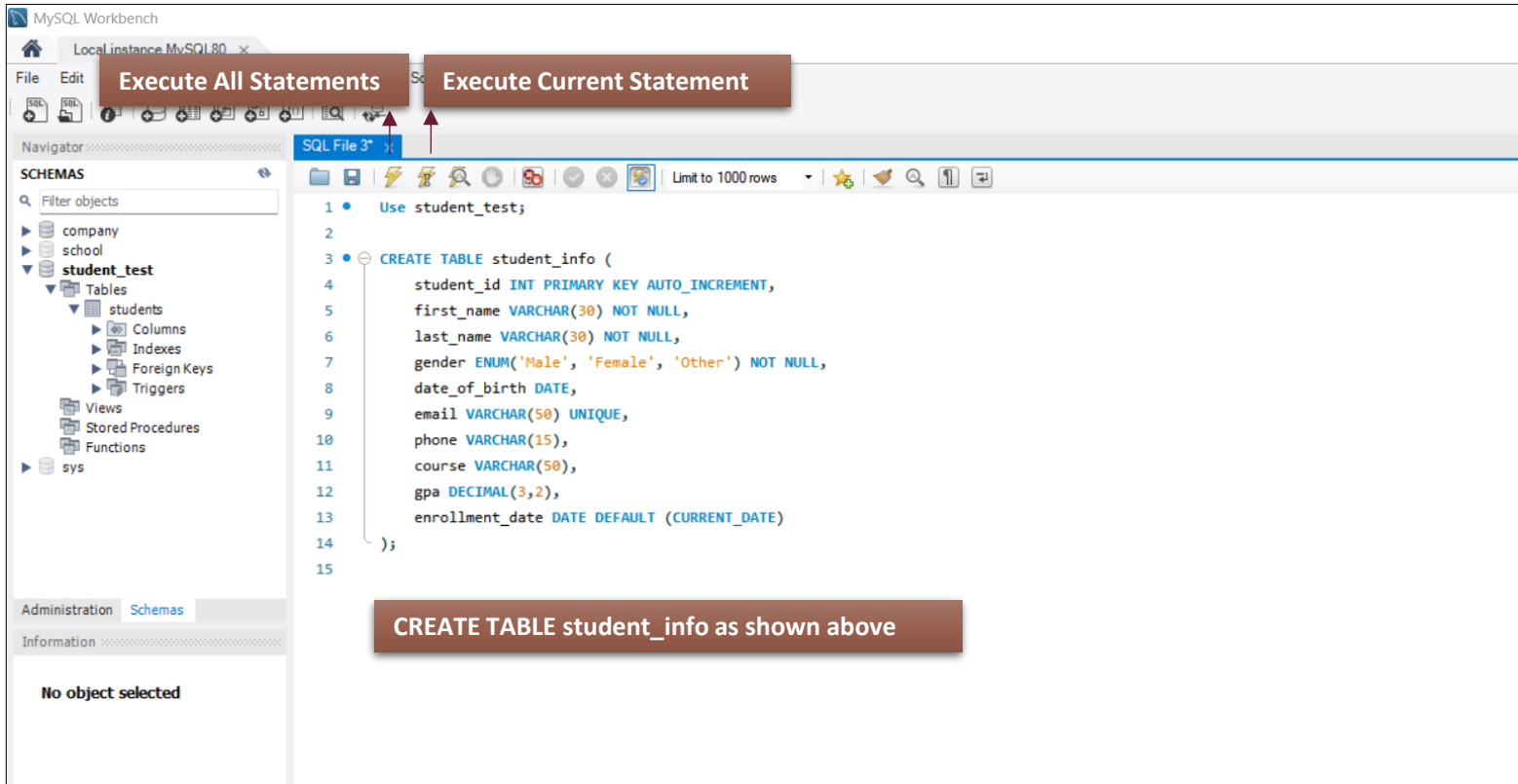
MySQL WorkBench (Mac/Windows)

This will be your view



MySQL WorkBench (Mac/Windows)

Once connected, create your practice table:



The screenshot shows the MySQL Workbench interface. On the left, the 'SCHEMAS' pane shows a tree view with 'company', 'school', and 'student_test'. Under 'student_test', there are 'Tables', 'Columns', 'Indexes', 'Foreign Keys', 'Triggers', 'Views', 'Stored Procedures', and 'Functions'. The 'Tables' folder is expanded, showing 'students'. The 'Administration' tab is selected, and the 'Schemas' sub-tab is active. The 'Information' pane at the bottom shows 'No object selected'.

On the right, the 'SQL File 3*' editor shows the following SQL code:

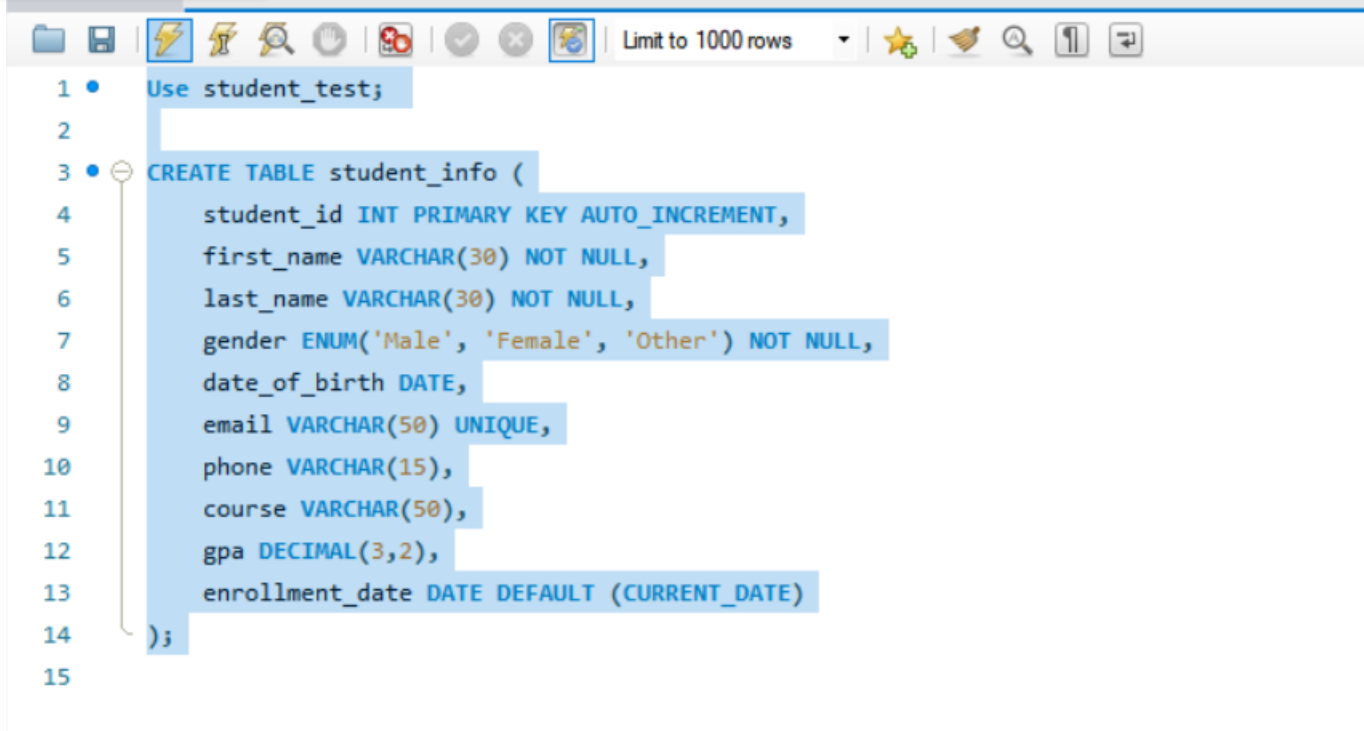
```

1 • Use student_test;
2
3 • CREATE TABLE student_info (
4     student_id INT PRIMARY KEY AUTO_INCREMENT,
5     first_name VARCHAR(30) NOT NULL,
6     last_name VARCHAR(30) NOT NULL,
7     gender ENUM('Male', 'Female', 'Other') NOT NULL,
8     date_of_birth DATE,
9     email VARCHAR(50) UNIQUE,
10    phone VARCHAR(15),
11    course VARCHAR(50),
12    gpa DECIMAL(3,2),
13    enrollment_date DATE DEFAULT (CURRENT_DATE)
14 );
15
  
```

Two callout boxes are present: 'Execute All Statements' pointing to the lightning bolt icon in the toolbar, and 'Execute Current Statement' pointing to the play icon in the toolbar. A third callout box at the bottom says 'CREATE TABLE student_info as shown above'.

MySQL WorkBench (Mac/Windows)

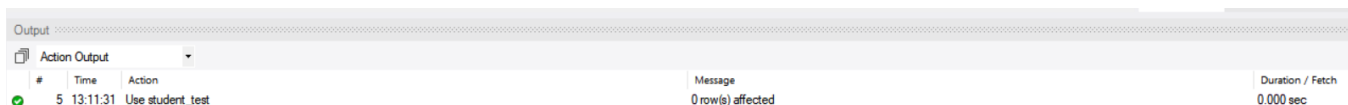
Execute All Statements



The screenshot shows the MySQL Workbench SQL editor. The toolbar at the top includes icons for file operations, execution (a lightning bolt icon), and other utilities. A dropdown menu is set to "Limit to 1000 rows". The SQL editor contains the following code:

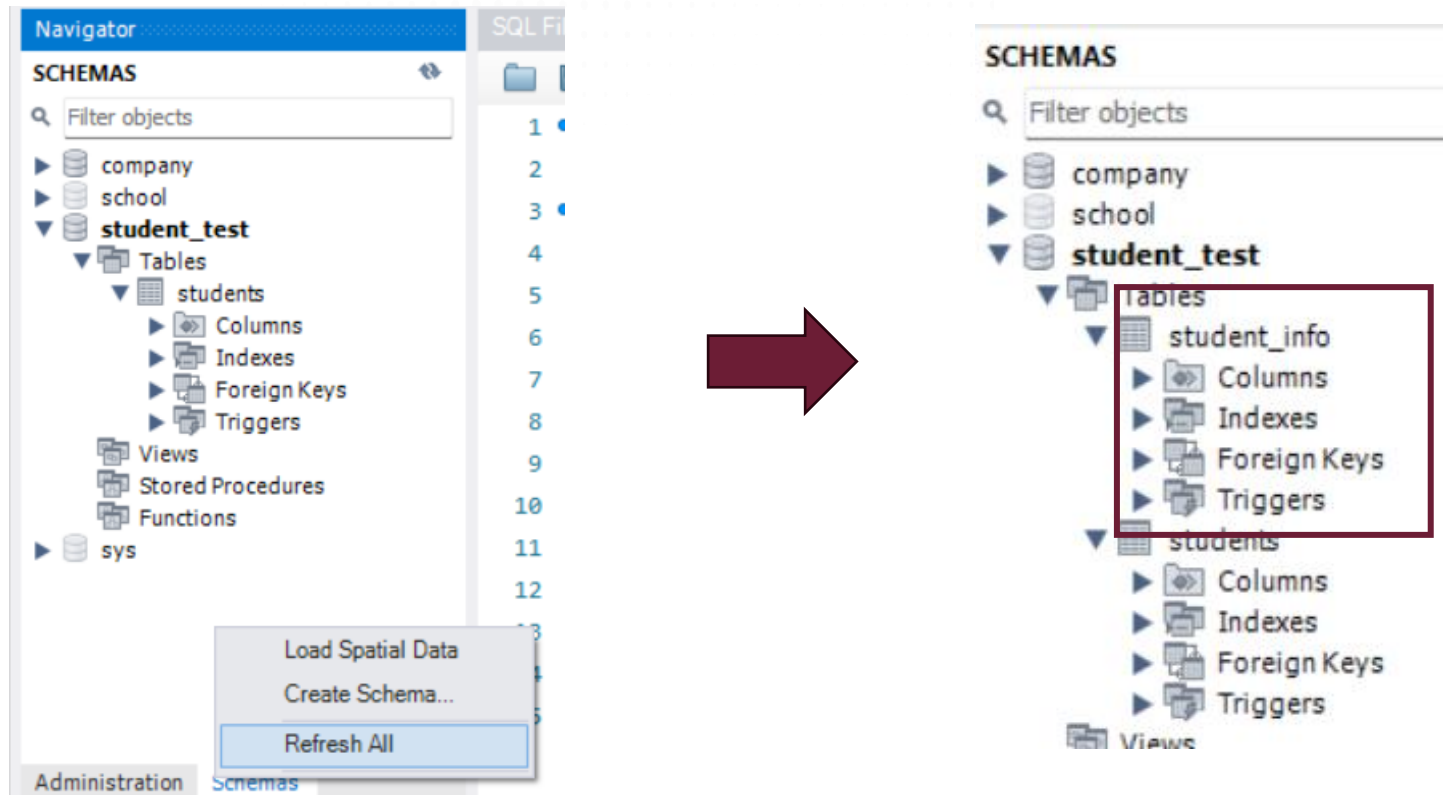
```
1 • Use student_test;
2
3 • CREATE TABLE student_info (
4     student_id INT PRIMARY KEY AUTO_INCREMENT,
5     first_name VARCHAR(30) NOT NULL,
6     last_name VARCHAR(30) NOT NULL,
7     gender ENUM('Male', 'Female', 'Other') NOT NULL,
8     date_of_birth DATE,
9     email VARCHAR(50) UNIQUE,
10    phone VARCHAR(15),
11    course VARCHAR(50),
12    gpa DECIMAL(3,2),
13    enrollment_date DATE DEFAULT (CURRENT_DATE)
14 );
15
```

Make sure action output green in color



The screenshot shows the Output window with the "Action Output" tab selected. It displays a single row of execution results for the "Use student_test" statement.

#	Time	Action	Message	Duration / Fetch
✓ 5	13:11:31	Use student_test	0 row(s) affected	0.000 sec



Right Click and Refresh All to view the updated Tables

Other resources

- You may also refer to following link for reference on installing MySQL:
- <https://www.youtube.com/watch?v=05-C-vHN8p4> (Windows)
- <https://www.youtube.com/watch?v=wpGnJHb2R58&t=336s> (Mac)
- <https://zarkomaslaric.notion.site/Zarko-s-Video-Tutorial-MySQL-Installation-on-Mac-14cfe1ebfde2804c933fecff0e02ca51> (Mac)

(For the provided link for Mac IGNORE the installation of Dbeaver. For this course, you are only required to install MySQL Workbench and MySQL Shell).

THANK YOU



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