



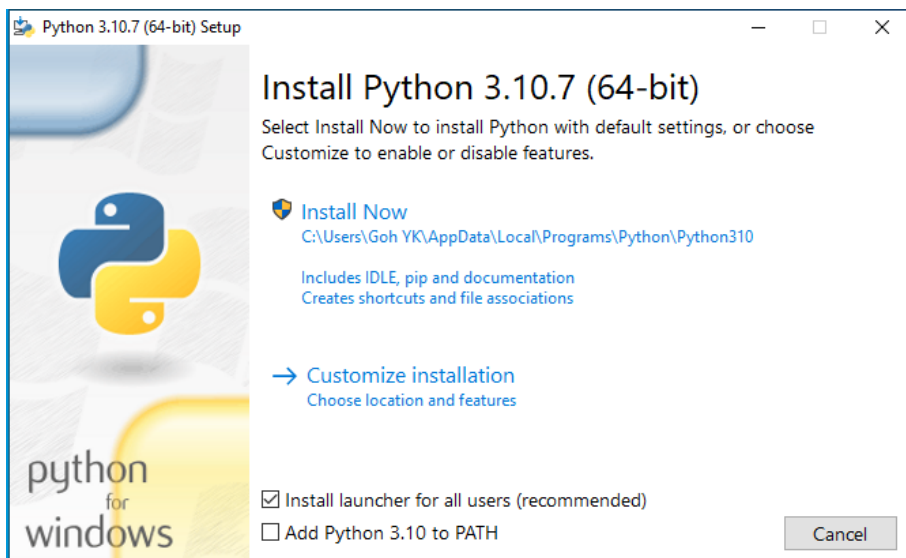
## Software needed

- Python - <https://www.python.org>
- cmdr - <https://cmdr.app/>
- PyCharm - <https://www.jetbrains.com/pycharm/download>
- Firefox - <https://www.mozilla.org/en-US/firefox/download/>
- MobaXterm - <https://mobaxterm.mobatek.net/download-home-edition.html>

The following instruction is for Windows users. If you are on Linux or Mac, most likely you just need to install PyCharm, and you are ready to go.

## Installing Official Python

1. Download the installer from <https://www.python.org>.
2. Double-click to start the installation.

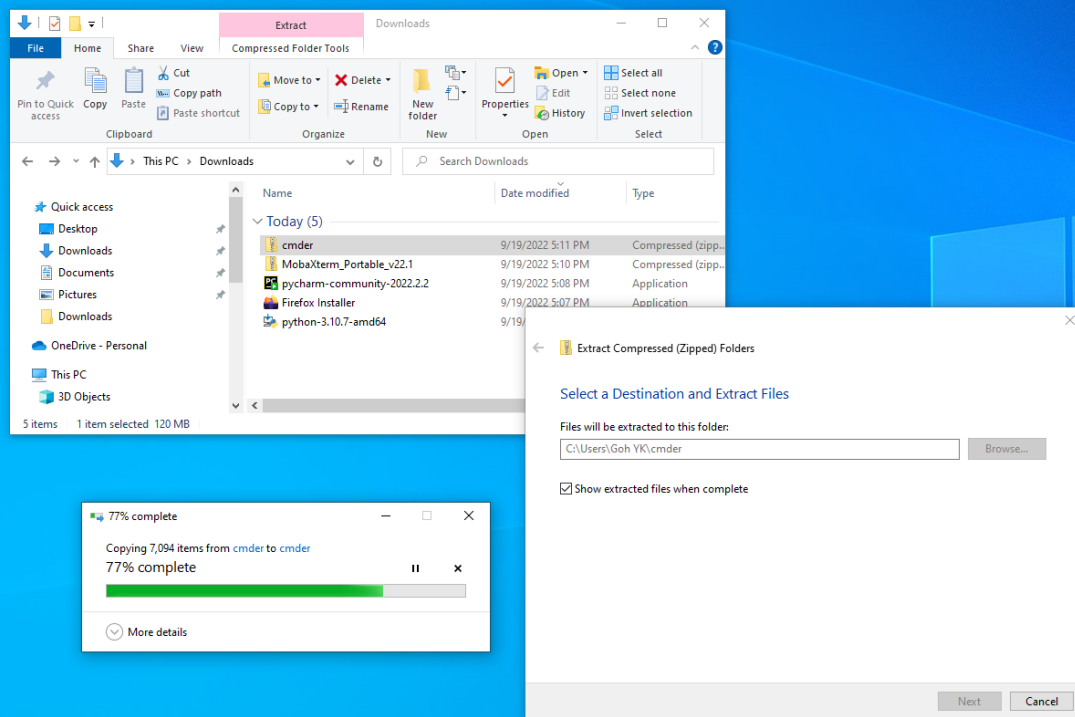


- do not select "Add Python 3.10 to PATH" if you have multiple versions of Python installed.

## Install Console Emulator

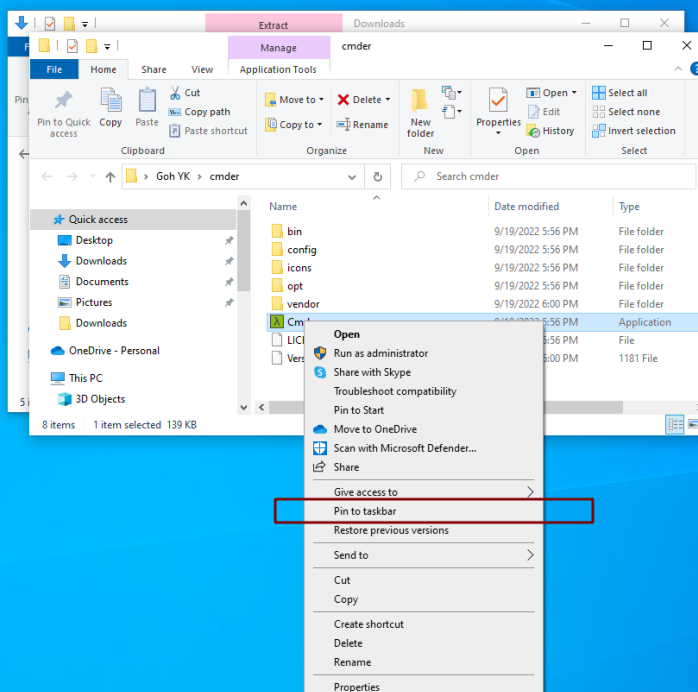
The default Windows command line interface is pretty bad. We will use a better console emulator to replace the default one. There are a few options, like Cygwin, MinGW, or even git-bash. We will be using `cmdr` as it has

- `git` and `ssh` support out of the box
- using Windows native binaries
- easy to integrate into the Windows folder system.
- To install, download the `cmdr` from <https://cmdr.app/>. Choose the full version, as we will need the git support in this version.
- The downloaded package is a zip file. Extract the zip files into a folder. Place your folder to `C:\Users\<your_user_name>\cmdr`, like this:

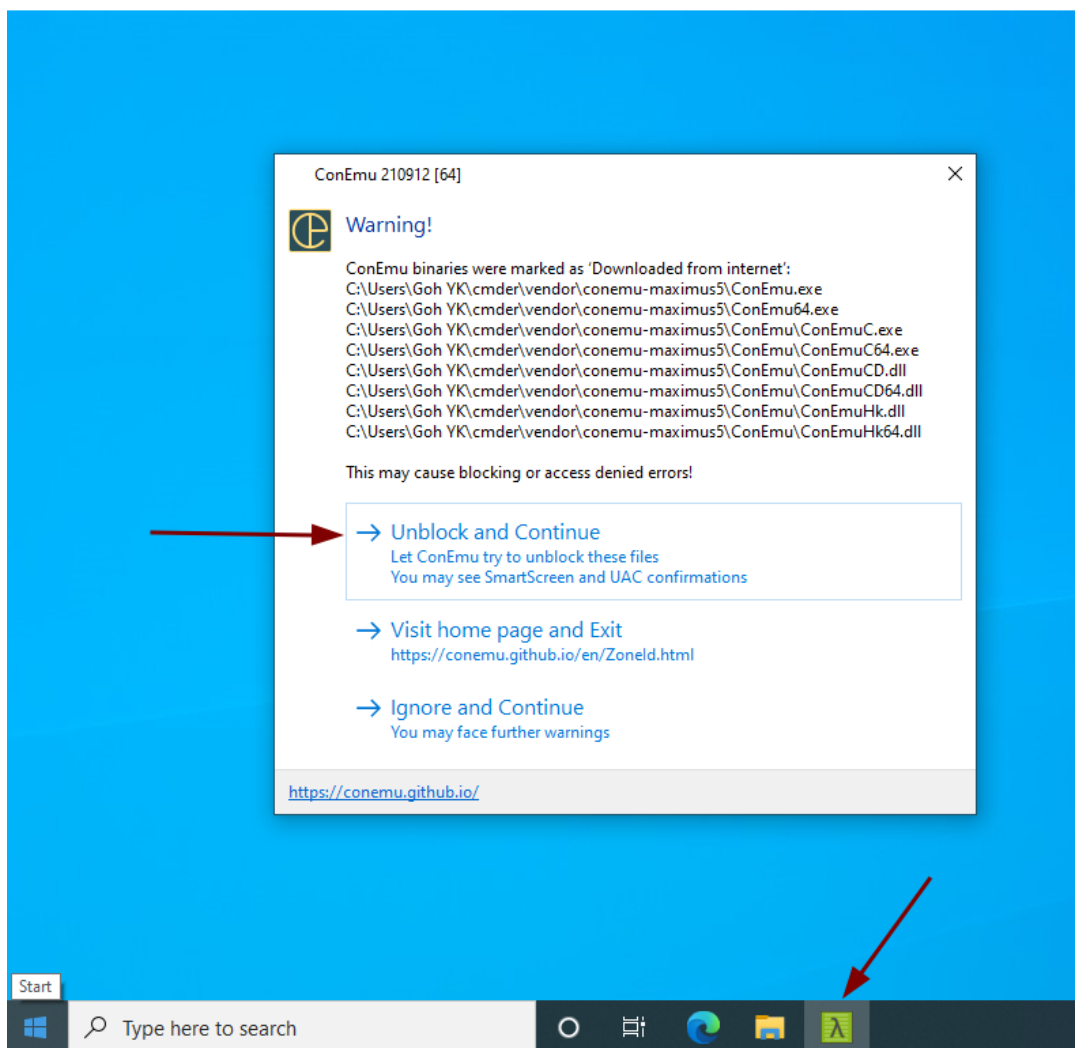


here, you should replace `<your_user_name>` with your user name, like `Goh YK` in the figure.

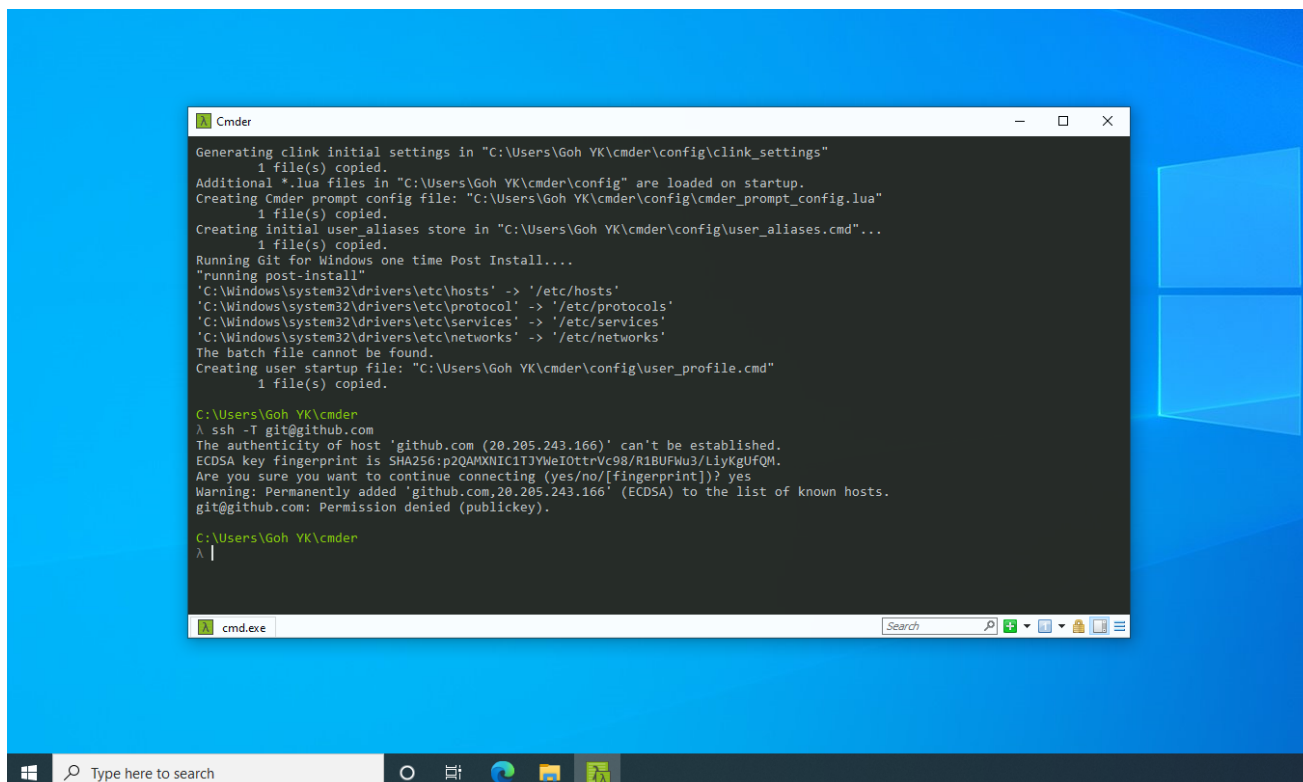
The unzipping process will be slow, as it will need to unzip 7000++ files. Once the unzipping is done, a folder will pop up. Select the icon for `cmdr` and right-click. From the right-click menu, choose `Pin to taskbar`. See figure.



Then, you can start `cmdr` by clicking the corresponding icon on the taskbar. Then, you will see the following on the first start.



Choose "Unblock and Continue" to avoid seeing the same message again. Finally, you will get the `Cmder` console emulator. Try out the new console by testing your ssh connection by typing the command `ssh -T git@github.com` into the console:



If you see the message:

```
λ ssh -T git@github.com
The authenticity of host 'github.com (20.205.243.166)' can't be established.
ECDSA key fingerprint is SHA256:p2QAMXNIC1TJYWeIOtrVc98/R1BUFWu3/LiyKgUfQM.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'github.com,20.205.243.166' (ECDSA) to the list of known hosts.
git@github.com: Permission denied (publickey).
```

Don't worry about the `Permission denied (publickey)`, we will resolve this in due course.

## Install PyCharm

When developing projects with a lot of source files and using various external libraries, a good IDE would help the developer's offloading burden on memory work. Some good IDEs are like `PyCharm` and `vscode`. Feel free to try out different IDE that best fit your workflow. We will use `PyCharm` as the primary IDE in the course.

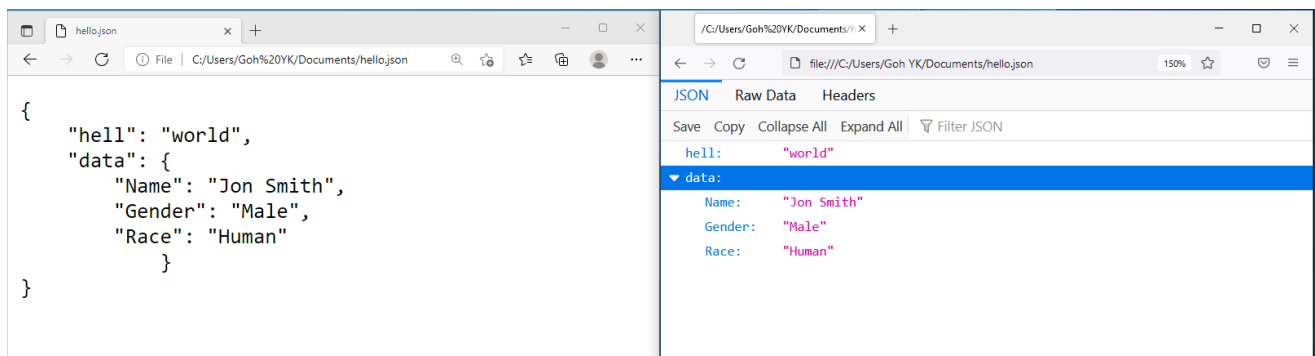
1. Download `PyCharm` installer and install. The community edition will do.
2. Double-click to start the installation process and accept all default options.

## Install Firefox

Installation of Firefox is straightforward, I will not repeat it here. But, **why do I need another internet browser?**

In our course, We will have some `JSON` responses from the `FastAPI` web app. A browser that can handle `JSON` data is important. You can either install Firefox, which has the plugin to display `JSON` out of the box or install `JSON` plugin for your favourite browser.

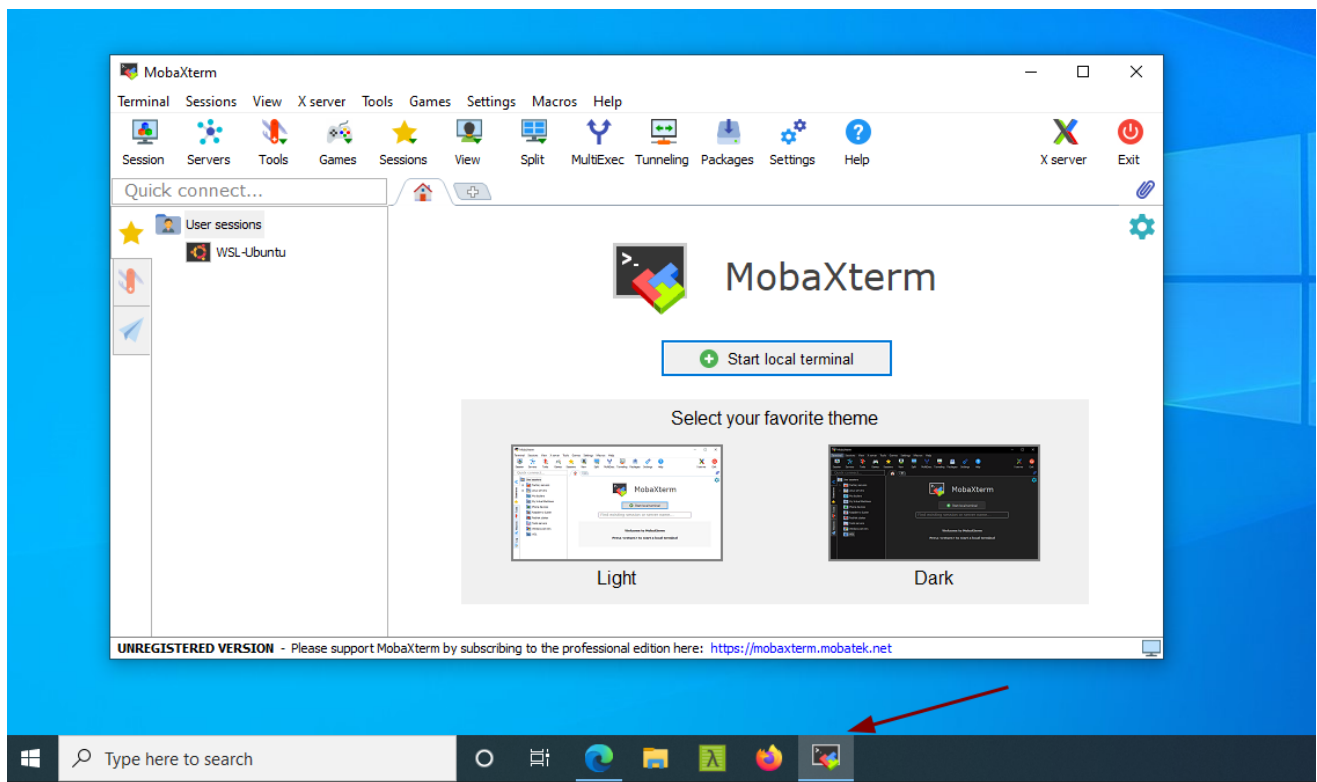
Here is an example of how Firefox and Microsoft Edge render a `JSON` file. You can see that Edge (left browser) will render the `JSON` file like a text file, but Firefox (right browser) structured the data in a hierarchical structure.



## Install MobaXterm

We will use MobaXterm as an ssh client to connect to a remote server. During the course, we will do files transfer and possibly edit files at the remote server. For those unfamiliar with the remote workflow, MobaXterm can help new users have a more smooth experience when transferring and editing remote files.

1. Download MobaXterm Home Edition (Portable Edition) from <https://mobaxterm.mobatek.net/download-home-edition.html>.
2. The downloaded package is a zip archive. Install in the same manner as the `Cmder`.
3. Extract the zip archive in the `C:\Users\<your_username>\MobaXterm_Personal` folder.
4. Once the zip files are extracted, pin `MobaXterm_Personal.exe` to the taskbar, just like `Cmder` for easy access.



## Online training setup

Documentation built with [MkDocs](#).

Because the training is now online, you will need to explore the most comfortable setting to follow the training. Remember that during the online training, the trainer will share his screen via either Zoom or Microsoft Teams, and at the same time, you probably will also want to open up your IDE. Most likely, both Zoom/MS Teams and your IDE are taking up half of your screen each. If your monitor screen is too small, you might have difficulty following the class. A few suggestions are:

1. Do not use a laptop with too small a screen size. At least a 14-inch screen is recommended.
2. If you have a second monitor, use it. Use your primary monitor for your IDE and your secondary monitor for Zoom/MS Teams.
3. If you don't have a second monitor but a tablet or ipad, you can use the tablet/ipad to login to Zoom and use it as a second monitor. However, viewing Zoom using a mobile phone is not recommended, as the screen is too small.
4. Please let your trainer know if you cannot see the screen shared by the trainer.

An example of setup is as below.

