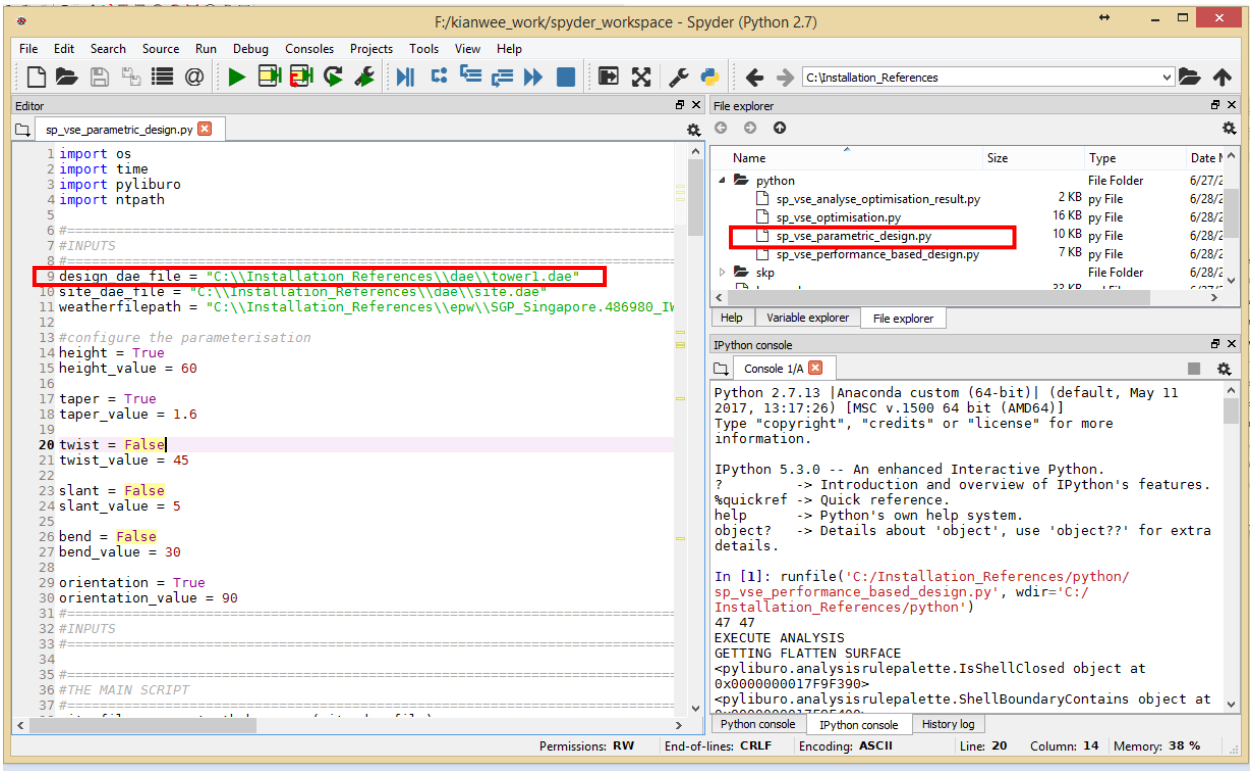
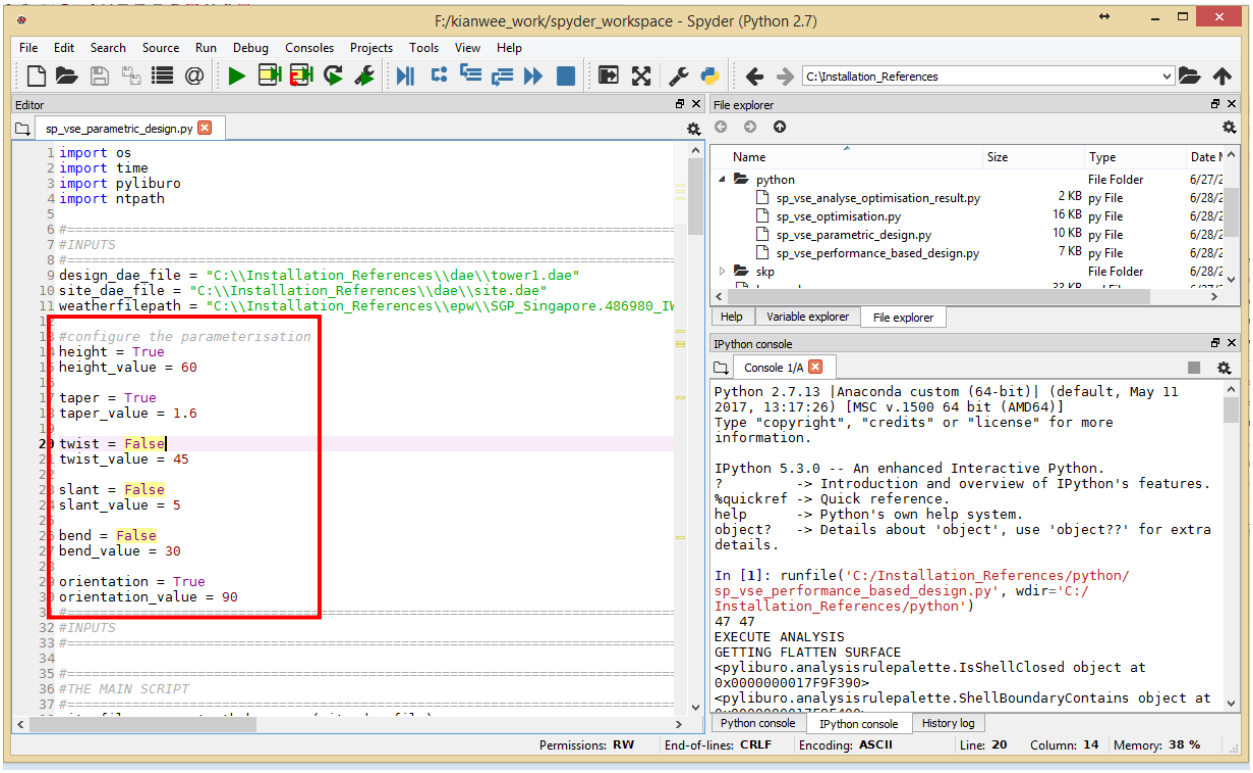
Pre-requisite:

- You must have read the installation guide for pyliburo and installed pyliburo before attempting this exercise.
- You must already finish exercise 1 to attempt exercise 2.

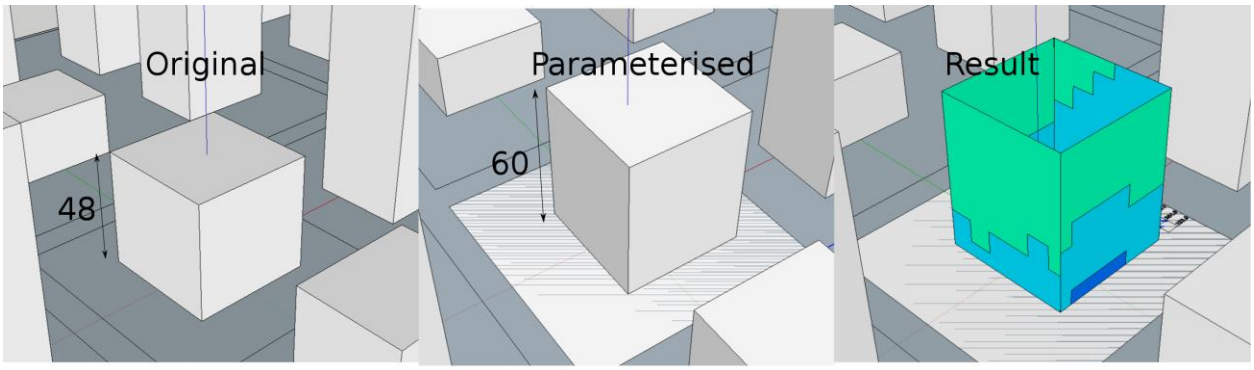
1.) Open spyder and go to the “sp_vse_parametric_design.py” script by double clicking it. We will use the example from exercise 1, “c:\\Installation_References\\dae\\tower1.dae”.



2.)You can parameterize your model according to 6 parameters. Height, taper, twist, slant, bend and orientation. Turn on each parameters by typing in True or False.



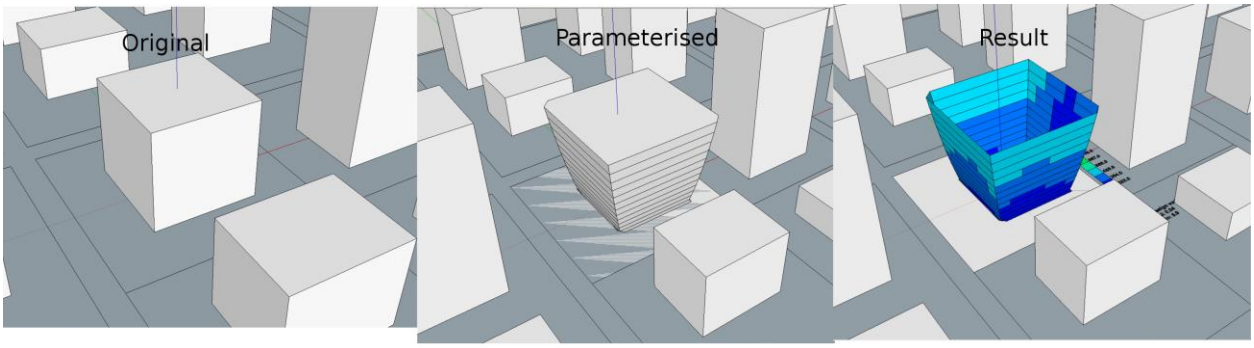
3.) For the height parameter if set to True and specified to 60.



PLOT RATIO: 3.2
NSHFFAI: 0.0

PLOT RATIO: 4.0
NSHFFAI: 0.0

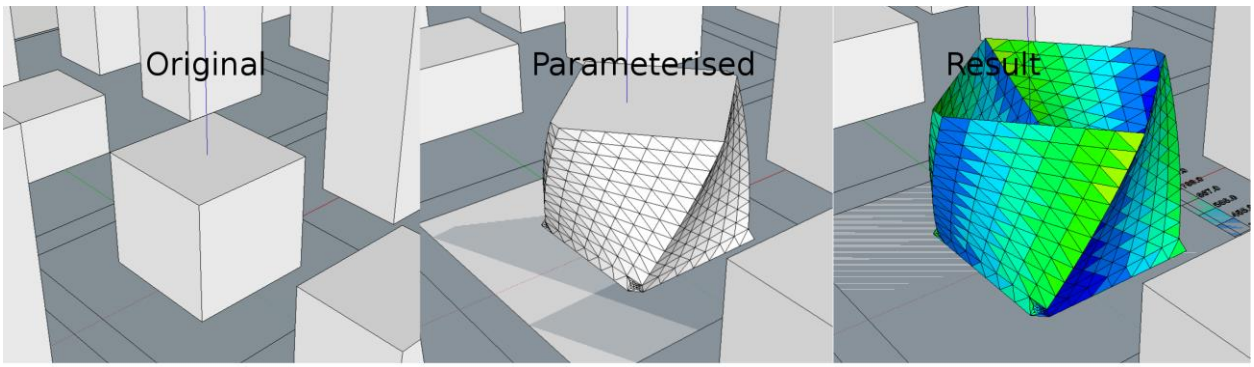
4.) For the taper parameter if set to True and specified to 1.6. The roof is 1.6 times bigger than the footprint.



PLOT RATIO: 3.2
NSHFFAI: 0.0

PLOT RATIO: 5.9
NSHFFAI: 0.04

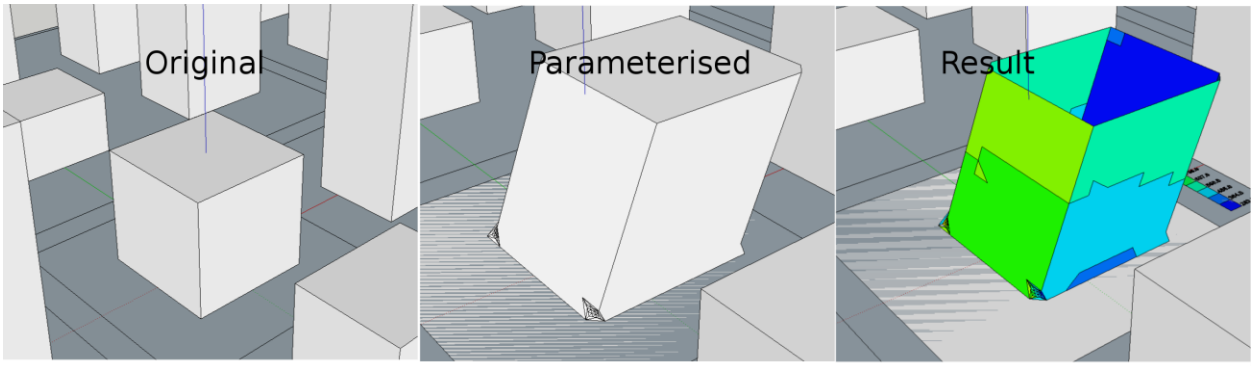
5.) For the twist parameter if set to True and specified to 45.The roof is twisted counter-clockwise in 45° relative to the footprint.



PLOT RATIO: 3.2
NSHFFAI: 0.0

PLOT RATIO: 3.2
NSHFFAI: 0.02

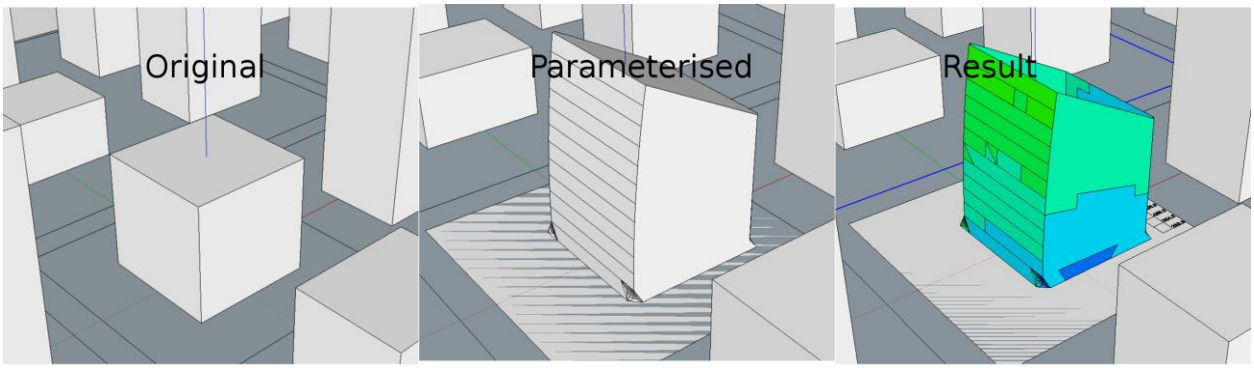
6.) For the slant parameter, if set to True and specified to 20m. The building will slant to the right in 20m.



PLOT RATIO: 3.2
NSHFFAI: 0.0

PLOT RATIO: 3.2
NSHFFAI: 0.02

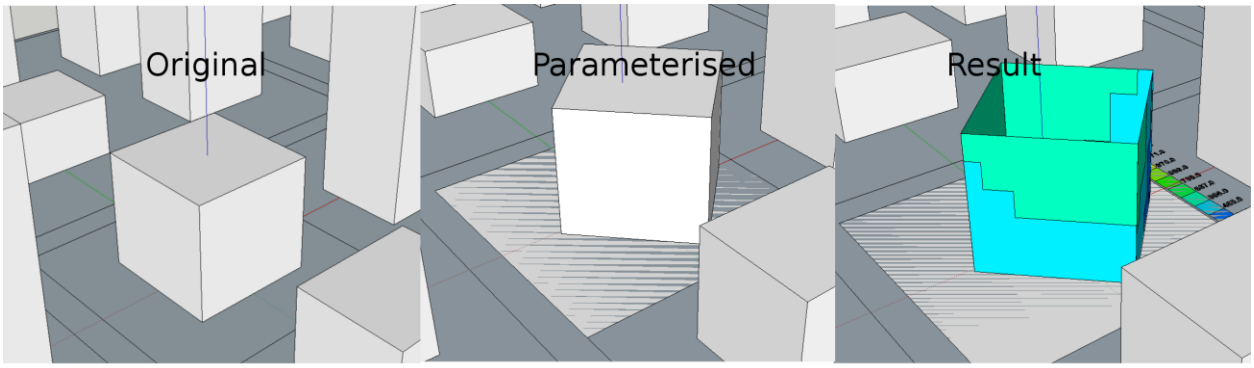
7.) For the bend parameter, if set to True and specified to 30°. The roof of the building will bend in 30° to the right.



PLOT RATIO: 3.2
NSHFFAI: 0.0

PLOT RATIO: 3.2
NSHFFAI: 0.0

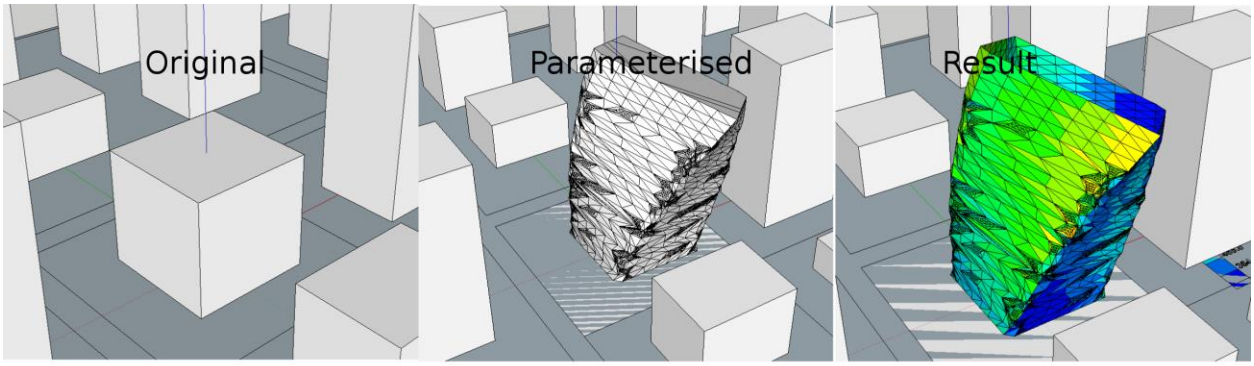
8.) For the orientation parameter, if set to True and specified to 45°, the building will turn 45° counter-clockwise.



PLOT RATIO: 3.2
NSHFFAI: 0.0

PLOT RATIO: 3.2
NSHFFAI: 0.0

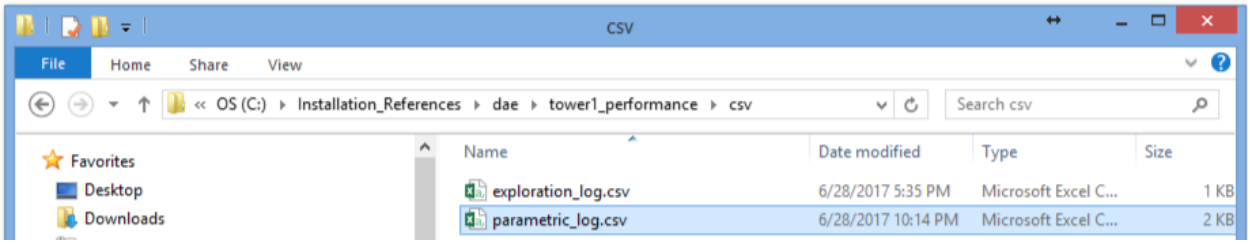
9.) Parameterise your model with different parameters such as: Height = 60, Taper = 1.6, Twist = 45, Slant = 20, Bend = 30, Orientation = 45. Try out as many different combinations as possible and find the best performing design.



PLOT RATIO: 3.2
NSHFFAI: 0.0

PLOT RATIO: 9.6
NSHFFAI: 0.02

10.) While trying out different parameters. You can navigate to the "c:\\Installation_References\\dae\\tower1_performance\\csv\\parametric_log.csv" to check the history of your parameterization.



11.) The csv contains all your past exploration. The results and all the parameters. It is advised to look at this csv file when you decide the ranges for optimisation in exercise 3. (PLEASE DO NOT EDIT THIS CSV). If you want to edit this csv, make another copy and edit that copy.