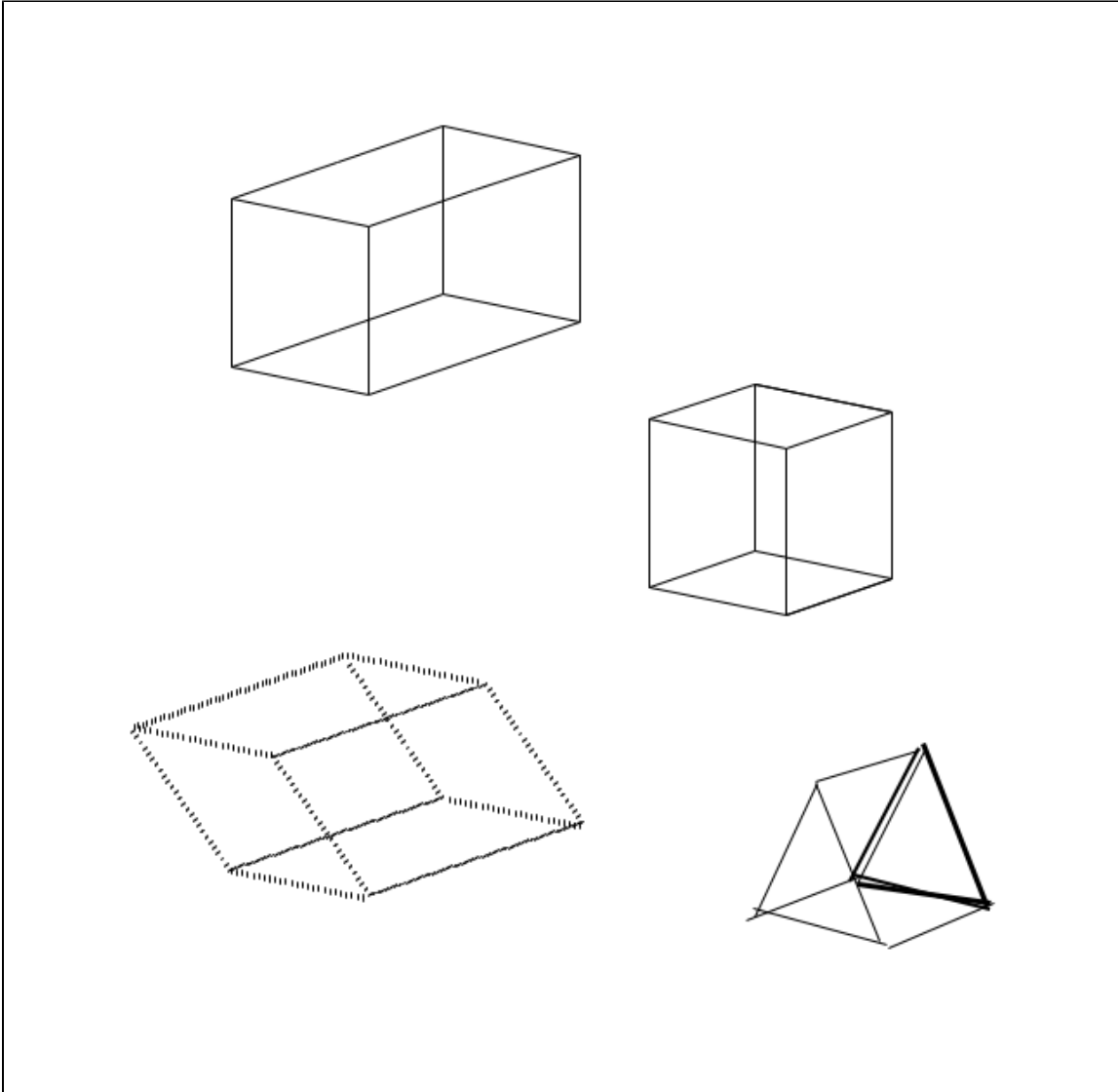


Luke's Project 11

The purpose of this project was to become more comfortable using 3d turtle, and hence yaw, roll, and pitch, and also to familiarize myself with recursive functions.

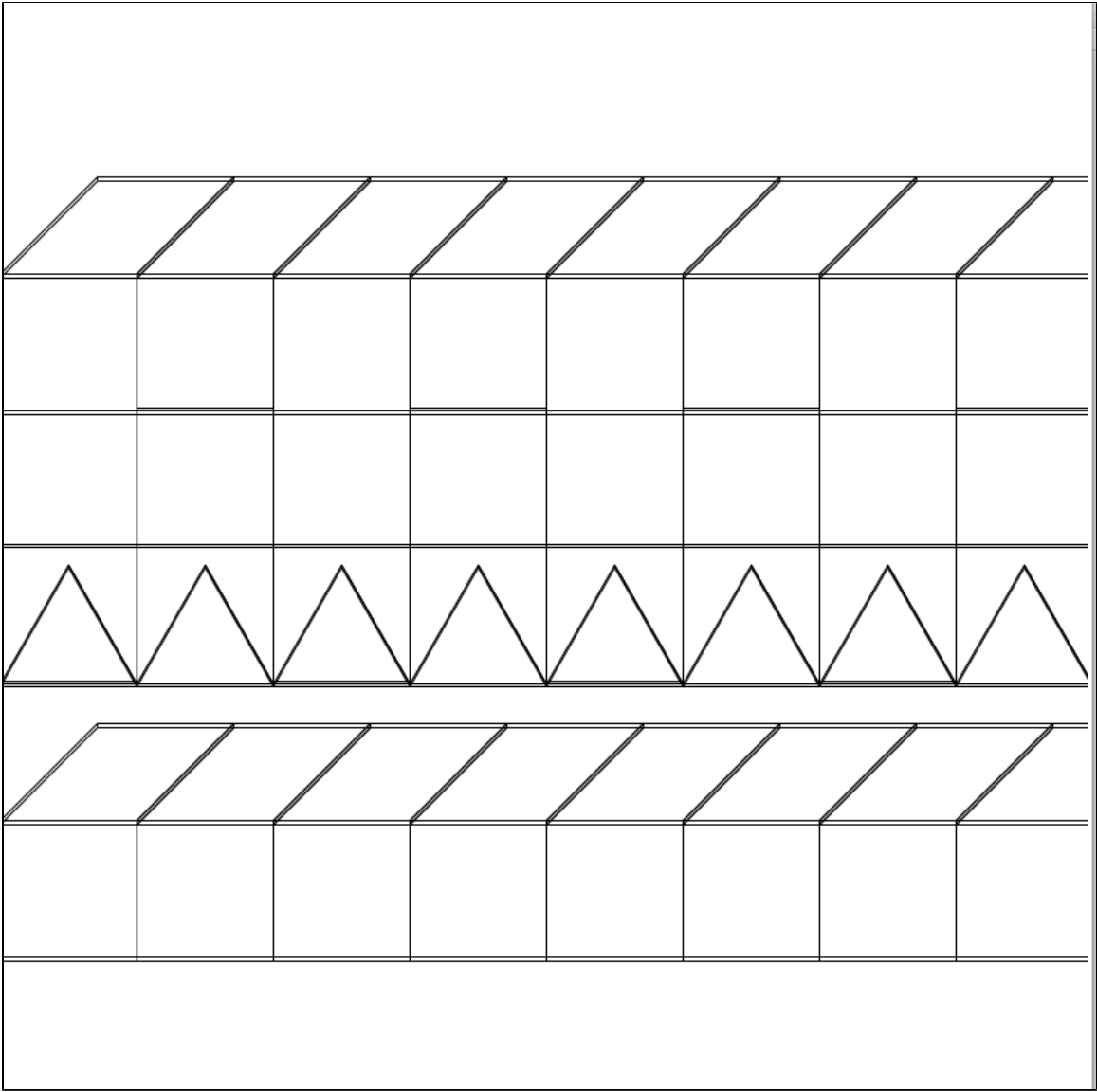
The first task was to create 4 new 3d shape classes in the shapes.py file. I chose to create a box, a rectangular prism, a triangular prism, and a diagonal prism. My shapes came out like this:

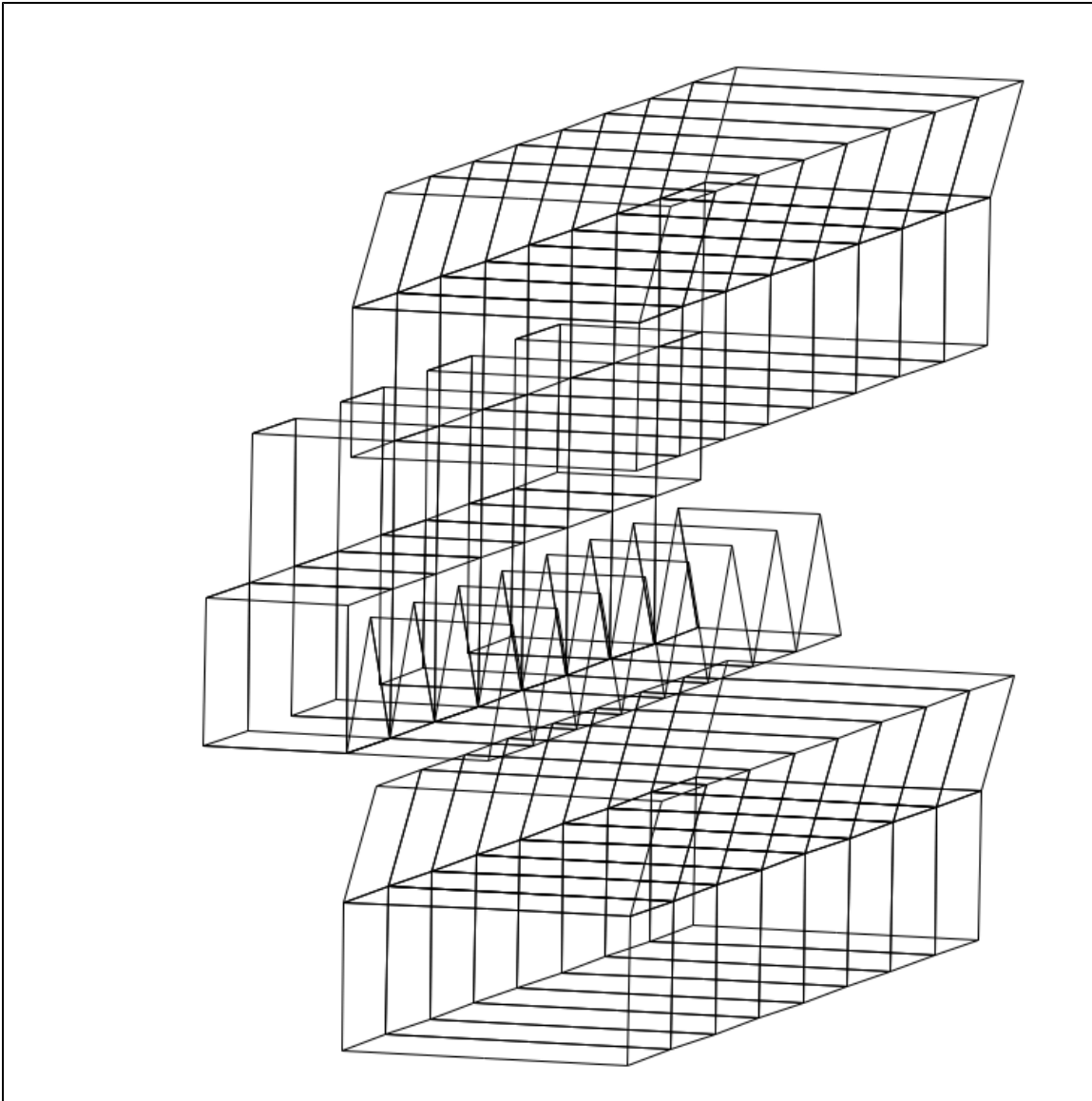


The next task was to rewrite a function as a recursive function. I chose the insertmod() function in the lsystem.py file.

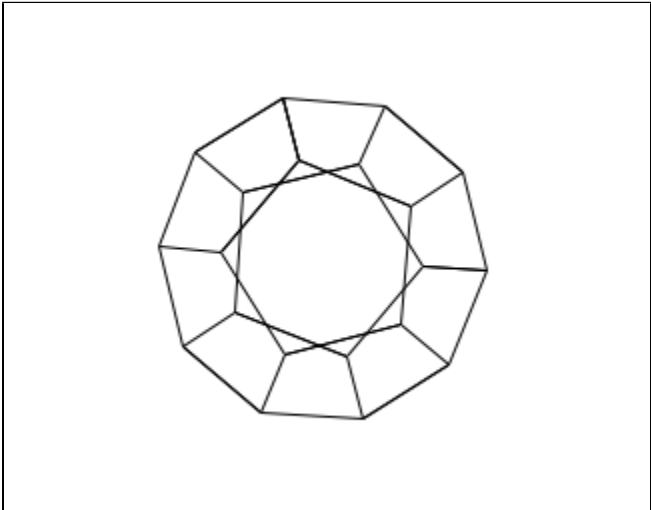
```
def insertmod1(self, sequence, modstring, symbol):  
    tstring=''  
    if sequence==[]:  
        return tstring  
    elif sequence[0]==symbol:  
        tstring='('+modstring+')'+insertmod1(self, sequence[1:], modstring, symbol)  
    tstring+=sequence[0]  
    return tstring
```

The following task was to create an image using the shapes created in task one. Here is a view from two different vantage points of my scene.





The final task was to pick an extension and implement a solution. I chose to draw a dodecahedron using turtle. This was the result:



Through this lab and project I learned that 3d turtle exists and how to use it, I learned more about when recursive functions are necessary. I worked alone on this project.