**Project Proposal**

I am planning to create a game for my term project so there isn’t a real problem I’m solving aside from the lack of creative entertainment that is out right now. I have given my game an initial title of “Traveling around a Box”.

The game I wish to design takes place around a three-dimensional world, which is the box or cube. However, the actual gameplay appears to be two-dimensional. The game is supposed to be a simplistic and catchy fast-paced game. There is a starting point at the top left of the first face and the goal of the player is to get past any obstacles to the bottom right square. This is done by clicking points and creating line segments which the player will slide along. If collision is detected, the level will restart. Once you reach the finish square of one face, the entire game rotates and you have to play on another face of the cube starting from the bottom to top. Once you complete all four sides and reach back to the beginning, you move on to the next level. The next level is entered by going through the three dimensional world from top to bottom. Score will be dependent on time, the number of times you had to change the path, and the number of points used. If you can get around the cube in your first attempt in one try using the fewest number of points, you will get the highest score. Once you get a certain score, you have beaten the level. Features that can be added on to this are power-ups, other graphics, a starting and help screen, and a level creator. Some of these may be more reasonable than others.

For this project, I definitely plan to use modules aside from Tkinter. One of these modules is VPython. In my submission, I have included some code that demonstrates my competency with this technology. This code will show the basic template for what my game will look like. There is a cube and I can rotate the entire environment so that the game can be played on different faces. The sphere is the player and the moving rectangle is a potential obstacle. Clicking works and creates line segments for the player to travel along to reach the finish square. I also briefly learned Pygame in the case that I need it while I am doing my project. A demo of some code that uses this is also included. This code detects collision with a line drawn by the user with the mouse and a rectangle that can be moved around the screen with arrow keys.