Playable Game: Stealthy Sam

CPSC 436D - Video Game Programming

Spring 2018/19

Team Members:

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Milestone Requirements:

Sustain progressive, non-repetitive gameplay using all required features for 4 min or including all new features (with minimal tutorial)

- Player is capable of playing the first three rooms consecutively and restart the game after collision with enemy. In the first room, the player has to avoid the enemies in order to reach the second room. Once there, there will be a key situated on the dinner table to be collected. The player will then continue onto the final room, the 'kitchen', where a key will be hidden in one of the room corners. Any collisions with an enemy will result in the player's death and they will have to restart from the first room. Once both keys are collected, then the player will be able to continue to through the locked gate situated in room one and access the boss room. Once in the boss room, the player will be challenged with illuminating all four corners of the room in order to defeat the final boss. This should last approximately 4 minutes and will be expanded upon on future iterations.

Implement time stepping based physical animation: A subset of the game entities (main or background) should now possess non-trivial physics properties such as linear momentum or angular momentum, and acceleration and act based on those. Specifically, you should implement some form of physical simulation, which can be either background effects (e.g. water, smoke implemented using particles) or active game elements (throwing a ball, swinging a rope, etc…)

- We have a torch that illuminates the level surrounding the torch. Once picked up, then the light strength decreases quadratically with distance and follows Sam around the level

as he explores the different hallways. Sam can throw the torch back into the level and the speed of the torch decreases over time or stops abruptly if it hits a wall or asset.
- If the torch collides with a cauldron, then the cauldron will illuminate and offer another source of light to help the player.

Incorporate one or more polygonal geometric assets

- The enemies now feature a vision/detection cone that showcases the direction they are facing and provides the user with additional help on locating the enemies through the darkness of the level

Implement smooth non-linear motion of one or more assets or characters

- The torch slows down due to acceleration when thrown.

Implement an accurate and efficient collision detection method (include multiple moving assets that necessitate collision checks)

- Multiple assets are now checked for collision :
    - Enemies colliding with assets or Sam
    - Torch with assets or cauldrons
    - Sam colliding with assets, keys, closets, walls, torches and enemies

- Collision are all performed efficiently and during each update tick.

Stable game code supporting continuing execution and graceful termination

- Our code can be continually executed without bugs and we are able to terminate the program without any problems.

Creative:

You should implement one or more additional creative elements. These can include additional assets, rendering effects, complex gameplay logic, or pre-emptive implementation of one or more features from subsequent milestones.

- We have implemented a light dimmer that makes the player's surroundings darker.
- Diffrent light sources interact with one another.
- Extensive sprites to match our original level designs.
- Refactored the original code to model the ECS design.
- Added additional interactable closets in each of the levels.
- Vision cones that follow the enemies.

- Interactable cauldrons that provide additional light sources for the user.
- Background music has been added to reflect the appropriate spooky tones for the game, also sound effects when dying has been added.

Your submission should align with your proposed development plan: Provide a write-up explaining how your milestone aligns with the plan. Explain all discrepancies.

In our original plan, we had these features planned for completion for this milestone:
Week: March 8th - **Playability**

- World shader
    - We have this implemented, and our character successfully travels with and takes a hole in the world shader with him
- Start implementation on interactables
    - We have currently keys implemented, and closets you can hide in for interactables.
- Level layout
    - We have all four rooms created that we proposed
    - We have implemented puzzles pieces and enemies in each of the rooms.

We made all of our major goals for the playability milestone.