

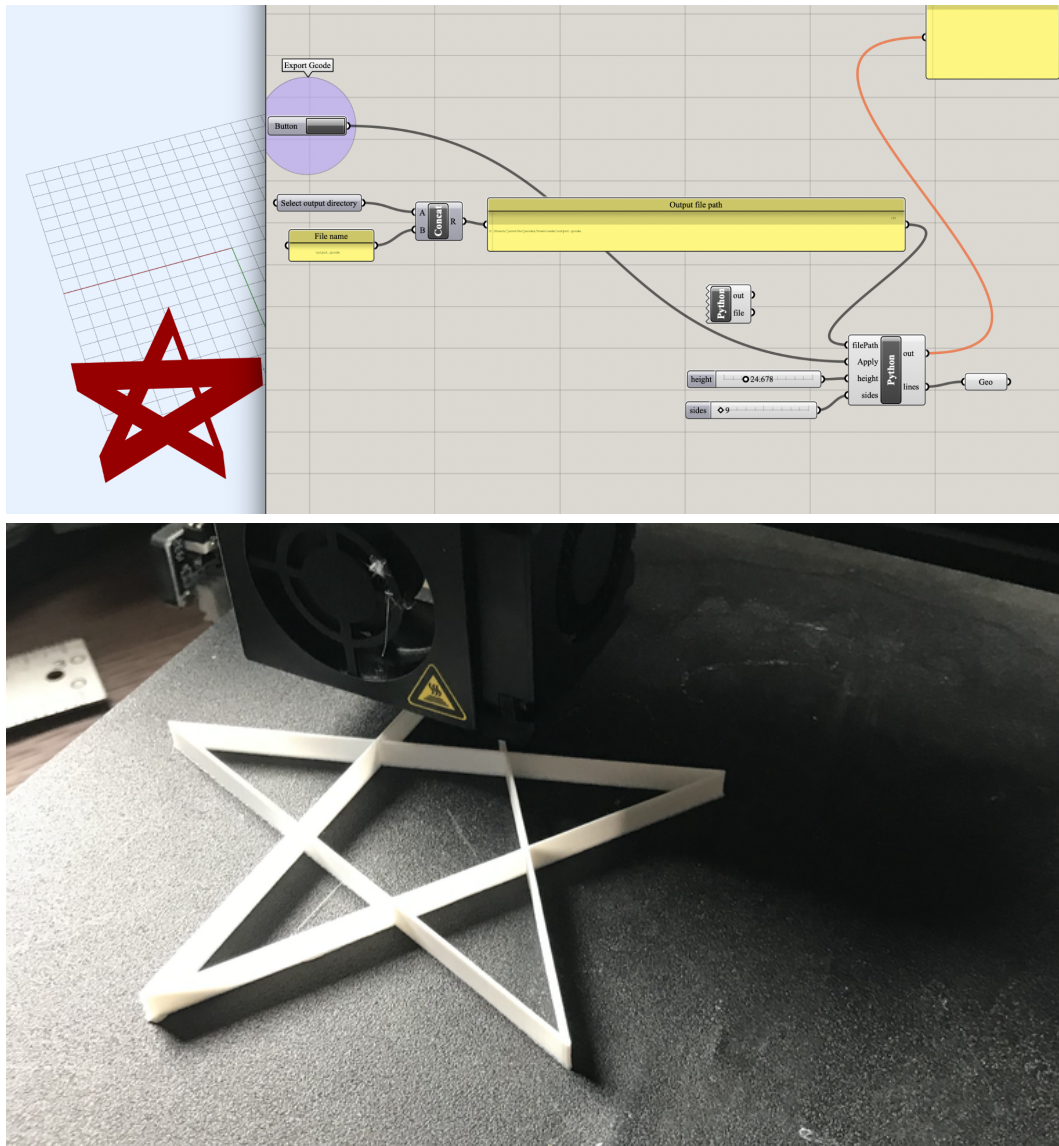
Generating GCode in Grasshopper by using Logo-like Turtle Geometry Commands

[Link to Grasshopper Code](#)

[Link to Python Turtle Library](#)

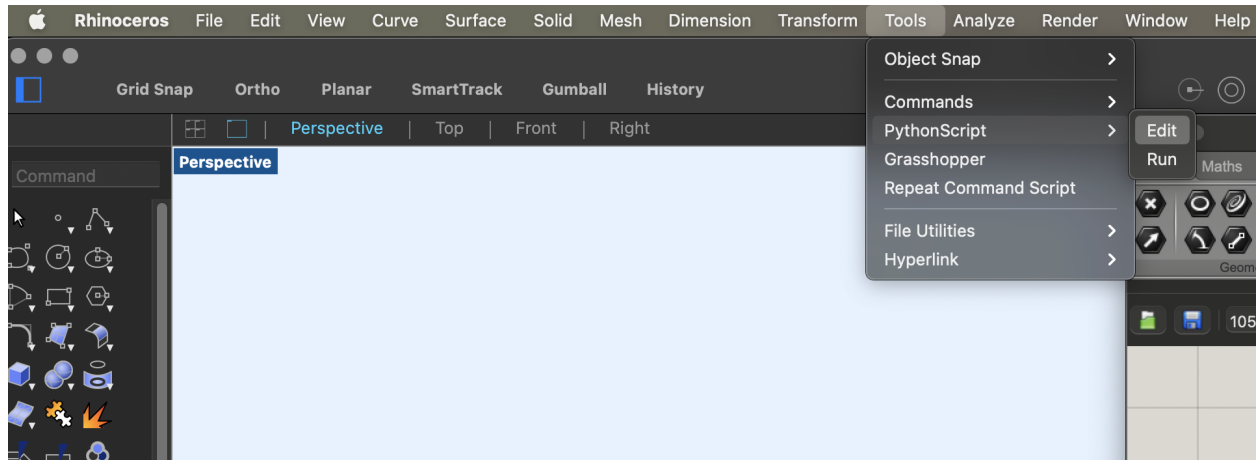
Logo is a programming language where you can draw with a turtle using orientation commands relative to the turtle (forward, left, right). See this [link](#) for details.

This [grasshopper](#) example uses a python version of Logo that functions in 3D. The example is adapted from [Melody Horn and Leah Buechley's Python code](#).

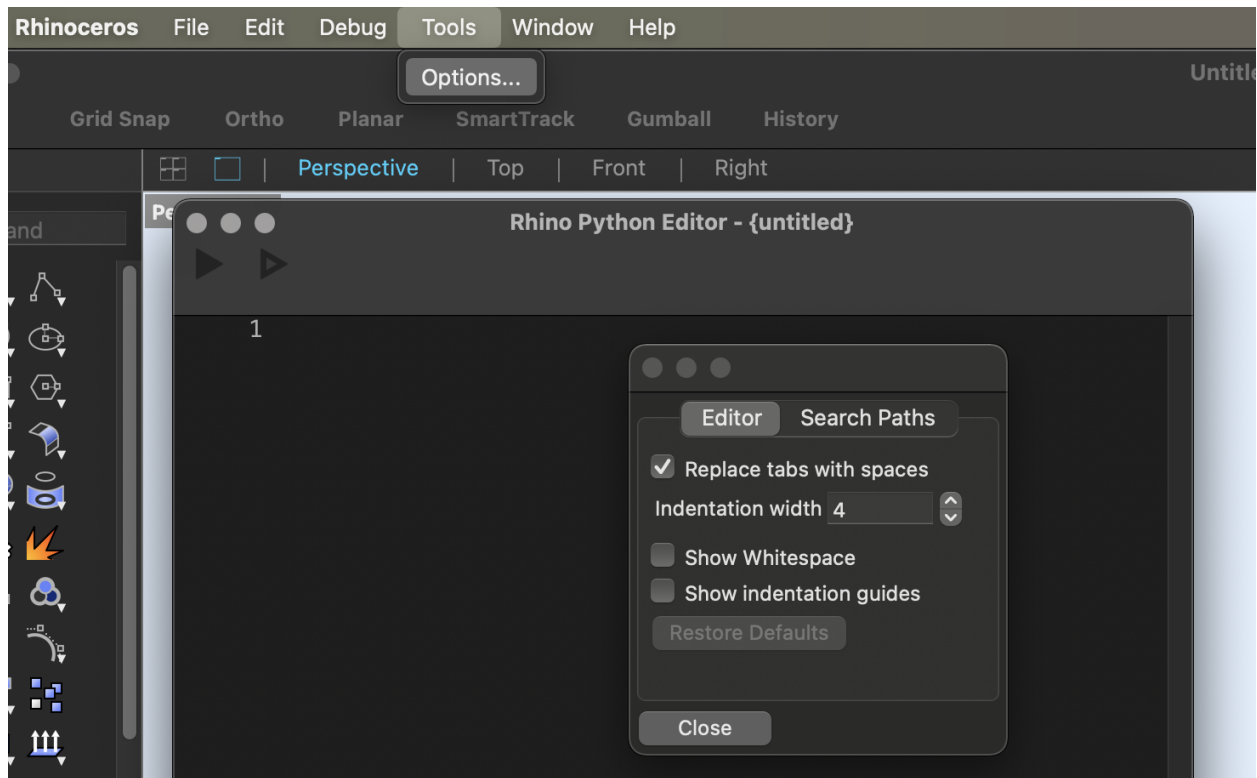


To run the Grasshopper Code, you first need to include the Turtle3D.py script in the Rhino python search path.

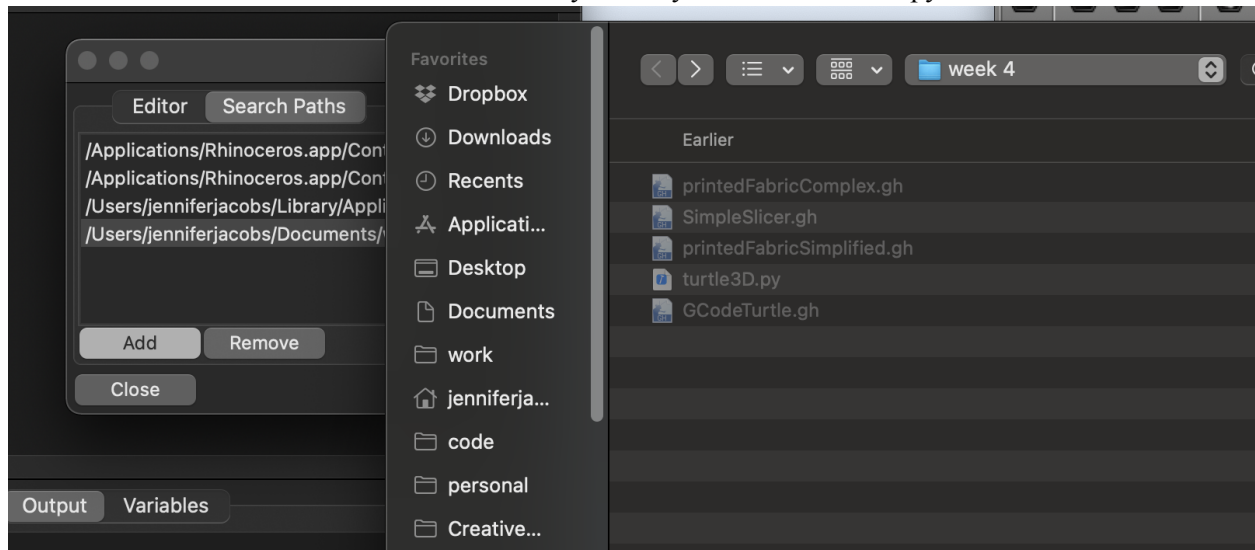
Download the Turtle3D.py file to a local directory on your computer. Then in rhino, go to Tools->PythonScript->Edit:



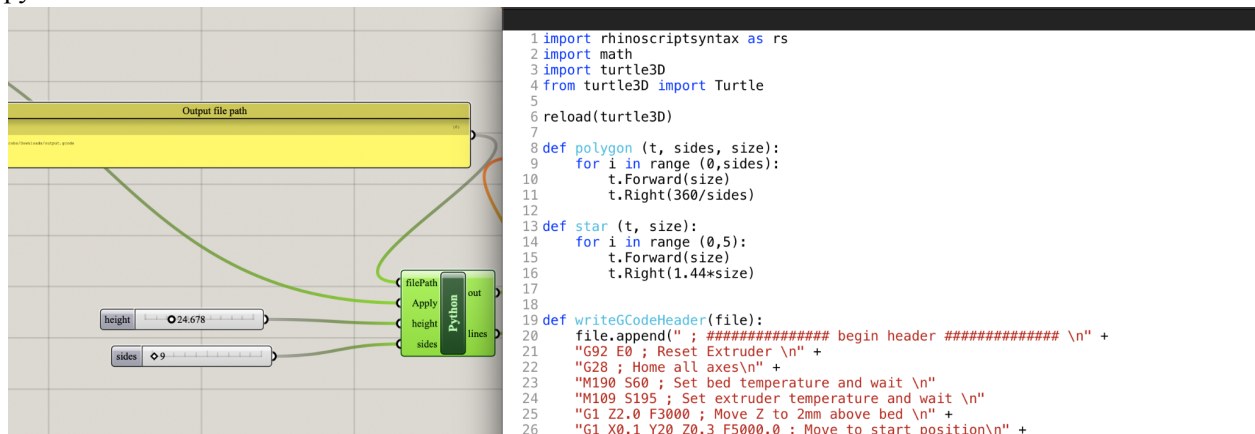
Select the code editor that opens and go to Tools->Options to pull open the options editor for the Rhino Python Editor:



Select Search Paths ->Add and find the directory where you saved Turtle3D.py



Once you have done so, you should be able to import the turtle3D python library into your grasshopper python node.



The example grasshopper file shows how to control the turtle commands to execute a basic star path. You can refer to Melody's documentation to see further instructions on how to generate different forms:

https://handandmachine.org/projects/extruder_turtle/index.html