Robust Game: Panda Express

CPSC 436D - Video Game Programming

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For this deliverable, we successfully implemented A* pathfinding for our boss fight where the boss sends flocks of bats to attack the player as mentioned in our game proposal for the week of March 15th. A “seeking” component and system were added that receives a vector of coordinates and makes an entity follow the path. As well, the ability to save and load the game state with a pause screen was added. In a previous deliverable, we addressed our goal for that week of implementing a more advanced enemy which uses parametric curves, seen with the ghost enemy, and also previously added sound effects.

Our physics system has been further improved, removing bugs that enabled the player to fall through Jacko instead of inflicting damage or avoid collisions with ghosts at times. A death animation for the panda was added, in addition to a fade out screen. For our external programming tool, we utilized Valgrind to fix memory leaks. To ensure proper memory management, we used caching for the sound and level managers rather than continuously reading from disk.

We now have full screen mode which is made to be the default setting. Also, ‘a’, ‘w’, ‘d’, and the up arrow keys were added as optional controls. More levels were created to incorporate solid blocks which the panda cannot jump through. Endless modes can now be accessed through the menu, which each start with a random seed, and also now feature healing food items. Transitions between story mode levels are now possible with the polygonal mesh cave, transporting the player from the horizontal scene, to the vertical, and then to the boss. Additionally, improvements to the score have been made, including a stroke effect, as well as an overlay effect triggered when killing an enemy, which adds to the player’s overall score.

We plan on adding particle effects in the next deliverable as well as additional environmental threats in the stages.