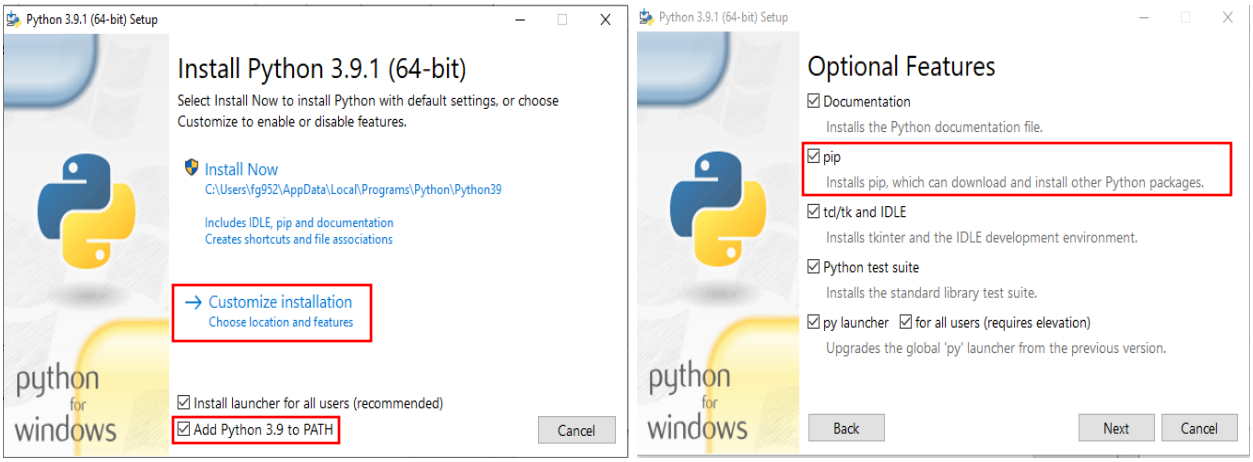
1: DOWNLOADING PYTHON:

From https://www.python.org/ go to downloads and download the python version for your OS

2: ENSURING DURING DOWNLOAD THAT PIP IS PRESENT:



1. Set Python 3.9 to PATH
2. Click on customize installation
3. Ensure pip installation box is complete

Through your search bar type: CMD and open the Command Window

From CMD type: pip

```
C:\Users\fg952>pip

Usage:
  pip <command> [options]

Commands:
  install                     Install packages.
  download                    Download packages.
  uninstall                   Uninstall packages.
  freeze                      Output installed packages in requirements format.
  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.
  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.
  help                        Show help for commands.
```

A large cache will open where the above picture represents scrolling back up to the line you typed pip into.

If the below output occurs when typing in pip (I typed pip1 because it would not work), type: pip3 instead.

```
C:\Users\fg952>pip1
'pip1' is not recognized as an internal or external command,
operable program or batch file.
```

```
C:\Users\fg952>pip3

Usage:
  pip3 <command> [options]

Commands:
  install                     Install packages.
  download                    Download packages.
  uninstall                   Uninstall packages.
  freeze                      Output installed packages in requirements format.
  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.
  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.
  help                        Show help for commands.
```

This is to ensure pip is present for you to download the packages necessary.

If neither of these work, follow step 3 to get to the correct directory then try both pip types again.

3: GETTING TO CORRECT FILE DIRECTORY:

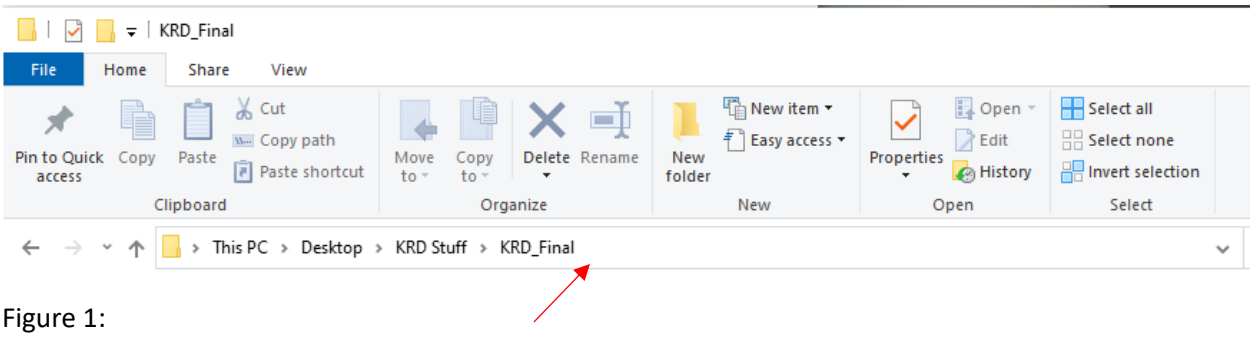


Figure 1:

Open the file explorer to the downloaded file and click in the directory line shown in Figure 1.

Once it is highlighted, type CMD and it will open your command window to the directory with the file.

3b) ALTERNATIVE METHOD:

As an alternative, from your command window type: cd /

This will return you to your base directory.

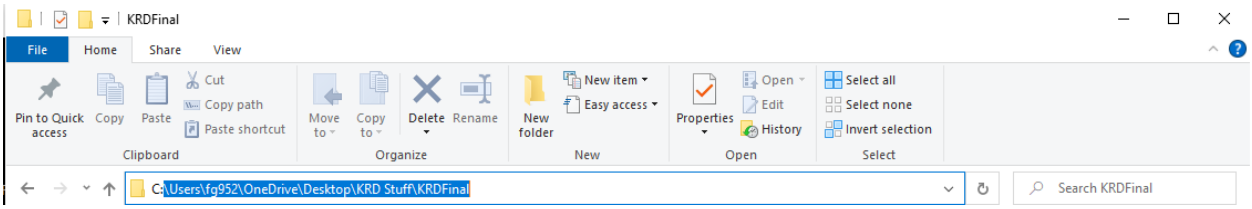


Figure 2

From the file location in the file explorer, highlight the directory as shown in Figure 2

Once this is copied, within CMD or Terminal type: cd [paste]

Where [paste] represents the file directory.

This will take you to the correct directory as well.

INSTALLING PACKAGES:

Once this is done, from the CMD window type the following lines, waiting after each for the download to commence and finish.

1) pip install numpy==1.19.3
2) pip install scipy
3) pip install matplotlib

This will download the necessary libraries to run the application to your system make sure you are in the correct directory, if python/pip is not part of your environmental variables for whatever reason, you need to be in the directory of the file when installing the libraries for them to work.

RUNNING APPLICATION:

From here within your command window type:

python KRD_App.py

This will run the application through the python interface without requiring the user to run python directly. If you would like you can also double click the file and it should open the python IDLE where you can also run the application from. This creates the potential to delete lines of code though and may cause error.

TUTORIAL VIDEO:

https://youtu.be/rWhEfzOntk4