Project Name: TBD

Overview: Our idea is a basic platformer, i.e. getting from point A to point B while overcoming obstacles with the unique abilities of each shape. The player controls an object that can transform into different shapes for it to overcome the obstacles in each level. The shapes (so far…) and their abilities are as follows: The circle for movement, the square to stop, the kite to glide, and the star is a bonus ability allowing the player to fly for a short duration.

System Overview: C++, OpenGL, OpenAI.

Requirements:

- 2-D graphics framework
- Collisions, weight, drifting, and physics for each shape
  - Square used to stop and collide with other objects
  - Circle must be able to drift
  - Kite must be able glide in a swinging motion
- Score
- Objects – Mostly rectangular and curved.
- Keyboard input for movement
- Mouse input for menu interaction

Game Design:

- Single player
- Score system
- Game menu
  - Hi-score submenu
- Object transformations
- Collisions of main player and environment
- Tones instead of music, or a combination of tones in sequence
- Physics
  - Object movement, mass, velocity, acceleration, and position
- System for handling particles during transformations, movement, and collisions