Sprint 10 Report

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The goals set for this sprint were to sketch a rough draft of a poster which describes this project and to implement extra balls which spawn at random, randomly changing paddle size, a scoreboard, goal zone segments which randomly award extra points, and visible indications of invisible effects.

We have sketched a rough draft of a poster which describes this project. The theme of the poster will be scripting (and the context will be the game we have developed). This involves descriptions of the programmed behaviors of each of the game objects and the gathering and computation of statistics. The poster will also describe the behaviors and underlying issues that Unity handles without the intervention of the programmer.

We have implemented extra balls which spawn at random and the artificially intelligent paddle pursues them. However, the artificial intelligence could be improved: occasionally the artificial intelligence pursues a ball which is ricocheting incessantly between the walls of the arena while other balls, also in the threat range of the artificially intelligent paddle, pass by the paddle. Ideally, the artificial intelligence would reevaluate its situation at every moment such that it would choose to pursue the ball which is most imminently threatening at that moment. Currently, the artificial intelligence pursues the ball which has most recently entered its threat range. The extra balls effect, like all other special gameplay effects, is executed from a singleton game object whose sole ability is to produce its delegated effect. The extra balls are spawned every 30 to 60 seconds and persist until they reach a goal zone. There currently exists a single bug in which more than 4 extra balls – the number of extra balls which we specified as the maximum number of extra balls – are occasionally spawned.

We have implemented randomly changing paddle size. Every 30 to 60 seconds a paddle is randomly selected and shrunken to half its original size or enlarged to twice its original size. The affected paddle will remain modified for 10 to 20 seconds.

We have implemented a scoreboard which displays the scores of both players. The scores are displayed in the top left and right corners of the opponent’s goal zone.

We have implemented goal zone segments which randomly award extra points. Every 30 to 60 seconds, a goal zone segment is randomly selected to be modified and the modification persists for 10 seconds.

We have implemented visual indications of invisible effects. A goal zone segment which is disabled is the yellow like the walls of the arena. A goal zone segment which awards extra points blinks green for the duration of that modification. We also introduced a visual warning for the visible effect of extra balls: the main ball blinks purple for 2 seconds before extra balls are spawned.