PROJECT PROPOSAL

My project is comprised of two parts:

1. Given an arbitrary picture, the program is able to generate another version the same picture, but comprising of only ASCII characters. There are many ways to this. The two algorithms I will be using to accomplish this task (described below) were taken from this webpage: (<http://www.jave.de/image2ascii/algorithms.html> )
   * greyscale method: the pixels in the image are grouped into blocks, and depending on their average brightness, each block is mapped to an asci character. This algorithm is fairly easy to implement, and I have already implemented a rudimentary form of it.
   * Edge detection method: This algorithm determines the outlines in a given image, and uses this to recreate the outline with certain asci characters (e.g. /,\,| etc.)

I plan on combining the two algorithms to generate an aesthetically appealing picture.

**Modules used for this part: PIL (Python imaging library):** Helps in image processing, which is the main purpose of this part of my project.

1. The second part makes use of the pictures generated from the first part, frames them, and puts them in an 3D maze. For aesthetic and entertainment purposes, I intend to make everything in the maze (walls, bushes etc.) be comprised of ascii characters ( so that the entire world is made of ASCII characters).

To enhance the user experience, I want to make a pseudo- horror game. The user must solve the maze, hints to which are hidden in the ascii pictures (for example, the phrase “turn left” could be hidden amongst the ascii characters in a given image). If the user fails to take into account the hints in the pictures and makes the wrong turn, they will lose some health. In addition to this, there is a time limit. If the user does not adhere to this, they will be caught by the villain, and the game will be over.

**Modules used for this part:**

* **Blender:** Generates the 3D models of the walls, bushes, and other objects I plan to include in the ASCII maze. However, if I can find models online to suit my purposes, I will not be using Blender.
* **Panda3D**: creates the maze by putting together the models, and creates the game interface.