CSCI E-7
GRADUATE PROJECT CHECKPOINT

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Project Progress Report

I have taught myself the basics of how PyGame can be used to build a game. I have explored the foundational building blocks that are necessary to make a functional game such as the main loop, event handling, drawing and managing sprite groups, collision detection and game mechanics (e.g. calculating angles using trigonometry, controlling the speed etc.)

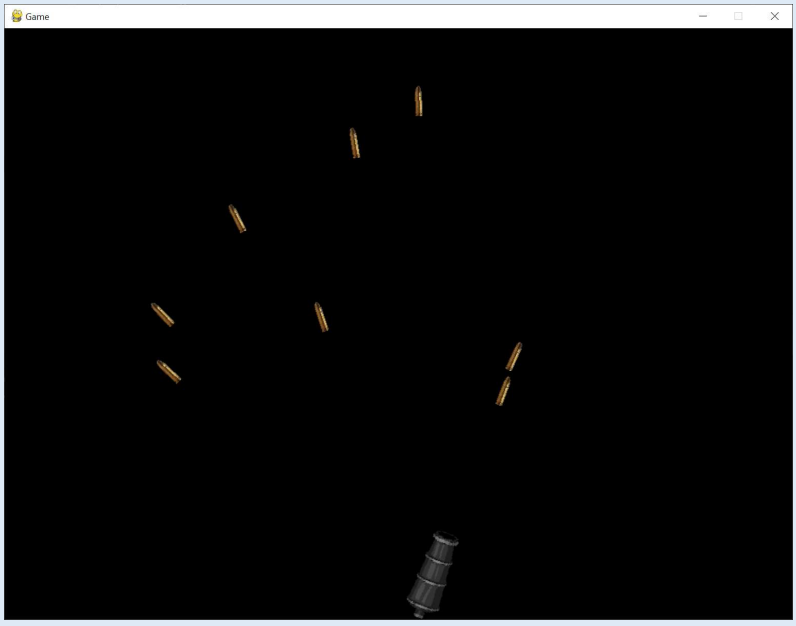
The most challenging part I've encountered thus far has been in getting the gun barrel to rotate with keypresses/mouse movements and making the projectile (bullet/missile) to shoot out at the corresponding angle in the direction the gun barrel is rotated to. I was able to get this to work after quite a bit of research online and using a sample piece of code as guidance

Next, I plan to work on the other challenging aspect of collision detection where a bullet/missile collides with the paratroopers and/or planes. Once I'm past that challenge, I will work towards incorporating score tracking, sound effects, background music, and improve the graphics if time permits.

The libraries I have used thus far:

- PyGame
- Math
- Random

A sample screenshot of what the game looks like so far with a few bullets being shot out of the cannon at the bottom of the screen:



Online resources I have used thus far for guidance:

- https://github.com/Rabbid76/PyGameExamplesAndAnswers/blob/master/documentation/pygame/pygame_move_towards_target.md#move-towards-targetv
- https://www.pygame.org/docs/