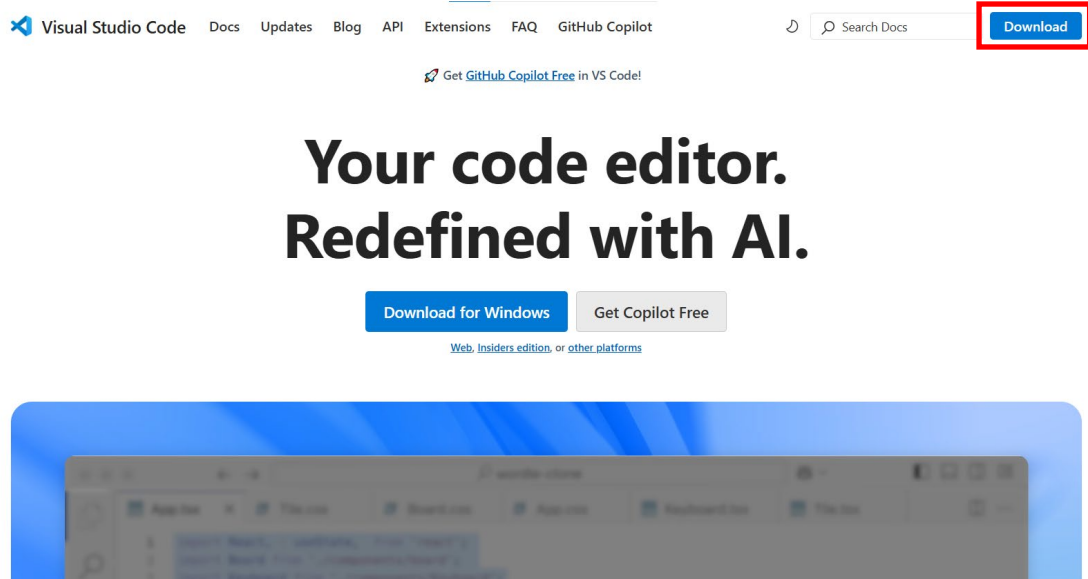


Full Stack Development with AI

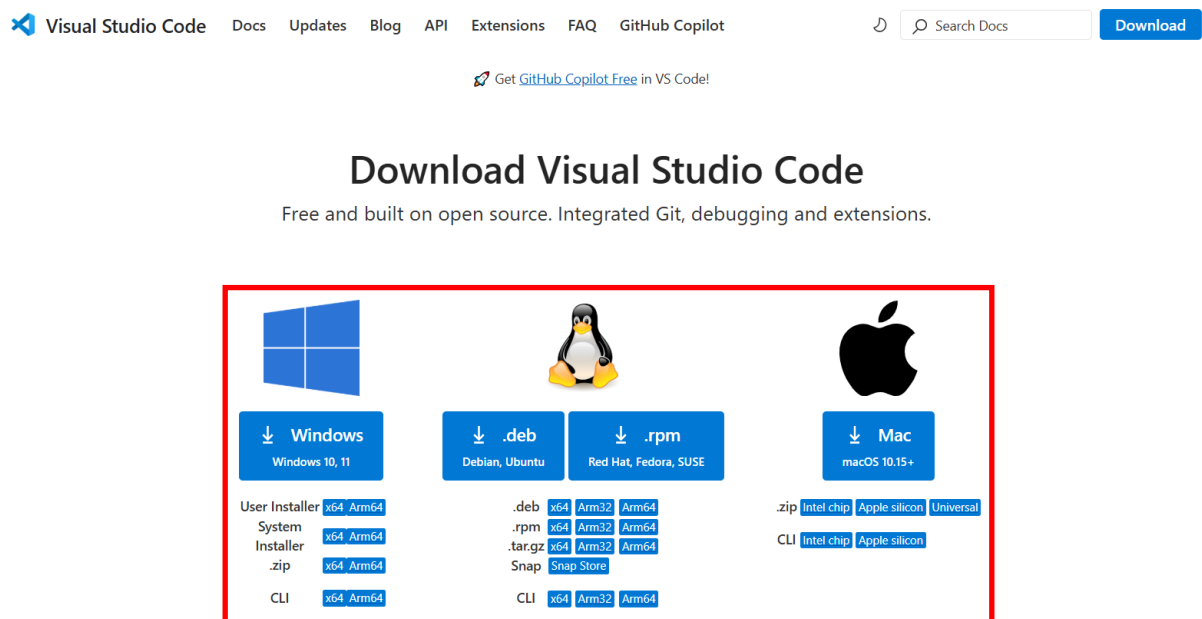
Lab 10.1 – Software Installation

1. Downloading and Installing Visual Studio Code

1. Browse to the official website of Visual Studio Code at <https://code.visualstudio.com/>.
2. Look for the “Download” button at the top right corner and click on it.



3. On the download page, choose the required download option based on the operating system of your laptop. For Windows, you should choose from one of the “User Installer” options.

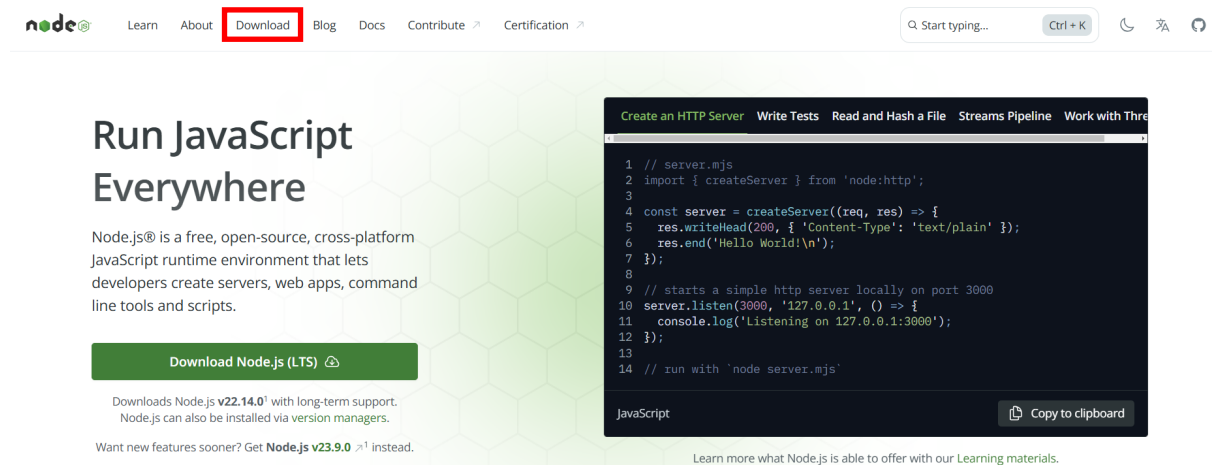


4. Start the installer and follow the on-screen instructions to complete the installation.
5. After installation has completed, click “Finish” to close the installer.

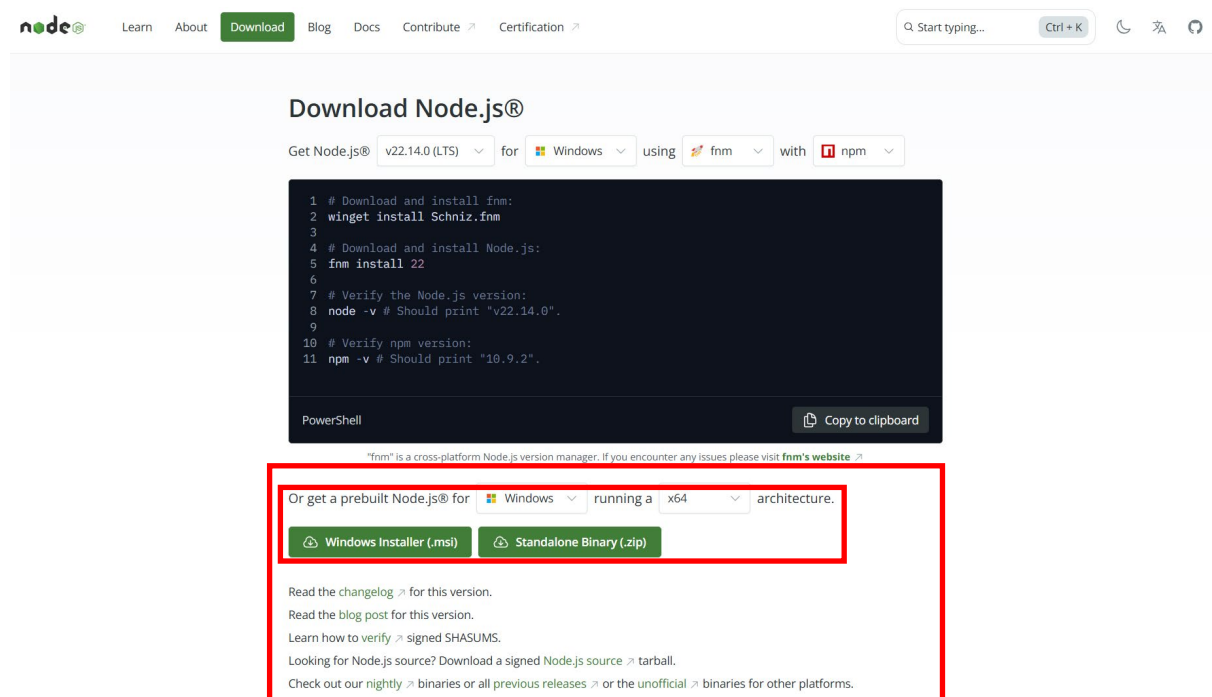
6. “Launch Visual Studio Code” will be checked by default. Otherwise, just start Visual Studio Code by clicking on the shortcut icon on your desktop.
7. Close the “Release Notes” tab.

2. Downloading and Installing Node.js

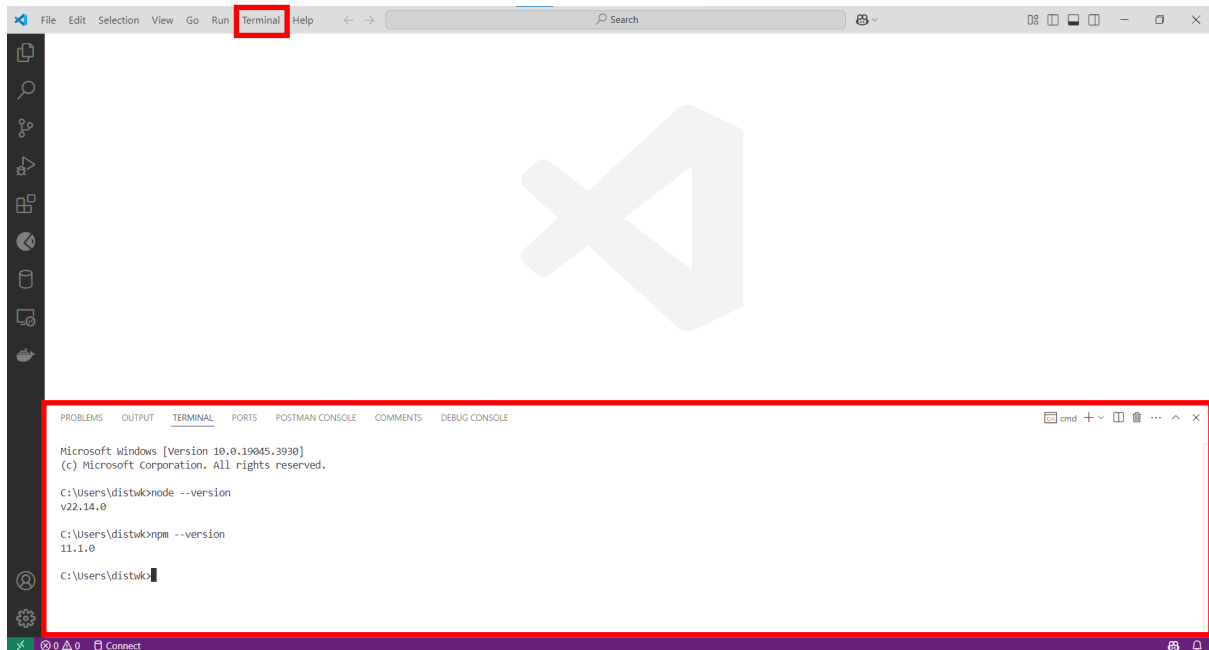
1. Browse to the official website of Node.js at <https://nodejs.org/>.
2. Look for the “Download” link at the top and click on it.



3. On the download page, scroll down and look under the prebuilt section. Choose the required download option based on the operating system of your laptop. This would install the latest LTS version, which is v22.14.0.



4. Start the installer and follow the on-screen instructions to complete the installation.
5. In the “Custom Setup” dialog box, all the features should be selected by default. Do not remove any features.
6. In the “Tools for Native Modules”, the checkbox for “Automatically install the necessary tools” should be unchecked by default. Leave this checkbox unchecked.
7. After installation has completed, click “Finish” to close the installer.
8. Return to Visual Studio Code.
9. From the main menu, select “Terminal > New Terminal” or use the keyboard shortcut “Ctrl+Shift+`” to open a new terminal window at the bottom of Visual Studio Code.



10. Enter the command `node --version` and then verify that Node.js has been installed successfully. The version reported should be "v22.14.0".
11. Enter the command `npm --version` and then verify that node package manager has been installed successfully. The version reported should be "11.1.0".

PROBLEMS OUTPUT TERMINAL PORTS POSTMAN CONSOLE COMMENTS DEBUG CONSOLE

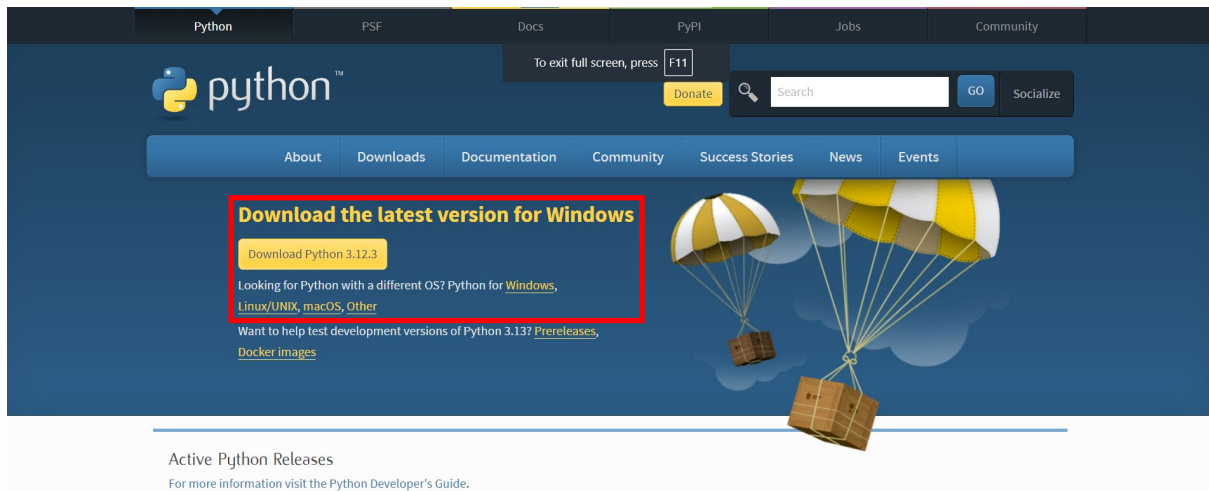
Microsoft Windows [Version 10.0.19045.3930]
(c) Microsoft Corporation. All rights reserved.

C:\Users\distwk>node --version
v22.14.0

C:\Users\distwk>npm --version
11.1.0

3. Downloading and Installing Python 3

1. Browse to the download page on the official website of Python at <https://www.python.org/downloads/>.
2. Select the required download option based on the operating system of your laptop to download the installer.



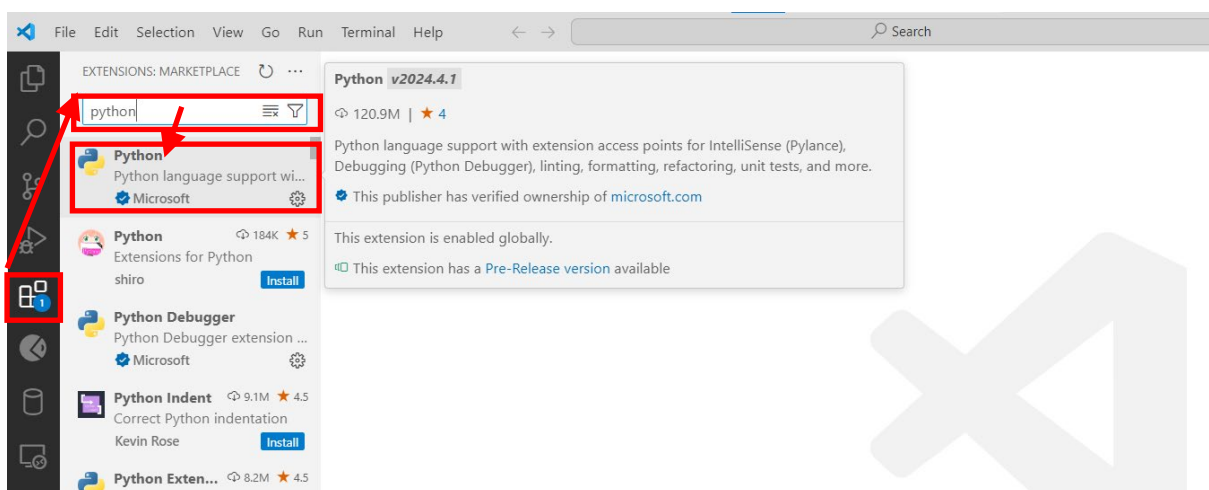
3. Run the installer and follow the instructions to install Python 3.
4. After installation has completed, start command prompt or terminal and run the command `python --version` OR `py --version` to verify that Python 3 has been installed successfully (note: your version number should be based on the latest version that you have downloaded).

```

C:\Users\distwk>python --version
Python 3.9.6

C:\Users\distwk>py --version
Python 3.9.6
  
```

5. Start Visual Studio Code.
6. Switch to the “Extensions” tab and search for “python”. Look for the “Python” extension and click on the “Install” button.



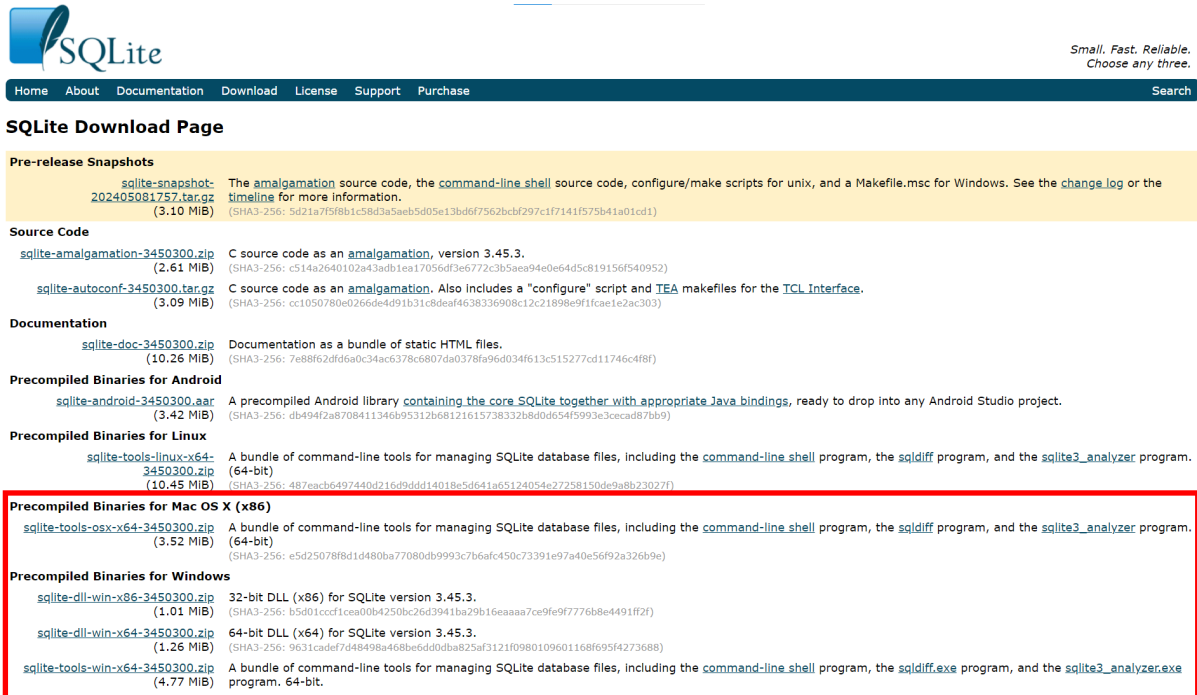
7. Quit Visual Studio Code after the installation of the extension has completed.

4. Downloading and Installing SQLite3

This step is only required if you are using Windows. If you are using macOS, SQLite is already installed by default. You can start a terminal and use the command `sqlite --version` to verify.

If you are using Windows, please follow the following steps to continue:

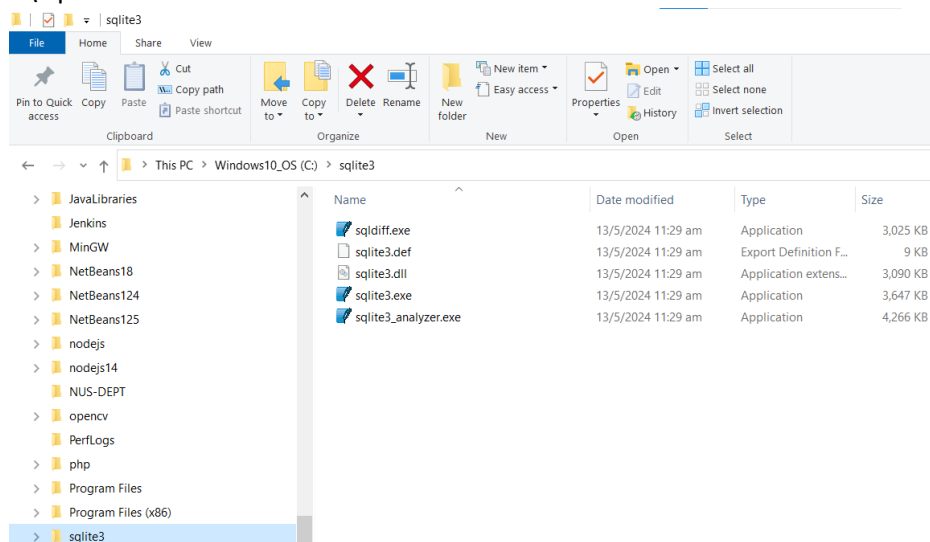
1. Browse to the download page on the official website of SQLite at <https://www.sqlite.org/download.html>.
2. Select the required download option based on the operating system of your laptop to download the precompiled binaries, both DLL and tools:



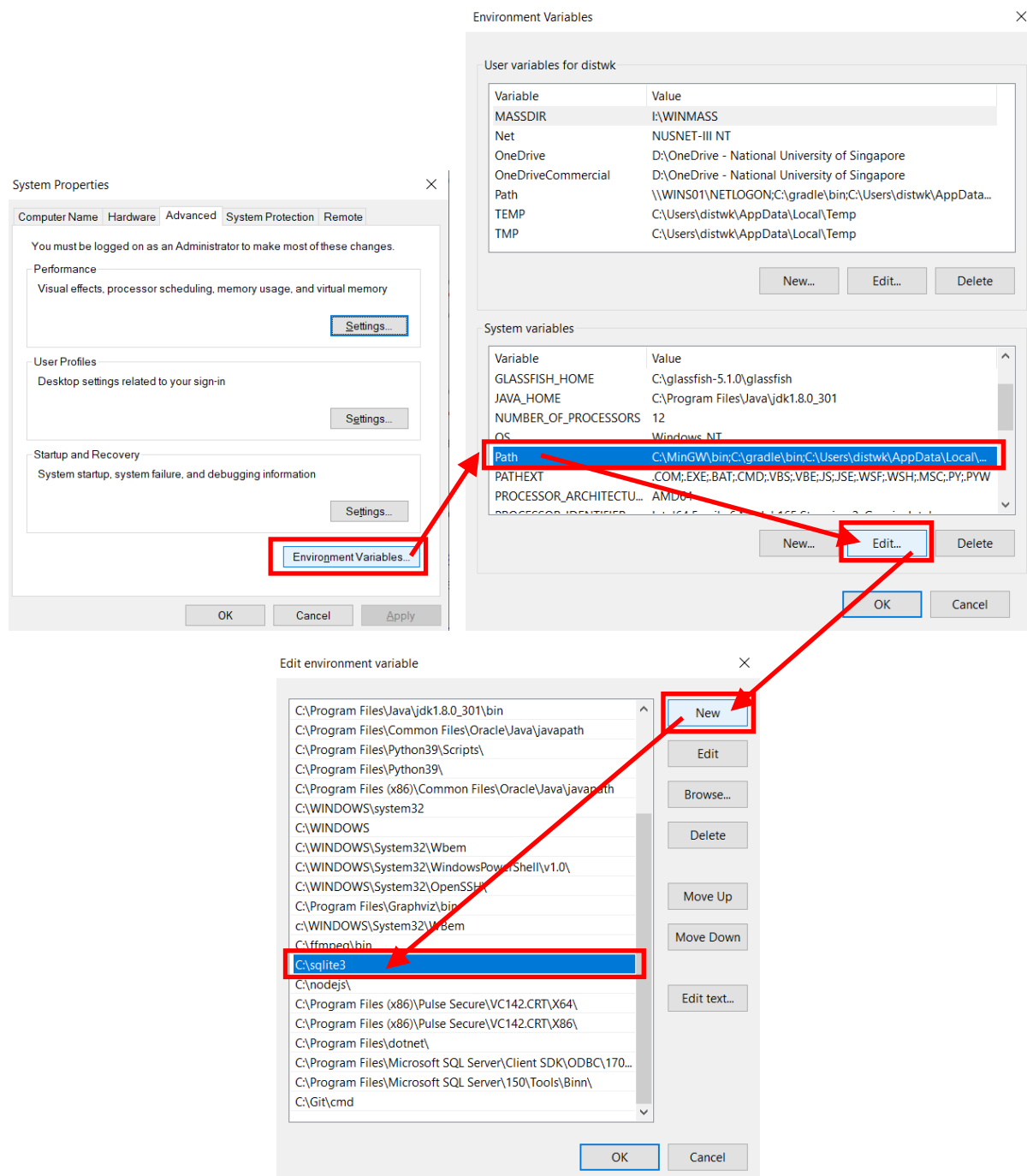
The screenshot shows the SQLite Download Page with the following sections:

- Pre-release Snapshots**: Includes a snapshot of the amalgamation source code, the command-line shell source code, configure scripts for unix, and a Makefile.msc for Windows. See the [change log](#) or the [timeline](#) for more information.
- Source Code**:
 - [sqlite-amalgamation-3450300.zip](#) (2.61 MIB): C source code as an amalgamation, version 3.45.3.
 - [sqlite-autoconf-3450300.tar.gz](#) (3.09 MIB): C source code as an amalgamation. Also includes a "configure" script and TEA makefiles for the TCL Interface.
- Documentation**:
 - [sqlite-doc-3450300.zip](#) (10.26 MIB): Documentation as a bundle of static HTML files.
- Precompiled Binaries for Android**:
 - [sqlite-android-3450300.aar](#) (3.42 MIB): A precompiled Android library containing the core SQLite together with appropriate Java bindings, ready to drop into any Android Studio project.
- Precompiled Binaries for Linux**:
 - [sqlite-tools-linux-x64-3450300.zip](#) (10.45 MIB): A bundle of command-line tools for managing SQLite database files, including the [command-line shell](#) program, the [sqldiff](#) program, and the [sqlite3_analyzer](#) program.
- Precompiled Binaries for Mac OS X (x86)**:
 - [sqlite-tools-osx-x64-3450300.zip](#) (3.52 MIB): A bundle of command-line tools for managing SQLite database files, including the [command-line shell](#) program, the [sqldiff](#) program, and the [sqlite3_analyzer](#) program.
- Precompiled Binaries for Windows**:
 - [sqlite-dll-win-x86-3450300.zip](#) (1.01 MIB): 32-bit DLL (x86) for SQLite version 3.45.3.
 - [sqlite-dll-win-x64-3450300.zip](#) (1.26 MIB): 64-bit DLL (x64) for SQLite version 3.45.3.
 - [sqlite-tools-win-x64-3450300.zip](#) (4.77 MIB): A bundle of command-line tools for managing SQLite database files, including the [command-line shell](#) program, the [sqldiff.exe](#) program, and the [sqlite3_analyzer.exe](#) program. 64-bit.

3. For example, if you are using 64-bit Windows, you should download "sqlite-dll-win-x64-3450300.zip" and "sqlite-tools-win-x64-3450300.zip".
4. The DLL zip archive contains two files, and the tools archive contains three files.
5. Place all five files together in the same folder and rename the folder to "sqlite3". For example, mine is "C:\sqlite3"



6. Then add this folder to your path so that you can run the `sqlite3` command from any location in command prompt or terminal. For Windows, you should use the System Properties tool and for MacOS, you should edit your profile file.



7. Start command prompt or terminal and run the command `sqlite3 --version` to verify that SQLite3 has been installed successfully (note: your version number should be 3.45.3).

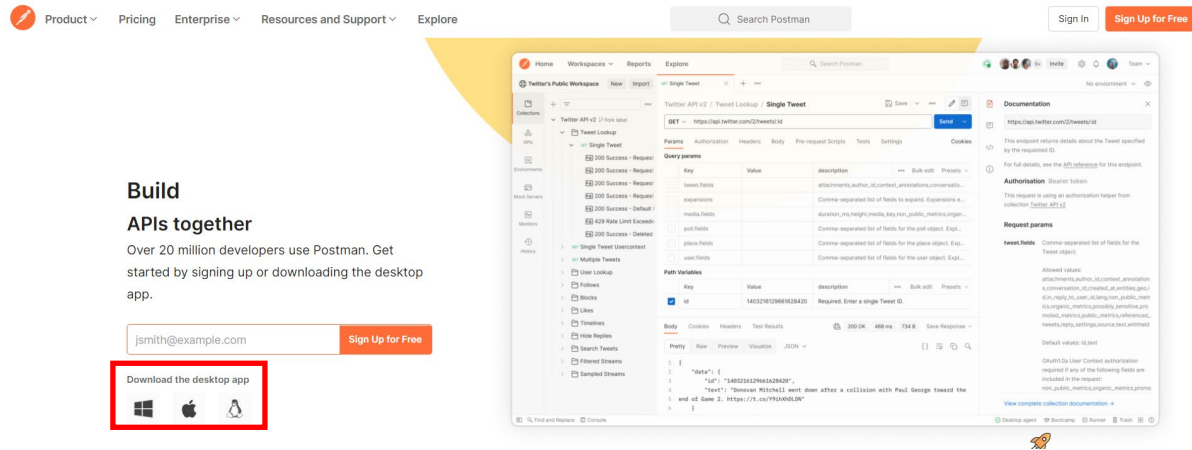
```

C:\sqlite3>sqlite3 --version
3.45.3 2024-04-15 13:34:05 8653b758870e6ef0c98d46b3ace27849054af85da891eb121e9aaa537f1e8355 (64-bit)

```

5. Downloading and Installing Postman

1. Browse to the official website of Postman at <https://www.postman.com/>.
2. Select the required download option based on the operating system of your laptop to download the installer.



3. Run the installer and follow the instructions to install Postman.