Project Report

**Objective**

Our project was to design a game in which the user controls an object on a track surrounded by a “Dead Zone”. The player navigates the object through a course called the “Safe Zone” using the arrow keys to control movement. If the player should navigate into the Dead Zone, they will lose the game and have to restart. To win the game, the player must navigate the track until they reach the finish line, the red area of the scene

**Features**

The program will load in a given track, different tracks will have different difficulties, and then use the white space to generate a safe zone and the black space to create the dead zone.

The player model being used is a colored cube, the cube starts at the center of the scene on a starting platform.

The player controls the movement of the cube using the arrows on the keyboard, a more in depth description of controls can be found in our user manual.

Using color detection the game can be ended 2 different ways: if the cube touches the dead zone (black) the game will end in a loss and restart. If the cube touches the finish line (red) the game will end in a win and give the option to restart.

At the start of every game the camera will rotate around the cube to give the player a preview of the course.

The game also incorporates 2 sounds, the first is a starting sound that plays as the camera revolves around the player. The second sound will play is the cube touches the dead zone and loses.

**Notes**

Progress in the beginning was slow, we initially started the assignment with different partners and then were paired together when the others fell through.

One of our biggest problems was getting the cube to appear on top of the track, for the majority of our debugging the cube was always hidden below the track. To finally fix this we used the same mvMatrix that we did for the track, but shrank it for the cube, then translated it to the playerPos. This allowed us to display the cube above the track making everything look much better

# **Screen Shots**

### Start State:

# 

### Losing Screen:

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### Winning Screen:

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