

Installing ORPL - Windows

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Installing dependencies

Installing Microsoft Visual C++ Redistributable

1. Go to <https://learn.microsoft.com/en-US/cpp/windows/latest-supported-vc-redist?view=msvc-170>
2. Download the correct version for your system (most likely X64 architecture), or download it from the (https://aka.ms/vs/17/release/vc_redist.x64.exe)
3. Run the installer
4. Close once it's successful

Visual Studio 2015, 2017, 2019, and 2022

This table lists the latest supported English (en-US) Microsoft Visual C++ Redistributable packages for Visual Studio 2015, 2017, 2019, and 2022. The latest supported version has the most recently implemented C++ features, security, reliability, and performance improvements. It also includes the latest C++ standard language and library standards conformance updates. We recommend that you install this version for all applications created using Visual Studio 2015, 2017, 2019, or 2022.

Unlike older versions of Visual Studio, which have infrequent redistributable updates, the version number is not listed in the following table for Visual Studio 2015-2022 because the redistributable is updated frequently. To find the version number of the latest redistributable, download the redistributable you are interested in using one of the following links. Then, look at its properties using Windows File Explorer. In the **Details** pane, the **File version** contains the version of the redistributable.

Architecture	Link	Notes
ARM64	https://aka.ms/vs/17/release/vc_redist.arm64.exe	Permalink for latest supported ARM64 version
X86	https://aka.ms/vs/17/release/vc_redist.x86.exe	Permalink for latest supported x86 version
X64	https://aka.ms/vs/17/release/vc_redist.x64.exe	Permalink for latest supported x64 version. The X64 Redistributable package contains both ARM64 and X64 binaries. This package makes it easy to install required Visual C++ ARM64 binaries when the X64 Redistributable is installed on an ARM64 device.

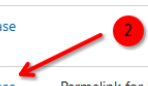


Figure 1: C++ Redistributable 1

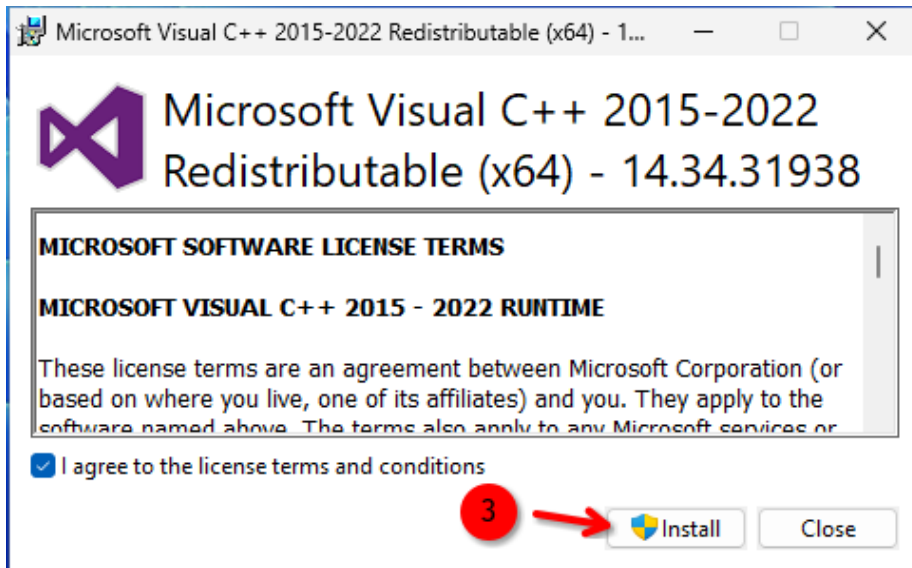


Figure 2: C++ Redistributable 2

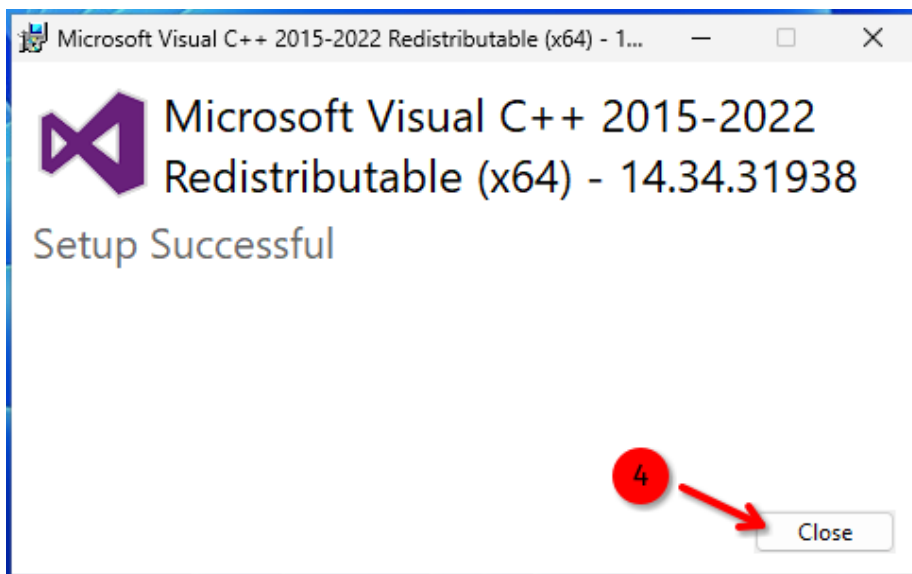


Figure 3: C++ Redistributable 3

Installing python

Setting up the table (optional)

Before you go through with installing python, there are a few things that I recommend you do with your system. All of this is optional, of course, so feel free to skip this section.

Showing file name extensions Most files have an extension name, and it is usually very helpful to know what it is at a glance. To enable this feature,

1. Open File Explorer
2. Click on the View menu
3. Go to Show
4. Check File name extensions

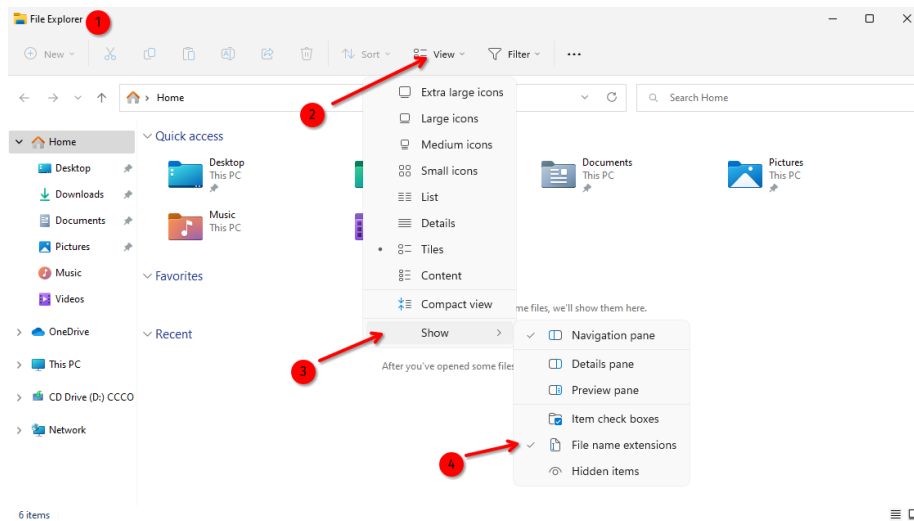


Figure 4: Windows 11 - Showing file name extensions

On Windows 10:

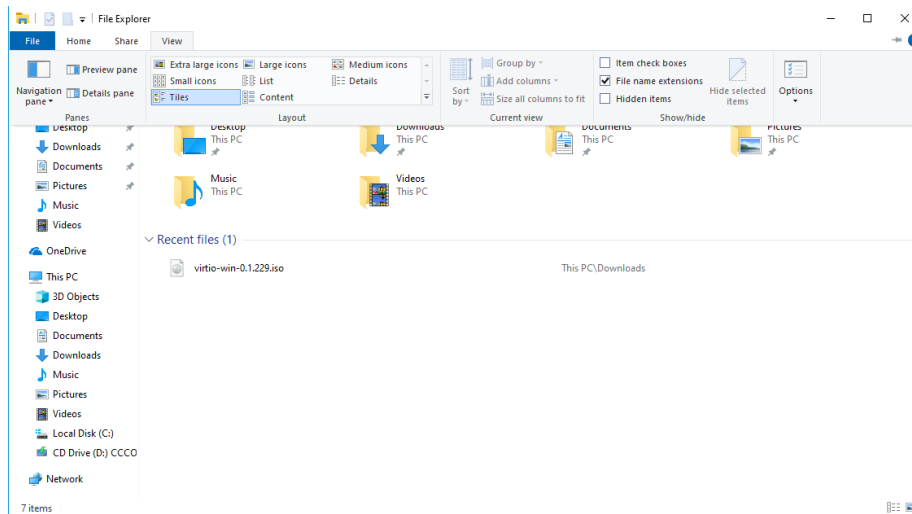


Figure 5: Windows 10 - Showing file name extensions

Setting up the Terminal The Terminal is an incredibly powerful tool, even though a bit scary at first (trust me, I get it). After decades of abandon, Microsoft massively improved its features in Windows 11. To make it even more accessible and useful, I like to pin it to the taskbar and to change the default profile to **Command Prompt**.

1. Pin it to the taskbar
 1. Click the **start** menu
 2. Search for **Terminal**
 3. Right click **Terminal** (on Windows 10, this is **Command Prompt**)
 4. Click **Pin to taskbar**
2. Change the default profile to **Command Prompt** (**Windows 11 only**)
 1. Launch **Terminal**
 2. Click the down menu arrow
 3. Open the **Settings** menu
 4. Change the **Default profile** to **Command Prompt**

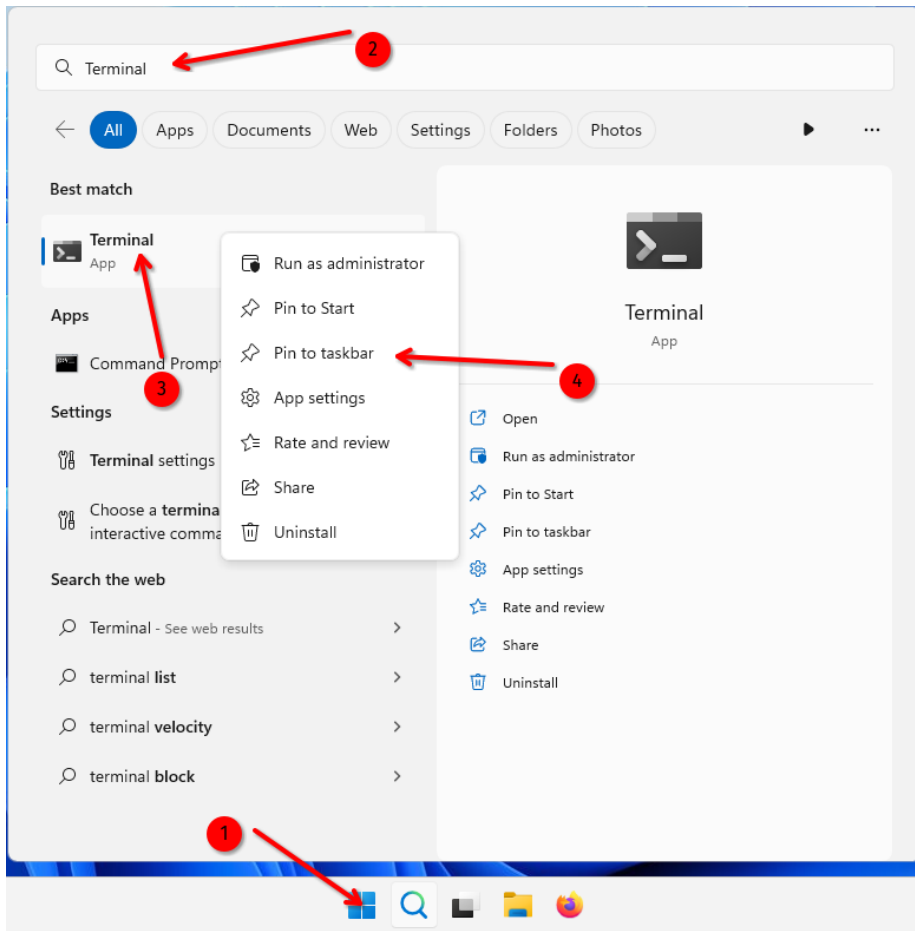


Figure 6: Pin terminal to taskbar

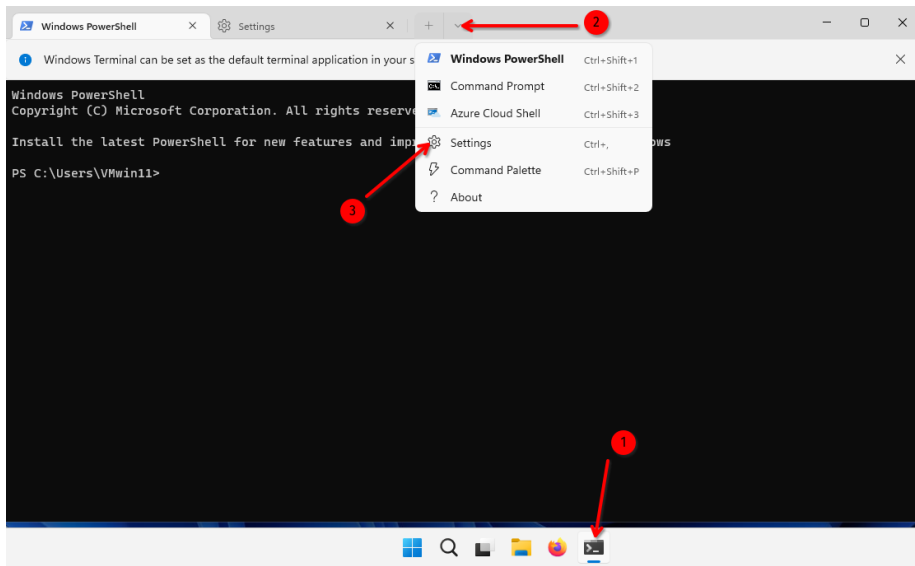


Figure 7: Changing default terminal profile 1

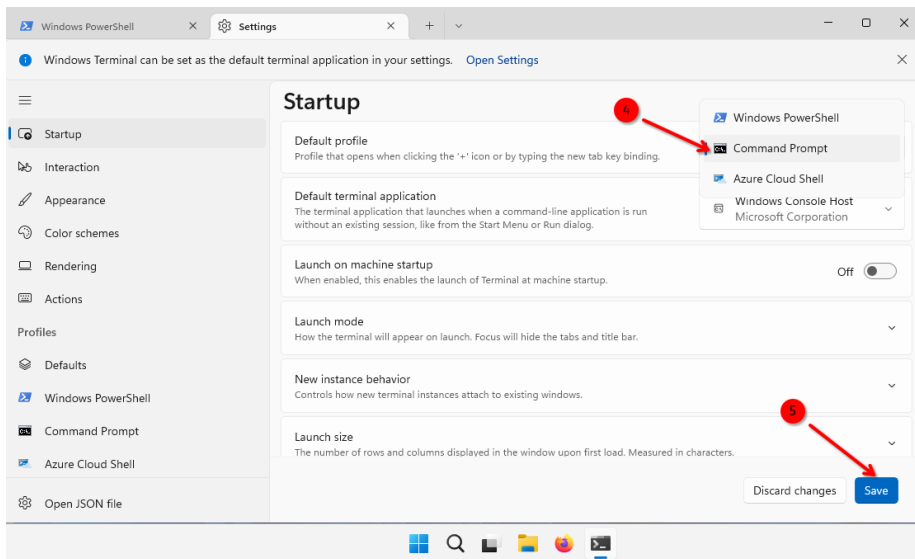


Figure 8: Changing default terminal profile 2

Downloading a python installer

Here is a download link for the windows 64-bit installer for python 3.10.11 :
<https://www.python.org/ftp/python/3.10.11/python-3.10.11-amd64.exe>.

Otherwise,

1. Go to <https://www.python.org/>
2. Go to the downloads section for windows (or <https://www.python.org/downloads/windows/>)
3. Find a version of python that has a **Download Windows installer (64-bit)** link (32-bit might be the one you need if you are running a 32-bit system, otherwise pick 64-bit)
4. As of April 2023, I recommend using the latest revision of python 3.10.

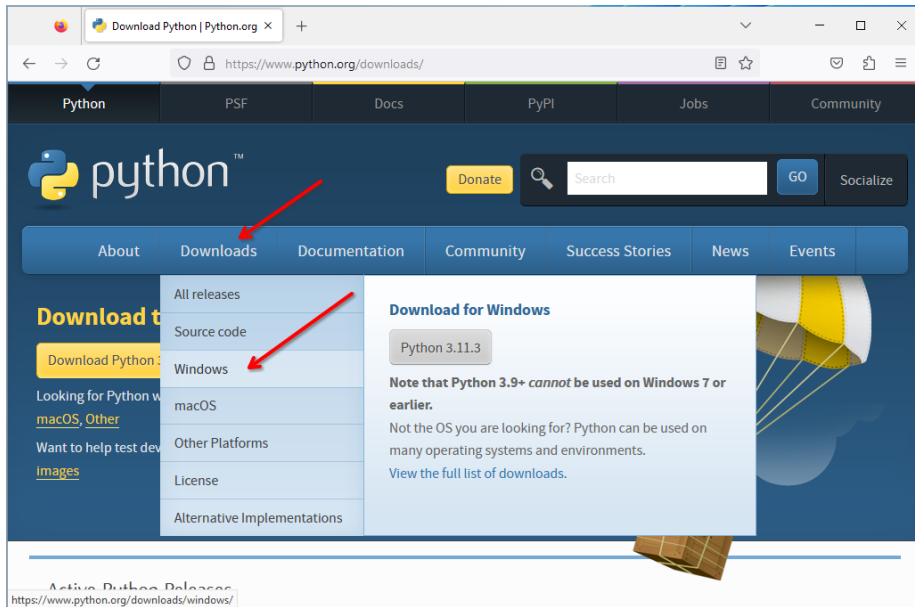


Figure 9: python.org windows download section

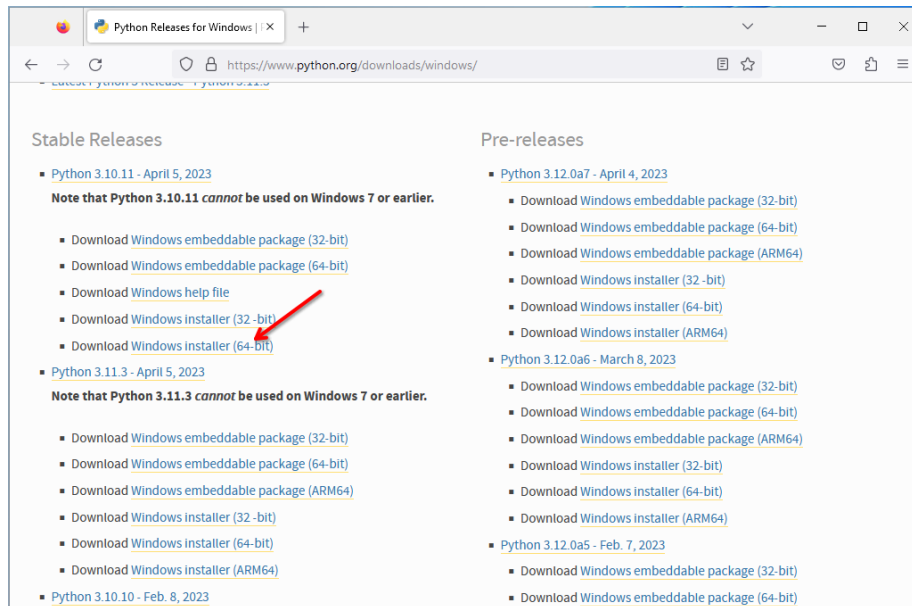


Figure 10: Windows python installer (64-bit)

Running the installer

1. Run the installer you downloaded (in this example, its name is `python-3.10.11-amd64.exe`)
2. Follow the screenshots **CAREFULLY** (selecting different options might lead to problems and you'll have to uninstall everything and start over)
3. On the first page:
 1. Check `Use admin privileges when installing py.exe`
 2. Check `Add python.exe to PATH`
 3. Click `Customize installation`
4. On the second page:
 1. Check **EVERYTHING**
5. On the third page:
 1. Check **EVERYTHING**
 2. Make sure the `Customize install location` is `C:\Program Files\PythonXX`, no somewhere in `C:\Users\...\AppData\Local\...`
 3. Click `Install`
6. After the installation:
 1. You should see that `Setup was successful`
 2. Click the button to `Disable path length limit` if you see it. If not, it means the path length limit has already been disabled on your system.
 3. Close the installer.

7. Verify that python was installed by running `python` in your terminal
 1. If so, you will see

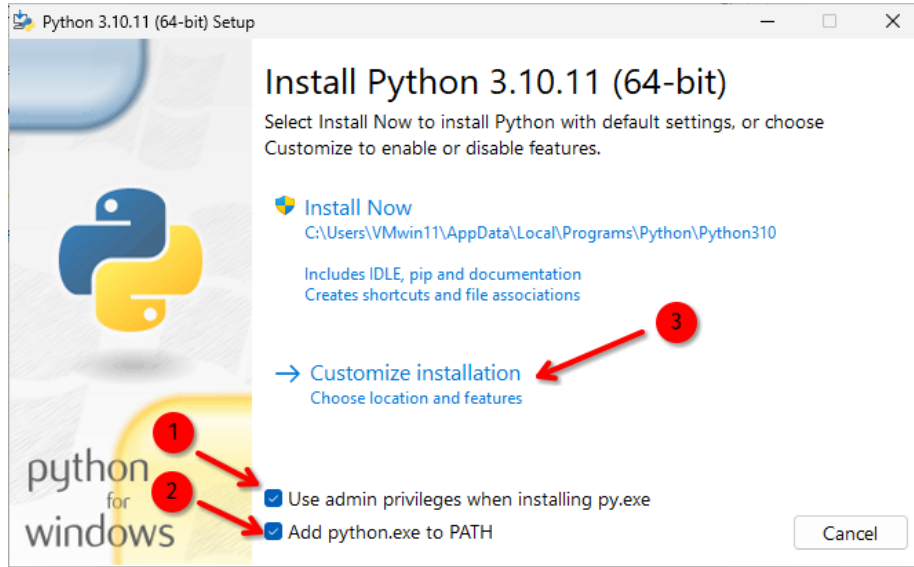


Figure 11: Python installer page 1

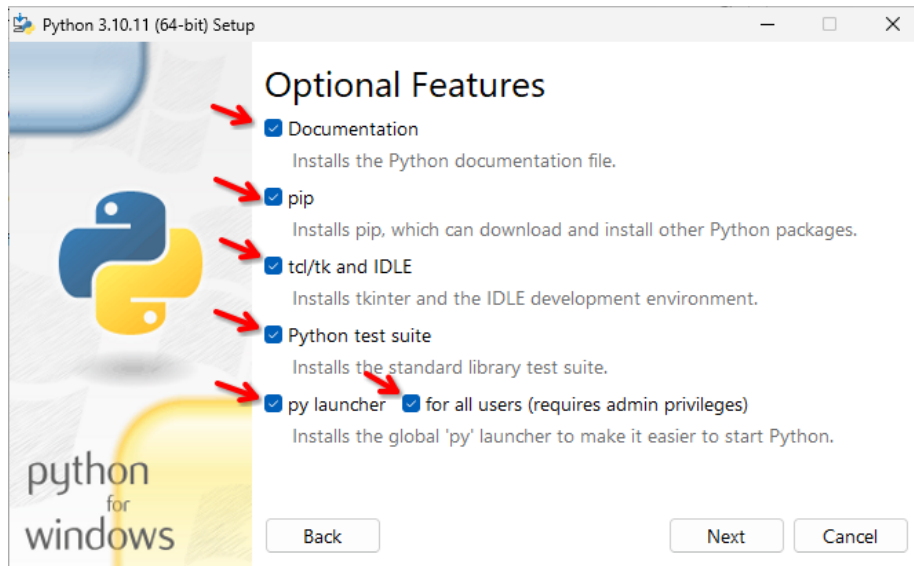


Figure 12: Python installer page 2

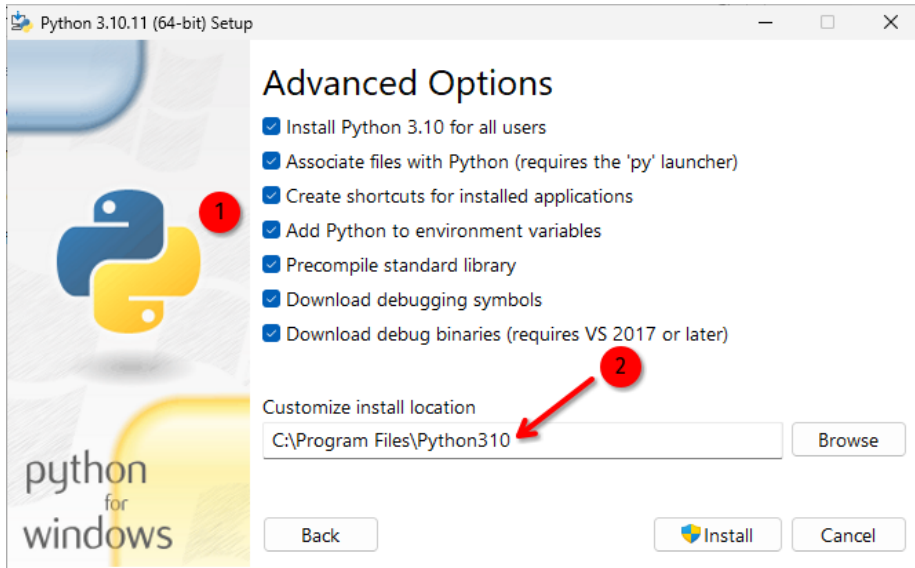


Figure 13: Python installer page 3

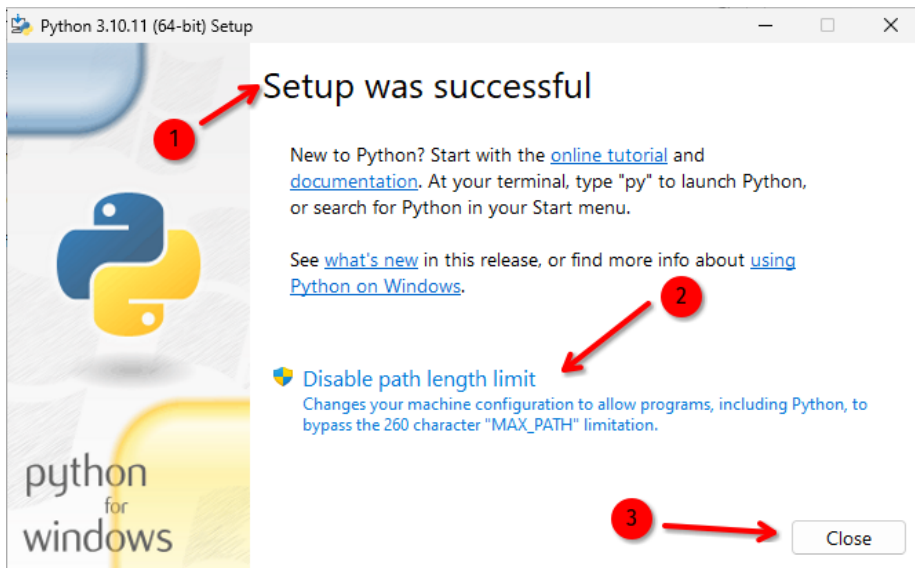


Figure 14: Python installer page 4

Validating that the installation was a success

Now that we went through the installation, we verify that `python` and `pip` were installed by

1. Opening Terminal
2. Running `python`
3. Python is **installed** if you get a prompt that looks like:
 - Python 3.10.11 ... Type "help", "copyright", ...
4. Exit python by running `exit()` (or opening a new terminal)
5. Running `pip`
6. Pip is installed if you get the help text that starts with `Usage: pip`

```
Microsoft Windows [Version 10.0.22621.525]
(c) Microsoft Corporation. All rights reserved.

C:\Users\VMwin11>python
Python 3.10.11 (tags/v3.10.11:7d4cc5a, Apr 5 2023, 08:38:17) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> exit()

C:\Users\VMwin11>pip

Usage:
  pip <command> [options]

Commands:
  install           Install packages.
  download          Download packages.
  uninstall         Uninstall packages.
  freeze            Output installed packages in requirements format.
  inspect           Inspect the python environment.
  list              List installed packages.
  show              Show information about installed packages.
  check             Verify installed packages have compatible dependencies.
  config            Manage local and global configuration.
  search            Search PyPI for packages.
  cache             Inspect and manage pip's wheel cache.
  index             Inspect information available from package indexes.
  wheel             Build wheels from your requirements.
  hash              Compute hashes of package archives.
  completion        A helper command used for command completion.
  debug            Show information useful for debugging.
```

Figure 15: Validating python and pip installation

Installing ORPL

1. Open terminal
2. Run `pip install orplib`
3. Test that it works by running `python -m orpl`
4. If the GUI launches, everything works
 - This can take a while for the first launch

- If no errors, it's doing stuff, please be patient.

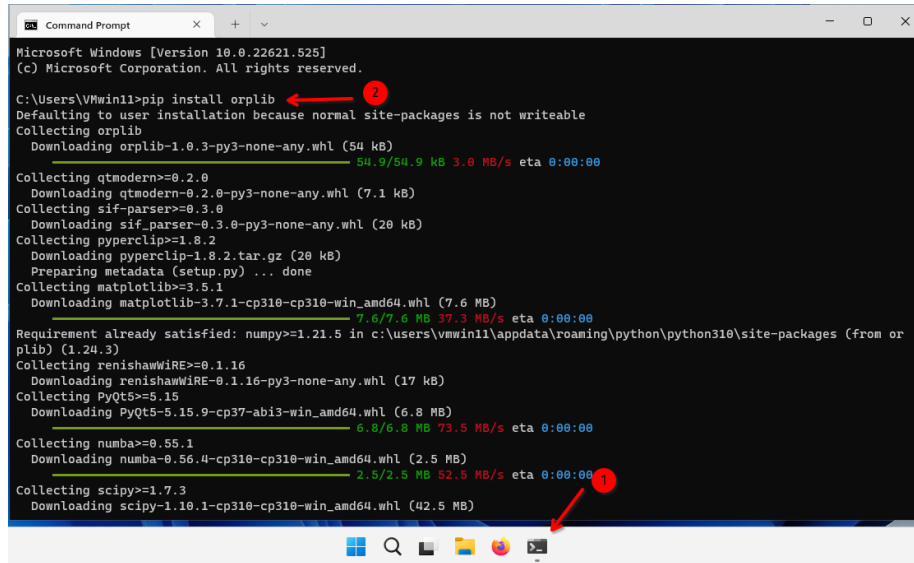


Figure 16: Installing orpl with pip

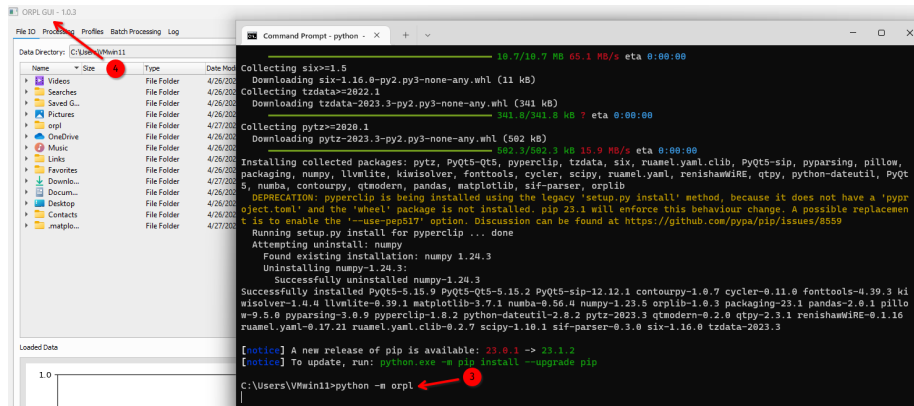


Figure 17: Validating orpl installation

Creating a Desktop shortcut to launch ORPL GUI

Before you do this, make sure you have gone through **Setting up the table (optional)**. Otherwise you won't be able to rename the .txt file to a .bat file.

1. Right-click on your Desktop
2. Create a new Text Document

3. Name it `ORPL - GUI.txt` (or whatever you prefer)
4. Open it with notepad
5. Write in the following lines
 - `python -m orpl`
 - `pause`
6. Save and close the text file
7. Rename the text file to a `.bat` extension (`ORPL - GUI.bat`)

You can now double-click the `ORPL - GUI.bat` file as a shortcut to launch ORPL GUI.

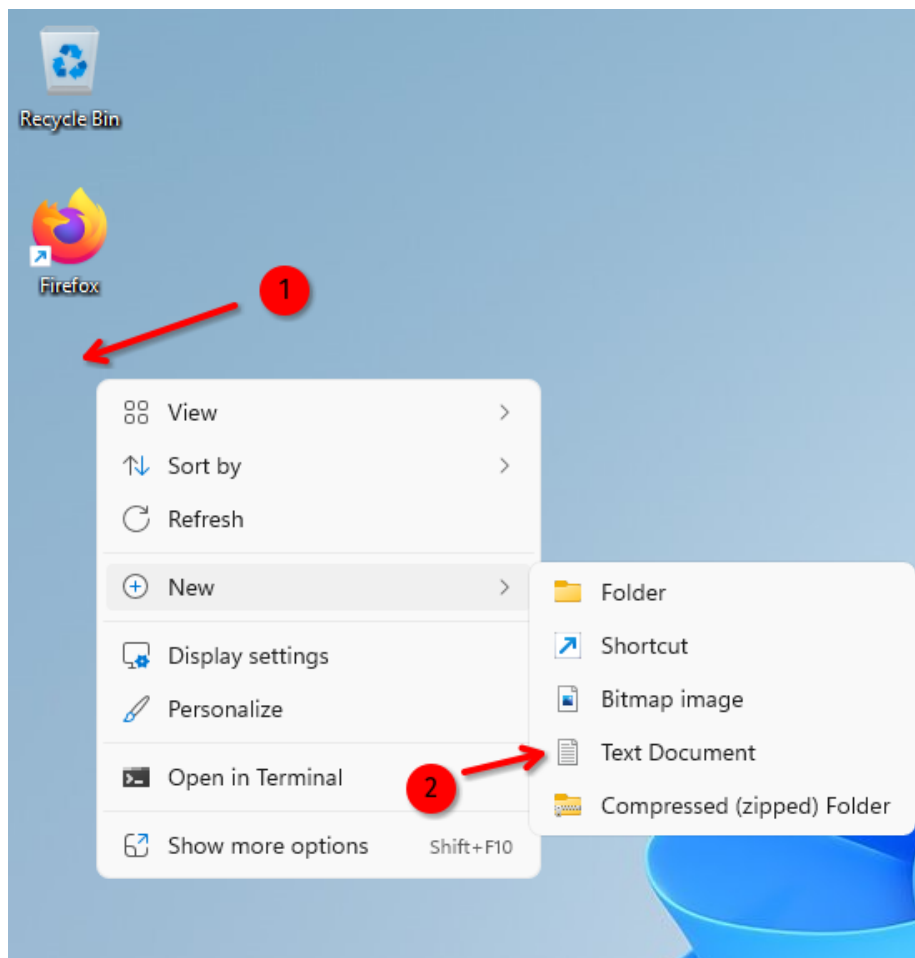


Figure 18: Creating a Desktop shortcut for ORPL - GUI 1

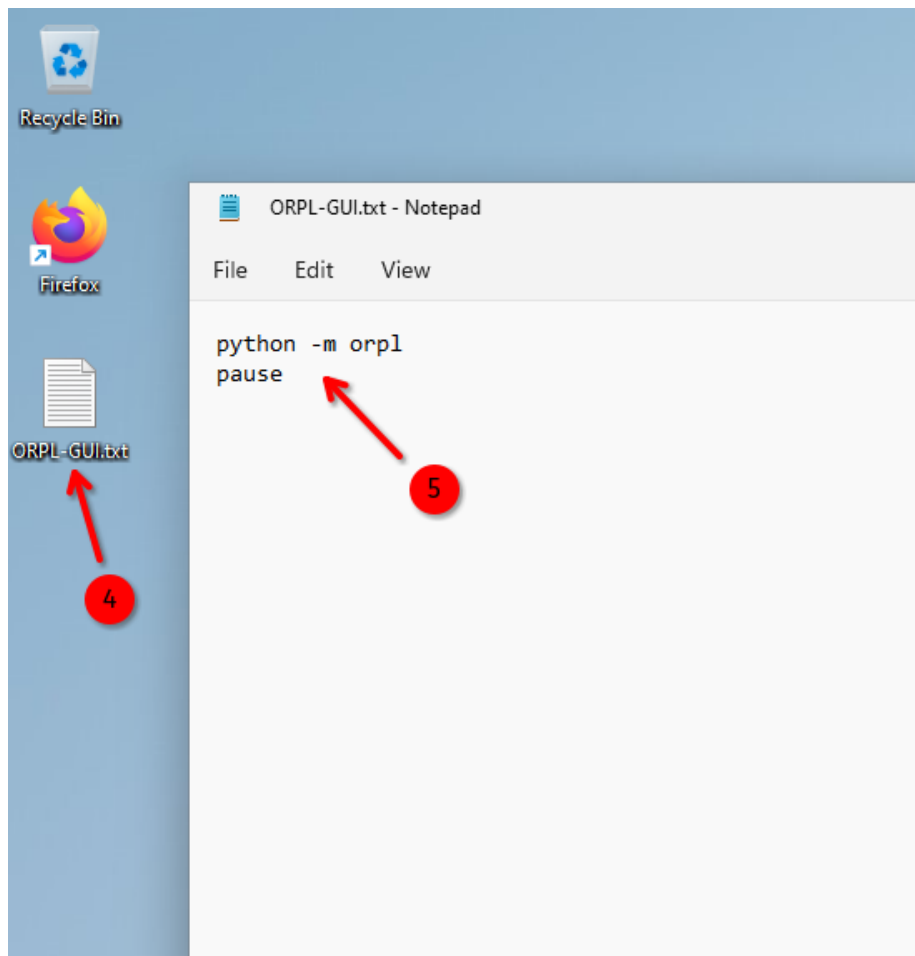


Figure 19: Creating a Desktop shortcut for ORPL - GUI 2

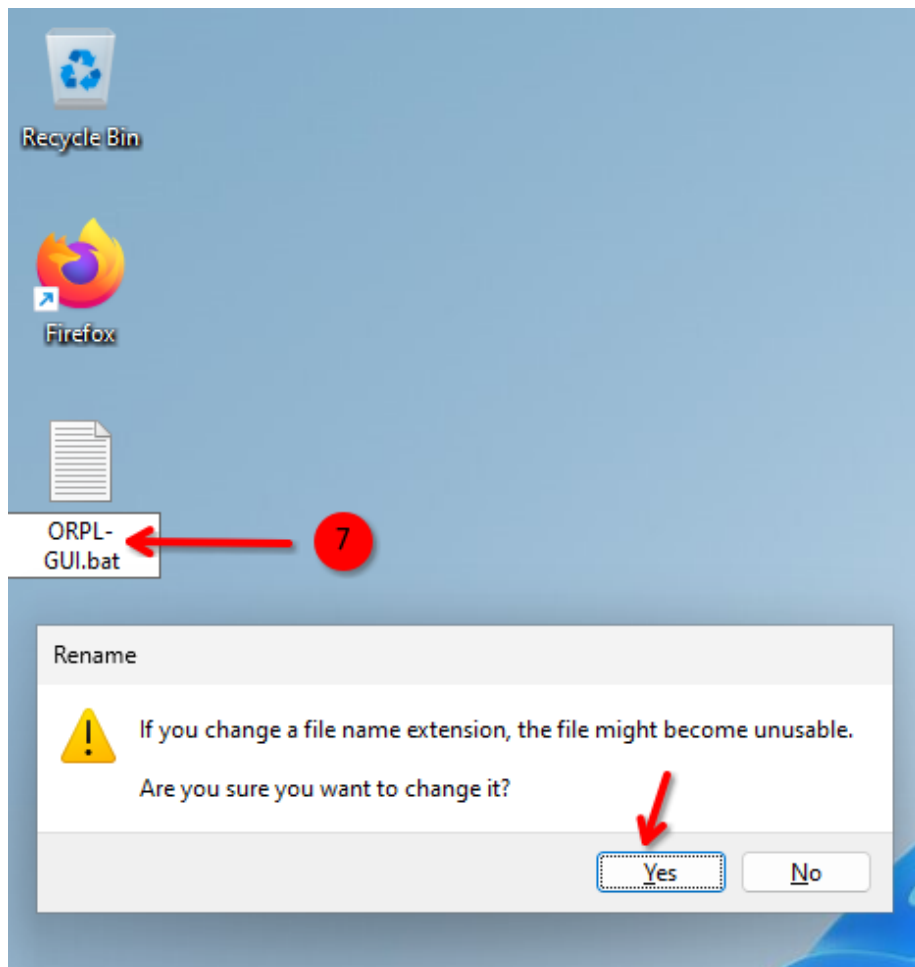


Figure 20: Creating a Desktop shortcut for ORPL - GUI 3