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Milestone 2 Report

Title: Gun Range Simulator

Project Concept:

The concept of my project is to create a simulation of the tasks done at a gun range. I would like to simulate the workings of various guns, such as reloading the magazines, reloading the guns, cocking the gun, and pulling the firing trigger.

Features Implemented:

In this iteration I've added my first gun to the project, and it is now fully functional. The gun can be loaded, it can be cocked via the handle towards the top of the gun, and it can fire bullets and simulate the ejection of bullet casing. The gun is programmed similar to a real gun, where simply loading the magazine is not enough. The magazine must be loaded, and the gun must be cocked once to load the first bullet into the chamber. Only then can the gun automatically reload and continue firing. Once the first gun is completed, I can easily implement one or more guns following the same logic.

Challenges and Solutions:

The challenge I experienced in this iteration is debating how to approach the class of guns in terms of code. I'm hesitant to create a overarching parent class of Guns, because I'm uncertain how many features each different gun will share with each other, and various intricate features are very precise and dependent on the state of the gun and the location of the gun. I've attempted to create a parent class of Gun and extend various components of it into GunM4, but I found that some parameters were getting too complicated passing back and forth between parent and child classes, and it was simply much more efficient to work on it directly within the child class.

Deviations:

One deviation I'm considering is to limit my gun range to 2 guns. I originally planned 3-4, but after consideration and a lot of coding, I've decided that I want to focus more on the special effects aspect of the project. I want to focus on the motion and movements of each gun, and the time limit doesn't permit me the luxury of fine tuning each gun.