Final Project details

Terr-Out, MAEJOR Games

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Our project is located on GitHub: https://github.com/jacobdeichert/HorrorGame/tree/development

You’ll want to look in the working\_project folder to see the work we’ve done)

1. Separating Axis Theorem (Odin von Doom) – There’s a script called DetectPlayer\_SAT where the SAT calculations are done. It’s put on the “end” floor tile, and essentially using the square of that tile and the square of the bottom surface of the player’s collision box to calculate whether or not there is any overlap. It’s only using squares, but was tricky in accounting for the player’s movement/rotation. There are a few debug rays in that script that have been uncommented so you can see the boxes surrounding the player and the end tile. Drag the player right up to the final tile if you want to see the collision detection happening.
2. Spring Wall Trap (Jacob Deichert) – There’s a script called CrushingWallTrap.cs (Assets/Scripts/trap\_stuff/CrushingWallTrap.cs). This script uses custom spring physics to move the wall back and forth in simple harmonic motion (non-dampened). Unity3D’s built-in physics was not used for the motion of this trap, this was hand-coded.
3. SineWave ArrowTrap (Ryan Holubeshen) the script “ArrowWallTrap.cs”(Assets/trap\_stuff/ArrowWalltrap.cs) uses a simple sinewave to update the position of the fired bullets or balls , in a sinewave pattern on the y axis , so while the bullet is moving on a constant x direction , it moves up and down on the y axis. None of unity’s pre built physics weren’t used.
4. Pendulum Trap (Matt Joncas), all of the pendulum physics were coded from scratch inside the PendulumTrap script. All the script does is define the variables needed to calculate the pendulums angle each time step and then obviously calculate the new angle and set the objects rotation accordingly. The pendulums spawn randomly through our maze so you can find one if you search.