

Development Environment Set-Up

This document contains the steps that you need to follow to install MySQL and Node.js. These software will be used later to develop the back end and front end of web applications.

macOS

MySQL

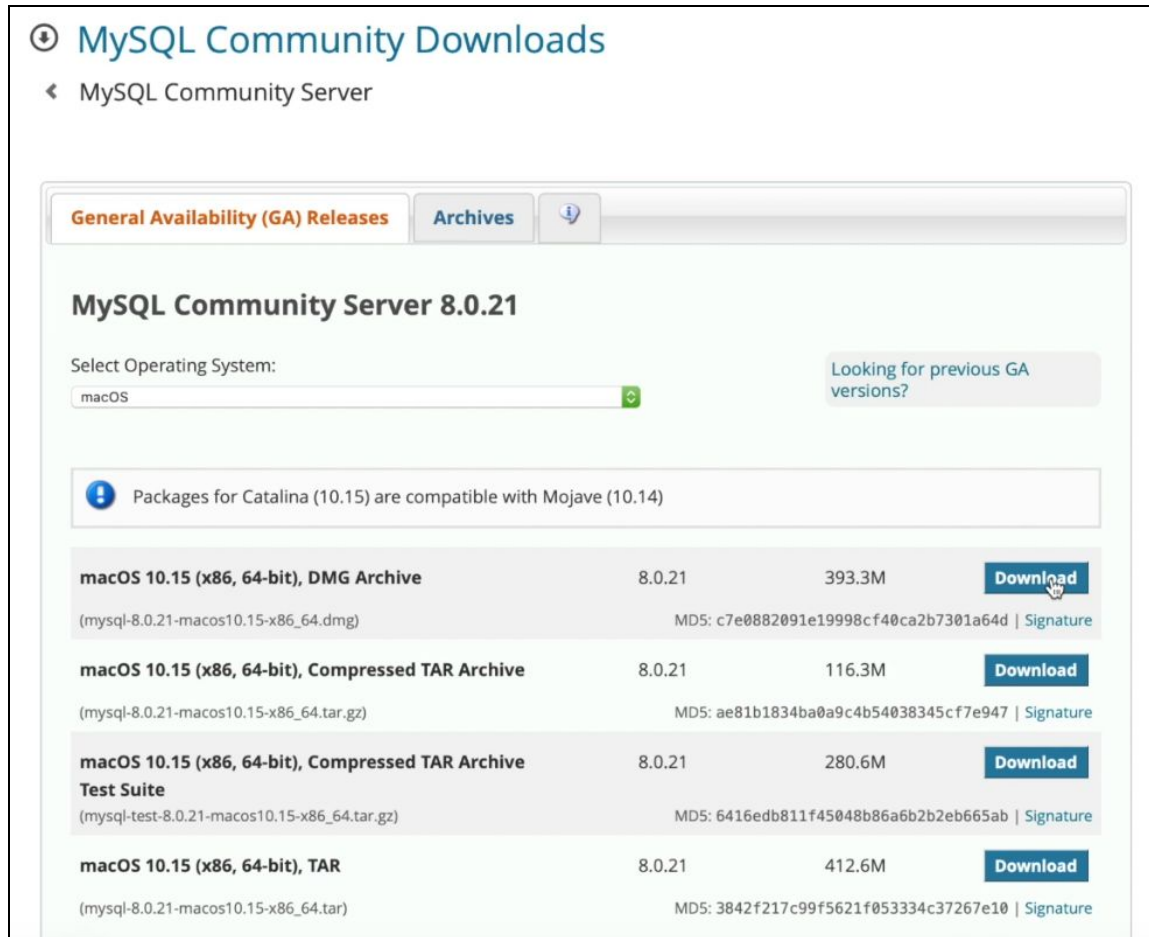
Step 1: Go to [this](#) link to download the MySQL installers.

Step 2: Click on 'MySQL Community Server'.

MySQL Community Downloads

- MySQL Yum Repository
- MySQL APT Repository
- MySQL SUSE Repository
- MySQL Community Server
- MySQL Cluster
- MySQL Router
- MySQL Shell
- MySQL Workbench
- MySQL Installer for Windows
- MySQL for Excel
- MySQL for Visual Studio
- MySQL Notifier
- C API (libmysqlclient)
- Connector/C++
- Connector/J
- Connector/NET
- Connector/Node.js
- Connector/ODBC
- Connector/Python
- MySQL Native Driver for PHP
- MySQL Benchmark Tool
- Time zone description tables
- Download Archives

Step 3: Click the 'Download' button to download the 'DMG Archive' file.



MySQL Community Downloads

MySQL Community Server

General Availability (GA) Releases Archives

MySQL Community Server 8.0.21

Select Operating System:

macOS

Looking for previous GA versions?

ⓘ Packages for Catalina (10.15) are compatible with Mojave (10.14)

Package Name	Version	Size	Action
macOS 10.15 (x86, 64-bit), DMG Archive (mysql-8.0.21-macos10.15-x86_64.dmg)	8.0.21	393.3M	Download
macOS 10.15 (x86, 64-bit), Compressed TAR Archive (mysql-8.0.21-macos10.15-x86_64.tar.gz)	8.0.21	116.3M	Download
macOS 10.15 (x86, 64-bit), Compressed TAR Archive Test Suite (mysql-test-8.0.21-macos10.15-x86_64.tar.gz)	8.0.21	280.6M	Download
macOS 10.15 (x86, 64-bit), TAR (mysql-8.0.21-macos10.15-x86_64.tar)	8.0.21	412.6M	Download

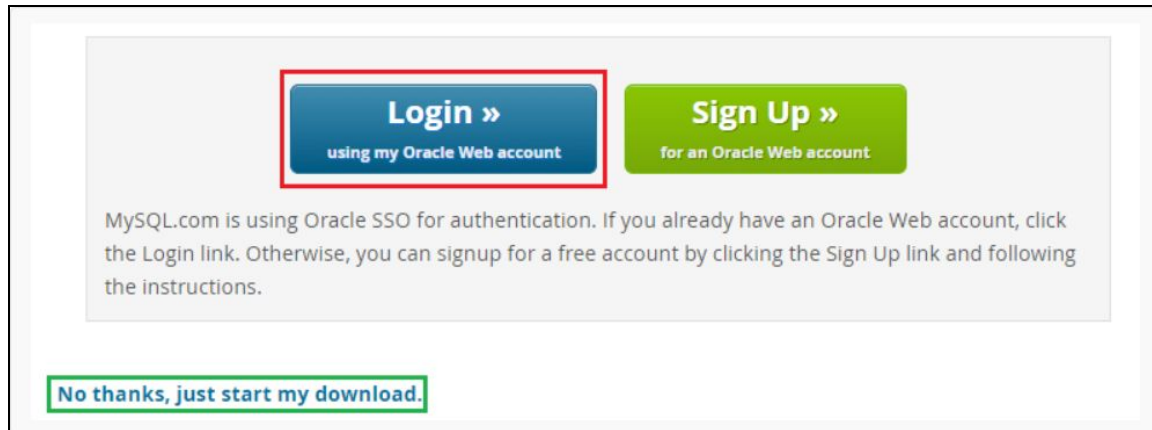
MD5: c7e0882091e19998cf40ca2b7301a64d | [Signature](#)

MD5: ae81b1834ba0a9c4b54038345cf7e947 | [Signature](#)

MD5: 6416edb811f45048b86a6b2b2eb665ab | [Signature](#)

MD5: 3842f217c99f5621f053334c37267e10 | [Signature](#)

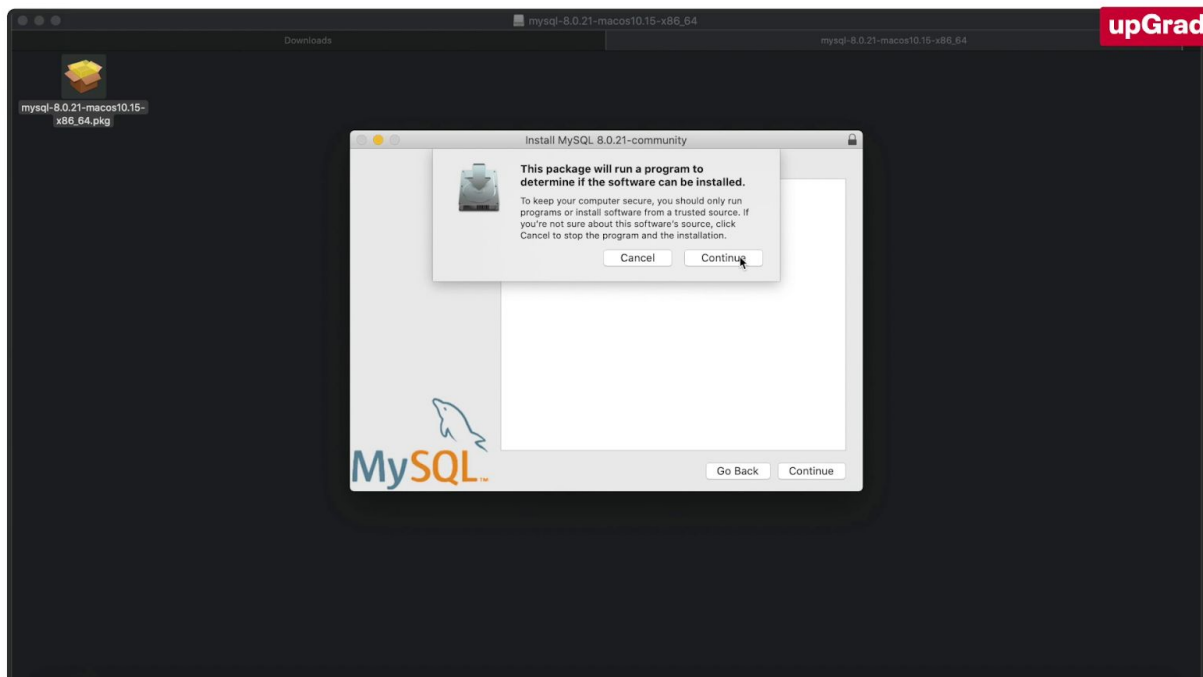
Step 4: It will ask you to log in with your Oracle account. You can either log in or click on 'No thanks, just start my download'.



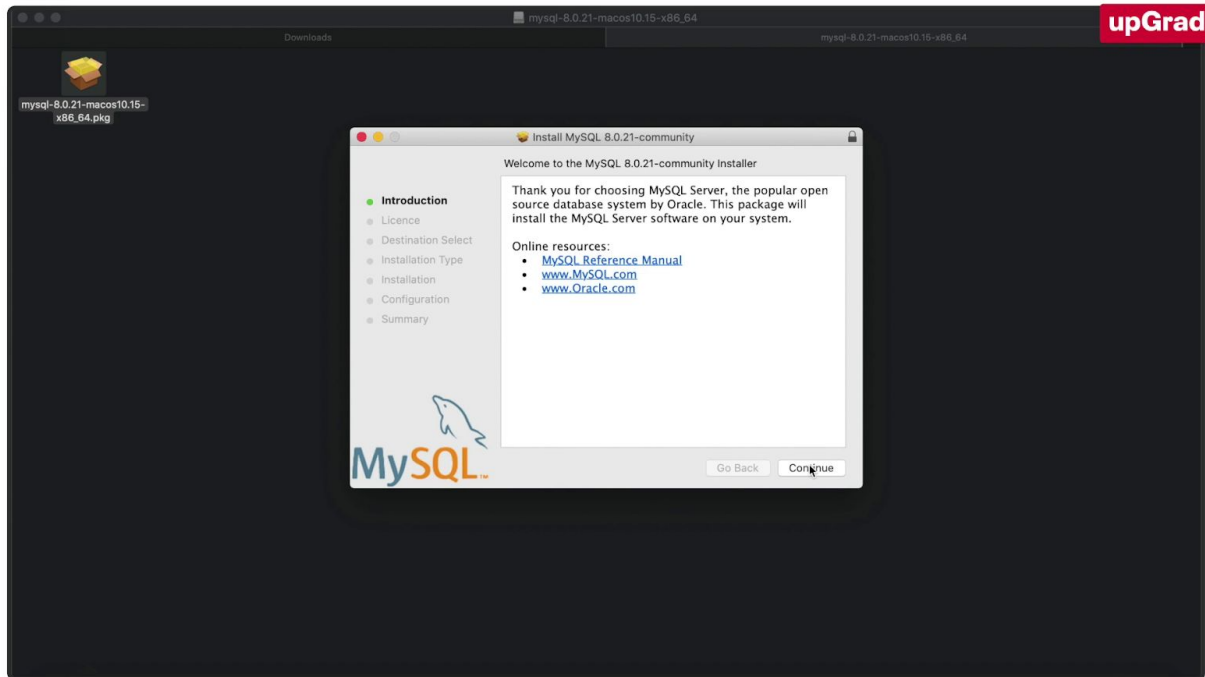
Step 5: Repeat steps 1–4 to download 'MySQL Workbench'.

Step 6: Double click on the downloaded .dmg file for MySQL Community Server. Once it opens, double click on the .pkg file to begin the installation.

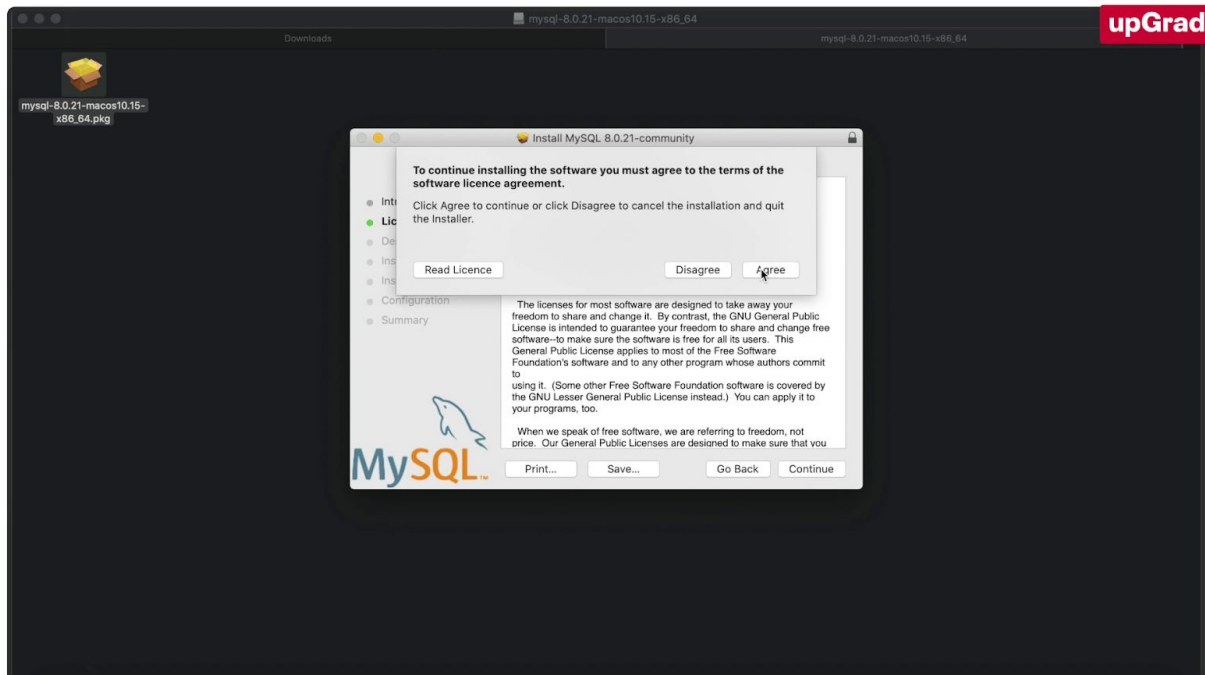
Step 7: Click 'Continue'.



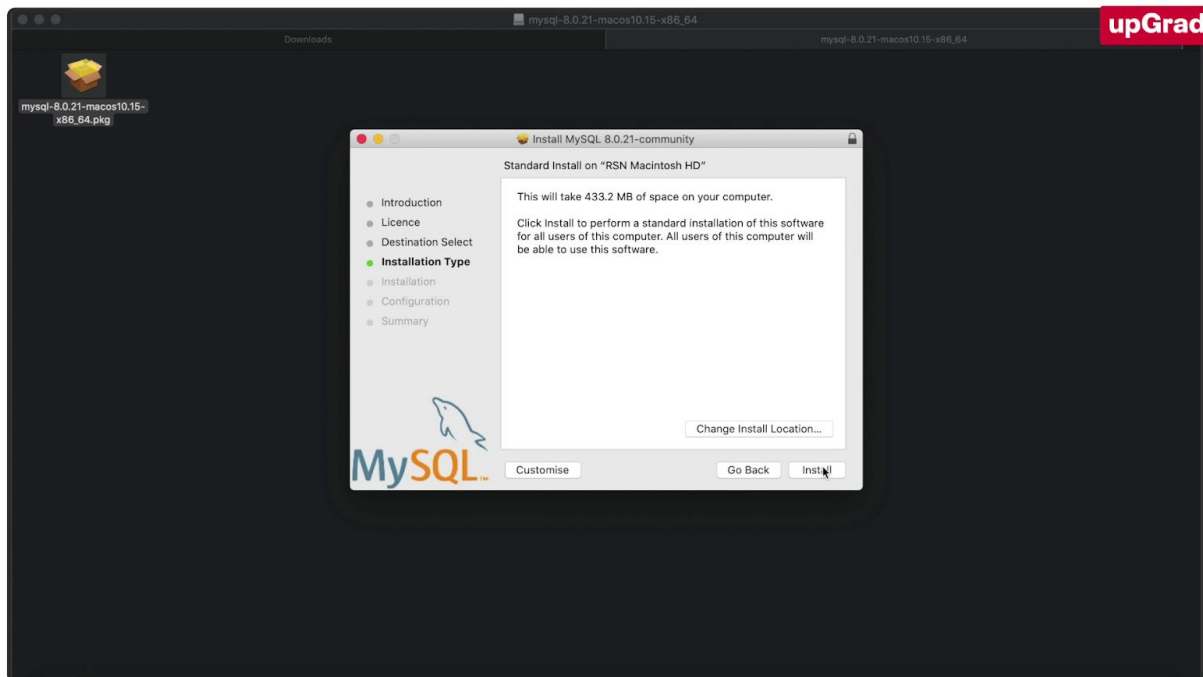
Step 8: Click 'Continue'.



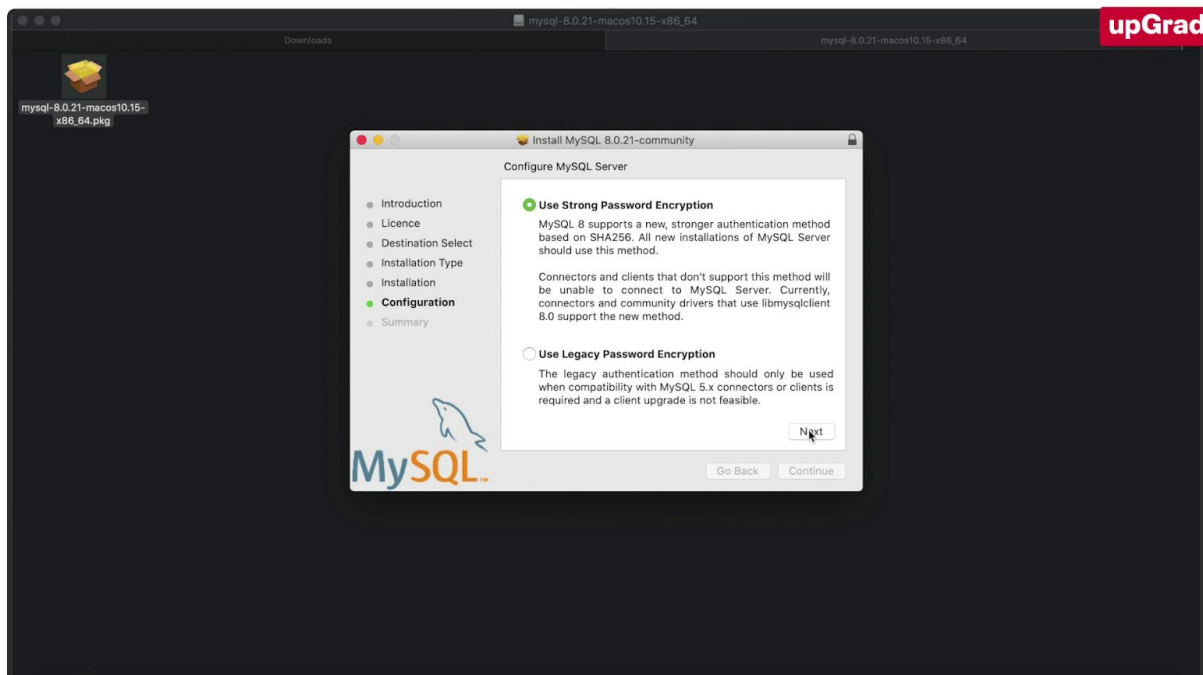
Step 9: Click 'Agree'.



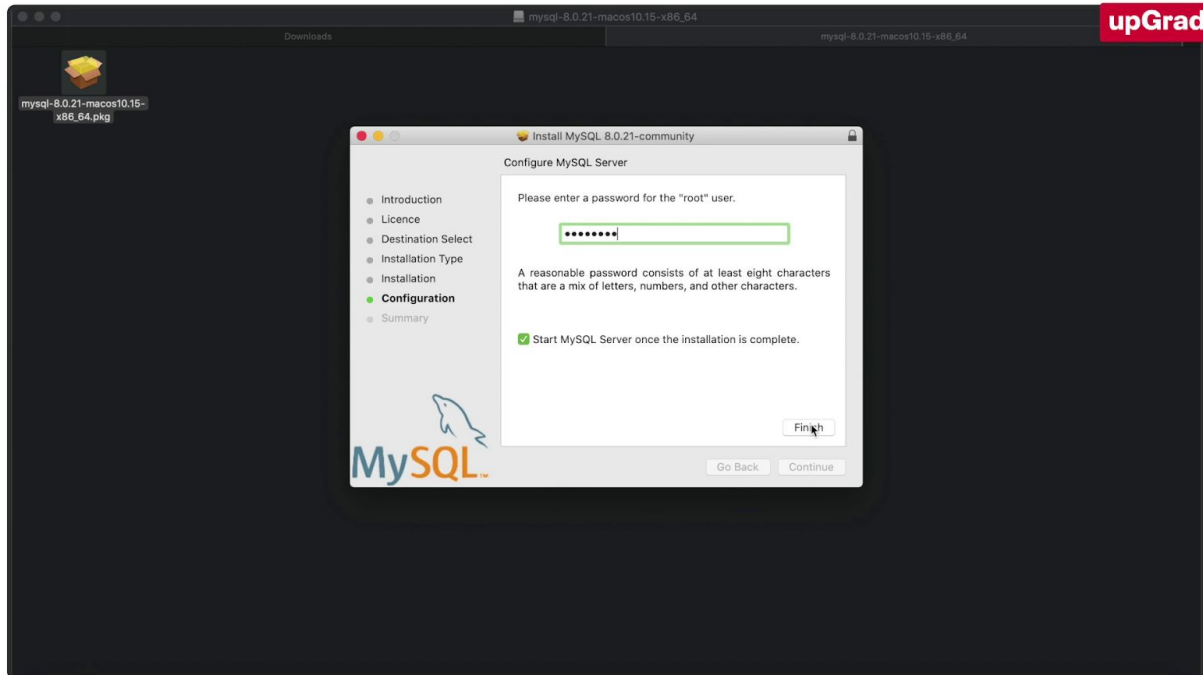
Step 10: Click 'Install' (You will be asked to enter your Mac password.).



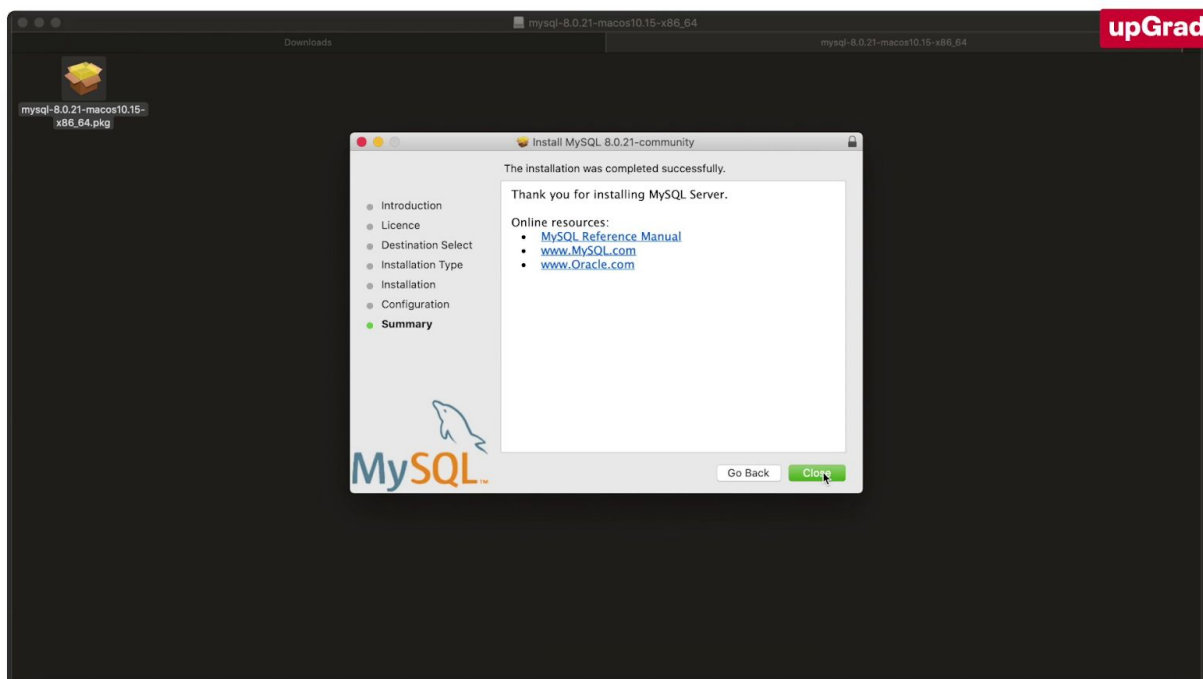
Step 11: Click on 'Next'.



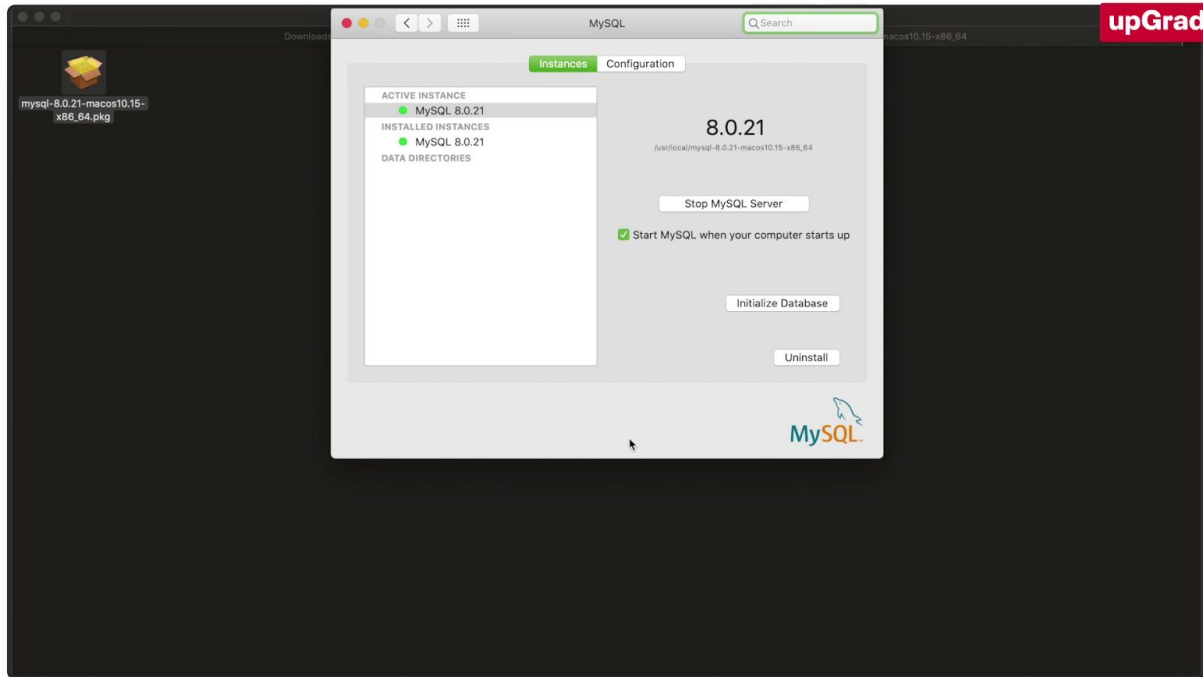
Step 12: Enter a password and remember it, as you will need it later. Click 'Finish' (You will be asked to enter your Mac password.).



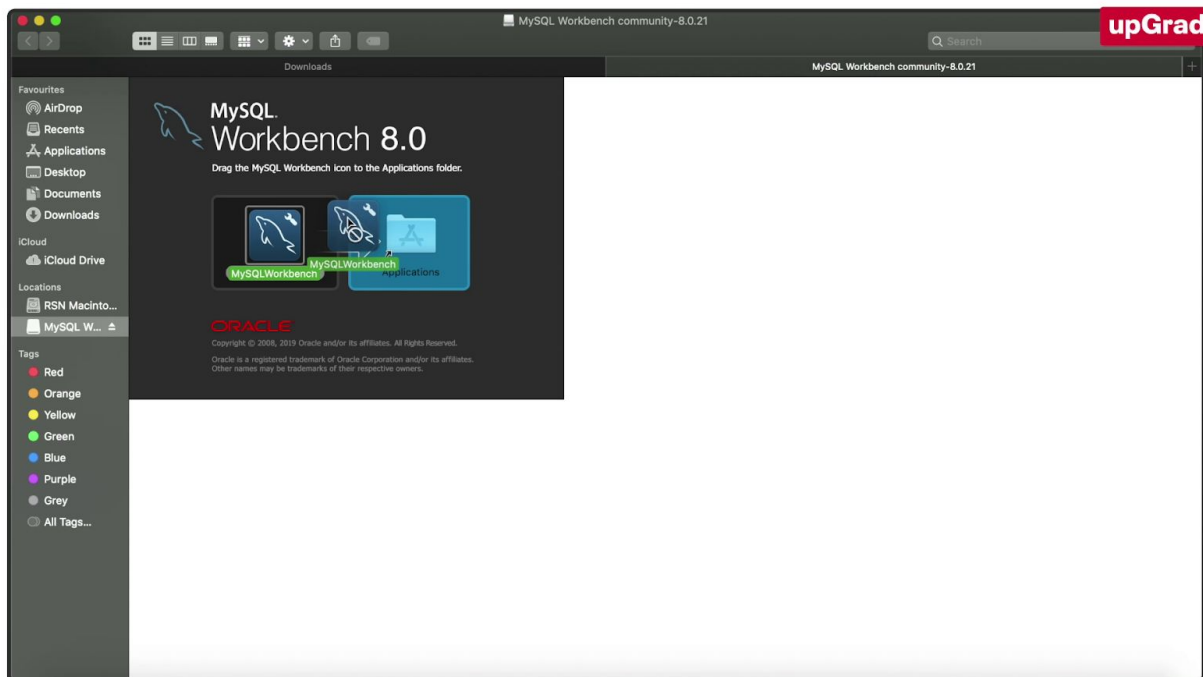
Step 13: Click 'Close'.



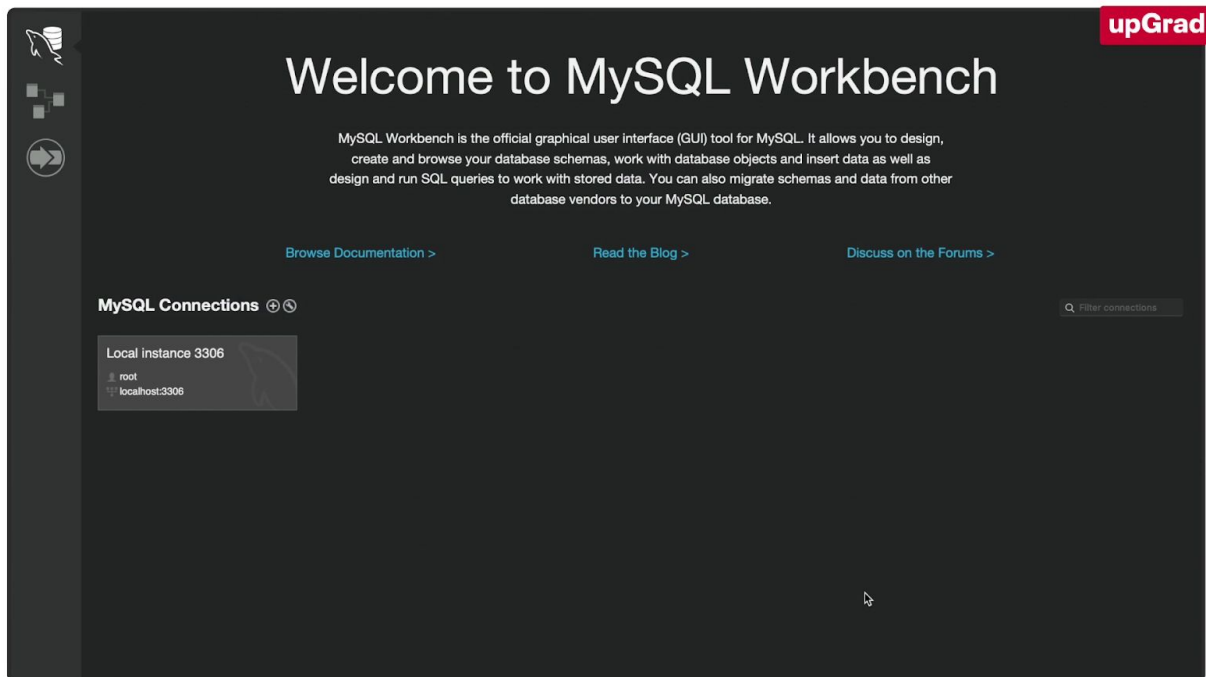
Step 14: You will find 'MySQL' at the bottom of your settings pane. Click on it to open it. You will see the following page after opening it.



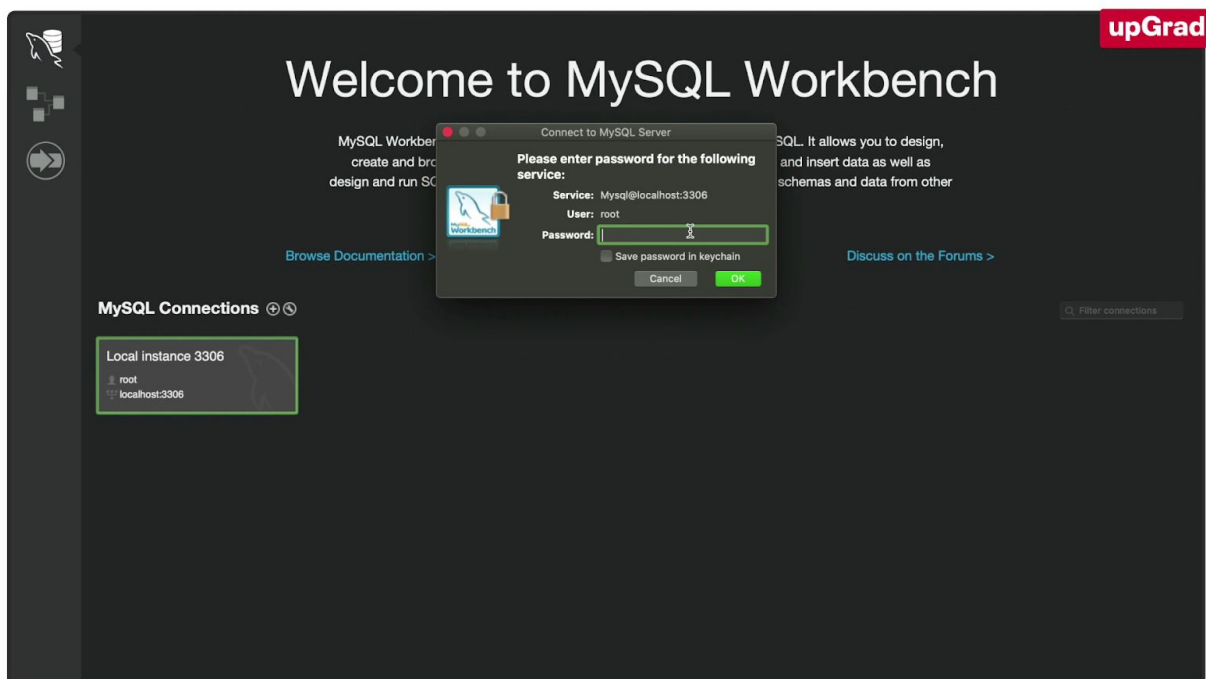
Step 15: Next, you need to install 'MySQL Workbench'. Double click on the .dmg file for 'MySQL Workbench' and drag the 'MySQL Workbench' icon to the 'Applications' folder.



Step 16: When you open 'MySQL Workbench', you will see the following page.



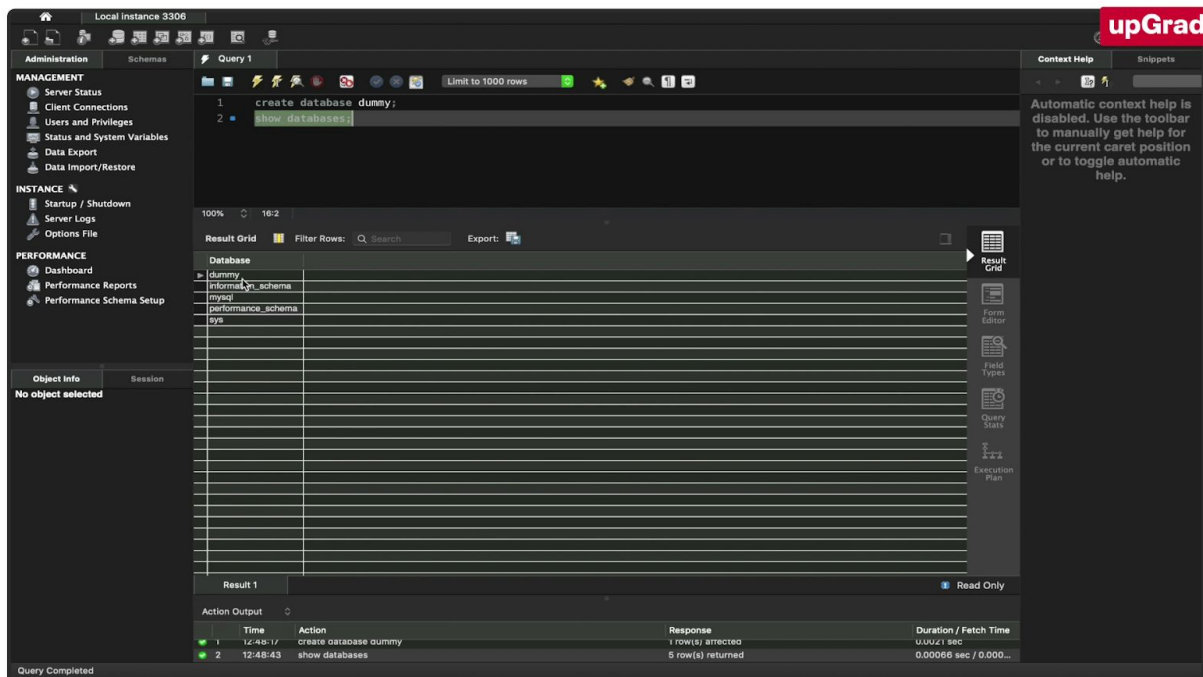
Step 17: Double click on 'Local Instance' and enter your MySQL password (that you set in Step 12).



Step 18: In order to check whether the MySQL installation has happened properly, let's create a dummy database and check whether it gets created. To do so, execute the following commands in MySQL Workbench.

```
create database dummy;  
show databases;
```

You will see that a database named 'dummy' gets created.



The screenshot shows the MySQL Workbench interface for 'Local instance 3306'. The left sidebar contains navigation menus for 'MANAGEMENT', 'INSTANCE', and 'PERFORMANCE'. The central 'Query Editor' displays two SQL queries: 'create database dummy;' and 'show databases;'. Below the editor, the 'Result Grid' shows the output of the 'show databases;' query, listing five databases: 'dummy', 'information_schema', 'mysql', 'performance_schema', and 'sys'. The 'dummy' database is highlighted. At the bottom, the 'Action Output' pane shows a log of the executed queries and their results.

Time	Action	Response	Duration / Fetch Time
12:48:17	create database dummy	1 row(s) affected	0.00021 sec
12:48:43	show databases	5 row(s) returned	0.00066 sec / 0.000...

Query Completed

Node.js

Step 1: Go to [this](#) link to download the Node.js installer.

Step 2: Click on the 'macOS Installer (.pkg)' option.

upGrad

nodejs

HOME | ABOUT | DOWNLOADS | DOCS | GET INVOLVED | SECURITY | CERTIFICATION | NEWS

Downloads

Latest LTS Version: 12.18.3 (includes npm 6.14.6)

Download the Node.js source code or a pre-built installer for your platform, and start developing today.

LTS

Recommended For Most Users

Windows Installer

node-v12.18.3-x86.msi

macOS Installer

node-v12.18.3.pkg

Source Code

node-v12.18.3.tar.gz

Current

Latest Features

Windows Installer

node-v12.18.3-x86.msi

macOS Installer

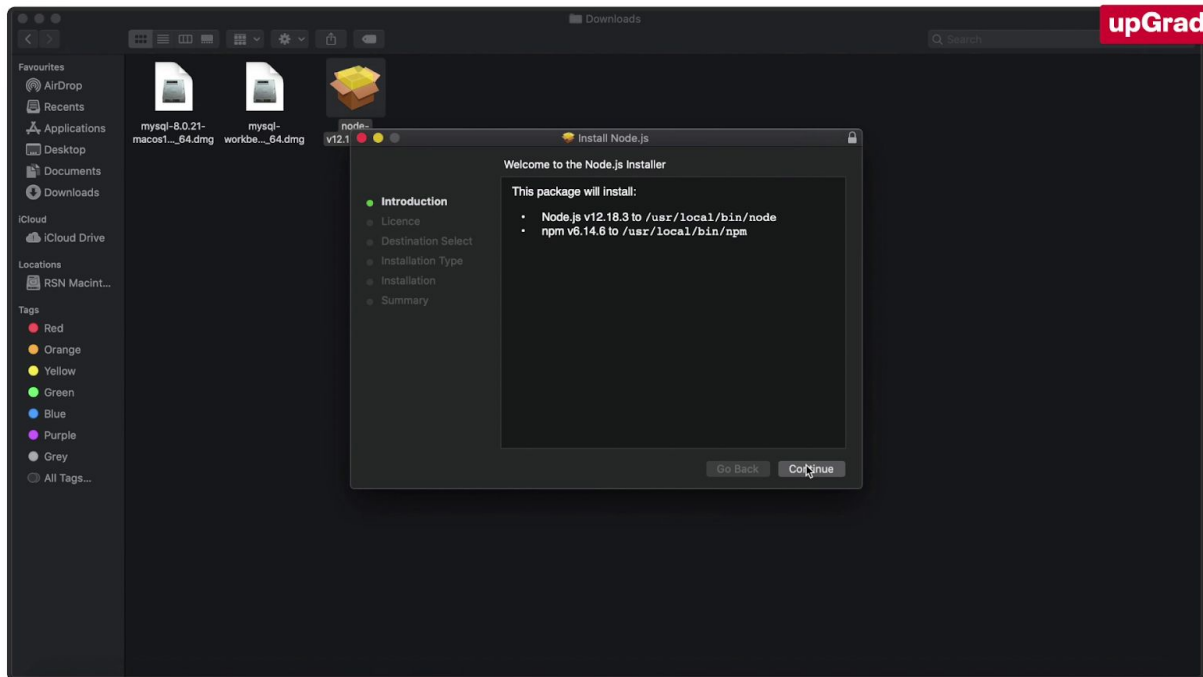
node-v12.18.3.pkg

Source Code

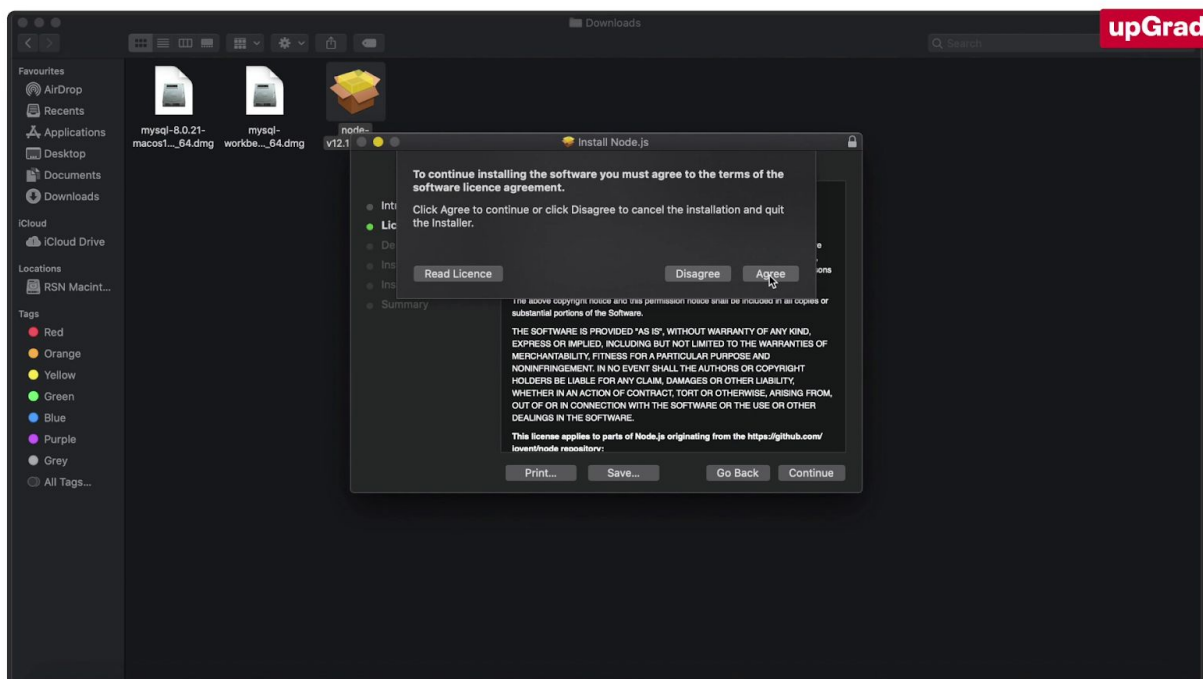
node-v12.18.3.tar.gz

32-bit	64-bit
32-bit	64-bit
64-bit	
64-bit	
64-bit	
ARMv7	ARMv8
node-v12.18.3.tar.gz	

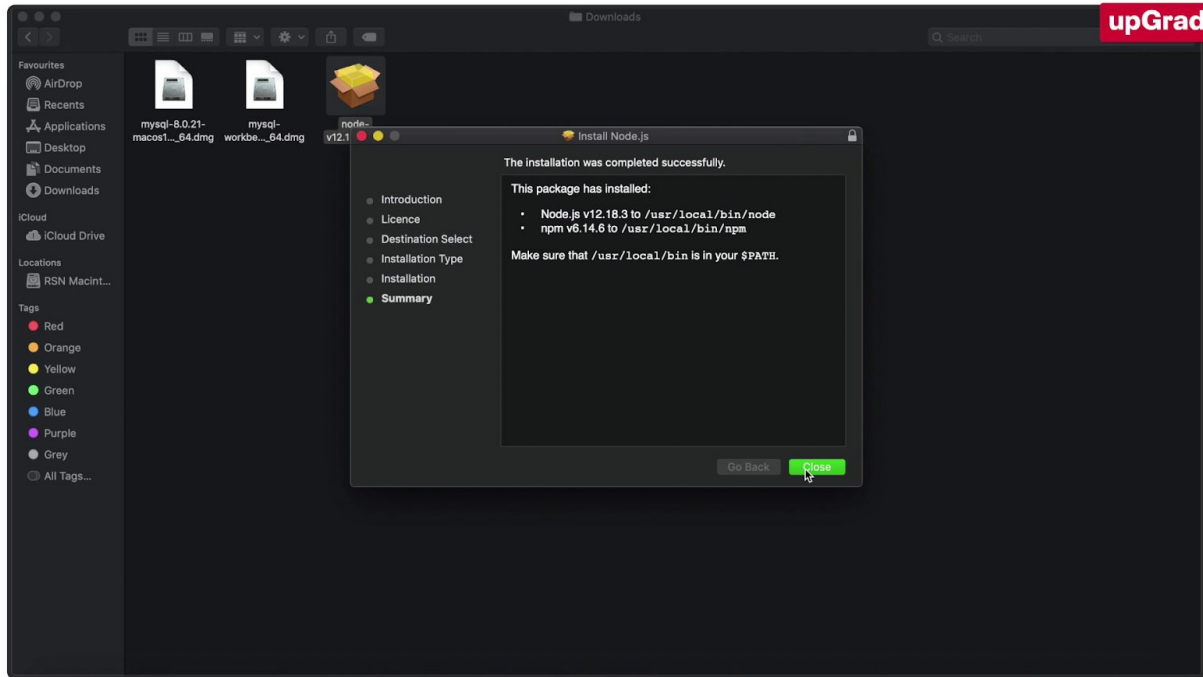
Step 3: Click 'Continue'.



Step 4: Click 'Agree'.

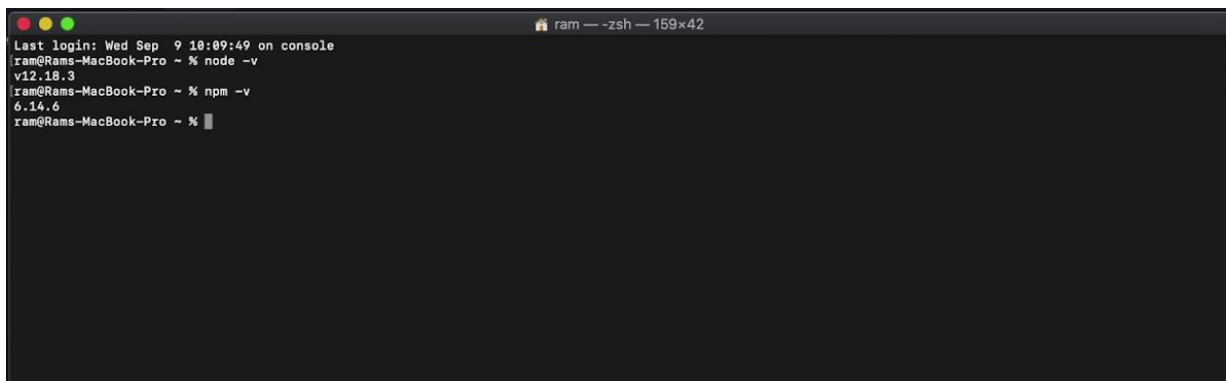


Step 5: Click 'Close'.



Step 6: To confirm that Node.js was installed on your system, run the following command in your command line and check whether you are getting an output similar to the one shown in the following snapshot.

```
node -v  
npm -v
```



Windows

MySQL

Step 1: Go to [this](#) link to download the MySQL installer.

Step 2: Click on 'MySQL Installer for Windows'.

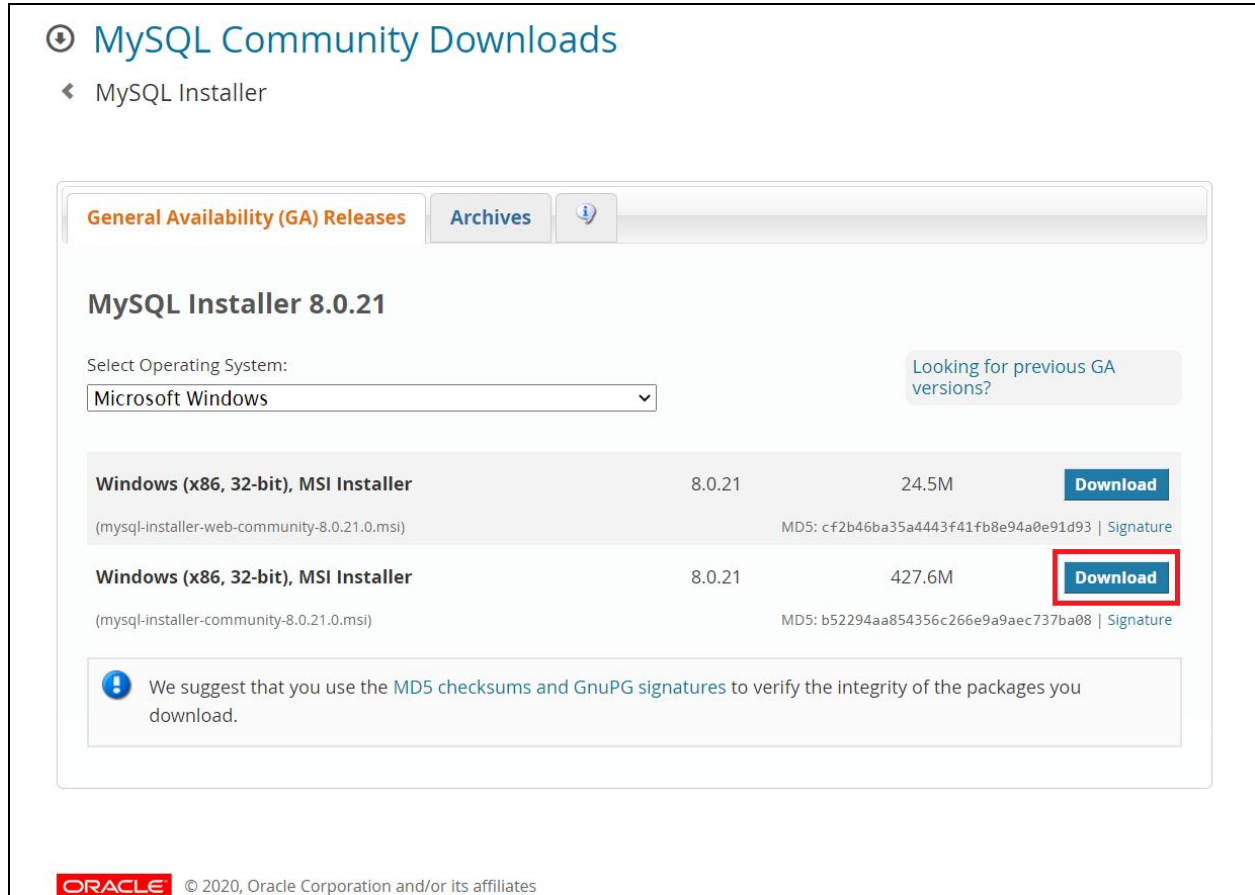
MySQL Community Downloads

- MySQL Yum Repository
- MySQL APT Repository
- MySQL SUSE Repository
- MySQL Community Server
- MySQL Cluster
- MySQL Router
- MySQL Shell
- MySQL Workbench
- MySQL Installer for Windows
- MySQL for Excel
- MySQL for Visual Studio
- MySQL Notifier
- C API (libmysqlclient)
- Connector/C++
- Connector/J
- Connector/NET
- Connector/Node.js
- Connector/ODBC
- Connector/Python
- MySQL Native Driver for PHP
- MySQL Benchmark Tool
- Time zone description tables
- Download Archives

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Step 3: You will see two different installers. One is a web community installer, which comes as a small file and the other is MySQL installer community. Click the 'Download' button on the second installer (mysql-installer-community).

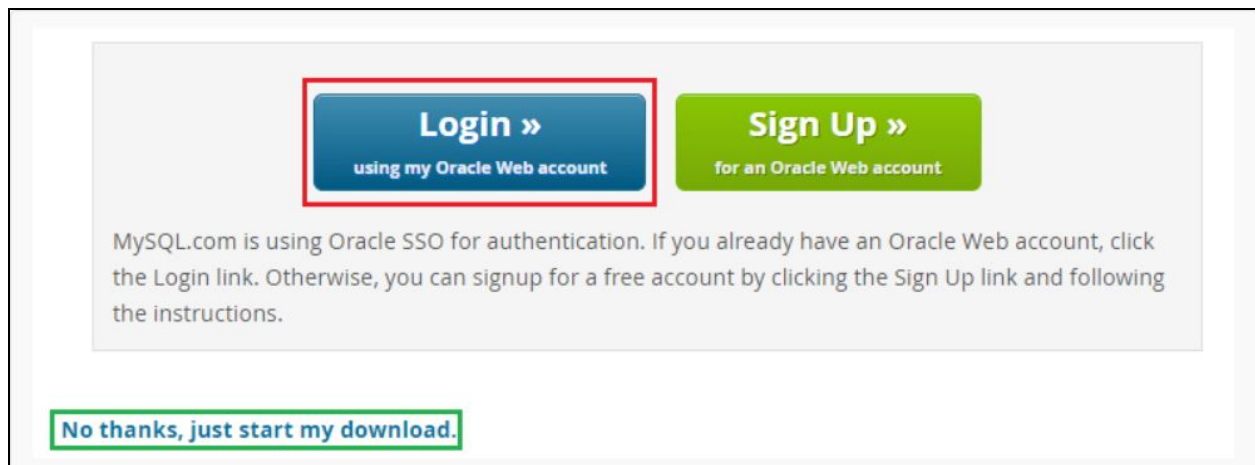


The screenshot shows the 'MySQL Community Downloads' page. It features a breadcrumb trail 'MySQL Installer' and tabs for 'General Availability (GA) Releases' and 'Archives'. Under 'MySQL Installer 8.0.21', there is a dropdown for 'Select Operating System' set to 'Microsoft Windows'. A table lists two installers:

Operating System	Version	Size	Action
Windows (x86, 32-bit), MSI Installer (mysql-installer-web-community-8.0.21.0.msi)	8.0.21	24.5M	Download
Windows (x86, 32-bit), MSI Installer (mysql-installer-community-8.0.21.0.msi)	8.0.21	427.6M	Download

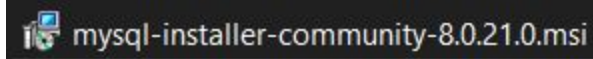
Below the table, a message states: 'We suggest that you use the MD5 checksums and GnuPG signatures to verify the integrity of the packages you download.' The footer includes the Oracle logo and copyright notice: '© 2020, Oracle Corporation and/or its affiliates'.

Step 4: It will ask you to log in with your Oracle account. You can either log in or click on 'No thanks, just start my download'.



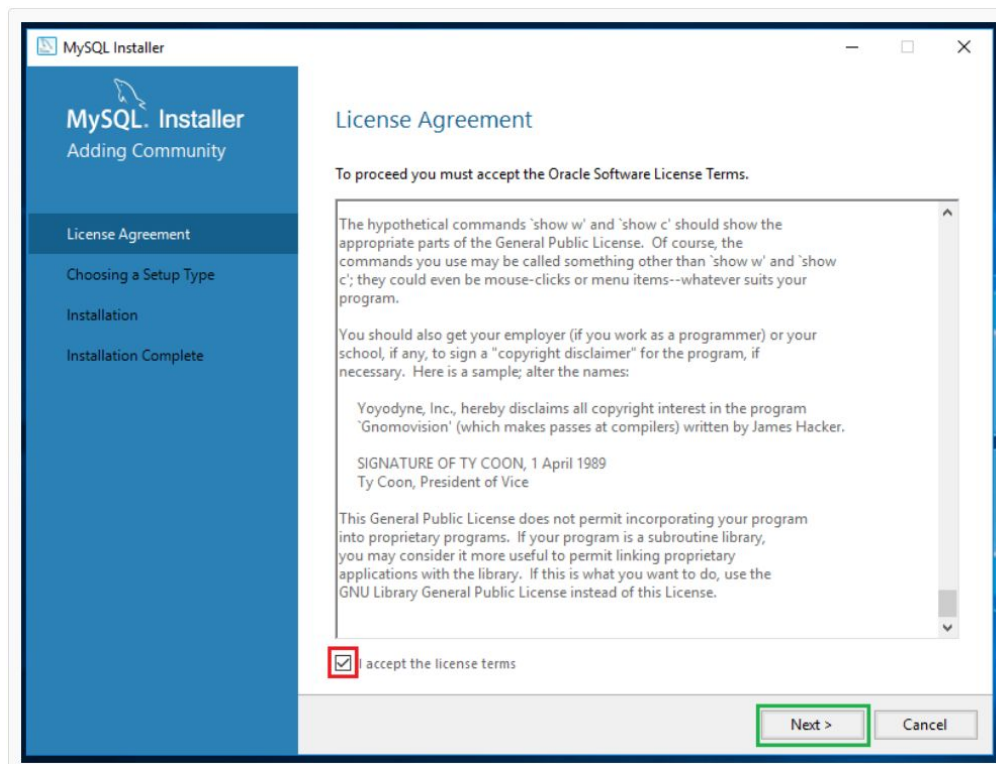
The screenshot shows the MySQL authentication screen. It features two buttons: 'Login » using my Oracle Web account' and 'Sign Up » for an Oracle Web account'. Below the buttons, a message states: 'MySQL.com is using Oracle SSO for authentication. If you already have an Oracle Web account, click the Login link. Otherwise, you can signup for a free account by clicking the Sign Up link and following the instructions.' At the bottom, there is a link: 'No thanks, just start my download.'

Step 5: Double click on the downloaded .msi file to start the installation.

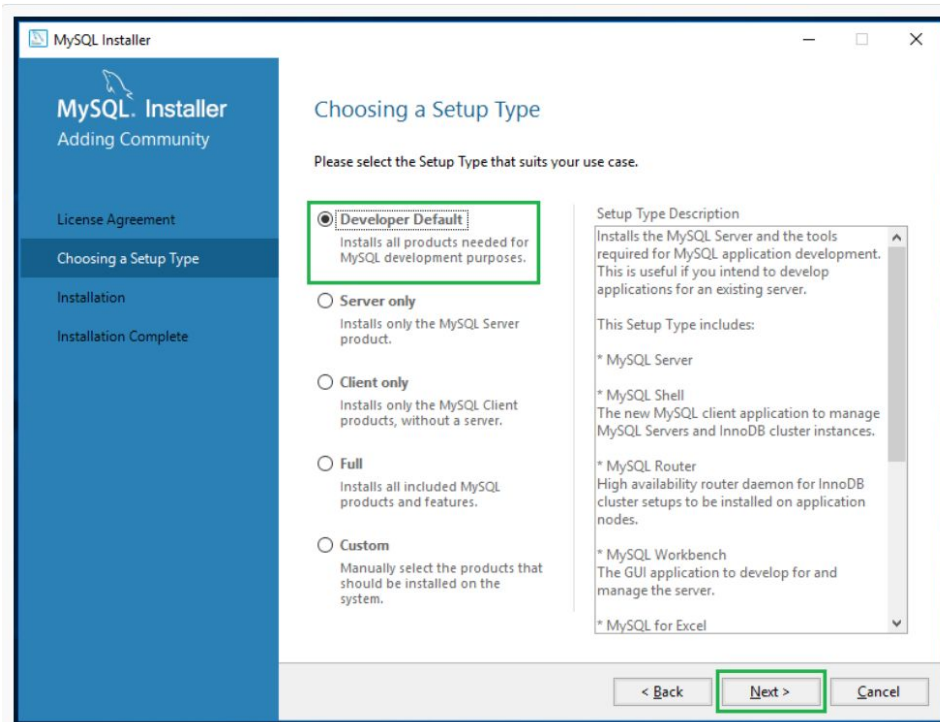


It may ask for permissions to change your computer settings or firewall confirmation. You can accept them.

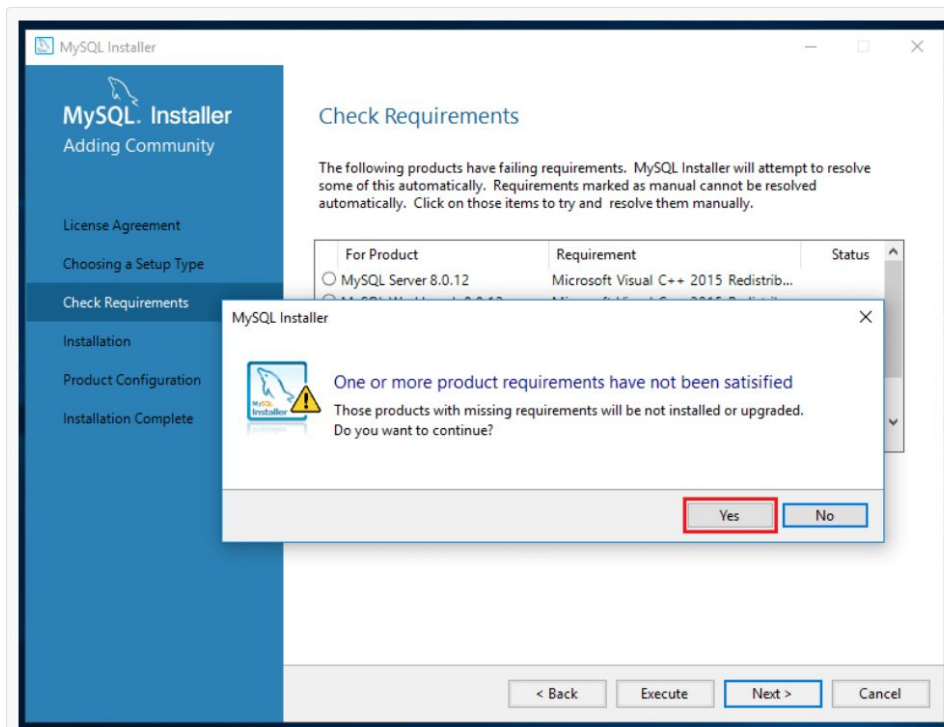
Step 6: Read the license agreement and accept the license terms.



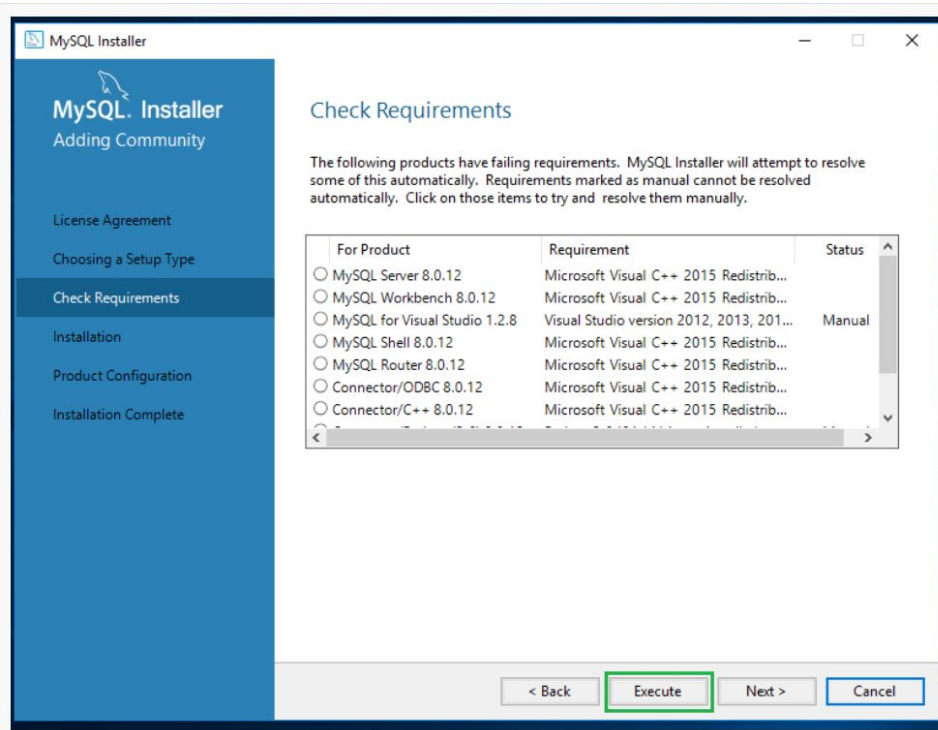
Step 7: Select 'Developer Default' and click on 'Next'.



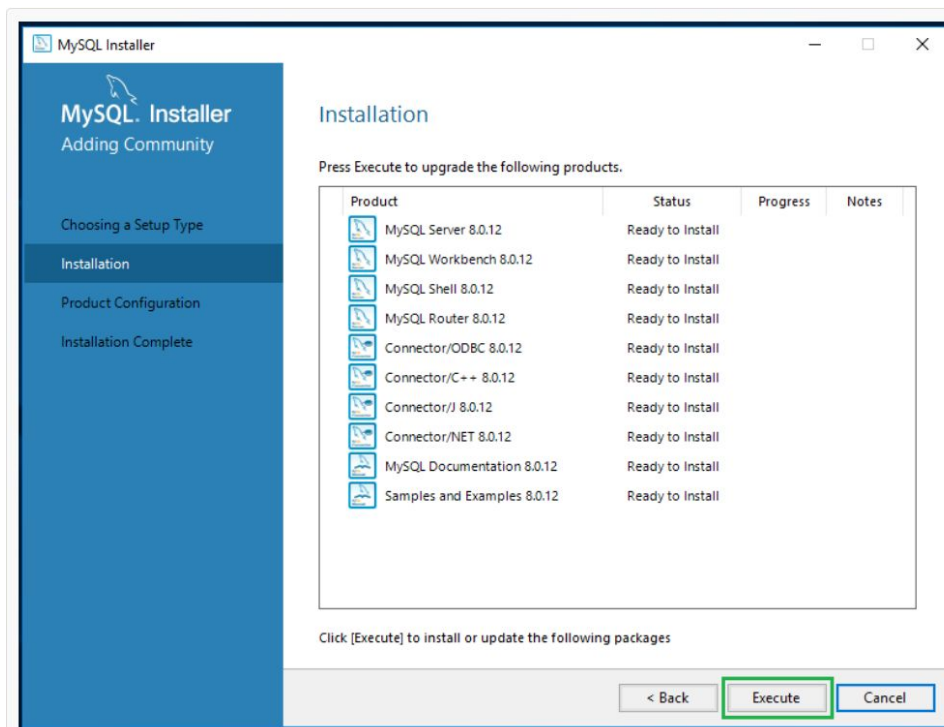
Step 8: You may get a prompt such as 'One or more product requirements have not been satisfied'. You can simply click on 'Yes'.



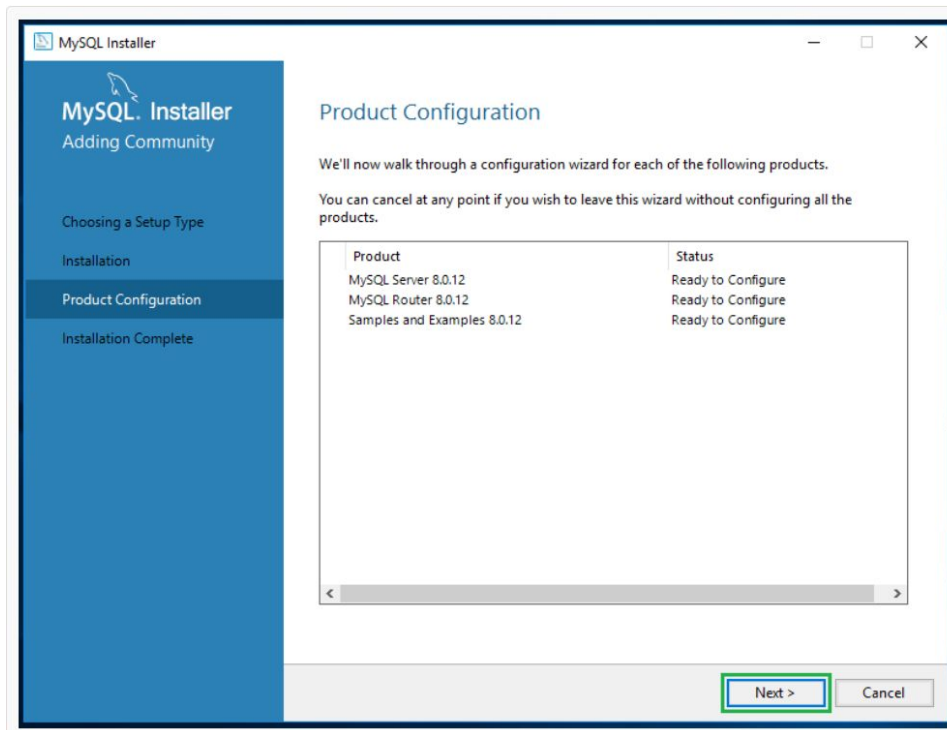
Step 9: Click on 'Execute'.



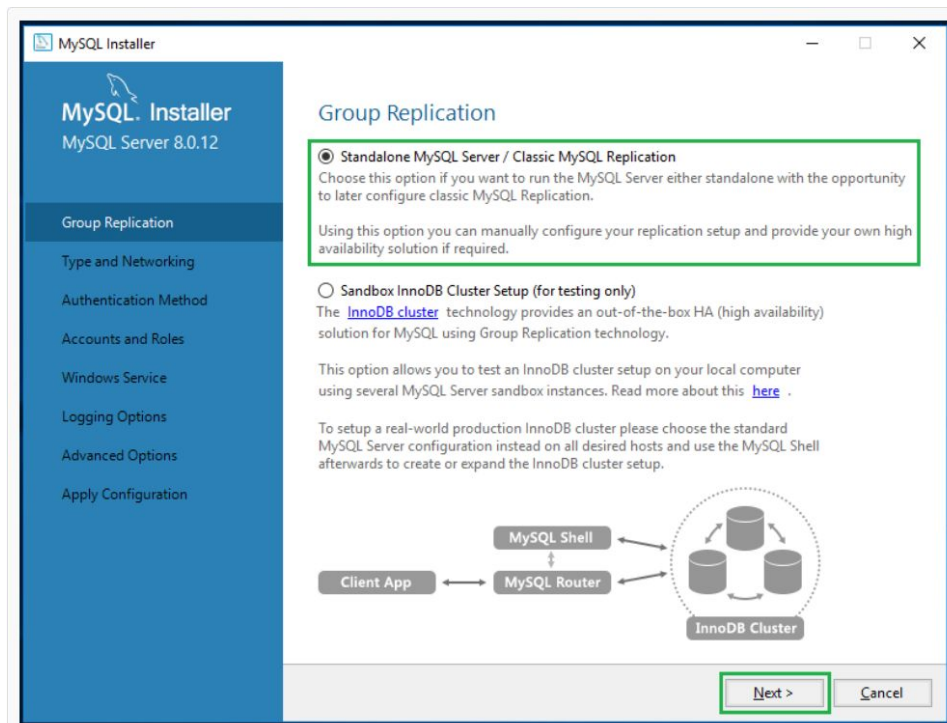
Step 10: Click on 'Execute'.



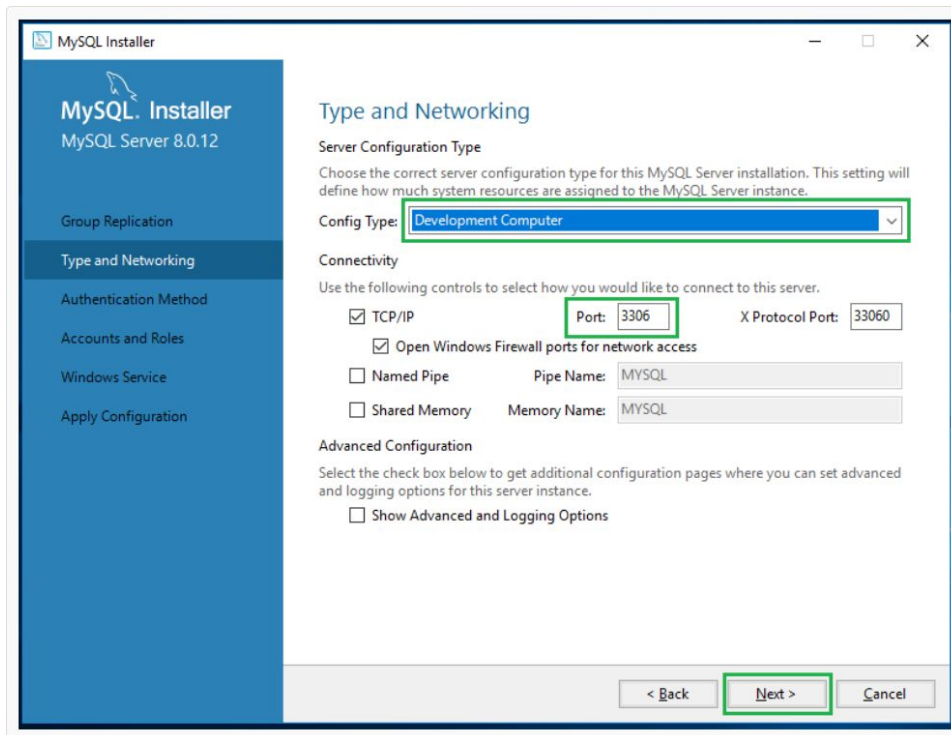
Step 11: Click on 'Next'.



Step 12: Select 'Standalone MySQL Server / Classic MySQL Replication' and click 'Next'.

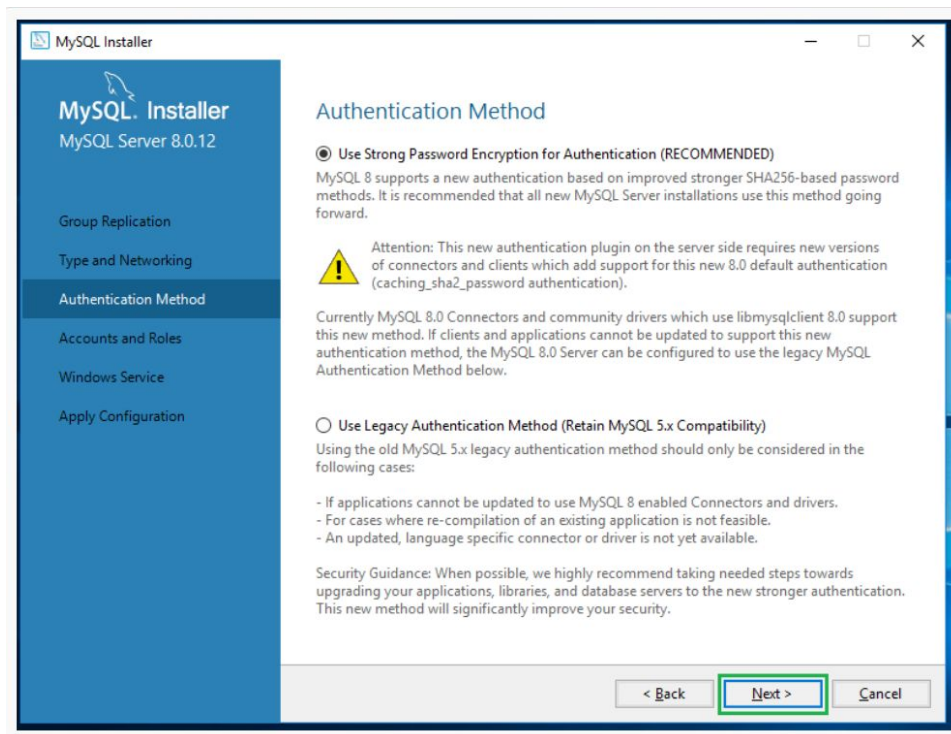


Step 13: Check whether Config Type is 'Development Computer' and Port is '3306'. Click 'Next'.



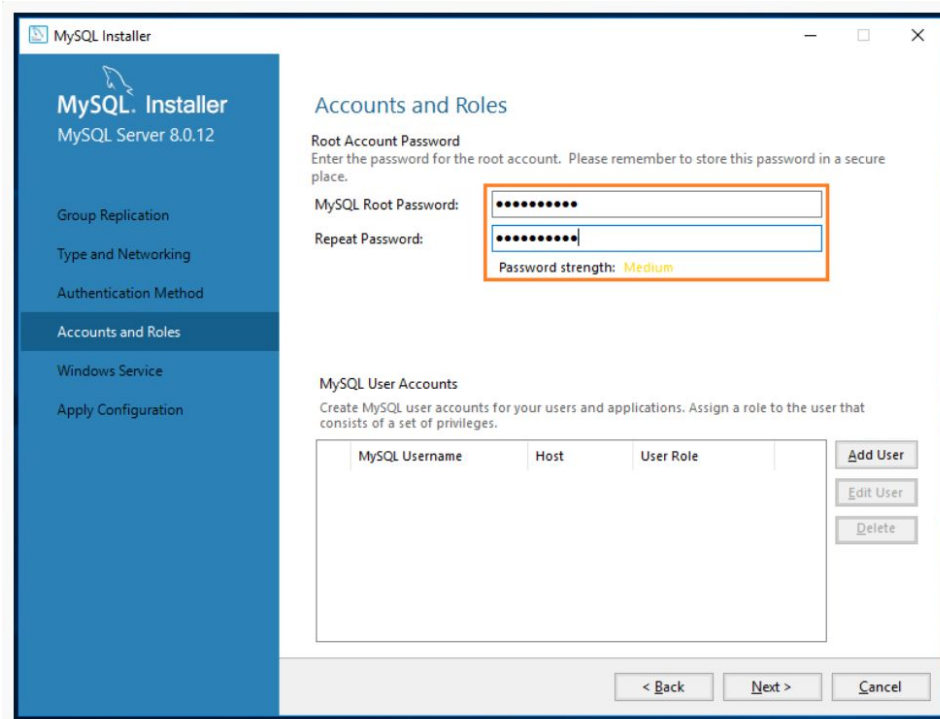
The screenshot shows the 'MySQL Installer' window for 'MySQL Server 8.0.12'. The left sidebar lists the installation steps: Group Replication, Type and Networking (selected), Authentication Method, Accounts and Roles, Windows Service, and Apply Configuration. The main area is titled 'Type and Networking'. Under 'Server Configuration Type', it says '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.' The 'Config Type' dropdown is set to 'Development Computer'. Under 'Connectivity', it says 'Use the following controls to select how you would like to connect to this server.' The 'TCP/IP' checkbox is checked. The 'Port' is set to '3306' and the 'X Protocol Port' is '33060'. The 'Open Windows Firewall ports for network access' checkbox is also checked. There are fields for 'Pipe Name' and 'Memory Name', both set to 'MYSQL'. Under 'Advanced Configuration', it says 'Select the check box below to get additional configuration pages where you can set advanced and logging options for this server instance.' The 'Show Advanced and Logging Options' checkbox is unchecked. At the bottom, there are buttons for '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a green box.

Step 14: Click 'Next'.



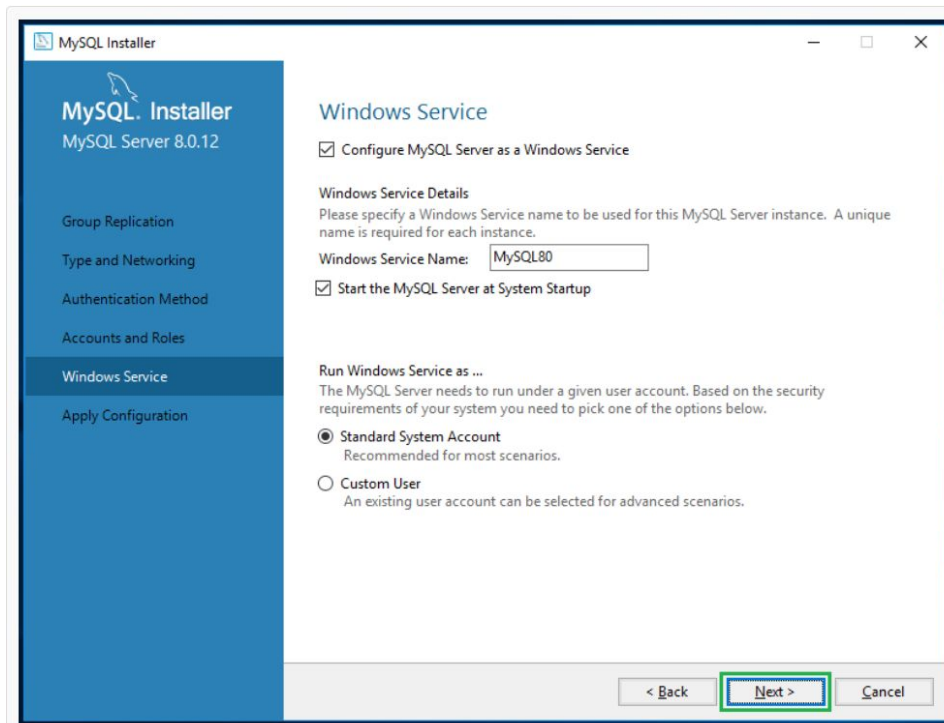
The screenshot shows the 'MySQL Installer' window for 'MySQL Server 8.0.12'. The left sidebar lists the installation steps: Group Replication, Type and Networking, Authentication Method (selected), Accounts and Roles, Windows Service, and Apply Configuration. The main area is titled 'Authentication Method'. It presents two options: 'Use Strong Password Encryption for Authentication (RECOMMENDED)' and 'Use Legacy Authentication Method (Retain MySQL 5.x Compatibility)'. The first option is selected. Below it, there is a warning icon and text: '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 (caching_sha2_password authentication).' It also states: '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.' The second option is 'Use Legacy Authentication Method (Retain MySQL 5.x Compatibility)'. Below it, it says 'Using the old MySQL 5.x legacy authentication method should only be considered in the following cases:' followed by a list of three bullet points: '- 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.', and '- An updated, language specific connector or driver is not yet available.' At the bottom, there are buttons for '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a green box.

Step 15: Enter a password and remember it, as you will need it later.



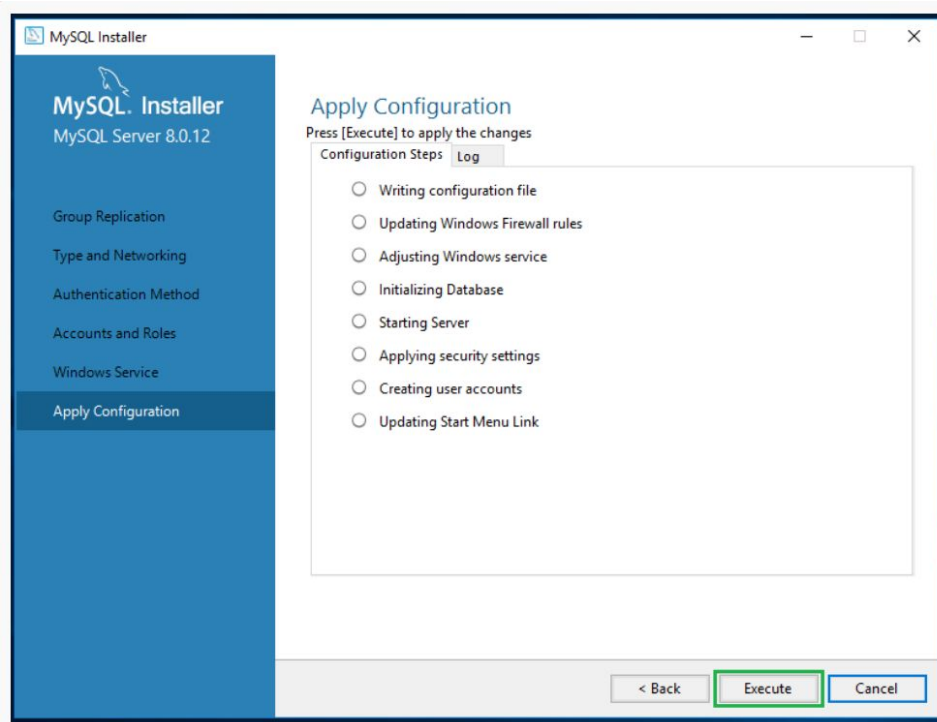
The screenshot shows the 'MySQL Installer' window for 'MySQL Server 8.0.12'. The left sidebar lists installation options: Group Replication, Type and Networking, Authentication Method, Accounts and Roles (selected), Windows Service, and Apply Configuration. The main area is titled 'Accounts and Roles'. It contains a 'Root Account Password' section with instructions to enter a password for the root account. There are two password input fields: 'MySQL Root Password:' and 'Repeat Password:'. Both fields contain masked characters (dots). Below these fields, it says 'Password strength: Medium'. At the bottom, there is a table for 'MySQL User Accounts' with columns 'MySQL Username', 'Host', and 'User Role'. To the right of the table are buttons for 'Add User', 'Edit User', and 'Delete'. At the bottom of the window are navigation buttons: '< Back', 'Next >', and 'Cancel'.

Step 16: Click 'Next'.

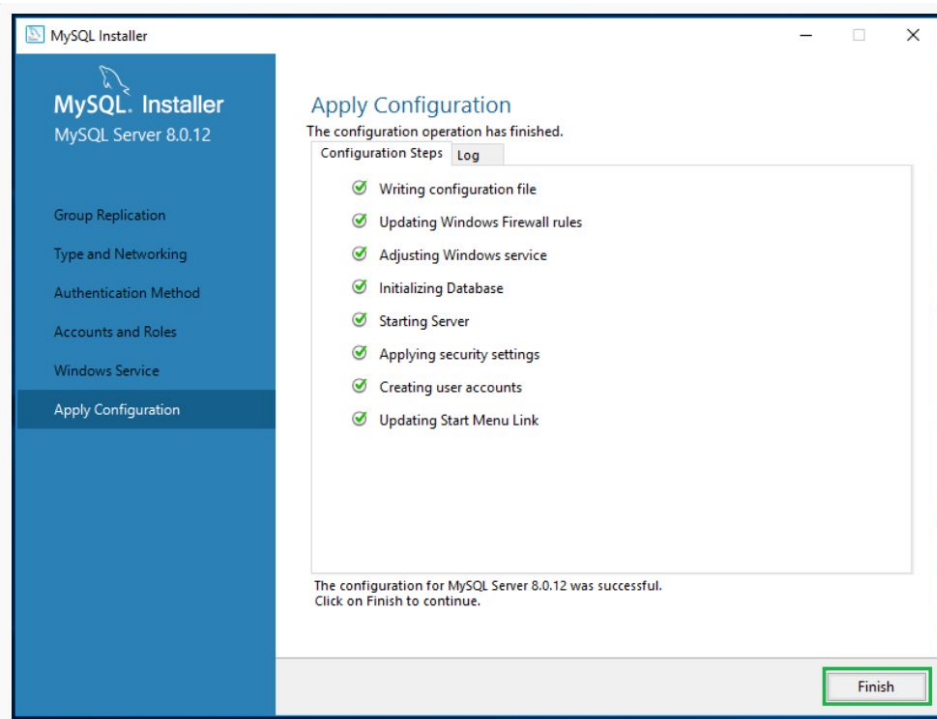


The screenshot shows the 'MySQL Installer' window for 'MySQL Server 8.0.12'. The left sidebar is the same as in Step 15, but 'Windows Service' is now selected. The main area is titled 'Windows Service'. It has a checkbox 'Configure MySQL Server as a Windows Service' which is checked. Below this is a section 'Windows Service Details' with instructions to specify a Windows Service name. There is a text input field for 'Windows Service Name' containing 'MySQL80'. There is another checkbox 'Start the MySQL Server at System Startup' which is also checked. Below this is a section 'Run Windows Service as ...' with instructions to pick an option. There are two radio button options: 'Standard System Account' (selected) and 'Custom User'. At the bottom of the window are navigation buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a green rectangle.

Step 17: Click 'Execute'.



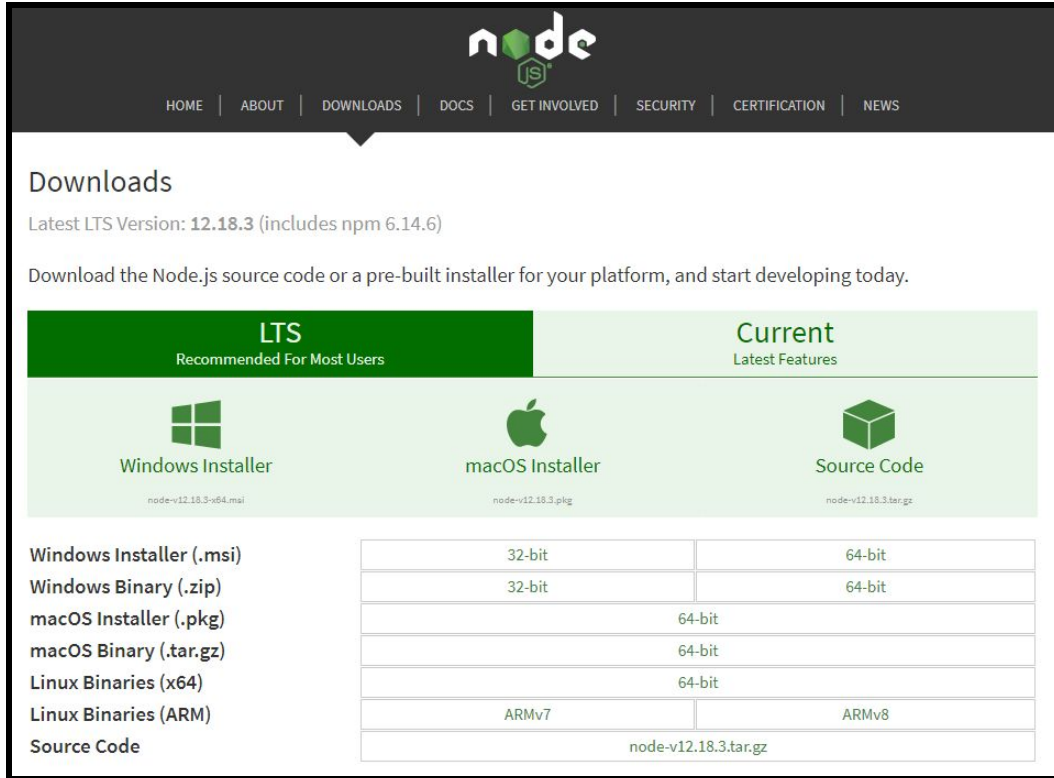
Step 18: Click 'Finish'



Node.js

Step 1: Go to [this](#) link to download the Node.js installer.

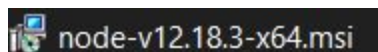
Step 2: Click on the 'Windows Installer' option.



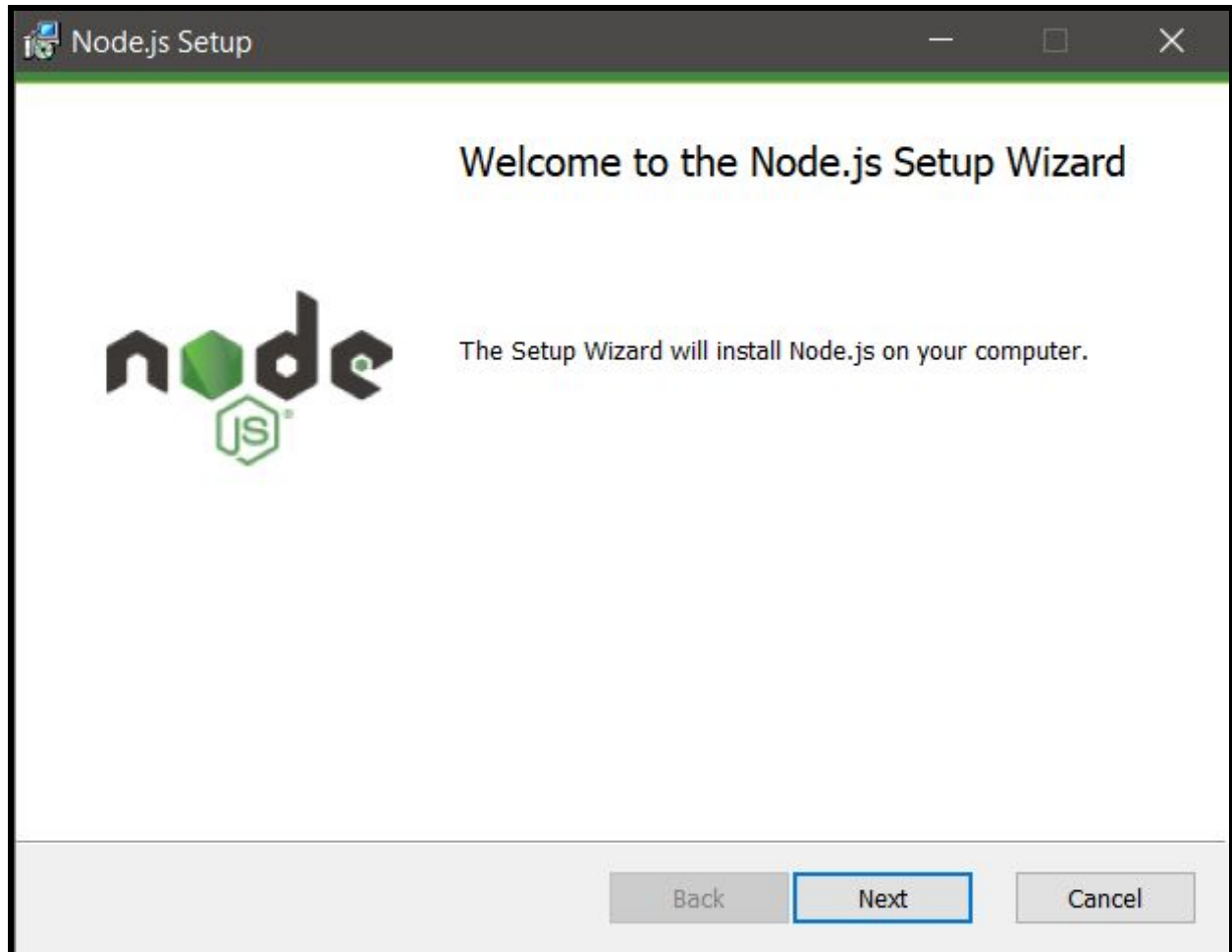
The screenshot shows the Node.js Downloads page. At the top, there's a navigation bar with links: HOME, ABOUT, DOWNLOADS, DOCS, GET INVOLVED, SECURITY, CERTIFICATION, and NEWS. Below the navigation bar, the 'Downloads' section is highlighted. It states 'Latest LTS Version: 12.18.3 (includes npm 6.14.6)' and 'Download the Node.js source code or a pre-built installer for your platform, and start developing today.' There are two main tabs: 'LTS Recommended For Most Users' and 'Current Latest Features'. Under the 'LTS' tab, there are three options: 'Windows Installer' (node-v12.18.3-x64.msi), 'macOS Installer' (node-v12.18.3.pkg), and 'Source Code' (node-v12.18.3.tar.gz). Below these, there's a table listing various download options for Windows, macOS, Linux, and ARM architectures.

Windows Installer (.msi)	32-bit	64-bit
Windows Binary (.zip)	32-bit	64-bit
macOS Installer (.pkg)	64-bit	
macOS Binary (.tar.gz)	64-bit	
Linux Binaries (x64)	64-bit	
Linux Binaries (ARM)	ARMv7	ARMv8
Source Code	node-v12.18.3.tar.gz	

Step 3: Double click on the downloaded .msi file to start the installation.



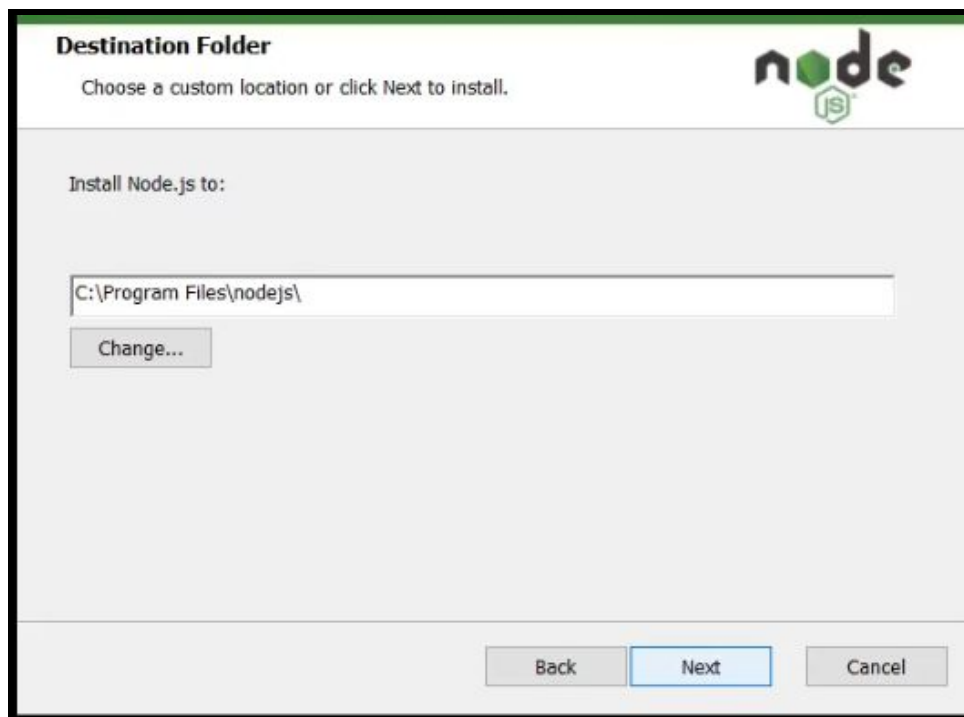
Step 4: Click 'Next'.



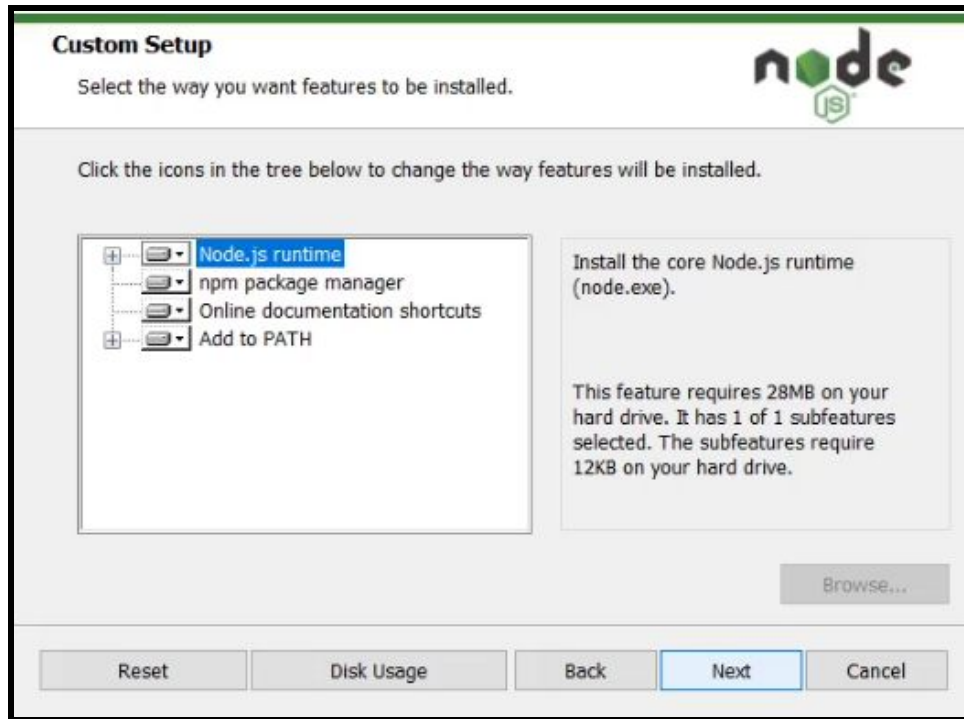
Step 5: Accept the terms of the License Agreement and click 'Next'.



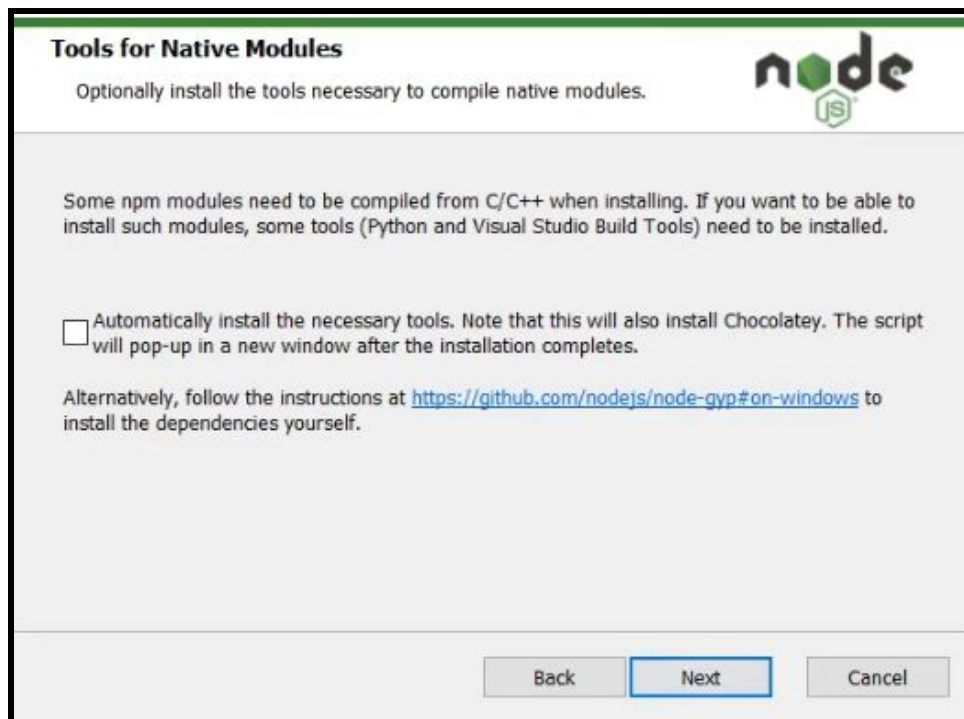
Step 6: Click 'Next'.



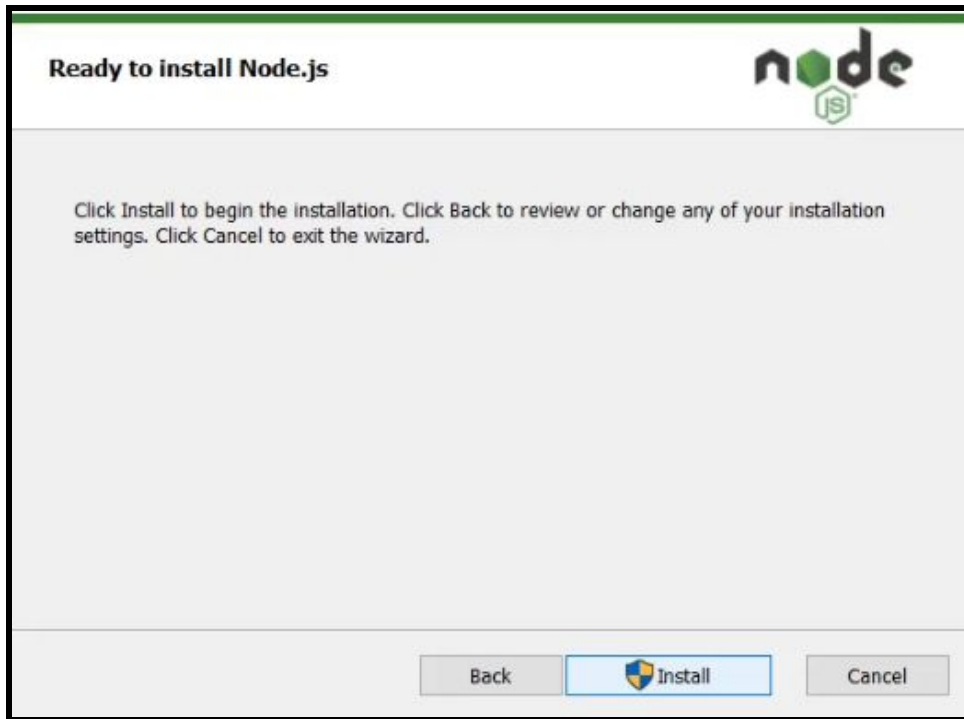
Step 7: Click 'Next'.



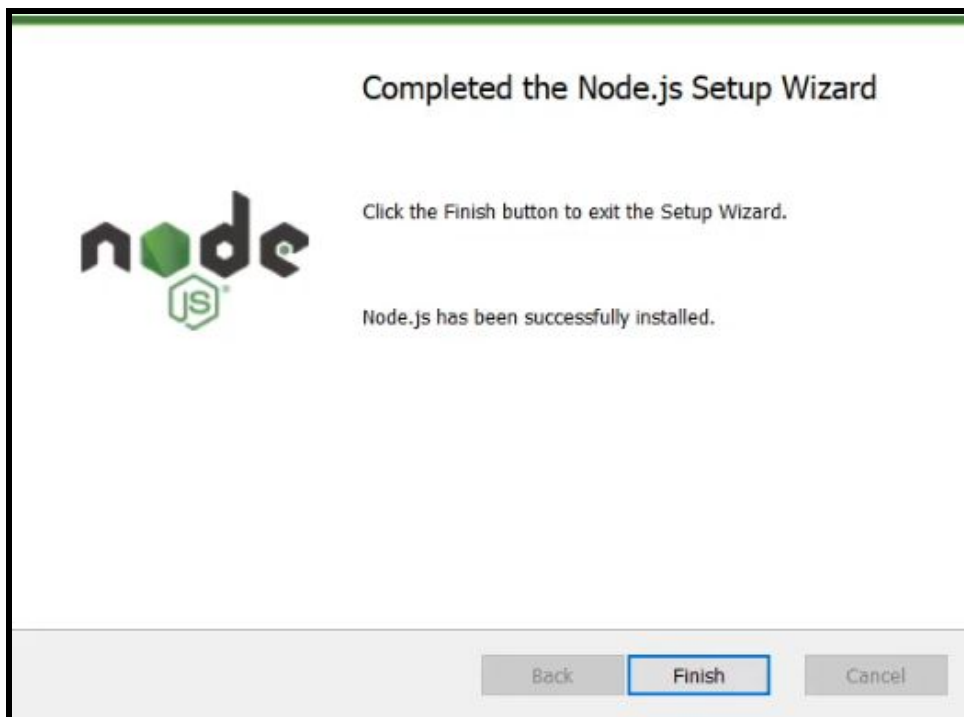
Step 8: Click 'Next'.



Step 9: Click 'Install' (This step will require Administrator privileges.).



Step 10: Click 'Finish'.



To confirm that Node.js was installed fully on your PC, you can type the following command in your command prompt and check whether you are getting the version number of Node.js displayed as output.

```
node -v
```

Linux (Ubuntu)

MySQL

Using root privileges, log in to your Ubuntu 18.04 instance and follow the steps given below.

Step 1: Download the MySQL repository package.

Download the repository using wget or curl command-line tool.

```
curl -OL https://dev.mysql.com/get/mysql-apt-config_0.8.13-1_all.deb
```

Step 2: Install the MySQL repository package.

Next, using the dpkg package tool, install the MySQL repository package as shown below.

```
dpkg -i mysql-apt-config_0.8.10-1_all.deb
```

After running the command given above, you will get a display prompt that will give you a selection of MySQL instances to choose from. Scroll down and select the last option 'Ok'.

Next, update the Ubuntu system.

```
sudo apt update
```

Step 3: Install MySQL server and client (Option 2).

Next, run the command given below to install MySQL server instance and client, which is used for remotely logging in to MySQL server.

```
sudo apt install mysql-server
```

You will be prompted to provide a MySQL root password to access the database. Type the password and hit 'Ok'.

Next, you will be required to choose the default authentication plugin. Select the first option and hit 'Enter'.

To confirm that you have successfully installed MySQL 8.0 server, run the following command.

```
mysql -V
```

To display more information about your database server such as the server version and uptime, run the following command.

```
mysqladmin -u root -p version
```

Node.js

Refresh your local package index by typing the following command.

```
sudo apt update
```

Install Node.js from the repositories using the following command.

```
sudo apt install nodejs
```

You will also want to install NPM, which is the Node.js package manager. You can do so by typing the following command.

```
sudo apt install npm
```

To check which version of Node.js you have installed, you can use the following command.

```
nodejs -v
```

To check which version of NPM you have installed, you can use the following command.

```
npm -v
```