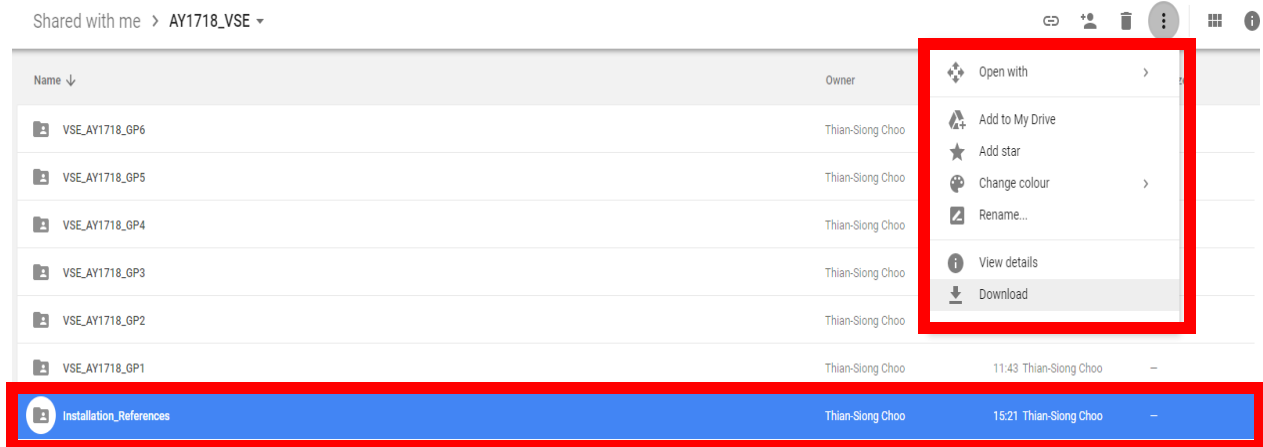
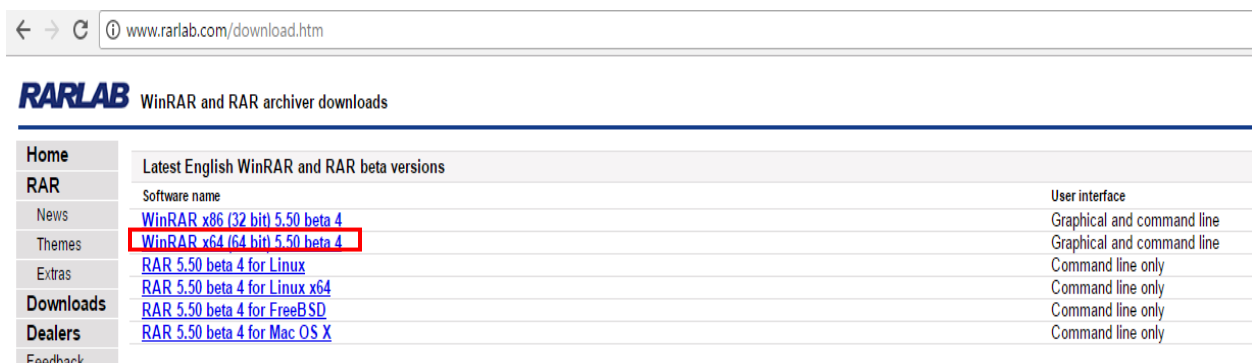


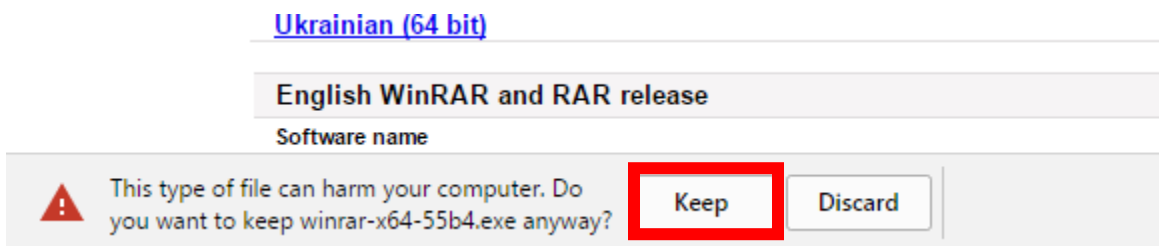
1.)Download the “Installation_References” folder from the google drive.



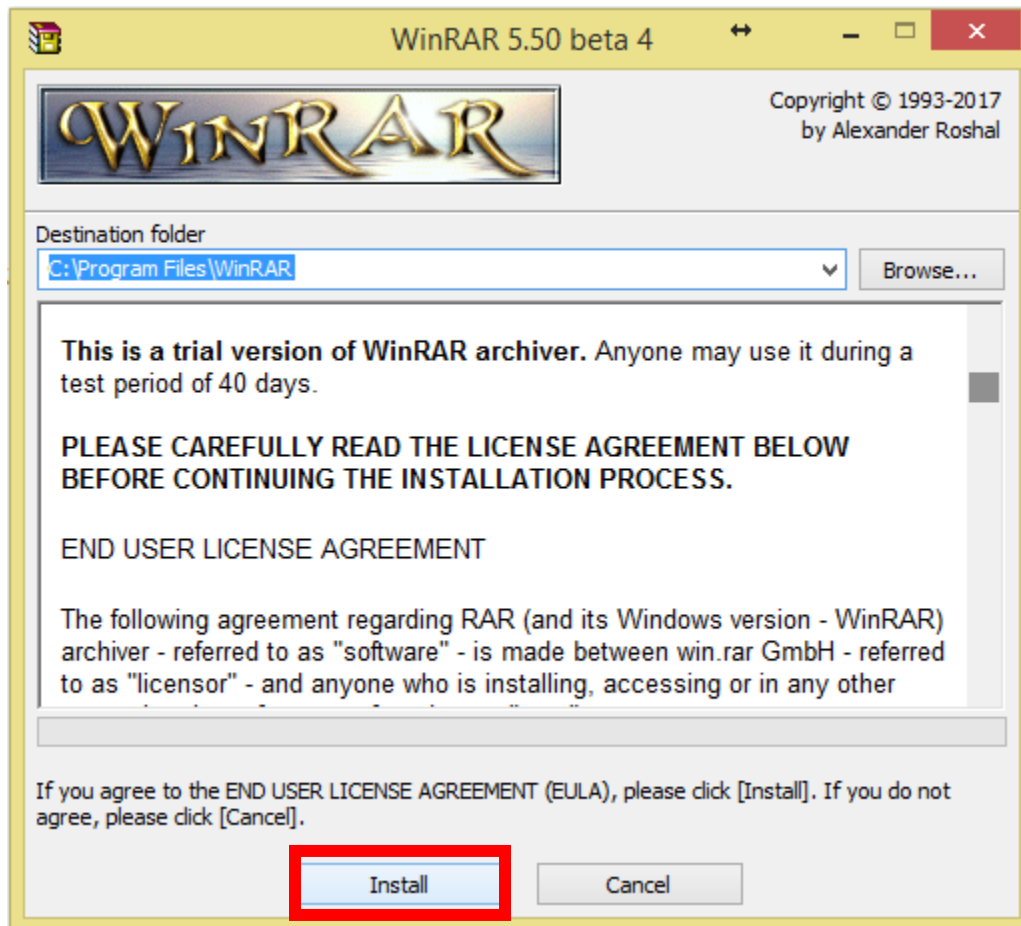
2.)If you already have a program to unzip the downloaded file please skip this step and move on to step 7. Download winrar from www.rarlab.com/download.htm and download “WinRARx64(64bit)5.50 beta 4”



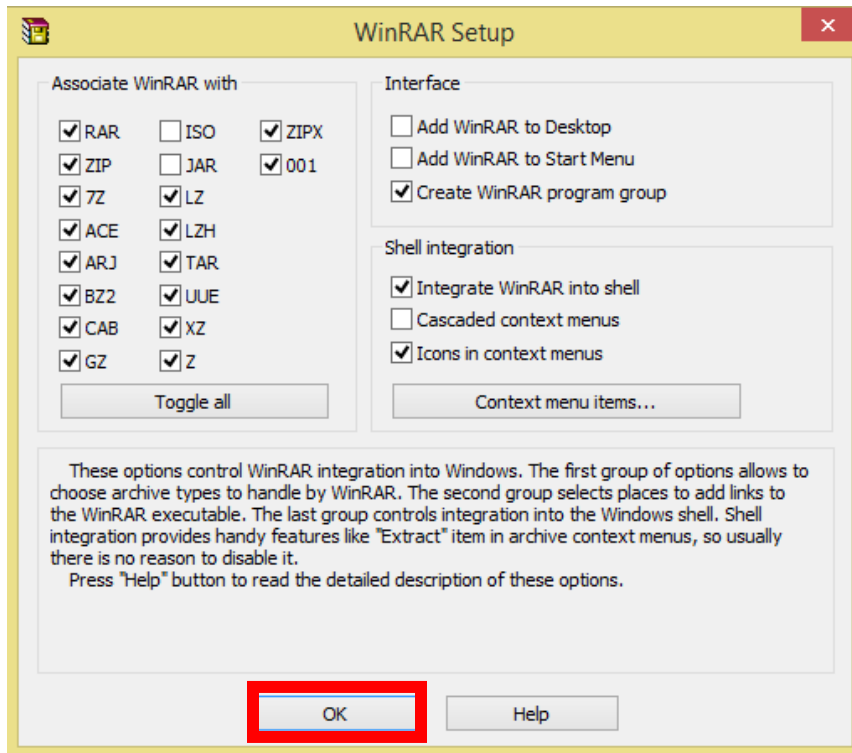
3.)Keep the file



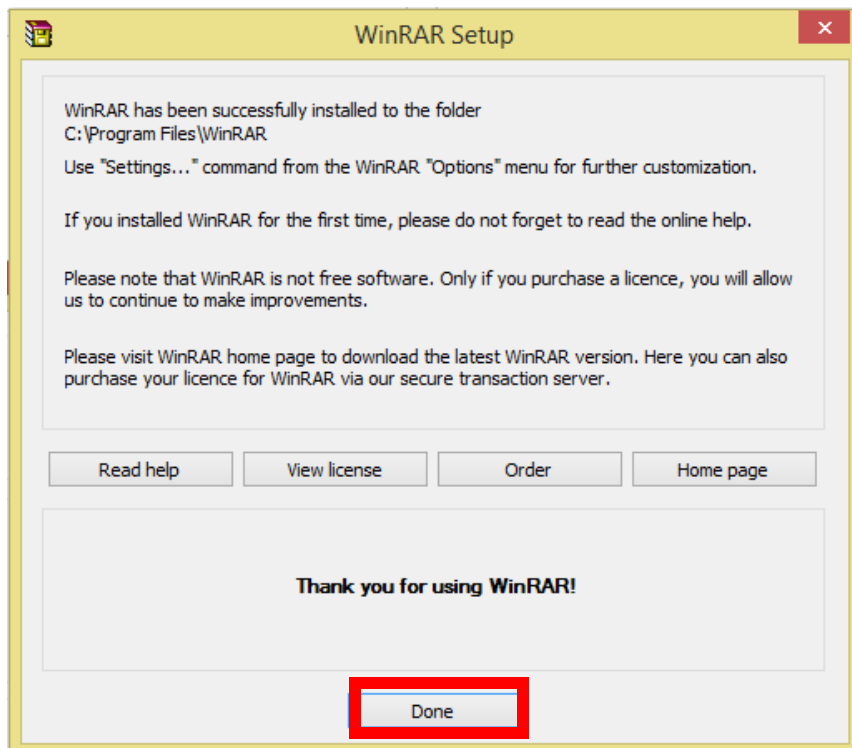
4.) Install winrar



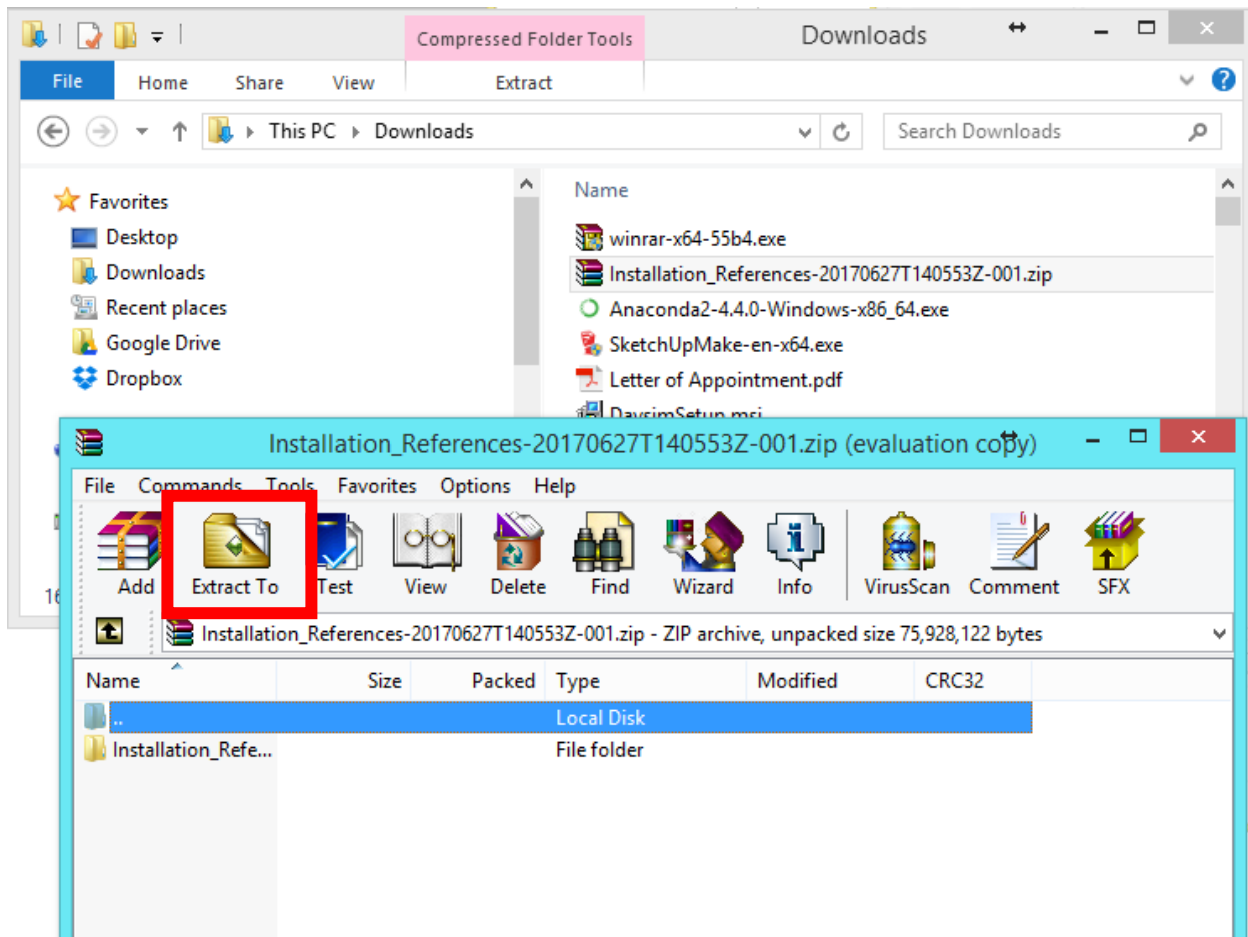
5.) Click "OK"



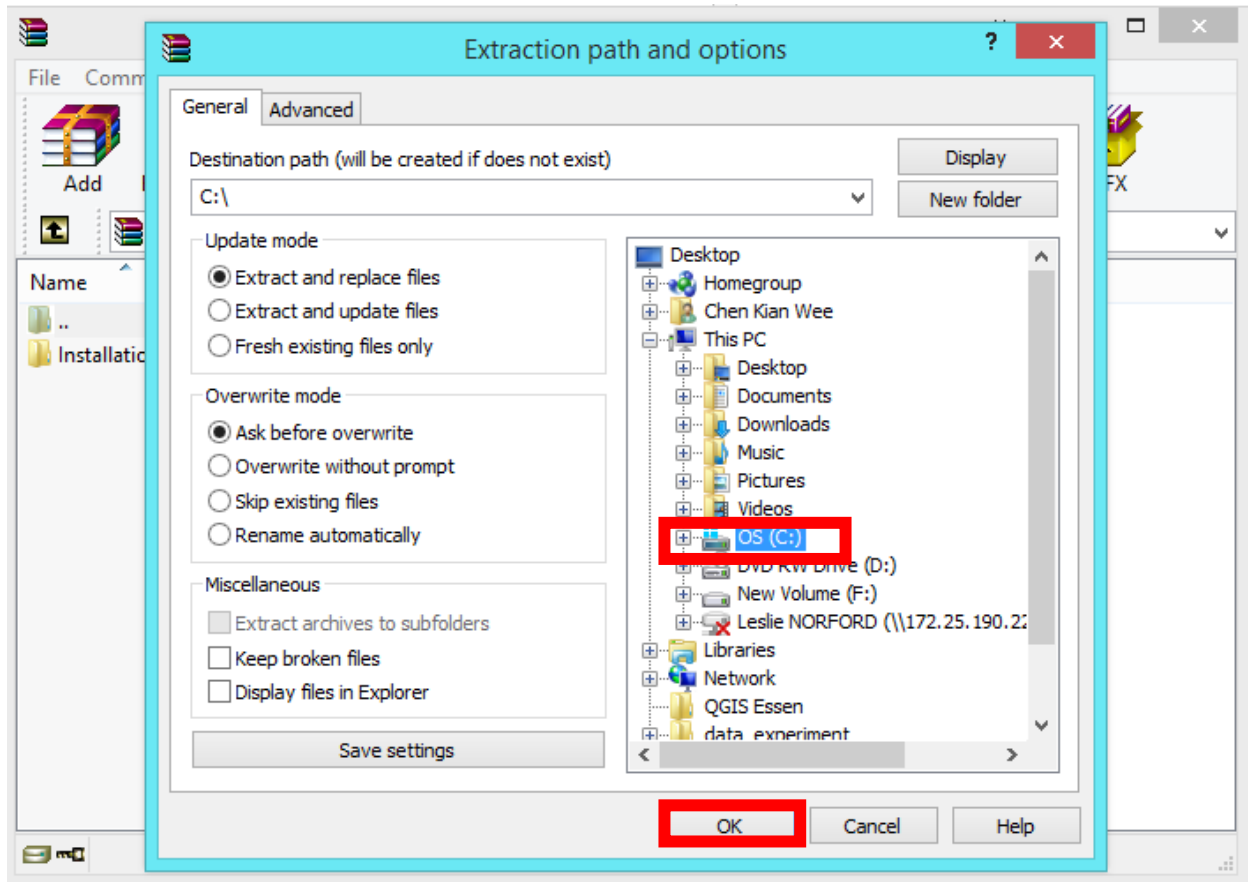
6.) Click "Done"



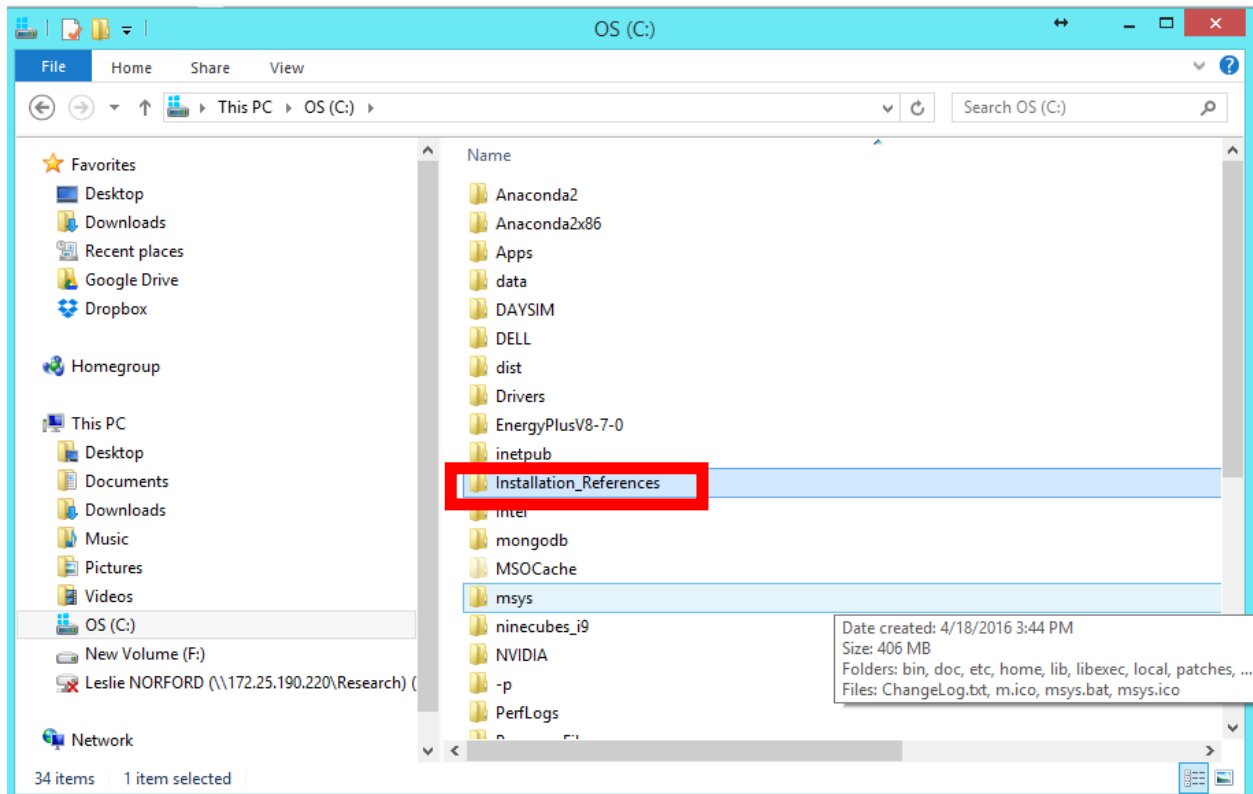
7.)Unzip and extract the “Installation_References” zip file to your c:\ drive.



8.) Extract it to c:\ drive as shown and click “OK”



9.) You will see the folder in your c:\ as shown here



10.) Download Daysim from

<http://daysim.ning.com/page/download>

[HOME](#) [DOWNLOAD](#) [API](#) [CREDITS](#) [PUBLICATIONS](#) [TUTORIALS](#)

Download

To download DAYSIM, please fill out the following information form. Any information you provide here will only be used by the DAYSIM development team for statistical purposes. It will remain completely private and will not be made available to any other organization or individual in any form.

In which country are most of your projects located?

In which Province/State (Canada and US only)?

What is your Profession or Area of Study?

What type of organization do you work for?

Intended Use ☒ Building Design ☐ HVAC Design

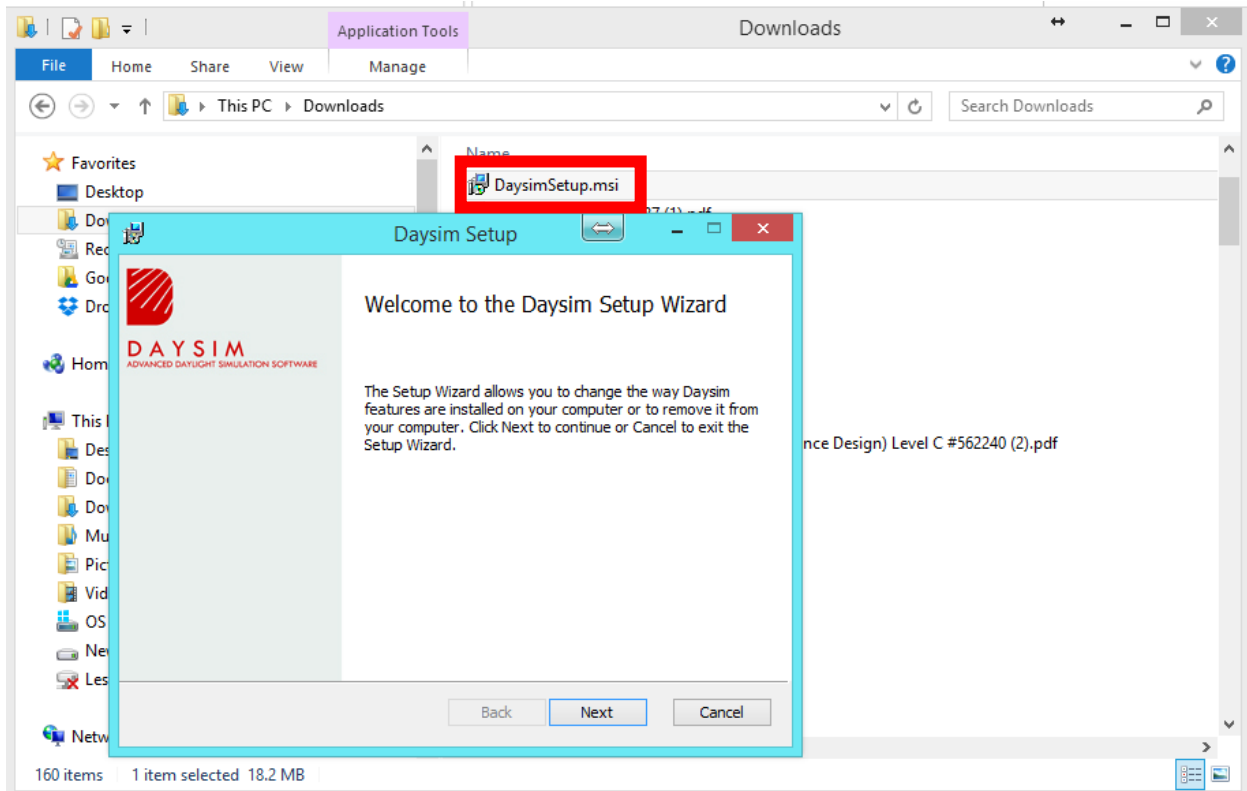
Your email address (optional):

Current DAYSIM Release

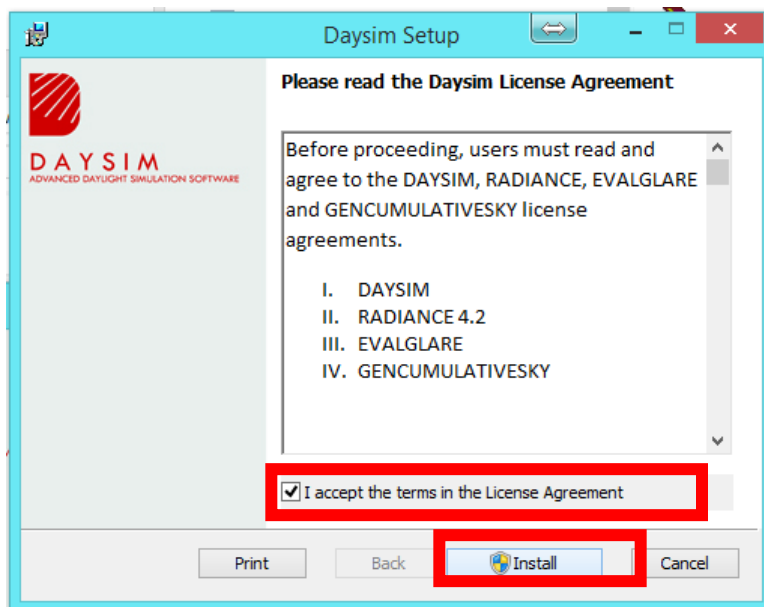
This version should be downloaded by default. It includes the latest version of the DAYSIM Windows binaries as well as the underlying source code.

[Download DAYSIM 4.0 for Windows \(executables and source code only\)](#)

- 11.) Go to the “DaysimSetup.msi” file in your download folder after you downloaded it. Install Daysim. Click “Next”



- 12.) Tick “I agree the terms in the License Agreement” and “Install”



13.) Download anaconda for python 2.7 at
<https://www.continuum.io/downloads>

[Download for Windows](#) | [Download for macOS](#) | [Download for Linux](#)

Anaconda 4.4.0

For Windows

Anaconda is BSD licensed which gives you permission to use Anaconda commercially and for redistribution.

[Changelog](#)

1. Download the installer
2. Optional: Verify data integrity with [MD5](#) or [SHA-256](#) [More info](#)
3. Double-click the .exe file to install Anaconda and follow the instructions on the screen

Behind a firewall? Use these [zipped Windows installers](#)

Python 3.6 version

64-BIT INSTALLER (437M)

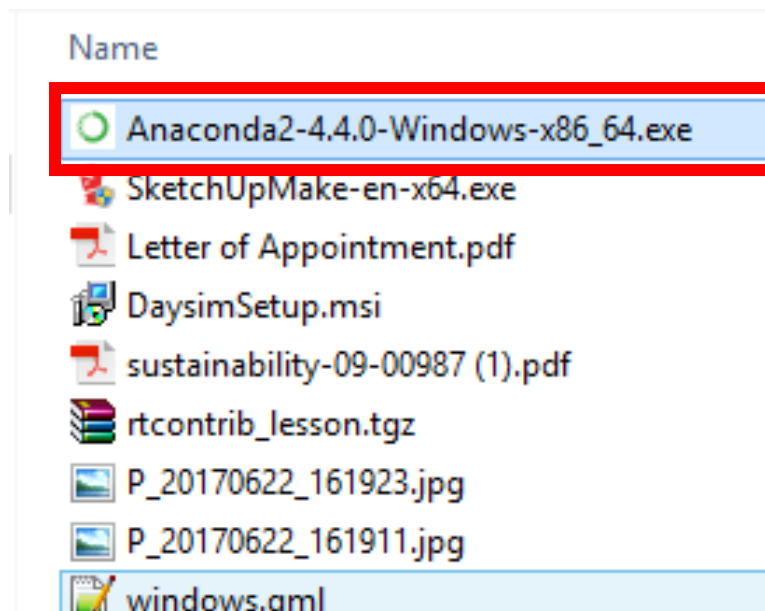
32-BIT INSTALLER (362M)

Python 2.7 version

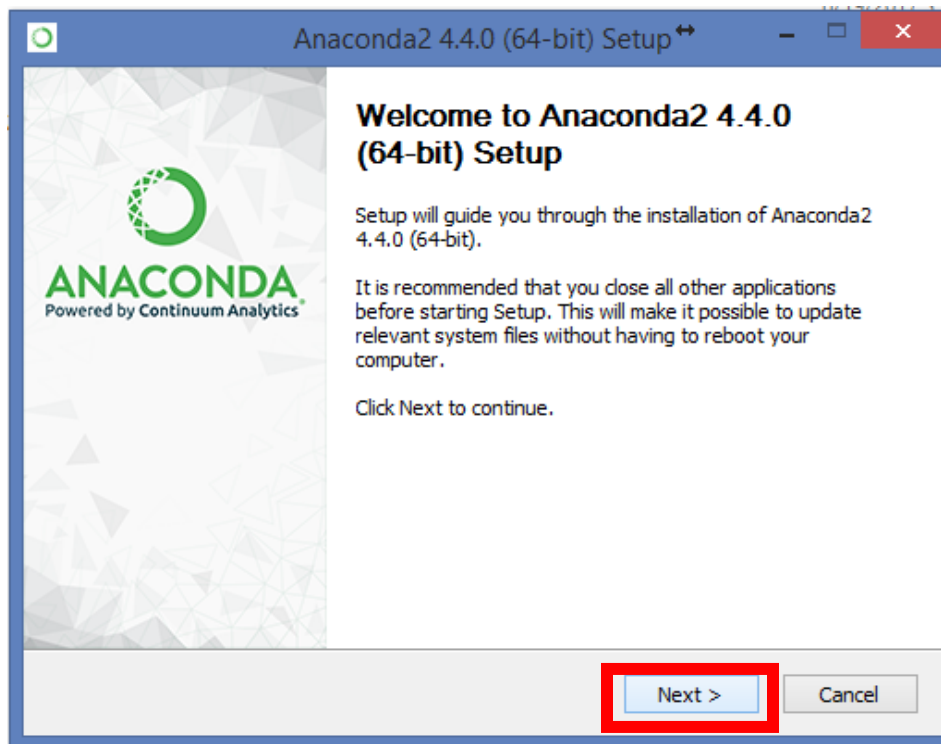
64-BIT INSTALLER (430M)

32-BIT INSTALLER (354M)

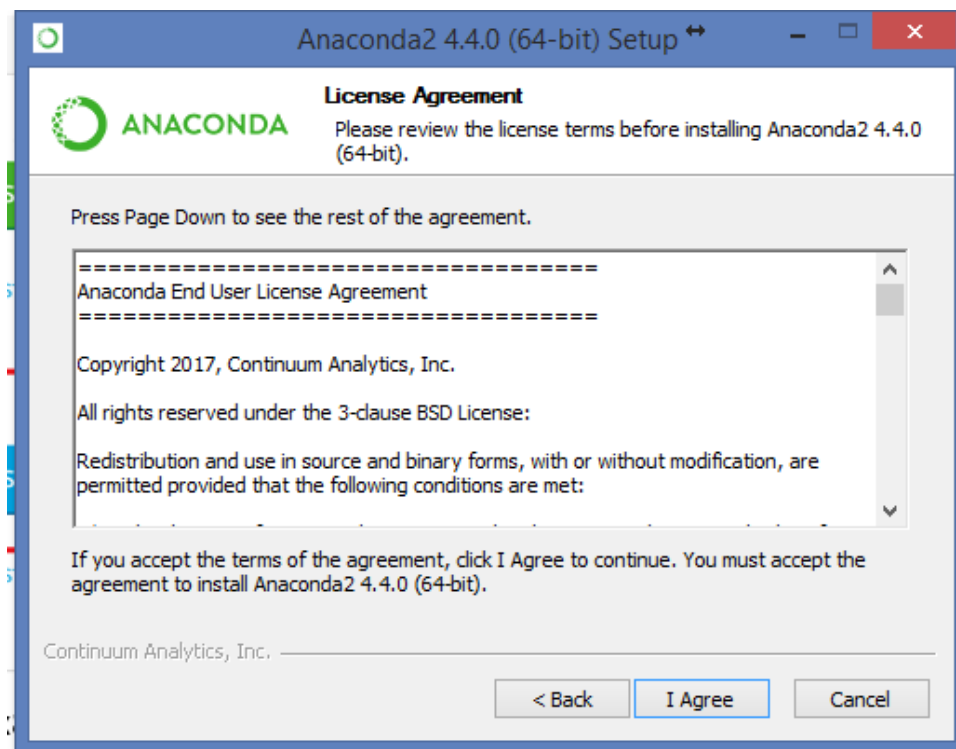
14.) Double click on the “Anaconda2-4.4.0-Windows-x86_64.exe” to install Anaconda



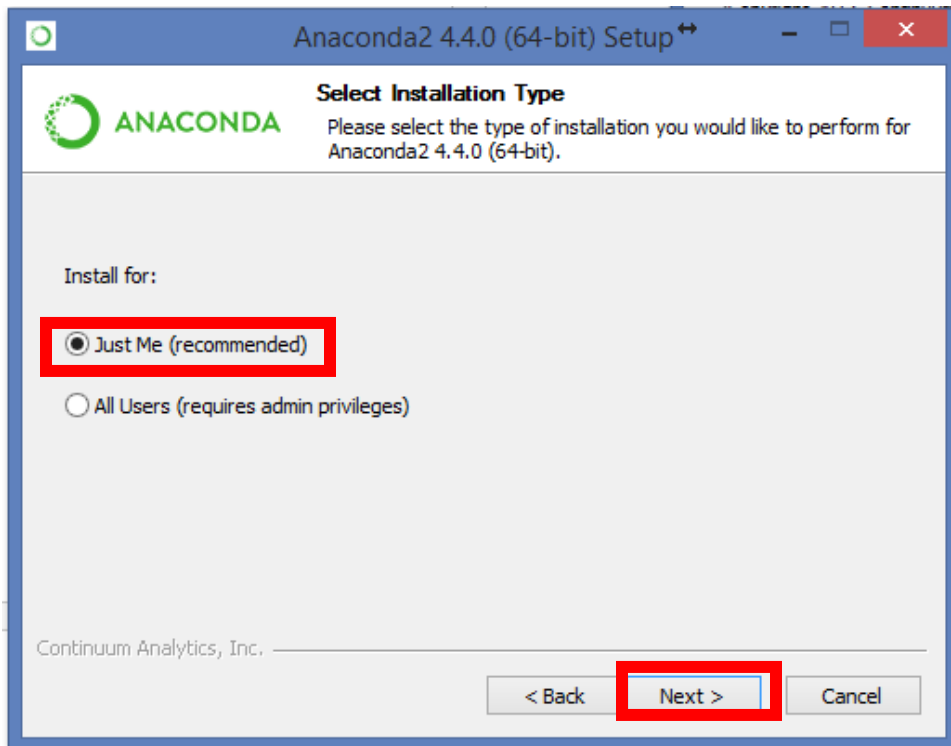
15.) Click Next



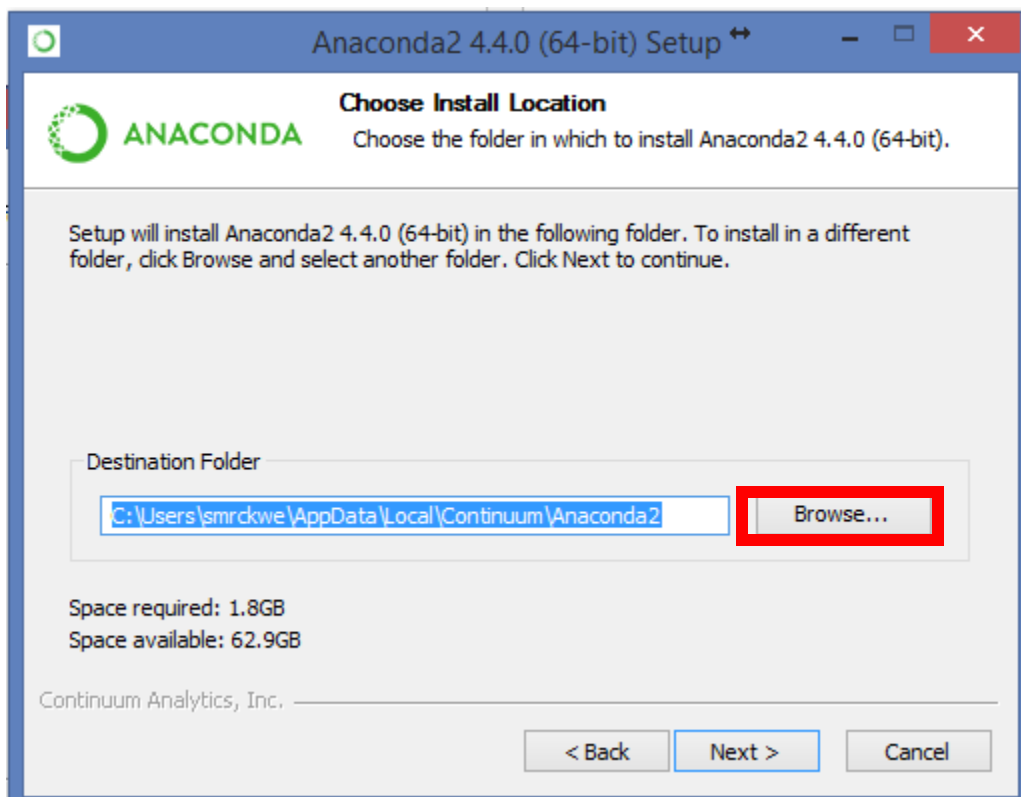
16.) Click I agree



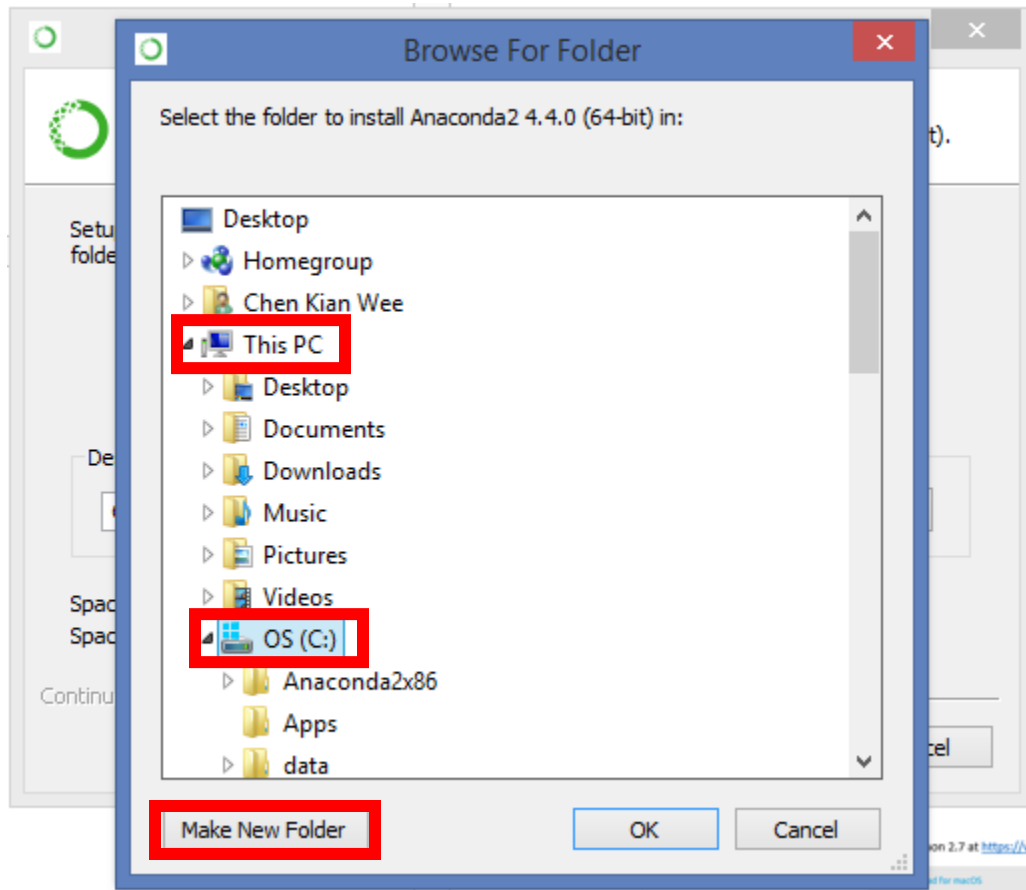
17.) Tick "Just me" and click Next



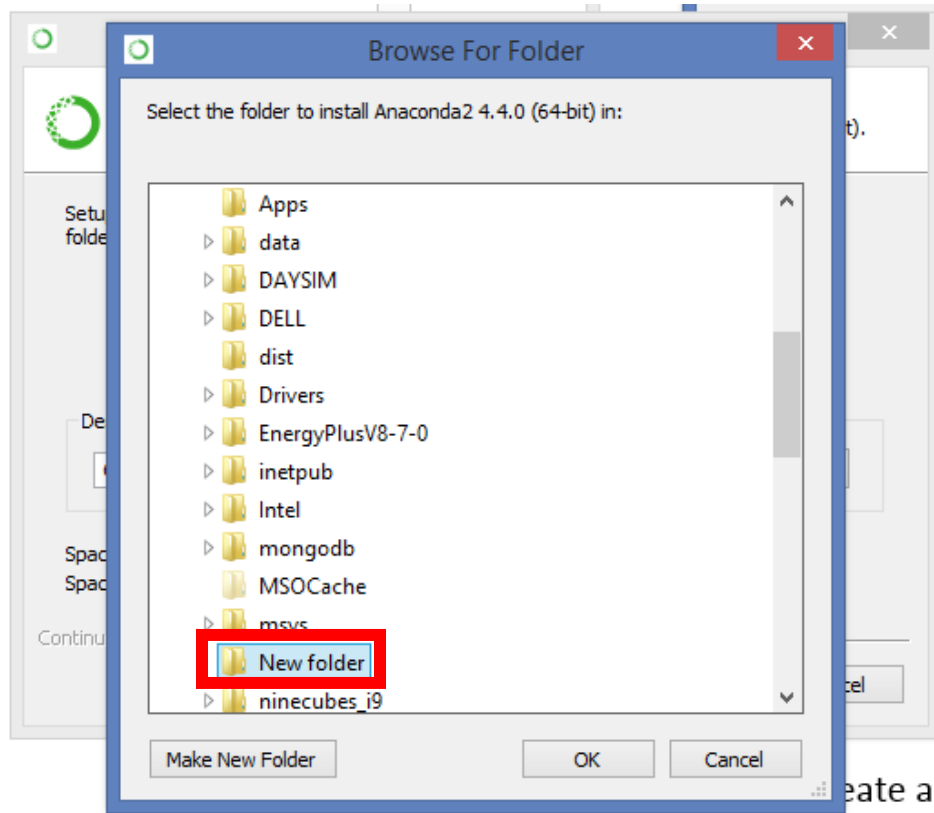
18.) Click on "browse"



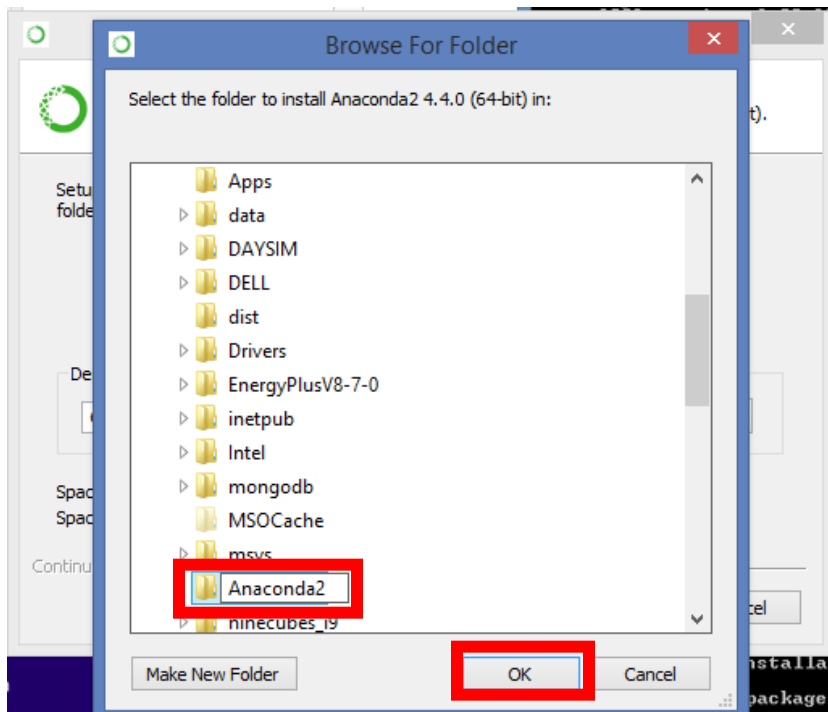
19.) Click on “This PC” and then “OS(C:)” and then click “Make New Folder”



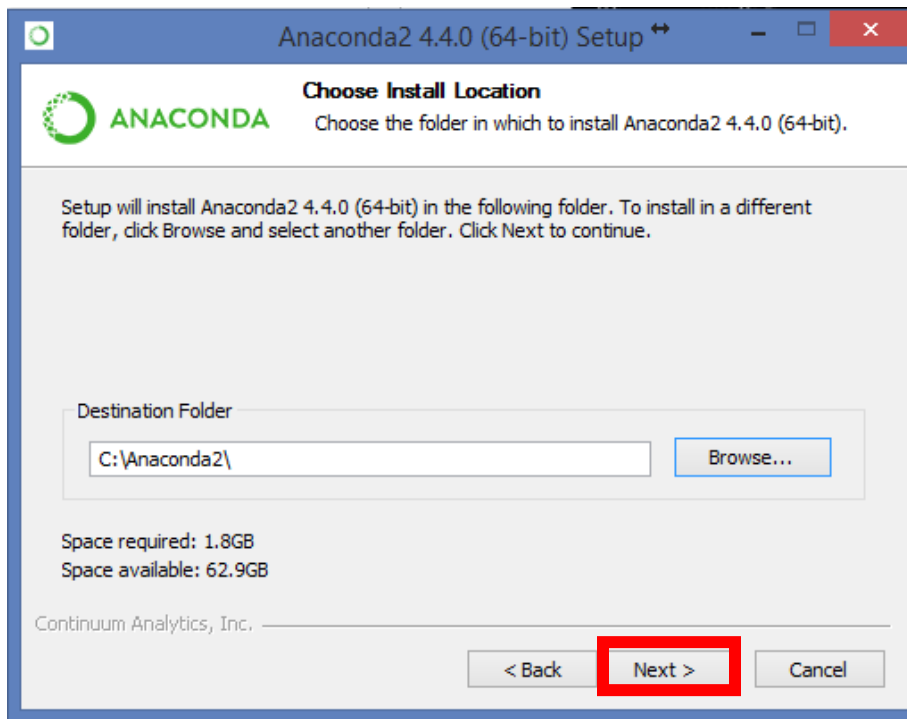
20.) This will create a “New Folder”



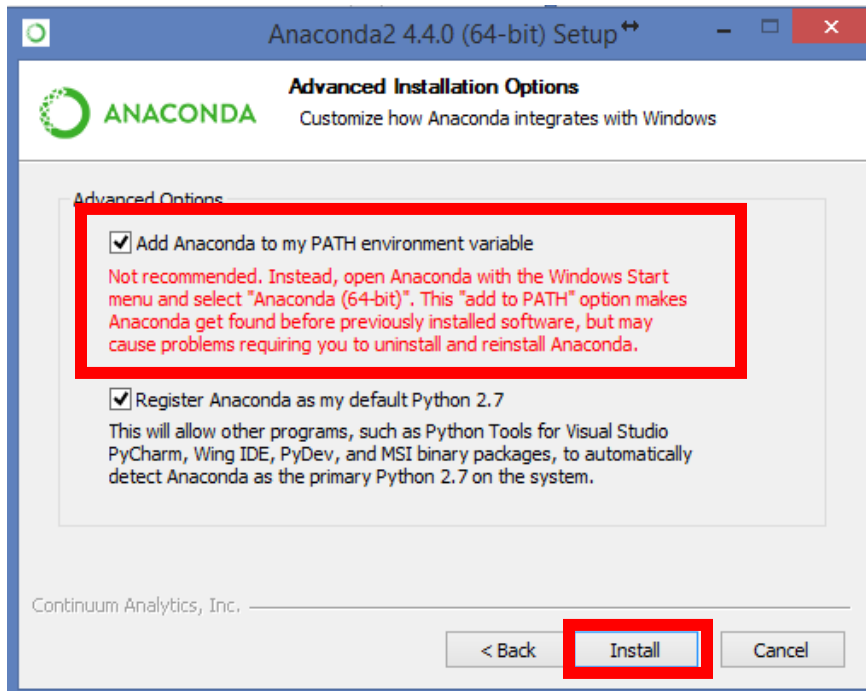
- 21.) Change the name of the folder to “Anaconda2” and press “OK”



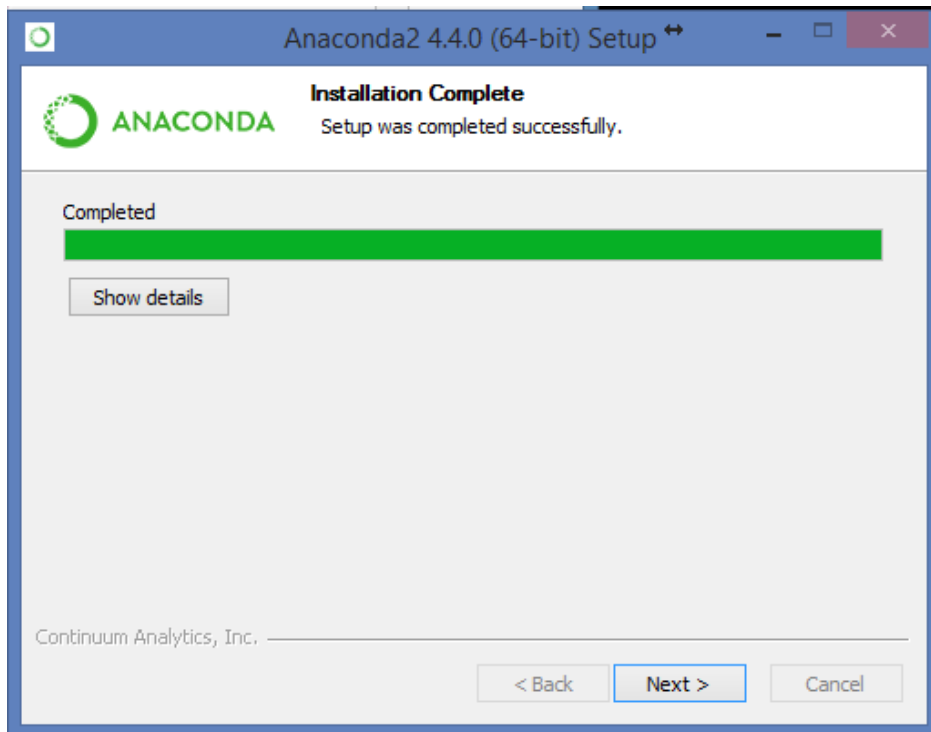
- 22.) Press “Next”



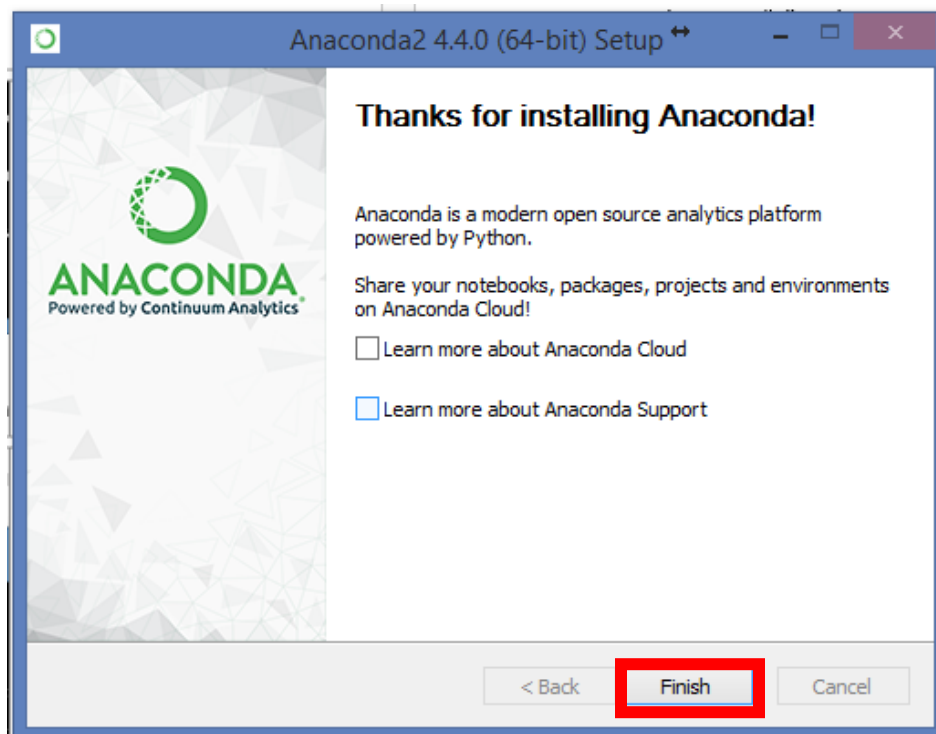
23.) Tick “Add Anaconda to my Path environment variable” and press install



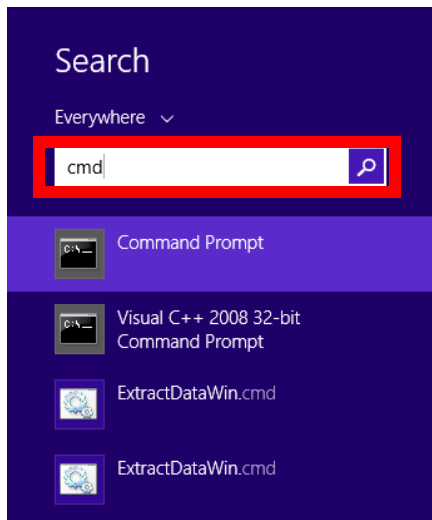
24.) Anaconda will install as shown, and click “Next”.



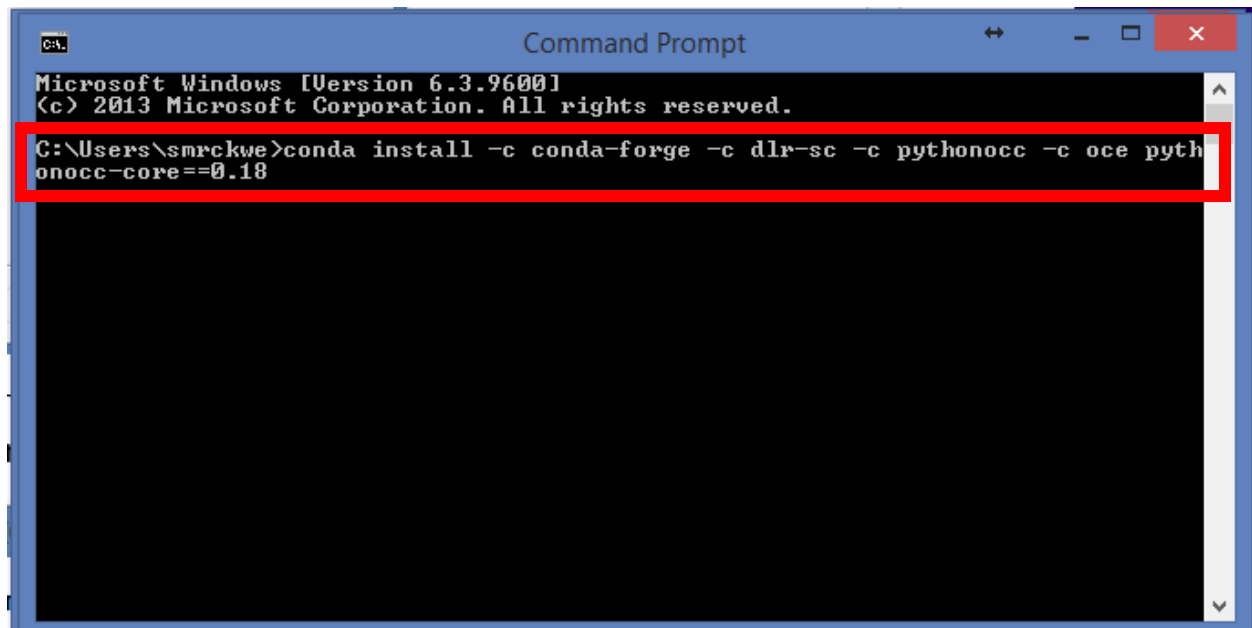
25.) Untick “learn more about anaconda cloud” and “learn more about anaconda support”, then click finish.



26.) Go to search and type in “cmd”, then click on “command prompt”



27.) Type in “conda install -c conda-forge -c dlr-sc -c pythonocc -c oce pythonocc-core==0.18” and press enter



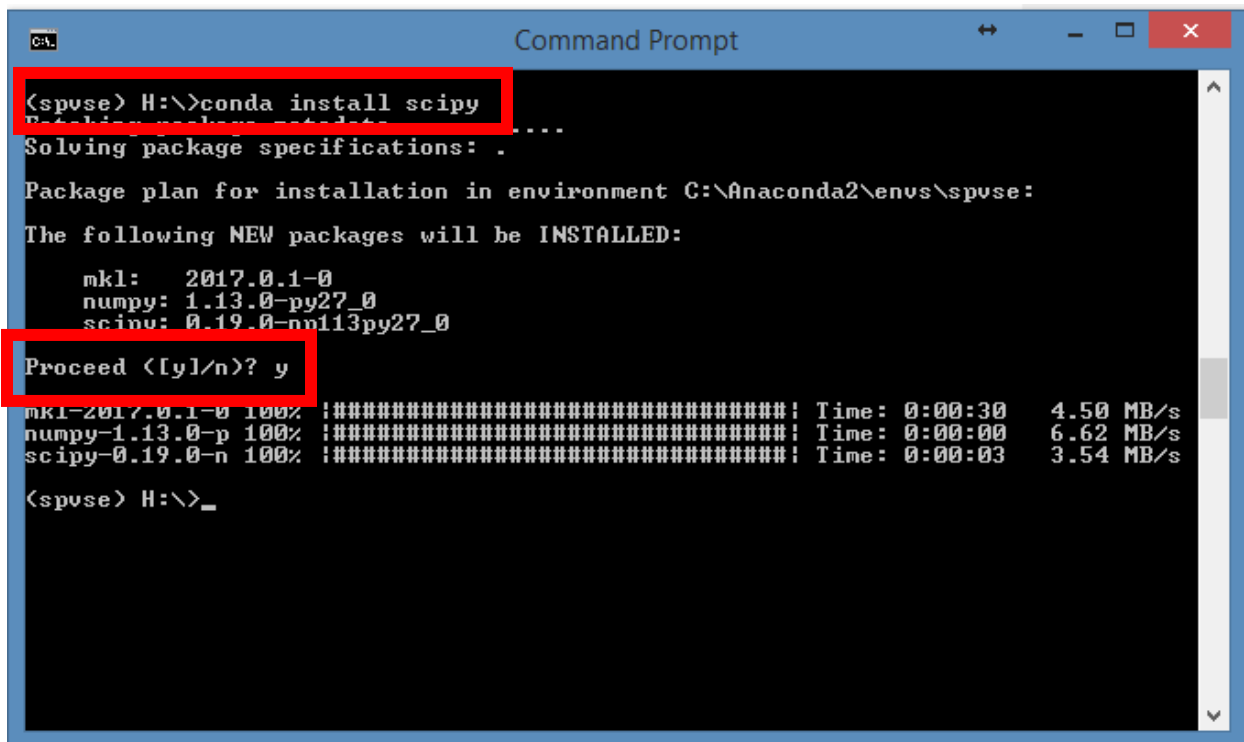
28.) Type in “conda install -c conda-forge -c dlr-sc -c pythonocc -c oce pythonocc-core==0.18”. Type in “y” and enter

```
Command Prompt - conda install -c conda-forge -c dlr-sc -c pythonocc -c oce ...
H:\>activate spvse
(spvse) H:\>conda install -c conda-forge -c dlr-sc -c pythonocc -c oce pythonocc
-core==0.18
Solving package specifications: .
Package plan for installation in environment C:\Anaconda2\envs\spvse:
The following NEW packages will be INSTALLED:

ca-certificates: 2017.4.17-0      conda-forge
freeimageplus:  3.17.0-vc9_0      dlr-sc [vc9]
freetype:        2.7-vc9_1         conda-forge [vc9]
gl2ps:           1.3.8-vc9_0       dlr-sc [vc9]
icu:             58.1-vc9_1        conda-forge [vc9]
jpeg:            9b-vc9_0          conda-forge [vc9]
libpng:          1.6.28-vc9_0      conda-forge [vc9]
oce:             0.18.1-vc9_1      oce [vc9]
openssl:         1.0.2k-vc9_0      conda-forge [vc9]
pyqt:           5.6.0-py27_4      conda-forge
pythonocc-core:  0.18-py27-vc9_0  pythonocc [vc9]
qt:             5.6.2-vc9_1       conda-forge [vc9]
sip:            4.18-py27_1       conda-forge
smesh:          6.7.4-vc9_0       pythonocc [vc9]
tbb:            2017_20170226-vc9_0 conda-forge [vc9]
vc:             9-0              conda-forge
zlib:           1.2.11-vc9_0      conda-forge [vc9]

Proceed [y]/n)? y_
```

29.) Type in “conda install scipy”, type in “y” and enter



```
Command Prompt

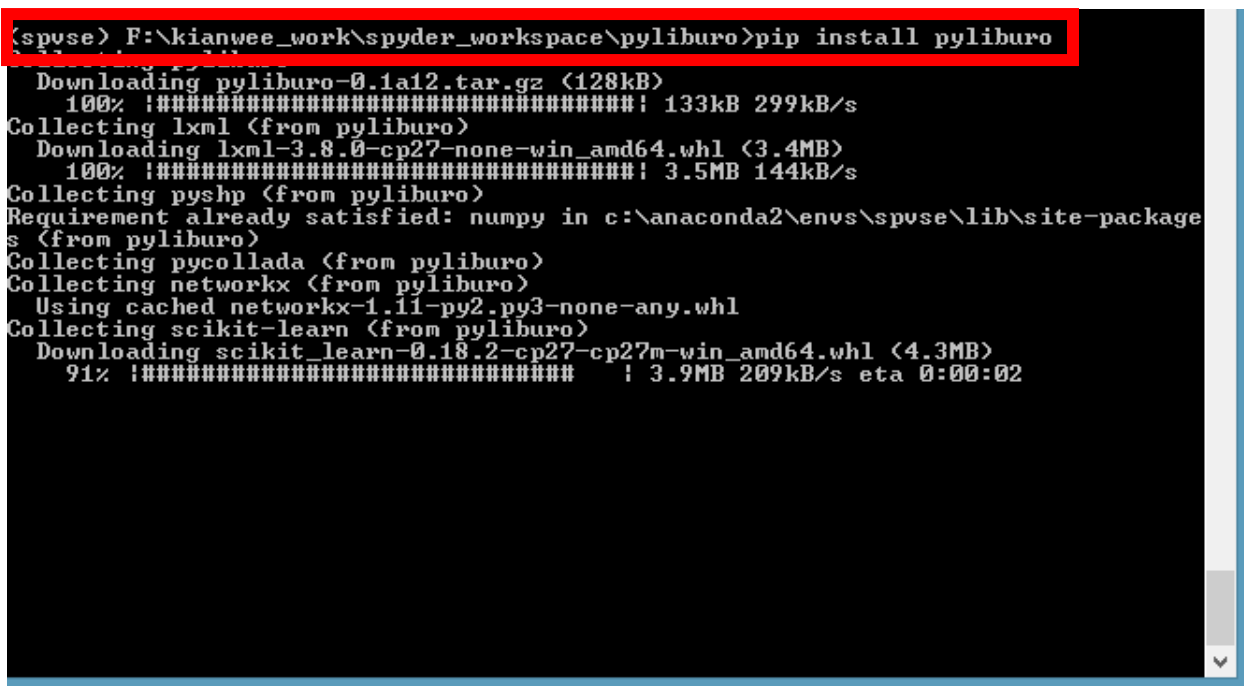
(spvse) H:\>conda install scipy
Solving package specifications: .
Package plan for installation in environment C:\Anaconda2\envs\spvse:
The following NEW packages will be INSTALLED:

    mkl:      2017.0.1-0
    numpy:    1.13.0-py27_0
    scipy:    0.19.0-np113py27_0

Proceed [y]/n? y
mkl-2017.0.1-0 100% |#####| Time: 0:00:30 4.50 MB/s
numpy-1.13.0-p 100% |#####| Time: 0:00:00 6.62 MB/s
scipy-0.19.0-n 100% |#####| Time: 0:00:03 3.54 MB/s

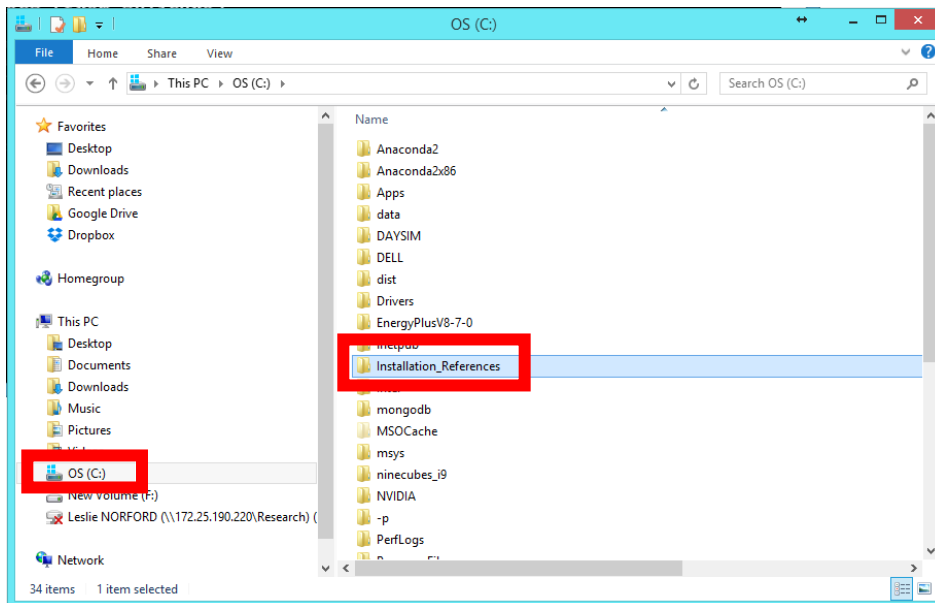
(spvse) H:\>_
```

30.) Type in “pip install pyliburo”

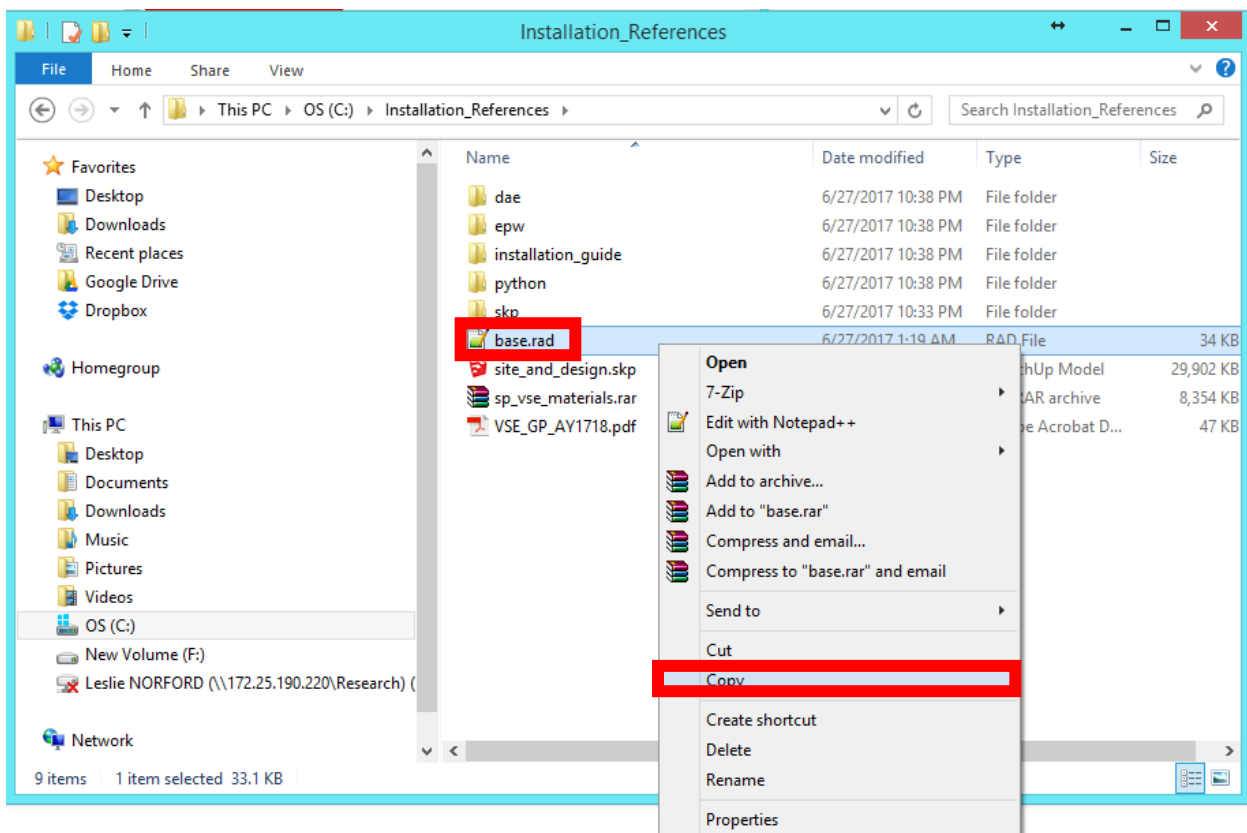


```
(spvse) F:\kianwee_work\spyder_workspace\pyliburo>pip install pyliburo
Downloading pyliburo-0.1a12.tar.gz (128kB)
100% |#####| 133kB 299kB/s
Collecting lxml (from pyliburo)
Downloading lxml-3.8.0-cp27-none-win_amd64.whl (3.4MB)
100% |#####| 3.5MB 144kB/s
Collecting pyshp (from pyliburo)
Requirement already satisfied: numpy in c:\anaconda2\envs\spvse\lib\site-package
s (from pyliburo)
Collecting pycollada (from pyliburo)
Collecting networkx (from pyliburo)
Using cached networkx-1.11-py2.py3-none-any.whl
Collecting scikit-learn (from pyliburo)
Downloading scikit_learn-0.18.2-cp27-cp27m-win_amd64.whl (4.3MB)
91% |#####| 3.9MB 209kB/s eta 0:00:02
```

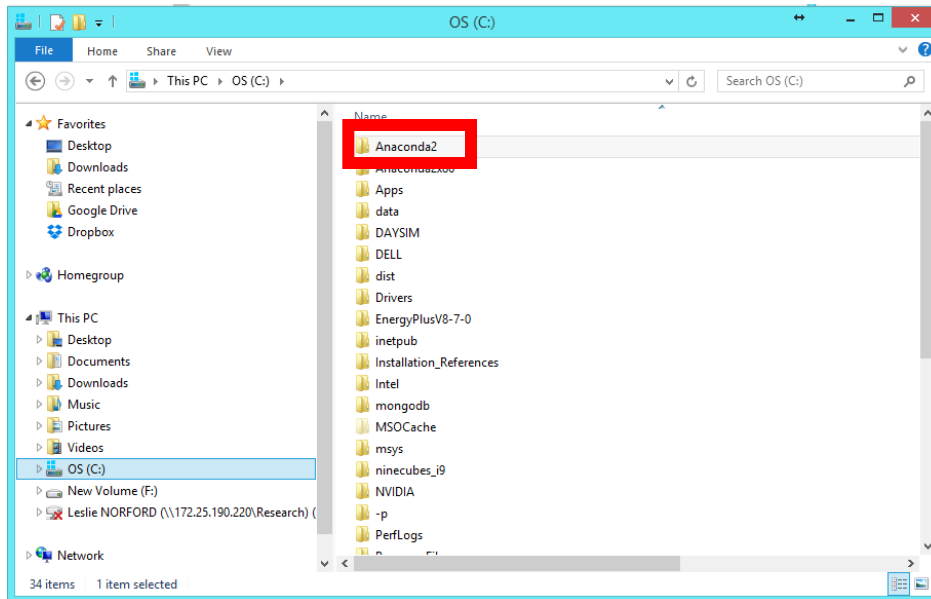
31.) Next go to C:\Installation_References folder double click to enter the folder



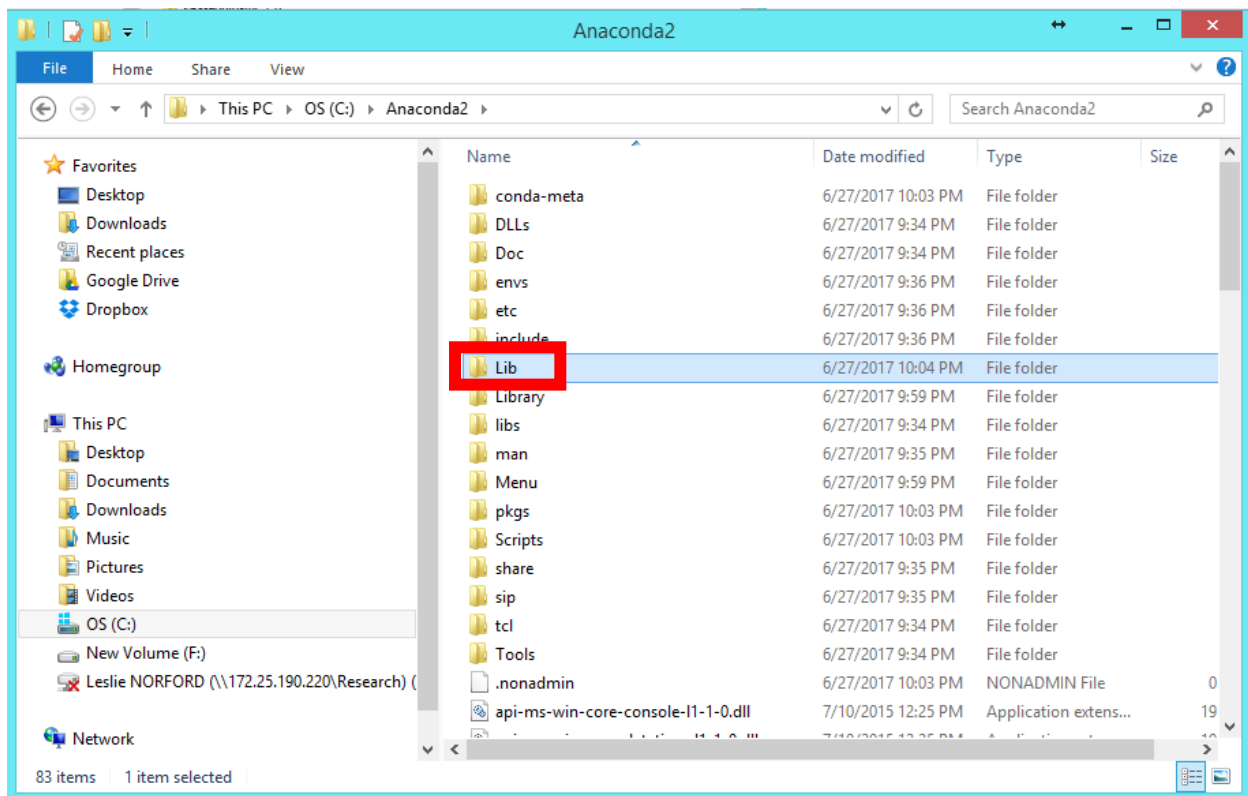
32.) Copy the "base.rad" file



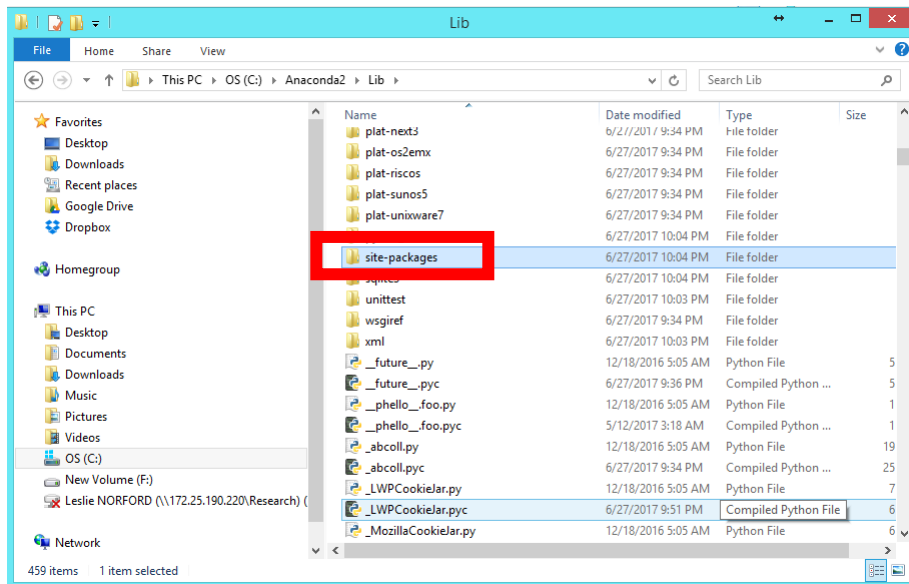
33.) Go c:\Anaconda2 double click to enter the folder



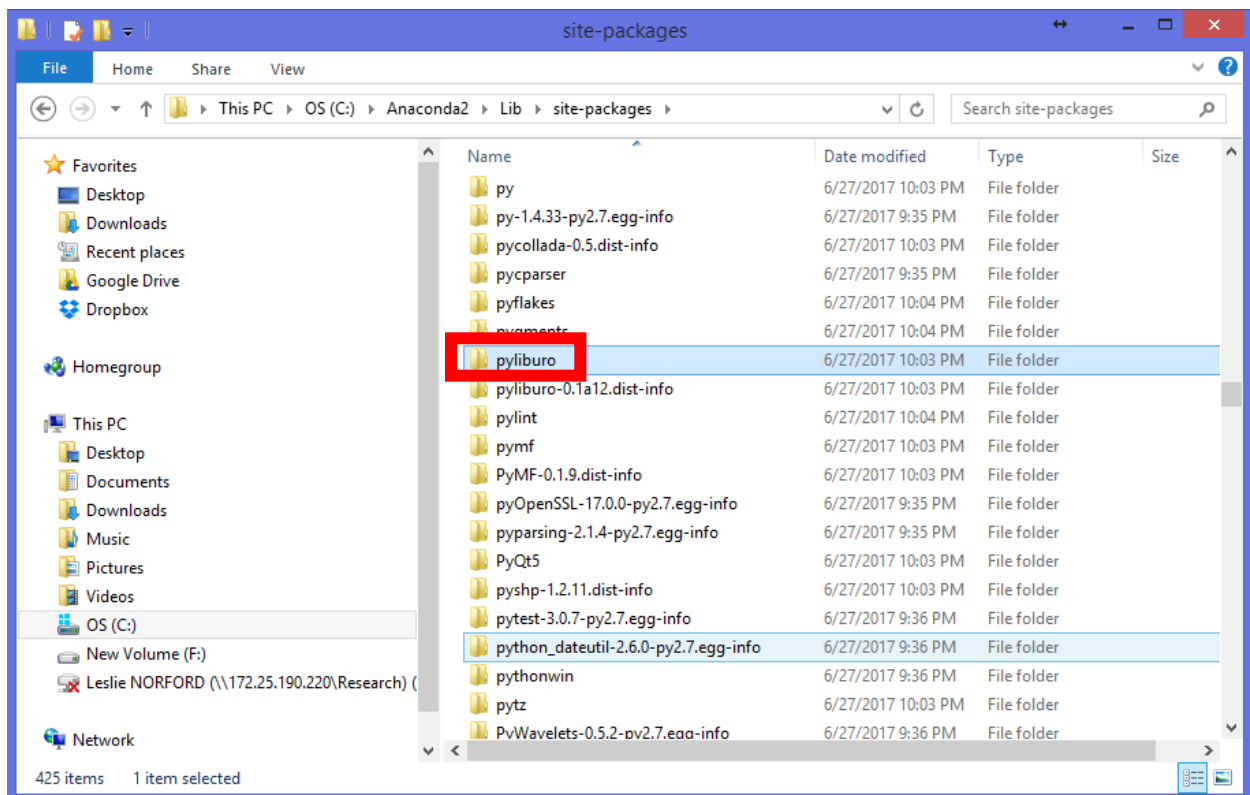
34.) In the Anaconda2 folder double click Lib



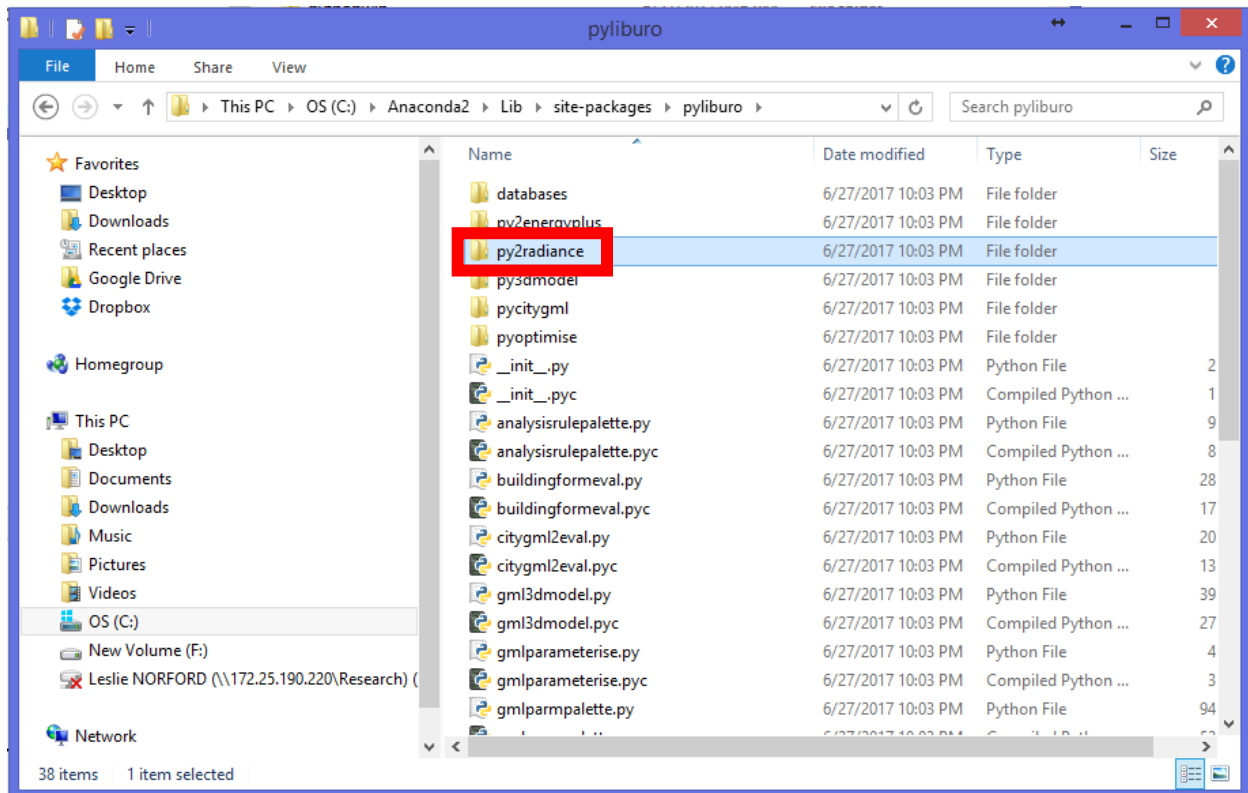
35.) In the Lib folder double click site-packages



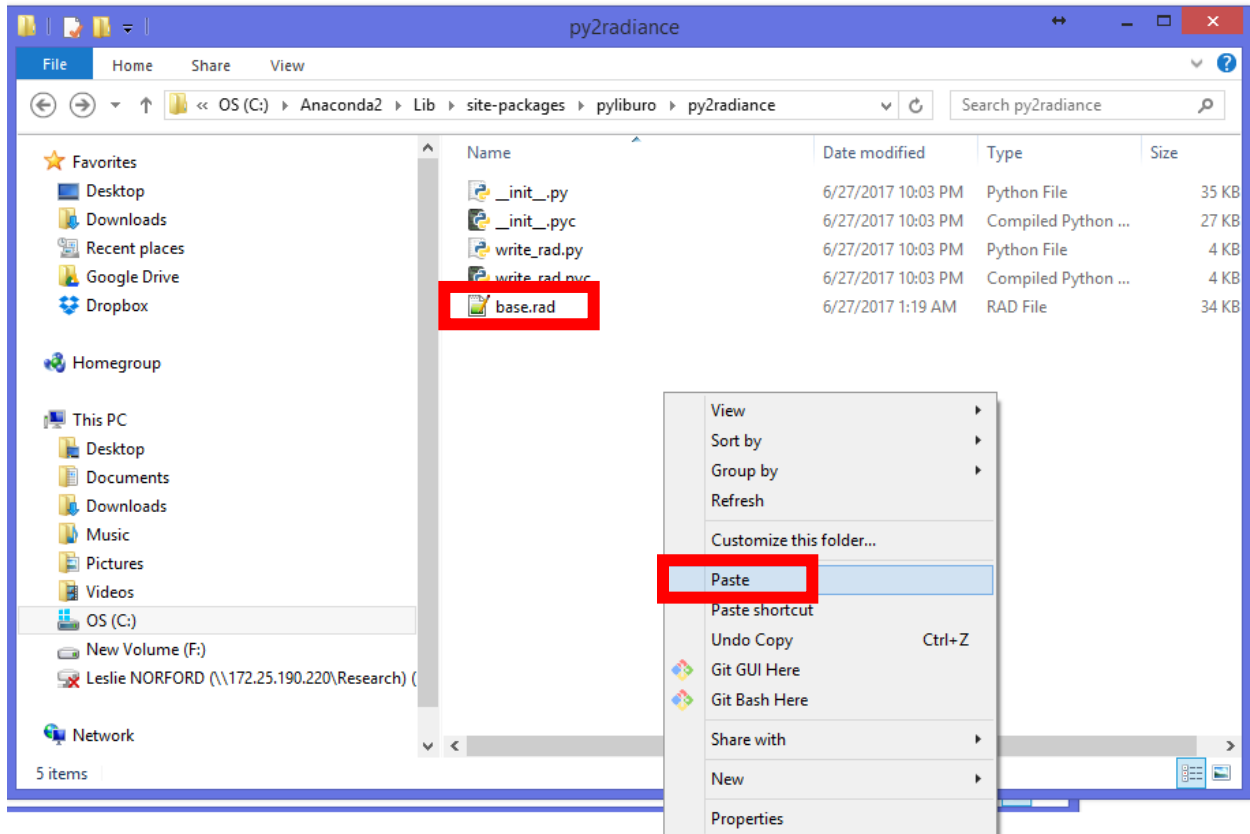
36.) In the site-packages folder double click pyliburo folder



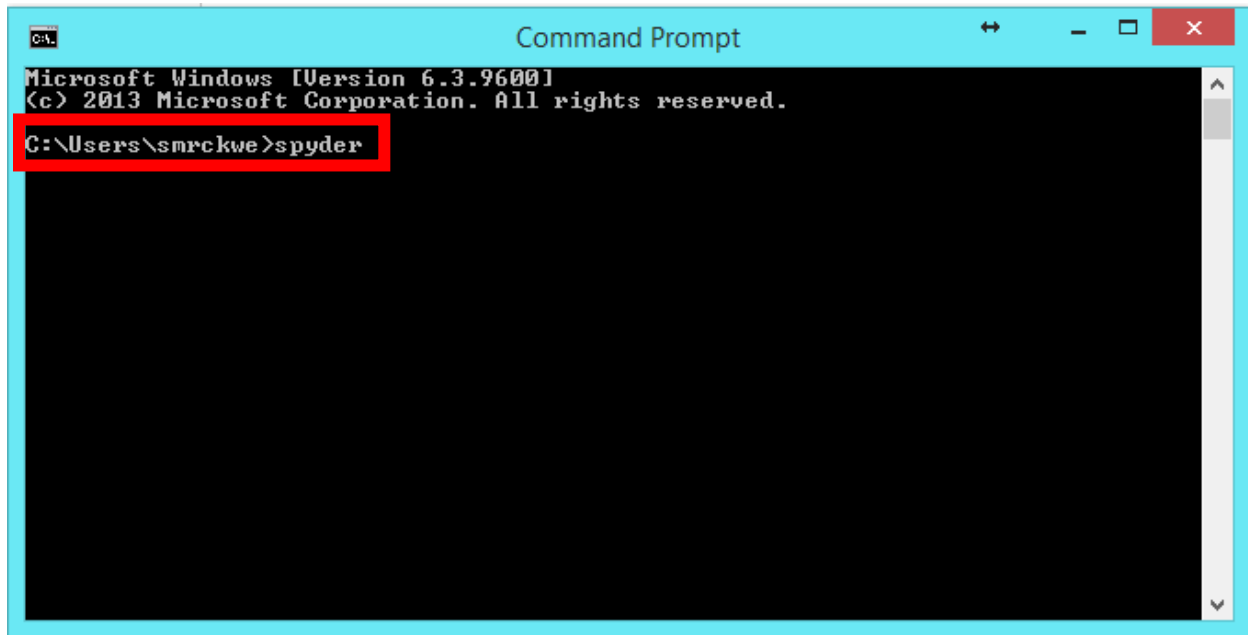
37.) In the pyliburo folder double click py2radiance folder



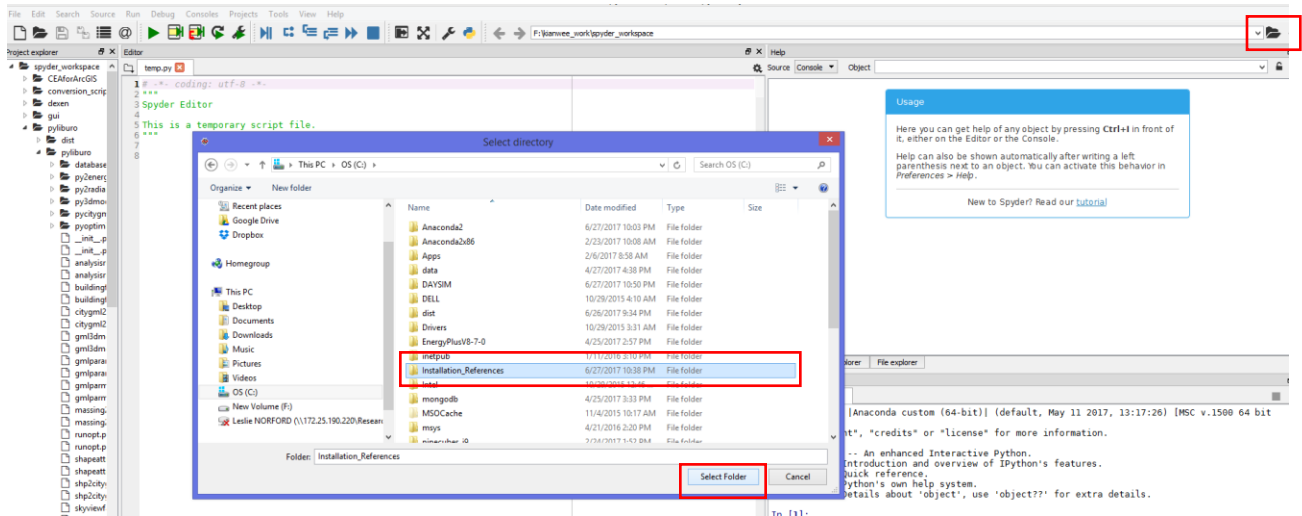
38.) Paste the base.rad file into the py2radiance folder



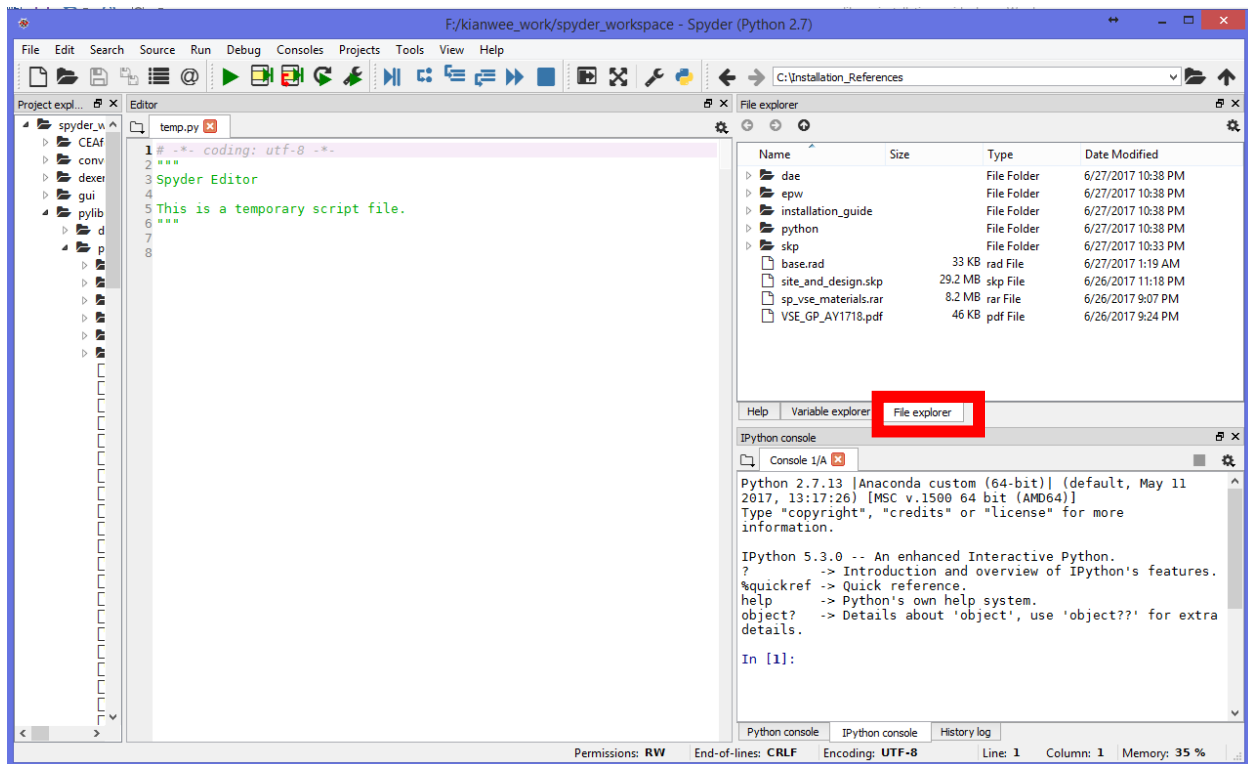
39.) Now go to your command prompt window and Type in “spyder” and enter.



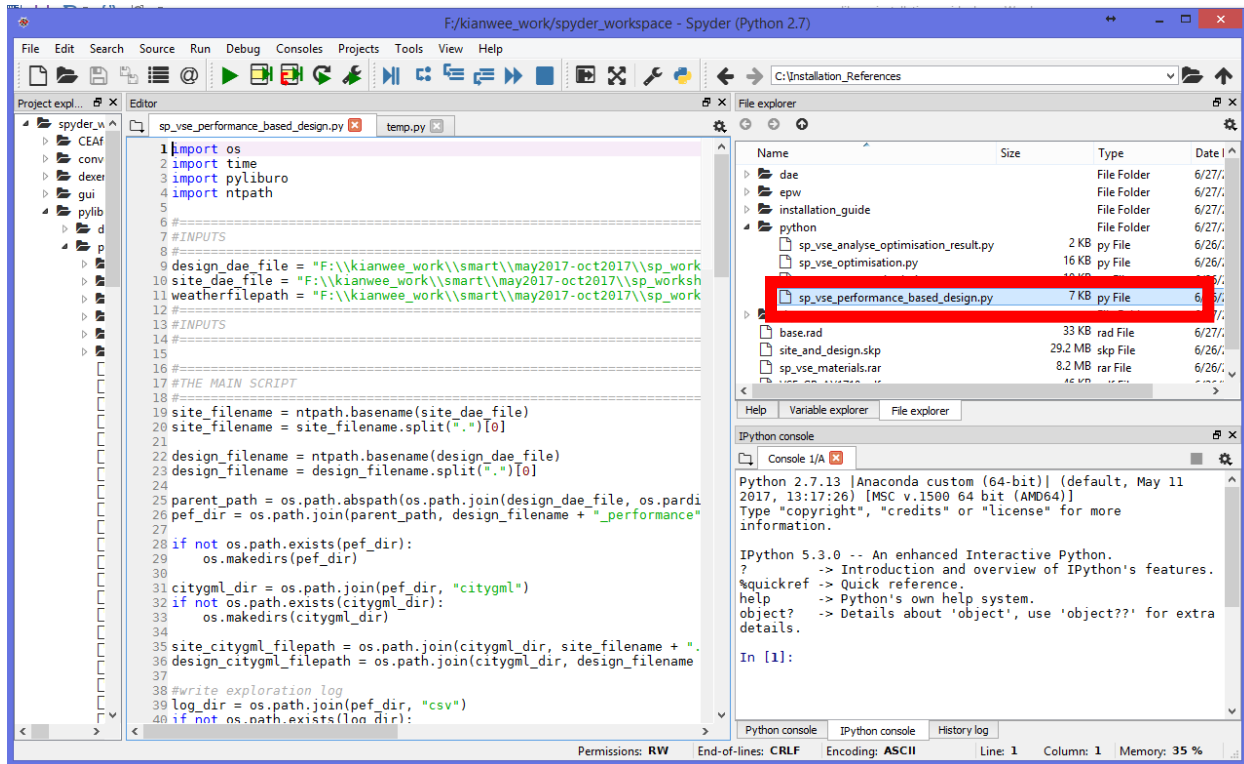
40.) Spyder will load and open. Click on the folder icon in spyder, and navigate to the “c:\Installation_References” folder. Click on the “Installation_References” and click “Select Folder”



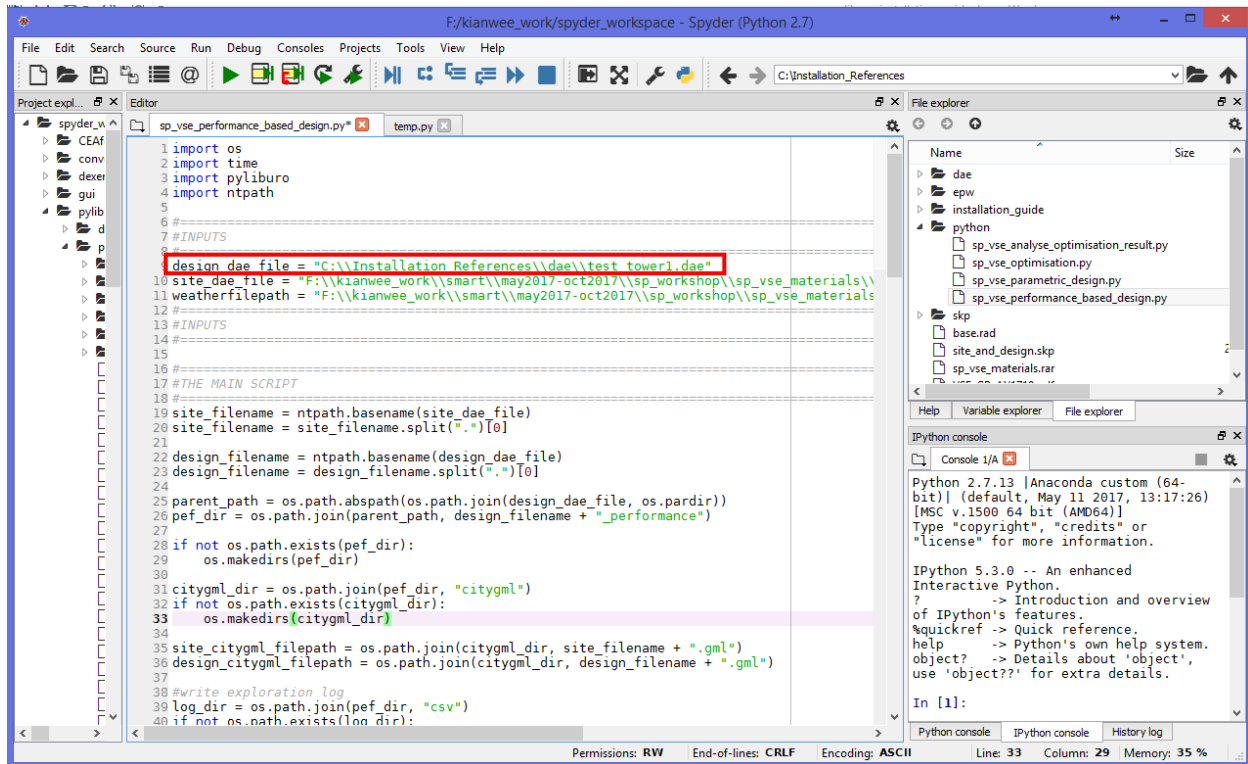
41.) Click on “File Explorer” to see all the files in the “Installation_References” folder



- 42.) Click on the down arrow at the “python” folder, and double click on the “sp_vse_performance_based_design.py”. The script will appear on the left window.



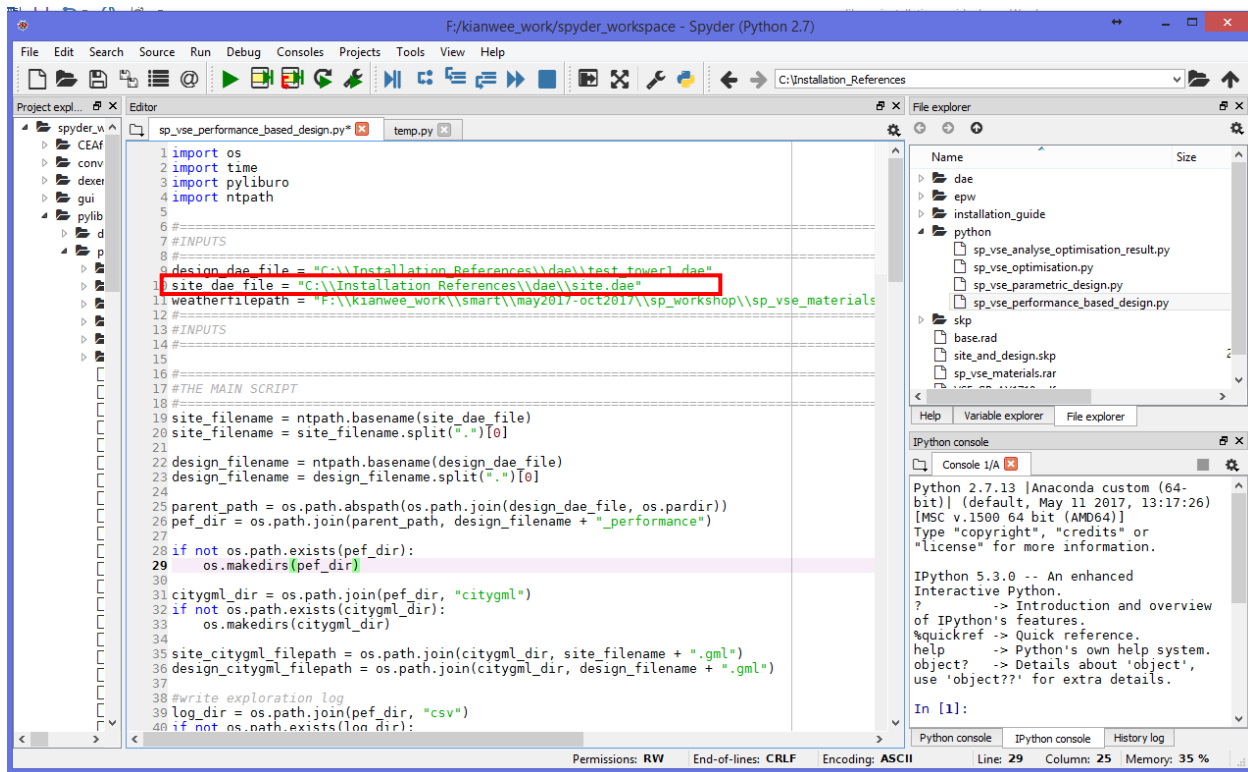
43.) In the script change the "design_dae_file" to
"C:\\Installation_References\\dae\\test_tower1.dae"



The screenshot shows the Spyder Python IDE interface. The main editor window displays a Python script named `sp_vse_performance_based_design.py`. The script contains several imports and a main execution block. The line `design_dae_file = "C:\\Installation_References\\dae\\test_tower1.dae"` is highlighted with a red rectangle. The script also defines `site_dae_file`, `weatherfilepath`, and `design_file`, and uses `os.path` to construct file paths and directories. The right-hand side of the IDE shows the `File explorer` panel, which lists the contents of the `C:\\Installation_References` directory, including `dae`, `epw`, `installation_guide`, `python`, and `skp` folders. The `python` folder contains several files, including `sp_vse_analyse_optimisation_result.py`, `sp_vse_optimisation.py`, `sp_vse_parametric_design.py`, and `sp_vse_performance_based_design.py`. The `IPython console` panel at the bottom right shows the Python version (2.7.13) and the IPython version (5.3.0).

```
1 import os
2 import time
3 import pyliburo
4 import ntpath
5
6 #=====
7 #INPUTS
8 #=====
9 design_dae_file = "C:\\Installation_References\\dae\\test_tower1.dae"
10 site_dae_file = "F:\\kianwee_work\\smart\\may2017-oct2017\\sp_workshop\\sp_vse_materials\\
11 weatherfilepath = "F:\\kianwee_work\\smart\\may2017-oct2017\\sp_workshop\\sp_vse_materials
12 #=====
13 #INPUTS
14 #=====
15
16 #=====
17 #THE MAIN SCRIPT
18 #=====
19 site_filename = ntpath.basename(site_dae_file)
20 site_filename = site_filename.split(".")[0]
21
22 design_filename = ntpath.basename(design_dae_file)
23 design_filename = design_filename.split(".")[0]
24
25 parent_path = os.path.abspath(os.path.join(design_dae_file, os.pardir))
26 pef_dir = os.path.join(parent_path, design_filename + "_performance")
27
28 if not os.path.exists(pef_dir):
29     os.makedirs(pef_dir)
30
31 citygml_dir = os.path.join(pef_dir, "citygml")
32 if not os.path.exists(citygml_dir):
33     os.makedirs(citygml_dir)
34
35 site_citygml_filepath = os.path.join(citygml_dir, site_filename + ".gml")
36 design_citygml_filepath = os.path.join(citygml_dir, design_filename + ".gml")
37
38 #write exploration log
39 log_dir = os.path.join(pef_dir, "csv")
40 if not os.path.exists(log_dir):
```

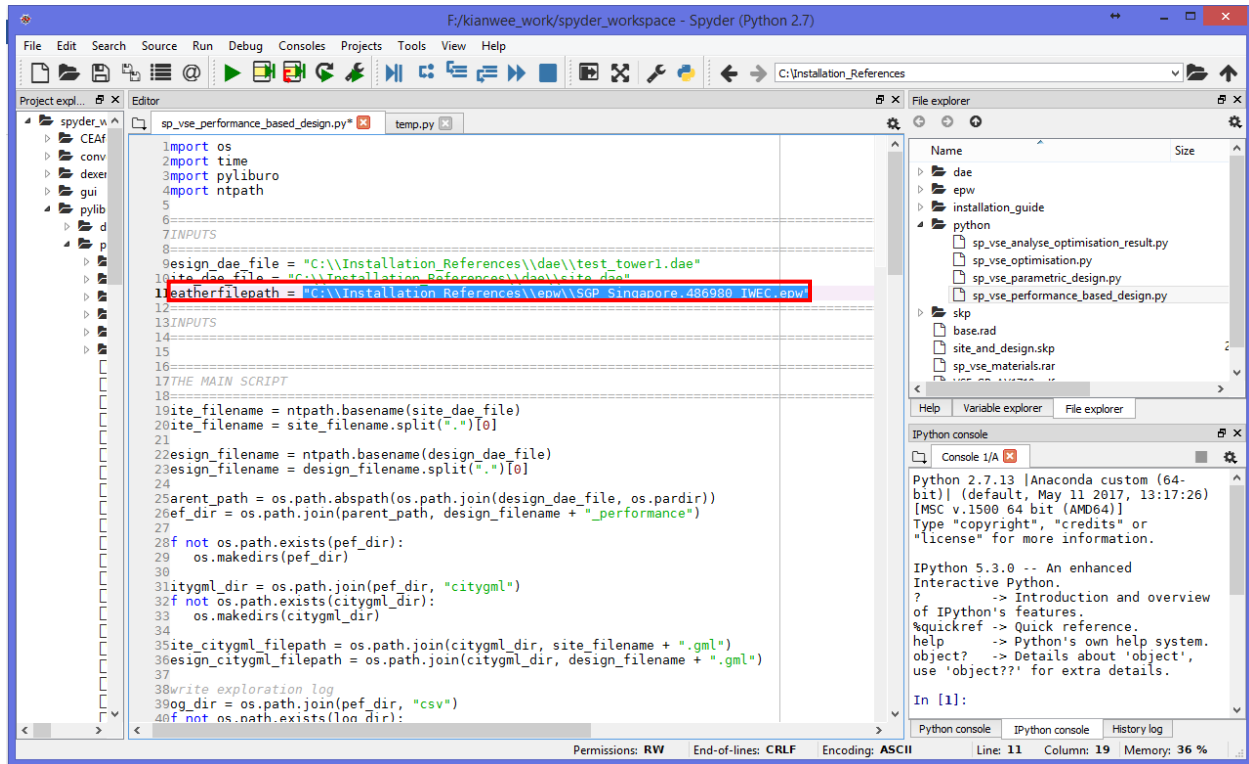
44.) In the script change the "site_dae_file" to
"C:\\Installation_References\\dae\\site.dae"



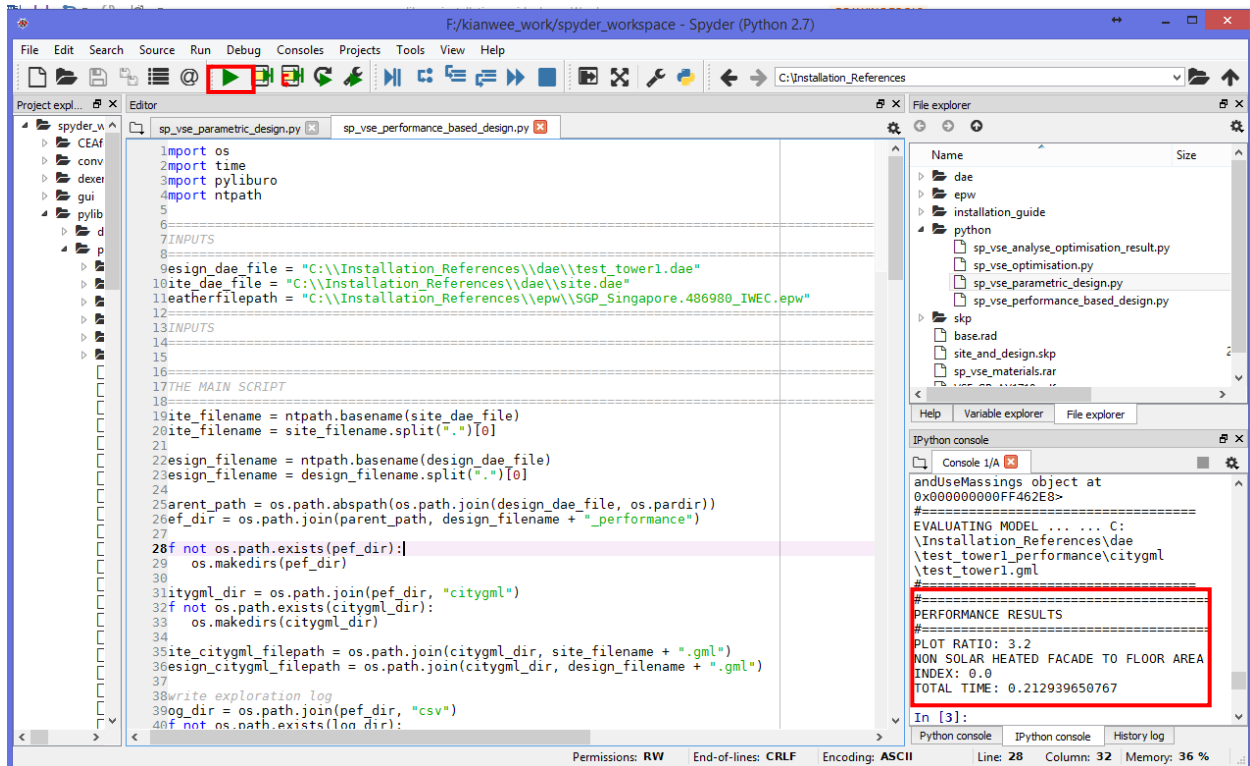
The screenshot shows the Spyder Python IDE interface. The main editor window displays a Python script named `sp_vse_performance_based_design.py`. The script contains several imports and a series of file path manipulations. The line `site_dae_file = "C:\\Installation_References\\dae\\site.dae"` is highlighted with a red rectangle. The script also includes a `weatherfilepath` assignment and a `parent_path` calculation. The `IPython console` on the right shows the Python version (2.7.13) and some help text. The `File explorer` on the right shows the project structure, including a `dae` directory and a `python` directory.

```
1 import os
2 import time
3 import pyliburo
4 import ntpath
5
6 #=====
7 #INPUTS
8 #=====
9 design_dae_file = "C:\\Installation_References\\dae\\test tower1.dae"
10 site_dae_file = "C:\\Installation_References\\dae\\site.dae"
11 weatherfilepath = "F:\\kianwee_work\\smart\\may2017-oct2017\\sp_workshop\\sp_vse_materials
12 #=====
13 #INPUTS
14 #=====
15
16 #===== THE MAIN SCRIPT
17 #=====
18
19 site_filename = ntpath.basename(site_dae_file)
20 site_filename = site_filename.split(".")[0]
21
22 design_filename = ntpath.basename(design_dae_file)
23 design_filename = design_filename.split(".")[0]
24
25 parent_path = os.path.abspath(os.path.join(design_dae_file, os.pardir))
26 pef_dir = os.path.join(parent_path, design_filename + "_performance")
27
28 if not os.path.exists(pef_dir):
29     os.makedirs(pef_dir)
30
31 citygml_dir = os.path.join(pef_dir, "citygml")
32 if not os.path.exists(citygml_dir):
33     os.makedirs(citygml_dir)
34
35 site_citygml_filepath = os.path.join(citygml_dir, site_filename + ".gml")
36 design_citygml_filepath = os.path.join(citygml_dir, design_filename + ".gml")
37
38 #write exploration log
39 log_dir = os.path.join(pef_dir, "csv")
40 if not os.path.exists(log_dir):
```

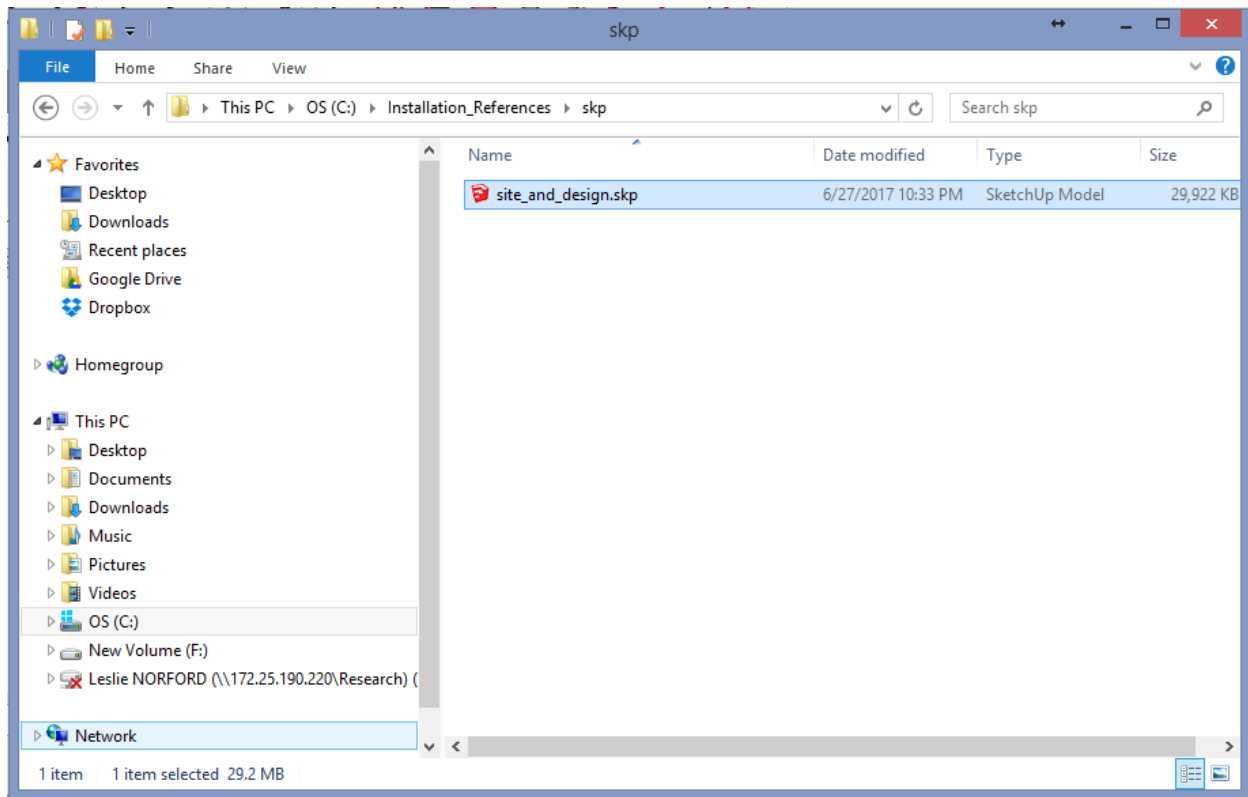
45.) In the script change the "weatherfilepath" to "C:\\Installation_References\\epw\\SGP_Singapore.486980_IWEC.epw"



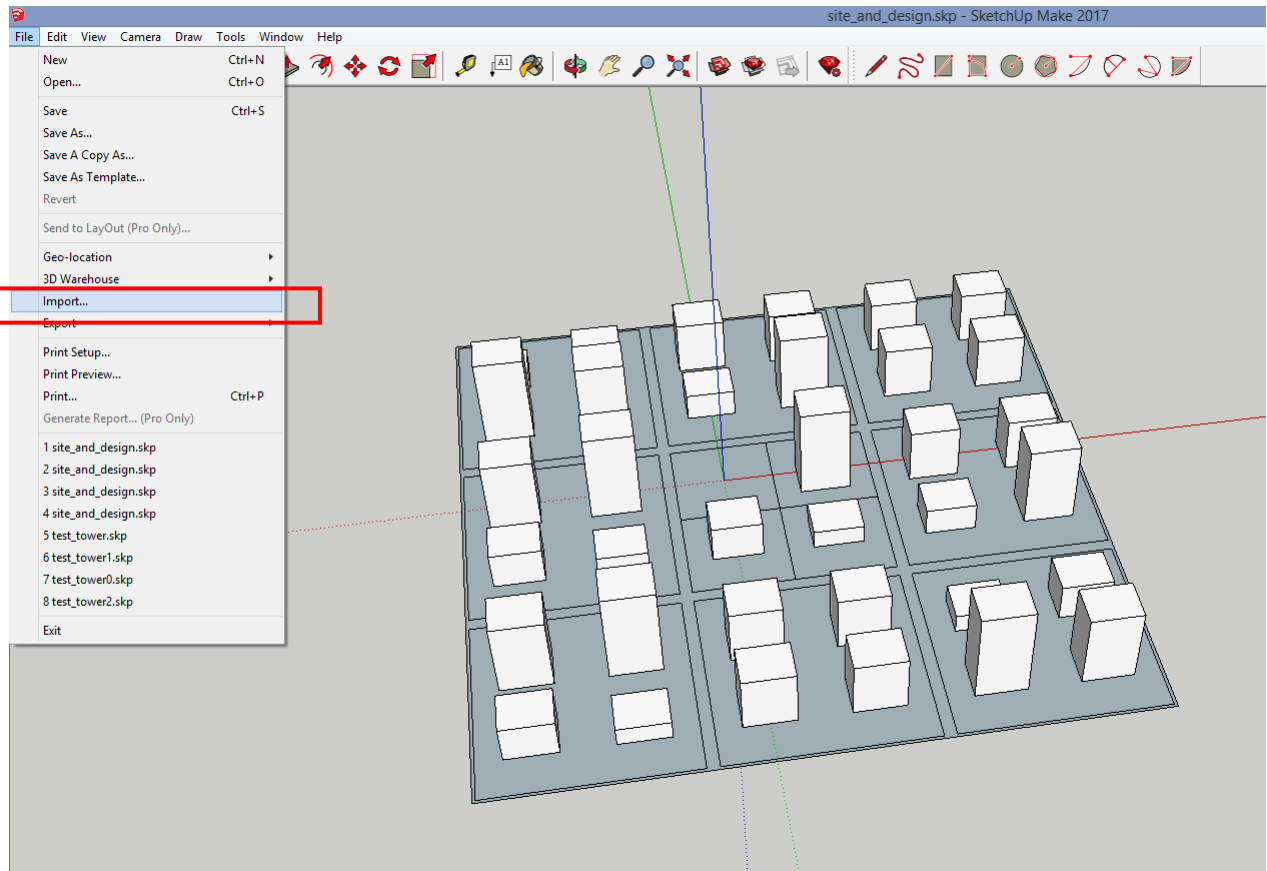
- 46.) Click the run button as shown in the figure and the script will run the analysis and show you the performance of the design.



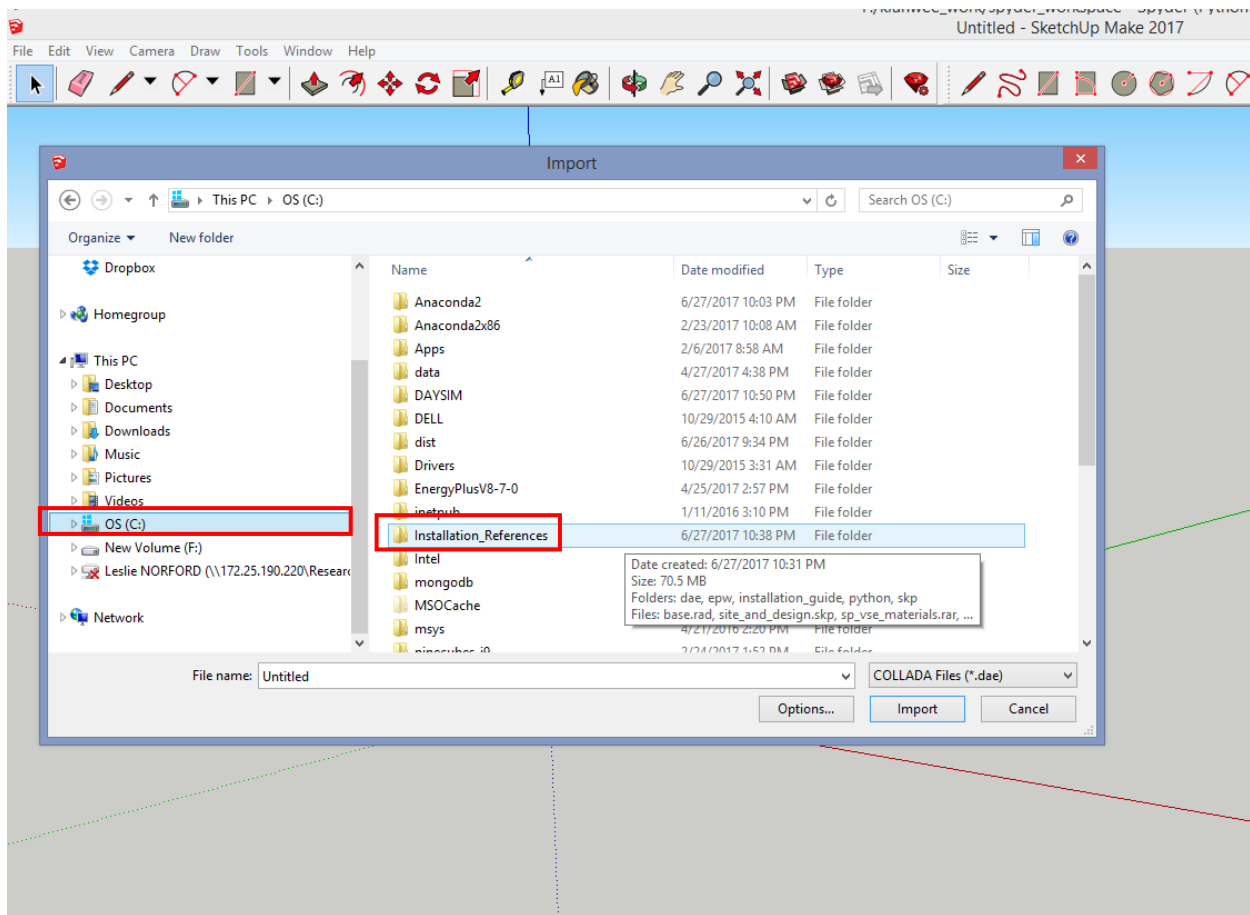
47.) Go to C:\Installation_References\site_and_design.skp,
double click to open the sketchup file.



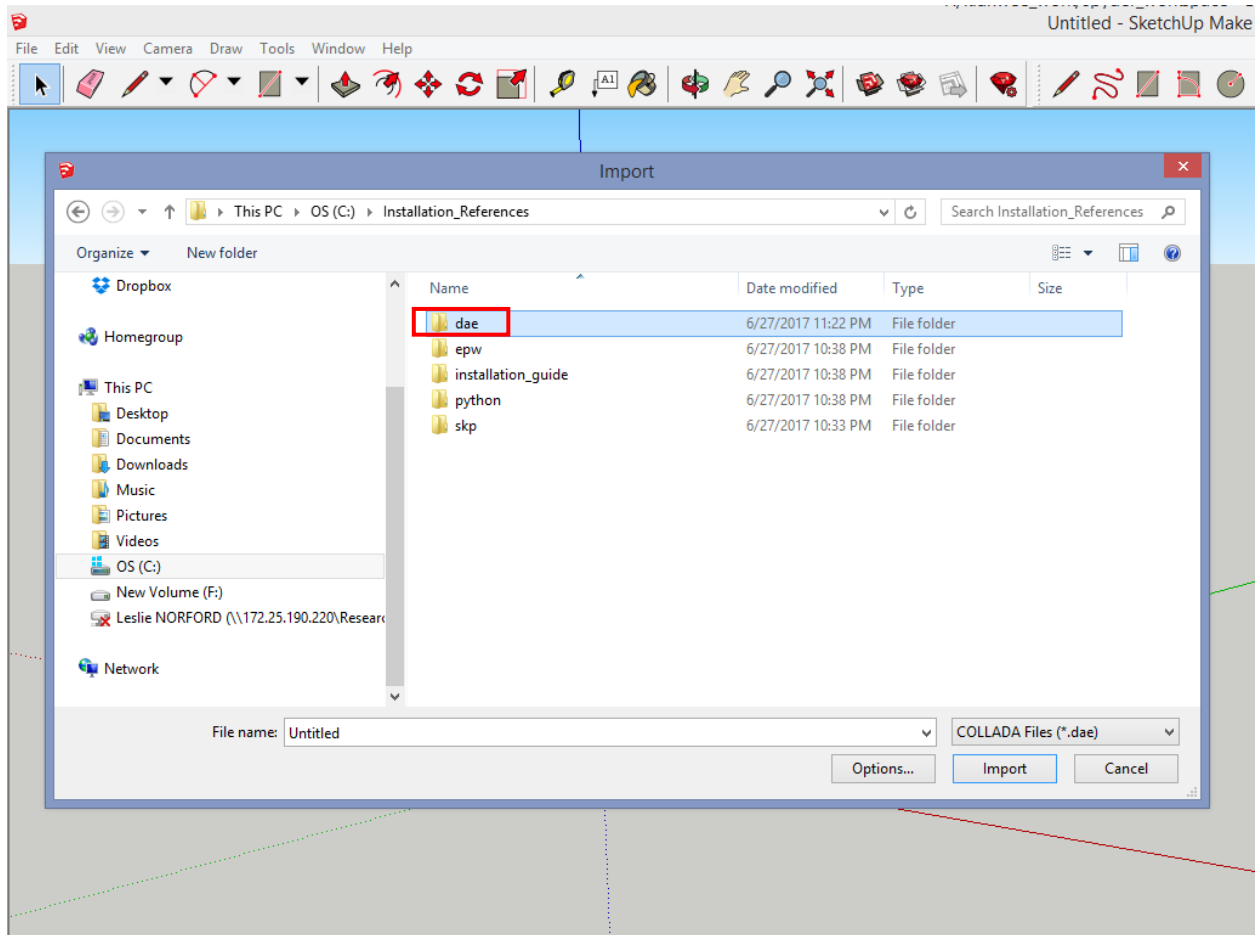
48.) Go to sketchup – file – import



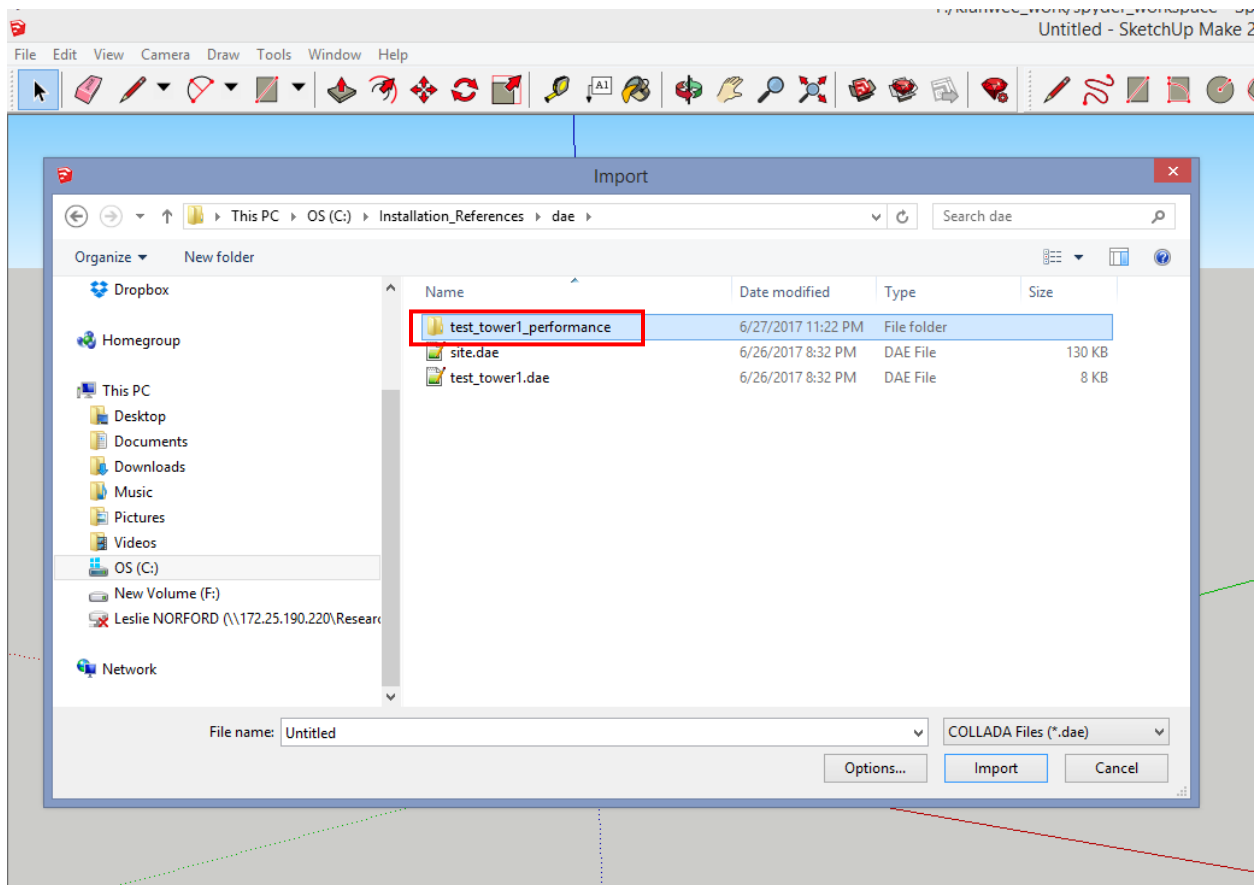
49.) Go the folder c:\Installation_References double click to enter the folder



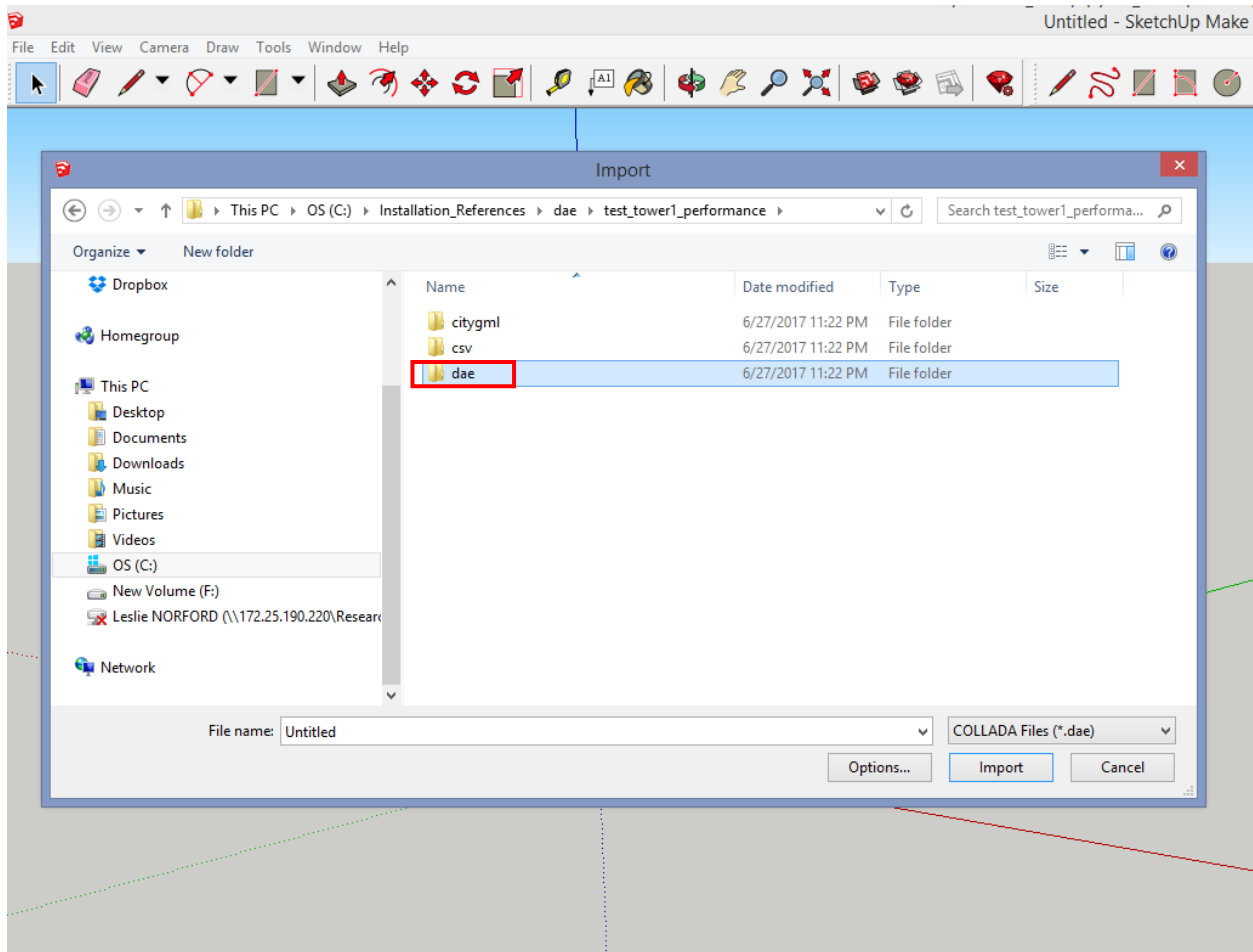
50.) In the “Installation_References” folder double click to enter the “dae” folder



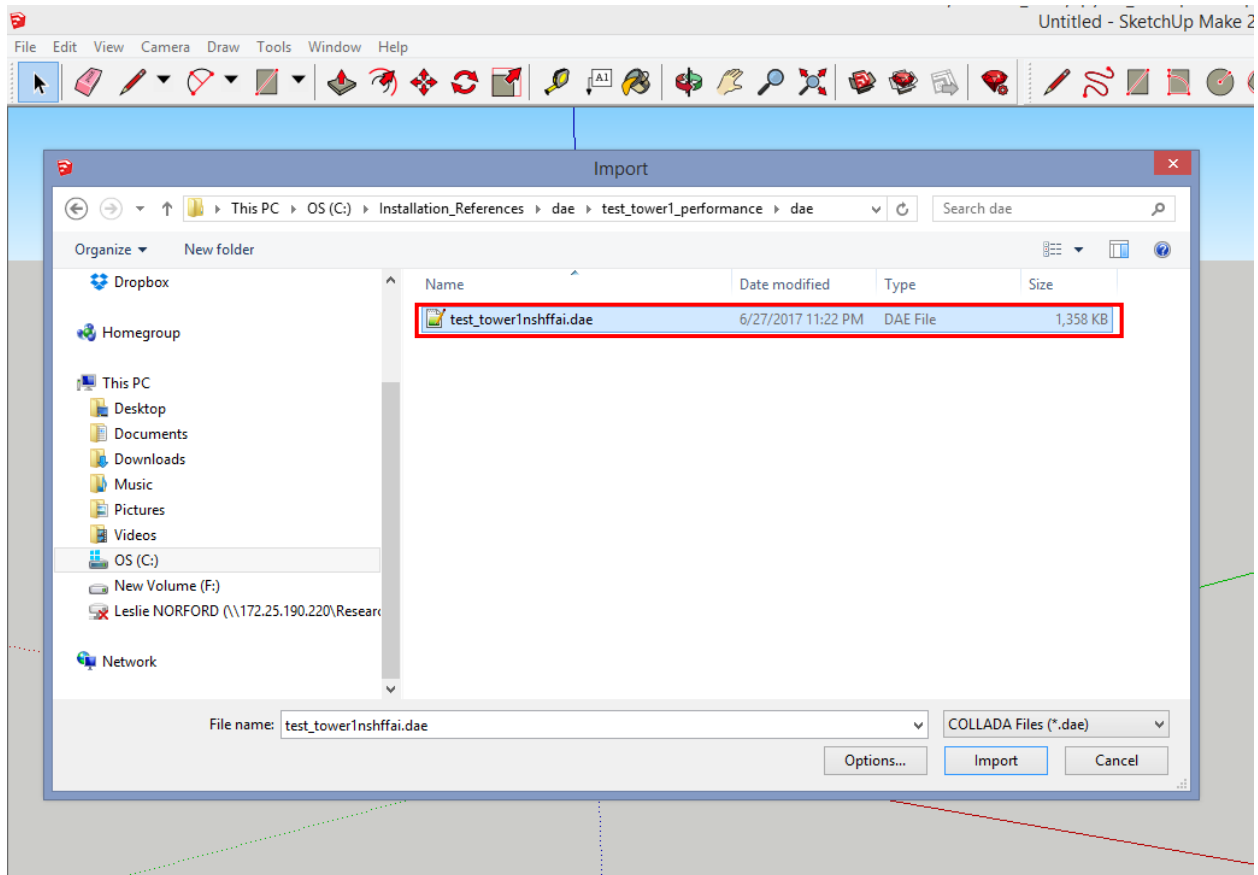
51.) In the “dae” folder double click “test_tower1_performance” to enter the folder



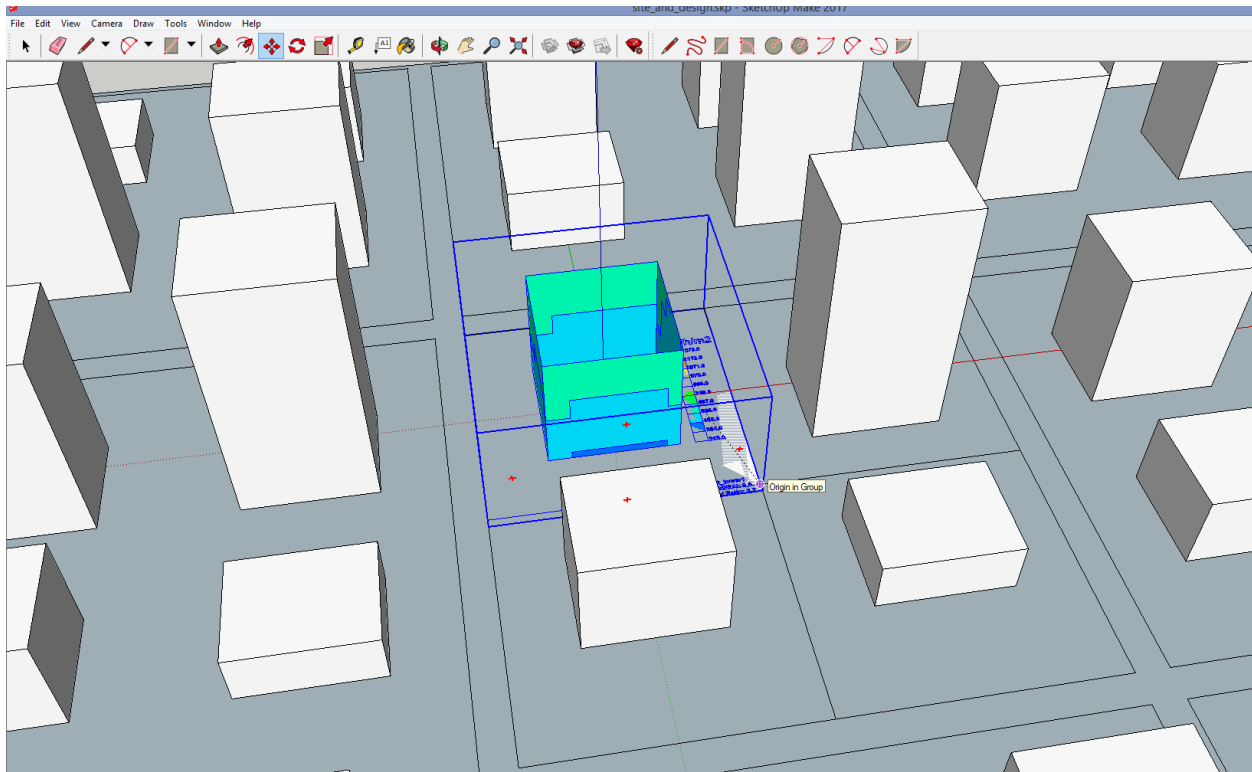
52.) In the “test_tower1_performance” folder double click “dae” to enter the folder



53.) In the “dae” folder double click the
“test_tower1nshffai.dae” file to import the results into sketchup.



54.) Import the file and put it in place to view the results.



55.) Congratulation! You have successfully install the library.