**Team**: Alex Geoffrey and Elijah Caluya

**Experience with Maya**: Novice

**Bowling Alley Simulation**

**Summary**: For this project we will be creating a bowling alley in Maya. We will use materials to make the surface visually clear and resembling a bowling alley. We will use the physics engine to create an animation of a bowling ball knocking pins down.

**Challenges/Technical risks**: Since we are both novices at using Maya, we will need to figure out many aspects of 3D modeling as we begin our project. Since we have only really dealt with a planar surface, we will need to figure out how to manipulate 3D surfaces to create our model. We will also need out figure out how to key different aspects of our model if we are to animate it. We will also need to figure out how to use the Physics engine Maya supplies.

**Range**:

1. Worst-case/Minimum: A scene with just pins and a bowling ball on the flat surface.
2. Normal: A ball that animates towards the pins and knocks them down, but the animation is hard coded without the use of physics.
3. Elaborate: Using the physics engine to create an animation where the ball hits the pins down.

**Learning Goals**: We hope to further our understanding of Maya software and how to create 3D models. We also expect to learn a lot about Maya’s animation system and how to key elements of the scene. We also hope to achieve a level of comfort on the project so that we can also experiment with Maya’s physics engine.

**Timeline**:

Week 6:

* Alex: Establish GitHub repo for the project. Push simple 3d model of a basic alley.
* Elijah: Make the ball and pins.

Week 7:

* Alex: Figure out how to transform an object to a different location with code. Learn a lot more about the Physics engine and how to animate with it.
* Elijah: Create a material for the ball, pins and alley.

Week 8:

* Alex and Elijah: Create an animation that is hard coded (or with Physics if that is doable at this point).

Week 9:

* Alex: Create UI
* Elijah: Create details such as gutters, backboard to alley, scoreboard(?).

Week 10:

* Alex and Elijah: Finalize project, clean code, brush up everything. Create new materials with spare time. Experiment with Physics if we have not already.