Manual Testing for a Random Shooter Game - Week 2

Prerequisites: You need Python 3 to run this code.

Environment setup and configurations: Clone this repository from github (or download it however you want). Then run

```
pip install -r requirements.txt
```

To start the program, use

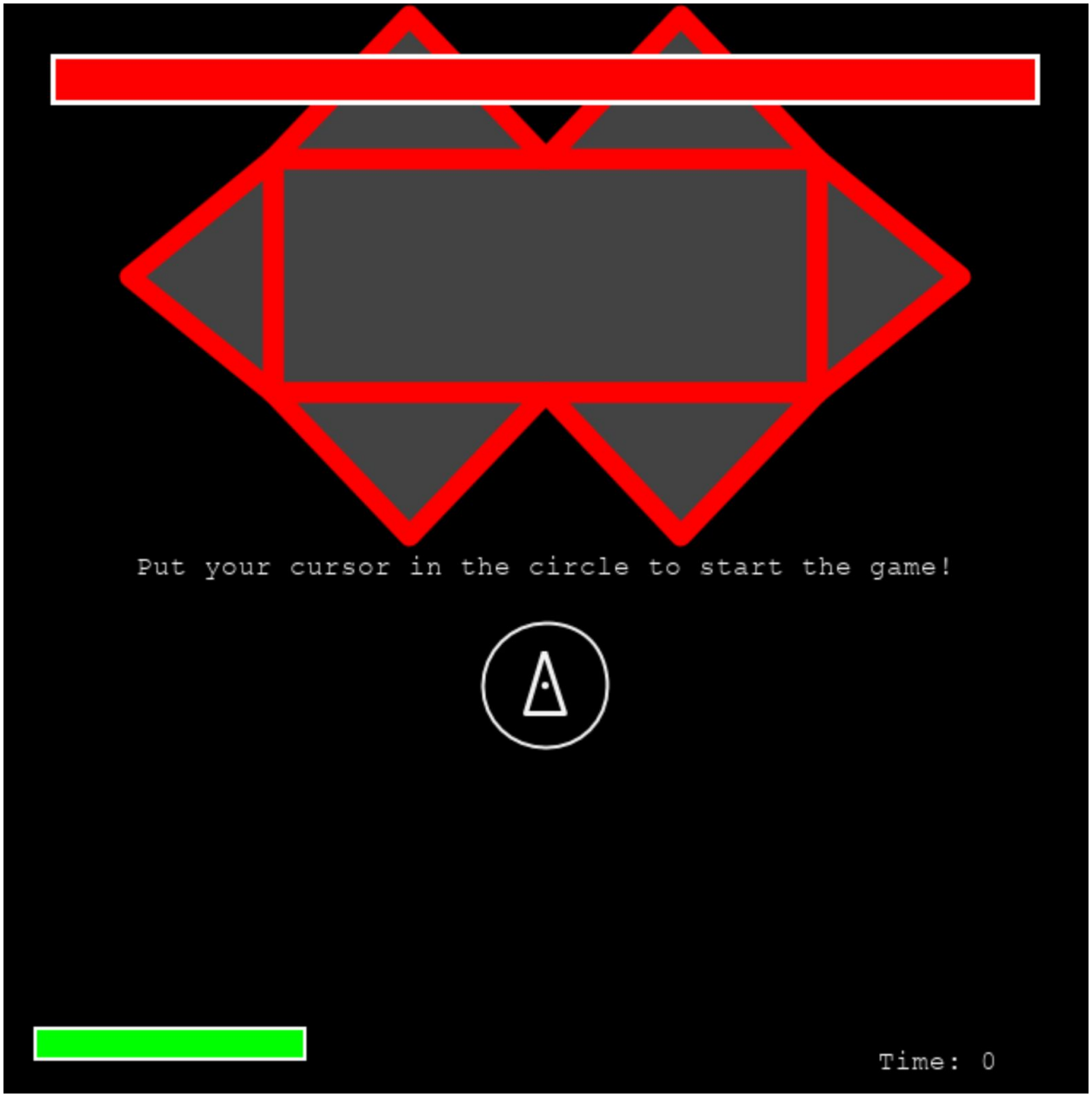
```
python game.py
```

Operations

To do manual testing, check the following things in order after starting the program (starting next page)

Game Start Screen

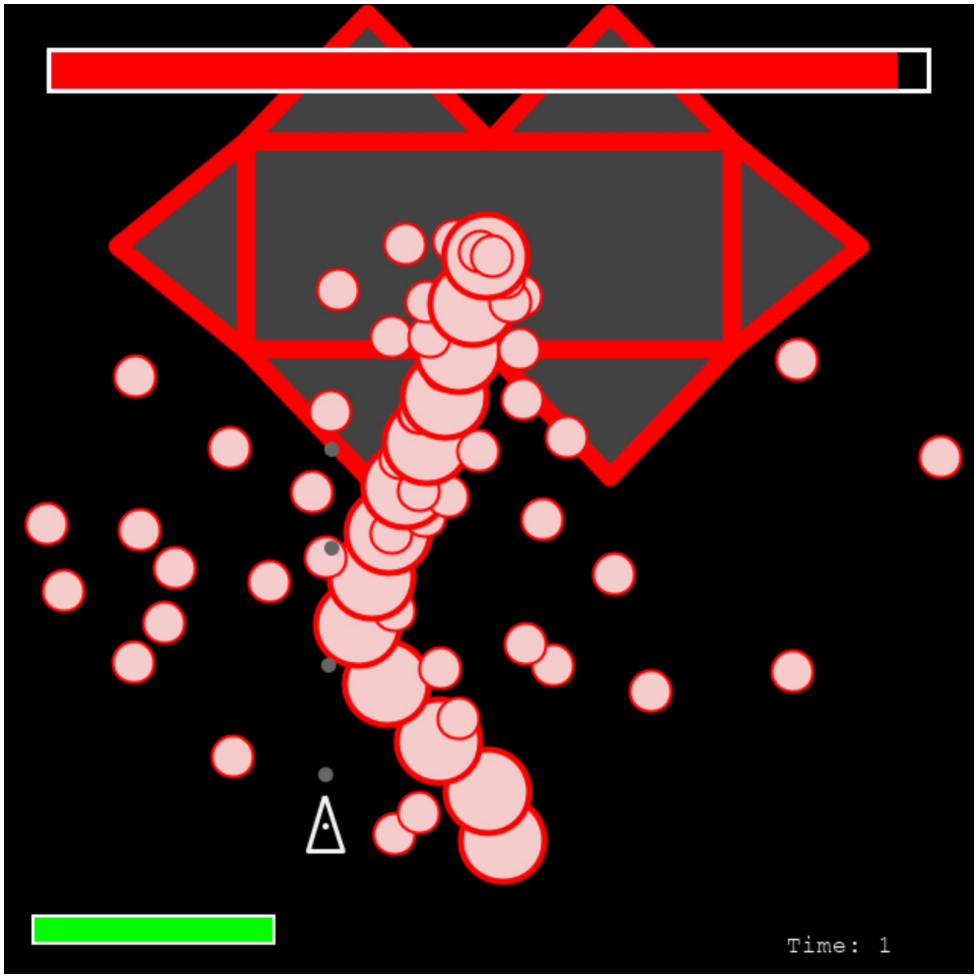
When the game is launched, a screen looking like this should appear:



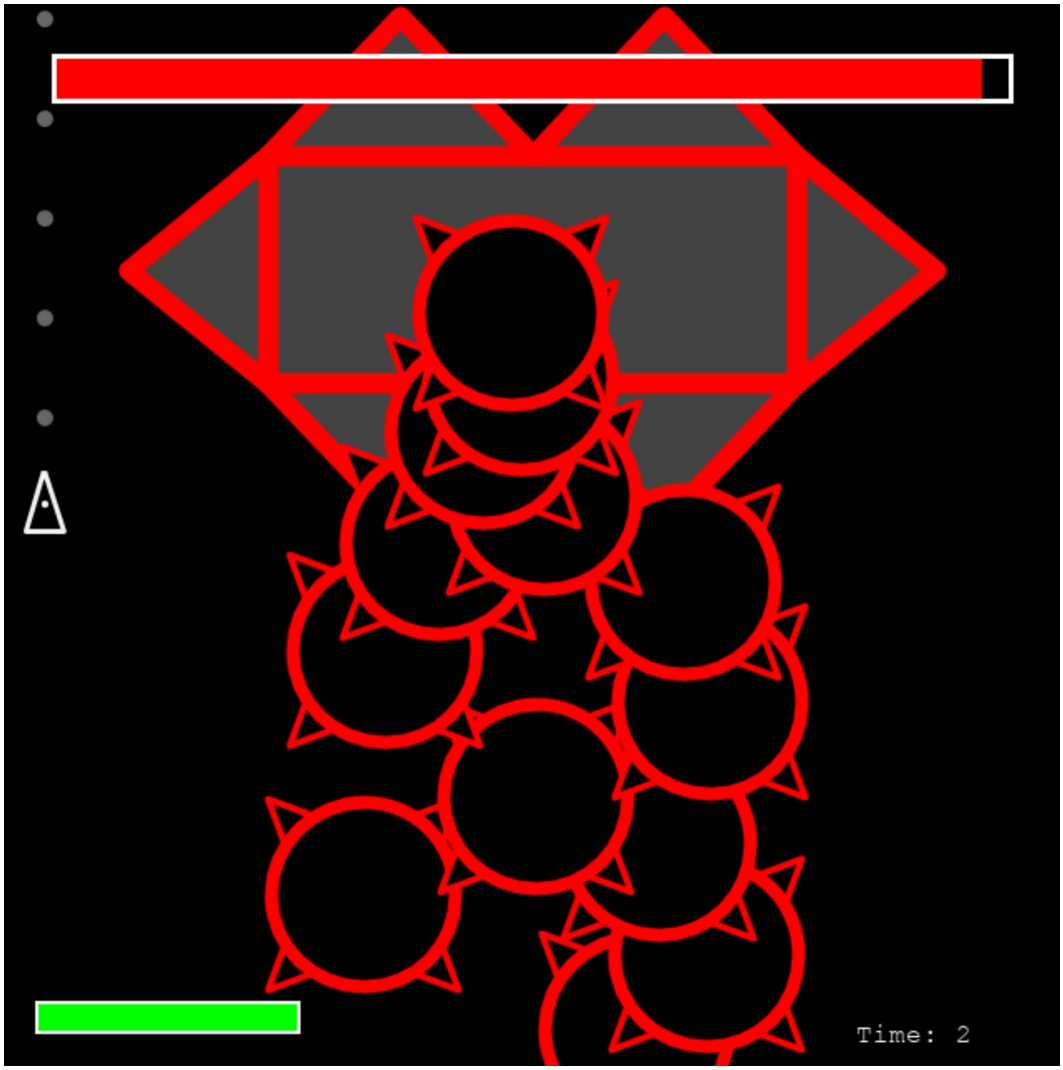
This includes everything from the previous week, but also an enemy entity and enemy health bar at the top of the screen. As before, nothing should happen until the player hovers their cursor over the player entity.

Hitting the Enemy

After the game begins, the player should be able to hit the enemy with bullets to deal damage to them. Check that when the enemy is being hit by bullets, the red health bar decreases, but when the player's bullets miss, the red health bar does not decrease.



(Red health bar should be decreasing in this scenario)

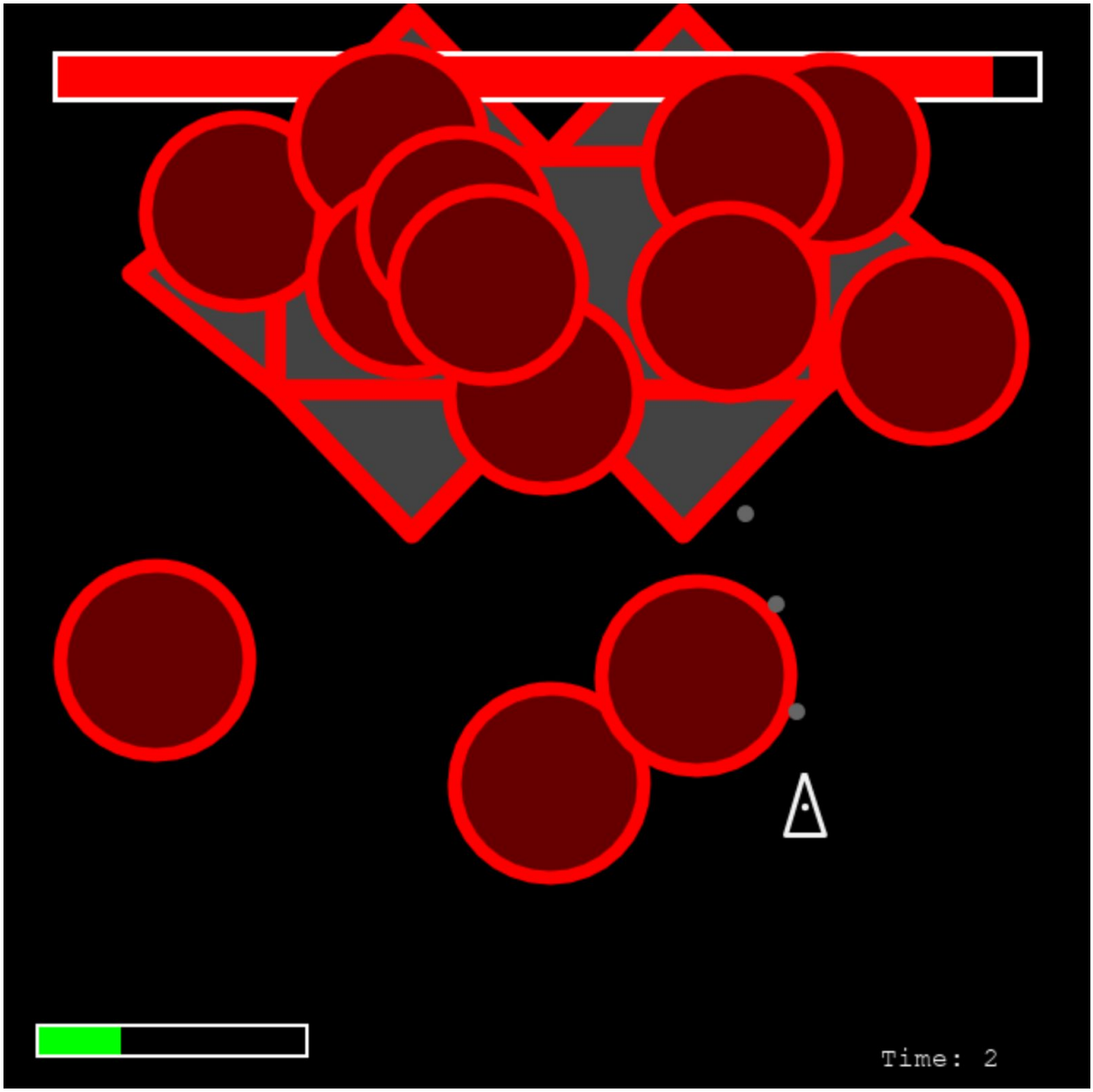


(Red health bar should NOT be decreasing in this scenario)

Getting Hit by Bullets

The small dot at the center of the player entity is its hitbox. Only this part of the player can actually be hit - bullets that collide with the triangle's perimeter but not this dot should not be considered to have hit the player.

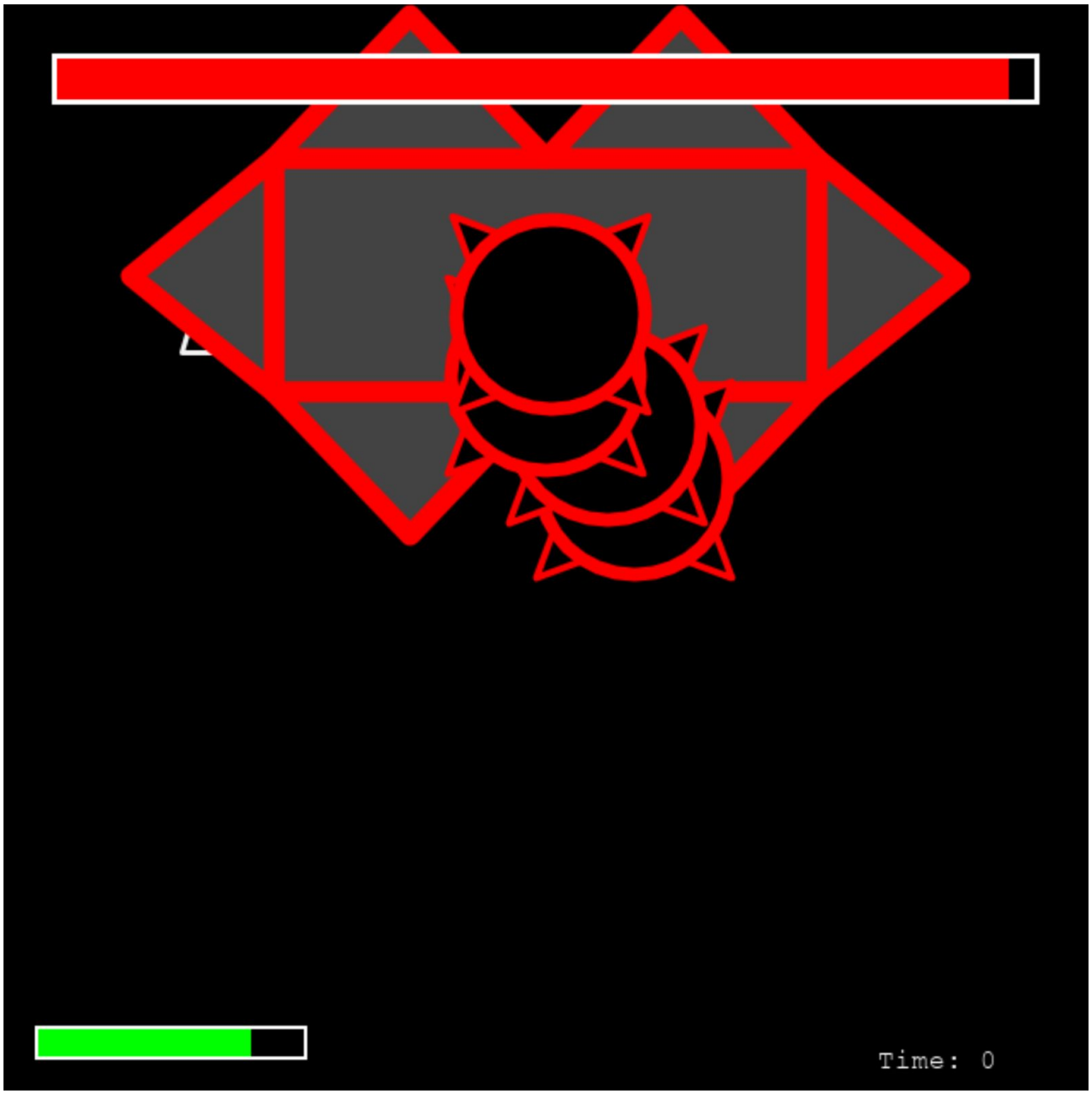
When an enemy bullet hits the player, the bullet should disappear, and the player should lose some health (indicated by the green health bar).



(In this screenshot, the player was just hit by one of the big red bullets. The health of the player decreased by a significant amount.)

Colliding with the Enemy

If the player and enemy collide, they should both lose health. Check that in such a situation, the player rapidly loses health, while the enemy's health bar decreases slightly faster than normal (due to damage from both the player and the player's bullets)



Game Over - Losing

If the player's health is completely depleted (or if the player presses X), the screen should transition to the You Lose screen.

The You Lose screen should include the time the game took, as well as a CONTINUE bullet that causes the game to go back to the game start screen if pressed.

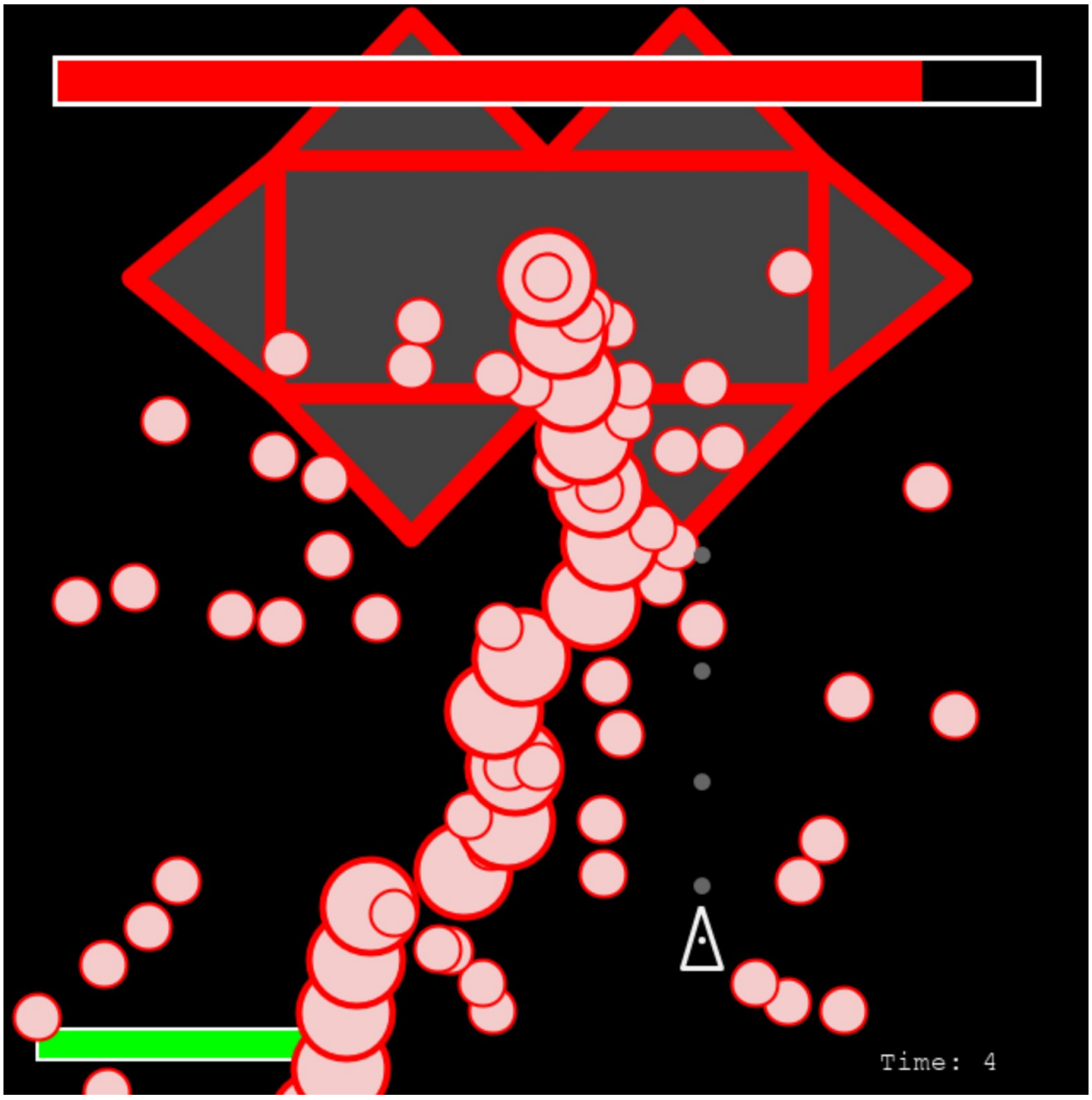
Game Over - Winning

If the enemy's health bar is completely depleted, the game should transition to the You Win screen. This should be the same as the You Lose screen, except with YOU WIN instead of YOU LOSE.

Attack Pattern 1 - Blargh

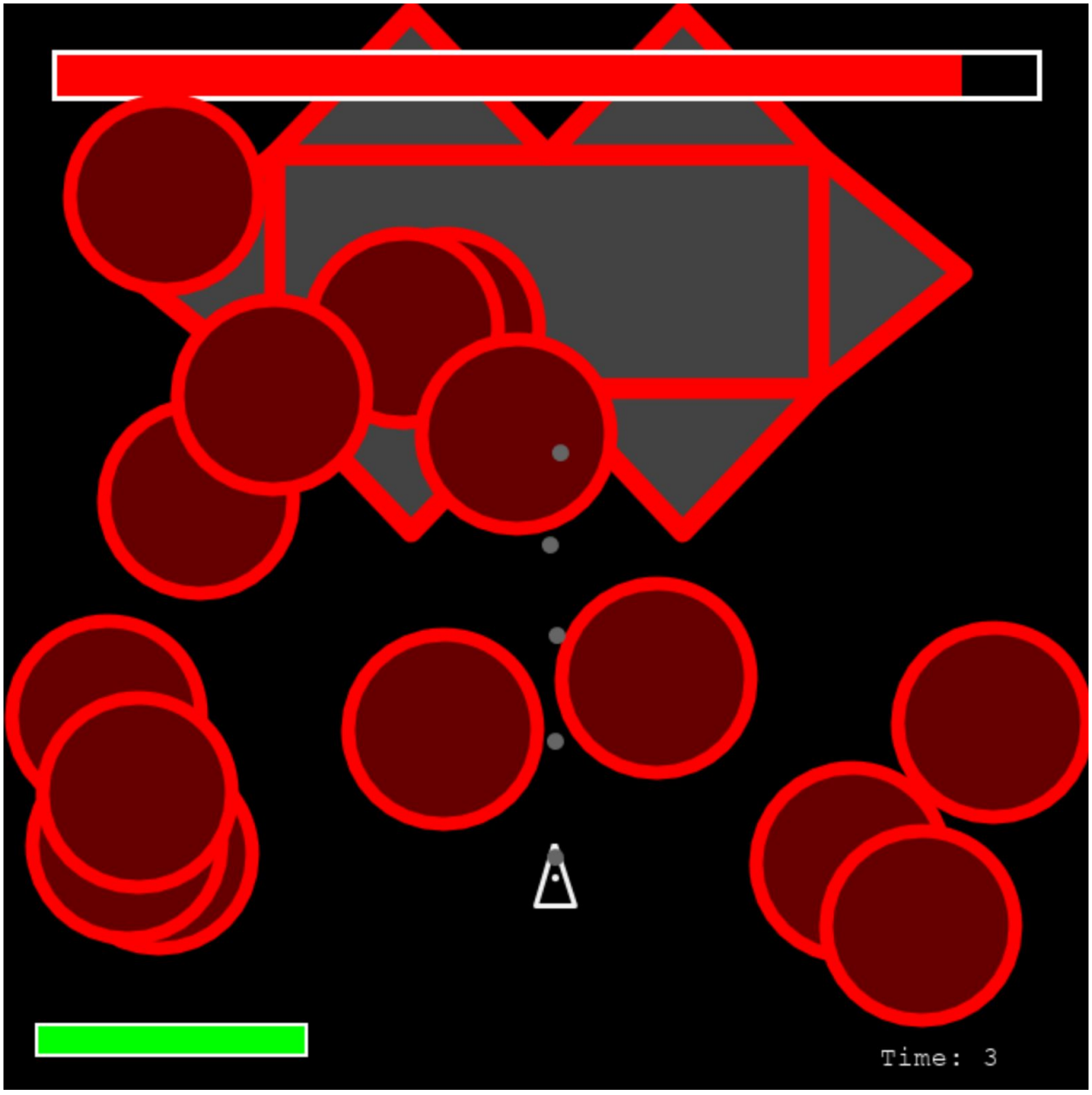
In this attack pattern, the enemy shoots a stream of medium-sized bullets directly at the player, and also sprays small-sized bullets in the general direction of the player. It's called Blargh because the enemy is basically vomiting bullets at the player. All bullets should deal damage and disappear upon hitting the player.

This attack pattern should last 10 seconds. In the last second, the bullets should stop firing.



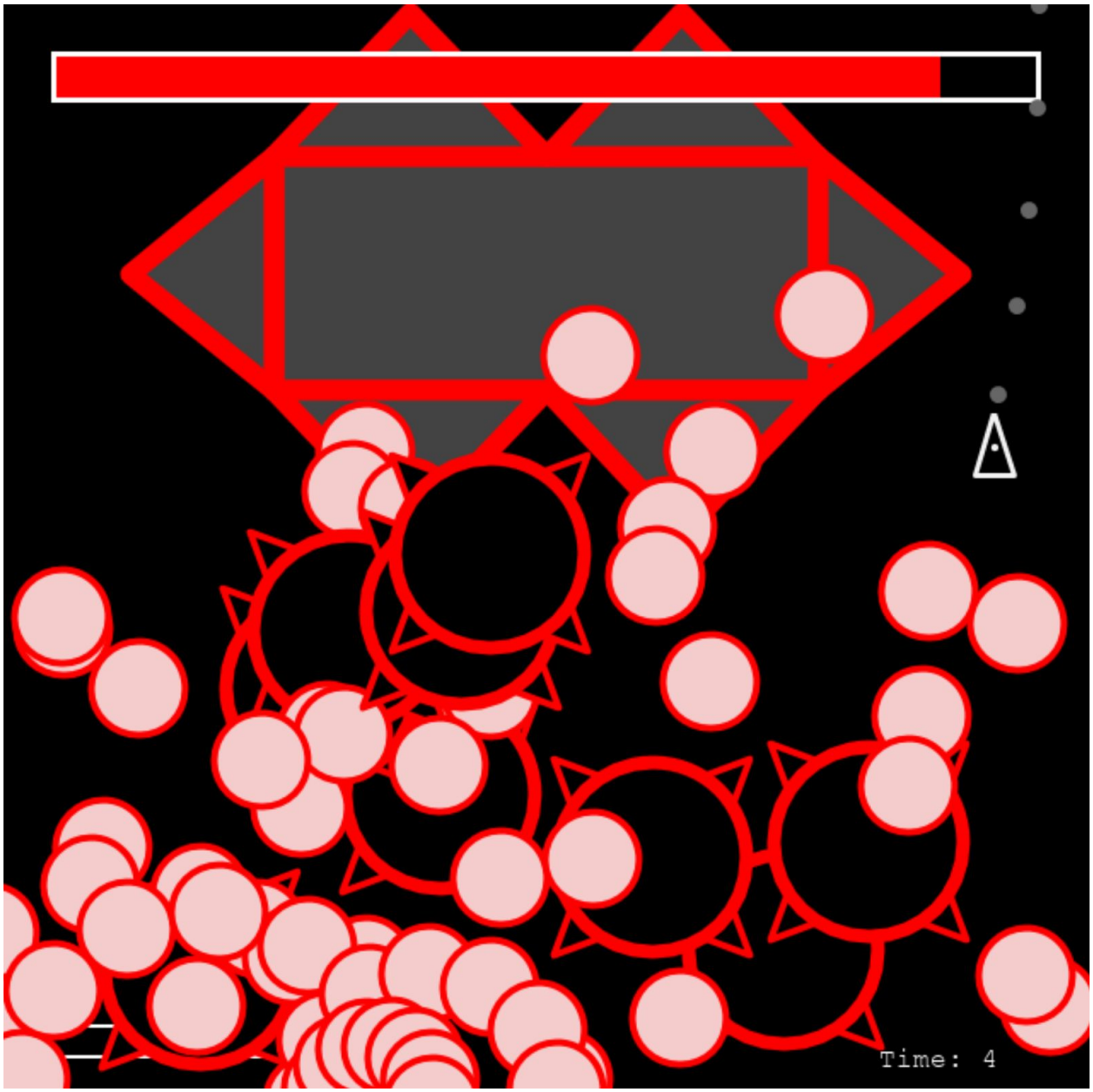
Attack Pattern 2 - Bounce

In this attack pattern, 15 big bullets are fired in random directions during the first second. Then, the bullets bounce around the screen for a while, before they exit the screen. This attack pattern lasts 10 seconds.



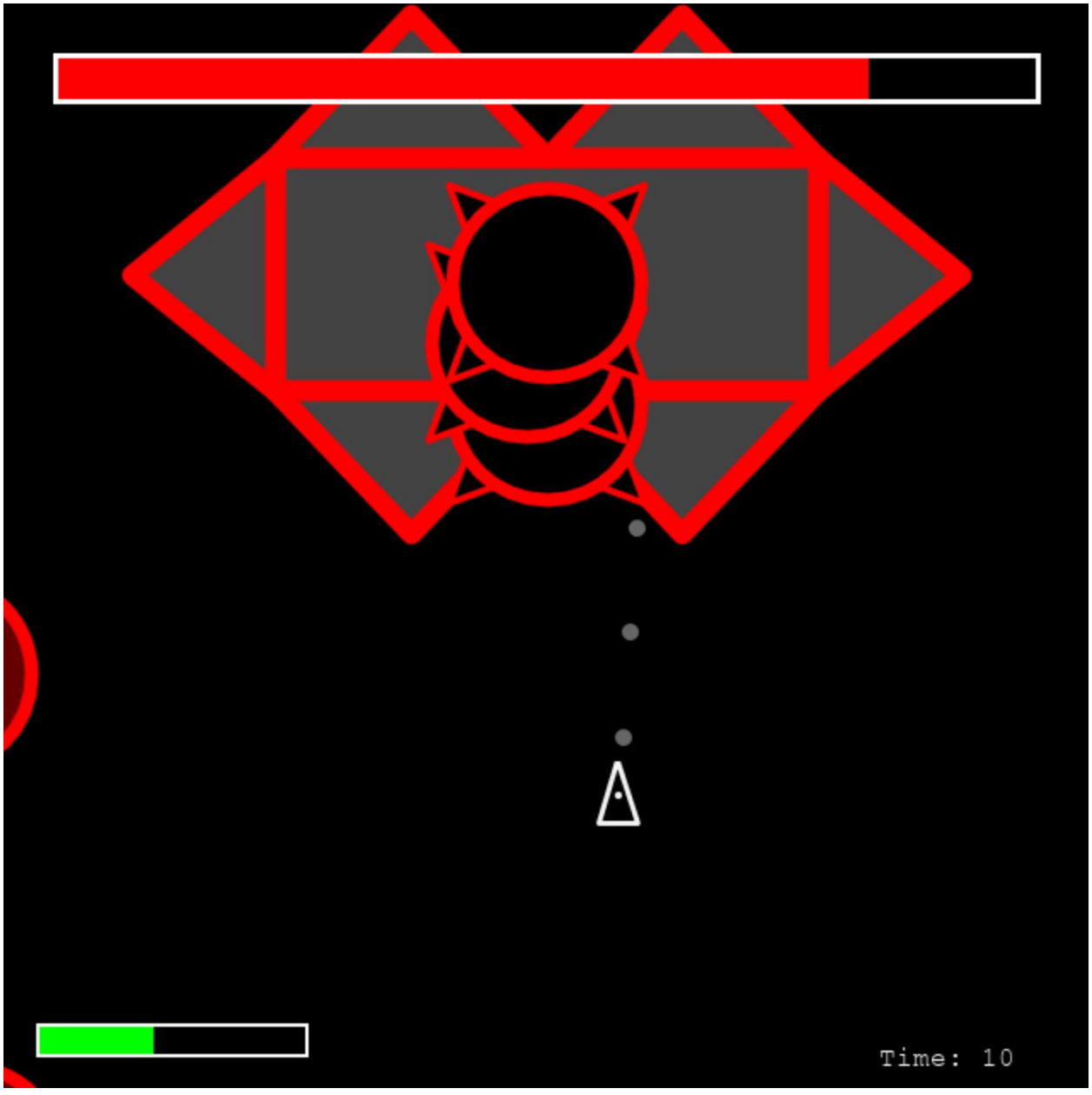
Attack Pattern 3 - Bombs

In this attack pattern, 20 big spiky bombs are fired roughly towards the bottom of the screen over the course of 2 seconds. When their centers hit the edge of the screen, or if they collide with the player, they should explode into 12 medium-sized bullets expanding in a circle (though, if they hit the bottom of the screen, only 6-7 of these will actually be visible). This attack pattern lasts 10 seconds.



Transitions between Attack Patterns

At the start of the game, one of the three attack patterns above should be chosen randomly to be used. Once one attack pattern ends, one of the other two patterns should be chosen randomly to be used next. This means that the same attack pattern should never occur twice in a row, but it is possible for two attack patterns to alternate if the RNG decides such.



(In the screenshot above, the enemy is transitioning from the Bounce attack pattern to the Bomb attack pattern.)