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CSCI 306 B

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Final Project: Design Outline

For our project design, we will make a medieval setting and provide the player a variety of projectiles and launchers they can use to hit a target from a fixed distance. Each projectile has its own mass and each launcher throws the mass with a set magnitude of force; this will allow for user experimentation as they play with different variables and find the optimal way or ways to hit the target.

Our testing strategy will first involve the loading of our projectiles and launchers, then making sure the angle of trajectory is indicated clearly and varies by user input. After this, ensuring the physics work with each combination of launcher and projectile is a top priority. The projectile will stop the moment it hits an object or the ground, so we will not need to worry about projectile physics outside of the first impact. Then we shall load a target, ensure that the game acknowledges when the target is impacted, and regularly prompt the user for a brief quiz regarding angles and their properties.

Stage I development will include implementing the physics engine, angle display and distance measurement, and getting tests to pass for one combination of launcher and projectile. We’ll also code for target collision and elementary GUI elements. Stage II will be mostly expansion on Stage I, where we will update the GUI with better graphics and more options. This way, the project will be hypothetically “done” by Stage I, while Stage II will mostly be an aesthetics and gameplay update.