CIS 452 01 – Assignment 10 Reflection

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Starting Scene: MainMenu

GitHub Link: <https://github.com/jburi/CIS_452_Assignment_10>

Simmer.io Link: <https://simmer.io/@jburi/multi-ball-pong>

1. What GameObjects are you spawning with the Object Pool Design Pattern?
   * A ping-pong ball.
2. When is your Object Pool filled with inactive GameObjects? On Start() when the scene loads or does something trigger the pool to be filled? If something triggers it, what triggers the pool to be filled with inactive GameObjects?
   * I changed the Start() function to a custom on to
3. In your mini-game, what makes the GameObjects be set active and spawn into your scene from the Object Pool? Does the player do something, or is it a repeating coroutine, or something else?
   * I used InvokeRepeating() on a function that calls the objectpooler’s spawnfrompool() function.
4. What makes the GameObjects return to the Object Pool in your mini-game? In the example code, the objects were recycled by adding them to the back of the Object Pool queue when they were spawned. Are you recycling them like that, or adding them back to the queue when something happens in your game? (Either is okay.) If you are adding them back to the queue when something happens, what happens if the pool is empty and the game tries to spawn a GameObject from the pool? Does it spawn an object or not? (Either is okay.)
   * I am enqueuing them to the back of the queue like the example.
5. What were the benefits of using the Object Pool Pattern to make your mini-game?
   * It allowed me to store multiple GameObjects as inactive and allowed me to increase the number of balls without creating and invoking.
6. Did you find any drawbacks to using the Object Pool Pattern? If so, what were they?
   * It’s only really useful if you need to handle so many objects that it effects performance.
7. What were the benefits of using the Singleton Pattern to make your mini-game?
   * Allowed me to store past scores between scenes
8. Did you find any drawbacks to using the Singleton Pattern? If so, what were they?
   * If I wanted another scoreboard I couldn’t create one since the pattern only allows one instance.
9. What is the player’s goal in your mini-game and what makes it challenging?
   * The goal is to beat the high score of 50 (difficulty was easier on my 16:9 screen versus the standalone). New balls spawn every 10 seconds making the player multitask.
10. How does the game communicate its goal(s) to the player?
    * This is found in the controls.
11. How can the player fail at the game and how does the game detect it?
    * If a ball reaches the edge of the screen, the GameOver scene is loaded.
12. How does the game give players feedback about how well they are doing?
    * High scores are displayed on the GameOver screen.

**UML Diagram**

