CIS 452 01 – Assignment 11 Reflection

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Starting Scene: Game

GitHub Link: <https://github.com/jburi/CIS_452_Assignment_11>

Simmer.io Link: <https://simmer.io/@jburi/target-practice>

1. What components does your Façade have? In other words, what subsystem classes does your Façade class hold references to?
   * A GameMaster and a Timer
2. What actions are you simplifying into a higher-level set of actions with the Façade design pattern? In other words, briefly describe what the higher-level actions are that your Façade does using its subsystem components.
   * The GameMaster has functions that control starting and ending the game by starting the timer’s coroutine, spawning and despawning the targets, detecting if all the targets are hit, and displaying UI to the player if they won or lost. This is all contained in a single function called “StartGame()” that the façade calls.
3. What were the benefits of using the Façade Pattern to make your mini-game?
   * I found that it was easier to find the order of operations when designing the game and simplified each of the steps by calling them inside of others.
4. Did you find any drawbacks to using the Façade Pattern? If so, what were they?
   * I had a hard time defining what counted as a façade and what was just a function calling a few other functions. Besides that I found that this pattern was one of the more useful ones.
5. What is the player’s goal in your mini-game and what makes it challenging?
   * To shoot all of the targets in 10 seconds. There is a very small window of time to hit each of the targets since there are 8 of them. They do spawn in the same place and after several tries I was able to complete it.
6. How does the game communicate its goal(s) to the player?
   * It is constantly displayed in the corner of the UI with transparent text.
7. How can the player fail at the game and how does the game detect it?
   * If the player fails to hit every target in those 10 seconds, then the game will return a UI Text saying “You Lose”. There is a function in the target’s script that detects if it was hit with a bullet.
8. How does the game give players feedback about how well they are doing?
   * The timer lets the player know how much time they have to hit all of the targets. If you hit all of the targets, the timer stops and displays how much time you had left.

**UML Diagram**

