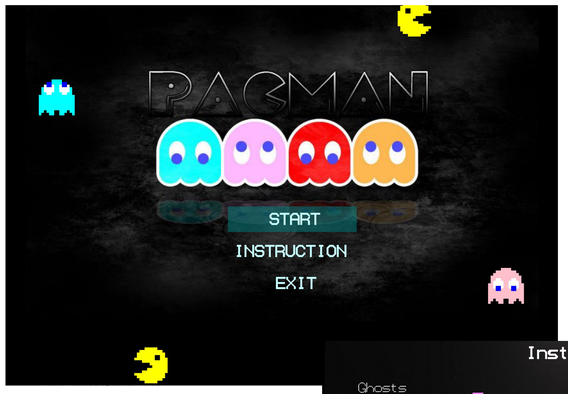
3D Pacman Go

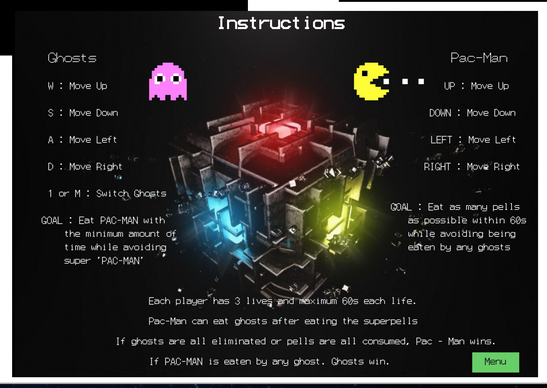
By *Absence*

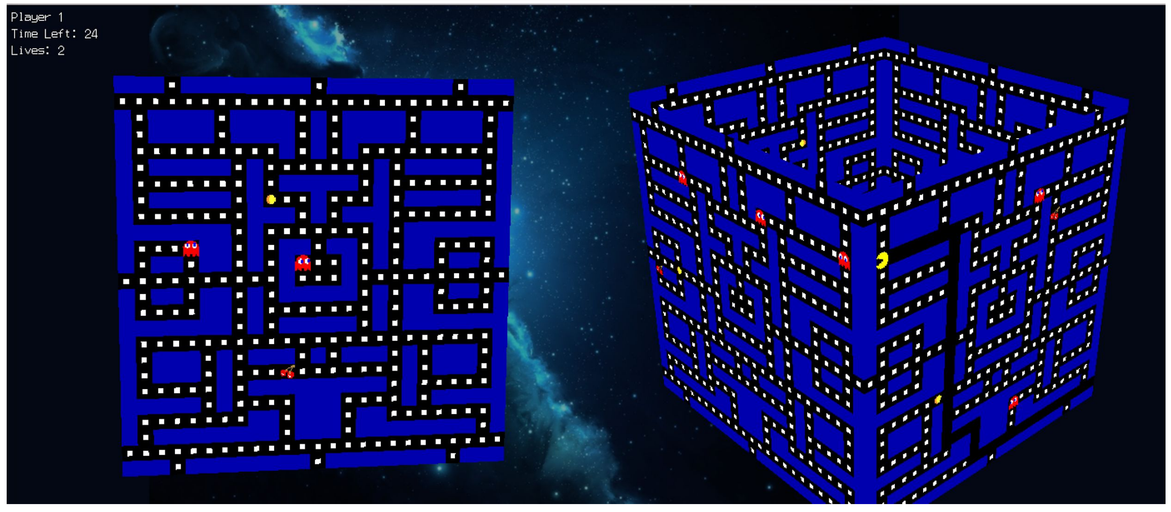
Summary

Our game is a reimagination of the 1980's hit game, Pac-Man. In the classic pacman, you traverse a 2D maze and eat pellets, all while running away from computer controlled ghosts. As a group, we decided we wanted to recreate this iconic game, but throw our own twist on it.

In this day and age, video games are no longer restricted to the flat, 2D space that they once were. Games have also become a social platform for friends and family alike. With this in mind, we decided to create a two-player, 3D version of Pac-Man.

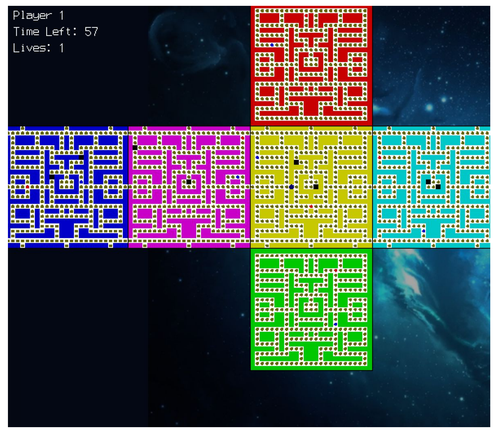






Technical Challenges

3D Graphics



As the objects to be drawn in 3D increased, the computation increased too much that slowed down the program. Simplifying the figures to balance between precision and speed was an issue me worked on.

Rotation of Cube

We try to rotate the cube using Euler angle and rotation of the camera. However, it's hard to deal with continual rotations with only head angle and pitch angle. So we decide to keep the camera following the ghost or pacman. But it's somewhat difficult for users to play on the top and down surfaces since the cube would keep rotating with changes of the heading angles. For now, we actually run on four surfaces.

Controls

In the beginning of the project, we struggled with taking in multiple inputs from two different users. The problem with the old system we had used was that we were using FsInkey(), which is incapable of taking in multiple inputs, or having a key be held down. To fix this, we used FsGetKeyState() which let us take up to six inputs at once, meaning we could successfully have two players controlling their characters.

Drawing Entire Cube

After compiling all of our code together to make a working game, we encountered a problem with the program's runtime, which was slower than expected. We determined that this was the cause of having to draw too much on the screen at once. This was remedied by reducing the number of objects draw, and simplifying someone of the objects themselves.