Week #3

Unit Tests

Timer->Tasks Cutting Point:

Conceptual Test #1: Verify proper semaphore communication between timer callbacks and tasks.

Status: Currently passing.

Conceptual Test #2: Update and read a global variable to verify that timer callbacks are being entered.

Status: Not tested but would pass since test #1 is passing.

Physics Task->Energy Timer Cutting Point:

Conceptual Test #1: Set using event flags and check period.

Status: Would not pass. Code written but not debugged.

Conceptual Test #2: Use event flags to set and stop the timer. Verify it stops.

Status: Not tested. Would fail.

Physics Event Flag Cutting Point:

Conceptual Test #1: Press buttons and verify the correct flags are set.

Status: Would pass.

Conceptual Test #2: Set a fake flag and verify that the physics task never runs.

Status: Would pass.

Unit Tests

Green is pass, red is fail.

1. Place finger on far right of slider, verify platform moves to the right with increasing speed.
2. Keep your finger in the same position and verify that the platform bounces off the cliff.
3. Keep your finger in the same position and verify that the platform moves back to the middle before stopping and turning around.
4. Move your finger to the far left of the slider and verify that the platform turns around.
5. Keep your finger in the same position and verify that the platform moves to the left with increasing speed.
6. Keep your finger in the same position and verify that the platform bounces off of the left side of the screen.
7. Keep your finger in the same position and verify that the platform moves back to where it previously turned around before hitting the wall.
8. Repeatedly tap far left and far right on the slider and verify that the platform moves in a twitchy fashion back and forth.
9. Press button0 and observe the shield is turned on.
10. Press, hold, and release button1 and verify that a rail gun shot is fired

Functionality:

This week I completed the platform physics and graphics, they are both fully functional.

I finished the graphics for the non-moving parts of the game.

I began implementing satchel charges. I’m nearly done debugging it.

I declared all global variables and adjusted a few of them.

I wrote all code modularly so game settings can easily be changed.

Summary:

I adjusted the hours for this weeks estimated tasks last week before starting as I knew after week #1 that they were too aggressive.

I’ve completed 38.2% of the total work in 29.2% of the initially estimated total time. For the work that has been completed, I took 1.2x the anticipated time.

Completed Work:

Revise globals and task diagram: The task diagram only had one mutex change but the global variables saw significant development. I’m finding it’s best to adjust the globals as I go depending on what I need as I write the physics task.

Begin implementing details task by task: Going chunk by chunk has made it super easy to focus on one thing at a time. It has boosted my productivity significantly.

Finish implementing structure: This was completed in the previous week.