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CSCI-447

Space Wars Documentation

Assignment 3, Phase 1

* What is Being Delivered:
  + Shingle Ship in Playfield
  + Ship:
    - Rotates
    - Accelerates
    - Moves inertially
    - Fires Missiles
  + Missiles:
    - Move inertially
* Development:
  + Development of movement of ship went smoothly, as most of the relevant code was mentioned or shown in class.
  + Screen wrapping was also implemented without any problems
  + For creating missiles, the yoyo game’s documentation was referenced for the correct function
    - (<https://docs.yoyogames.com/source/dadiospice/002_reference/objects%20and%20instances/instances/instance%20functions/instance_create.html>)
  + The main source of trouble came from the physics of launching the missiles.
    - There was difficulty in making the velocity of the missiles feel “natural”
      * What I realized was that the missile speeds were just grabbing the speed of the ship and adding a set amount to it.
        + This meant that a ship moving at a 45-degree angle and facing up would still be shooting at a 45-degree angle, instead of shooting in the ship’s direction.

Having the speed of the missile take the ship’s angle and use cos and sin to scale the speeds appropriately fixed this issue.

* Test Requirements & results:
  + Able to thrust for 2 seconds, rotate 180 degrees, and thrust again for 2 seconds and come to a complete stop.
  + Pressing space shoots a missile that moves faster than the ship, in the same direction as the ship, and disappears after a set time

All tests pass at time of submission