Readme File for COMP 4478 Exercise 2 Parth Joshi (1126914)

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Github Link: <https://github.com/parthjoshi1202/COMP4478_Ex2_Parth>

Unity Version: 2021.3.20f1

In this game we use Prefabs of fish and bomb sprites as well as a net to collect them. The user can go left and right using left and right arrow keys to move the net and collect fishes to continue playing the game. Each fish earns the user 1 point. If the user collects a bomb in the net, the game is over and the game restarts in 3 seconds. The user can keep a track of the score using the score displayed on the screen.

**Controls:** Left and Right Arrow Keys

**Front end:** All of this was possible using Unity 2D hierarchy, setting game objects like main camera, background, Net, Object Fall (which makes the fishes and bombs to spawn on the screen vertically), a Score Text to display and update the score as well as an Object Collect game object which collects the bombs and fishes which were collected by the net and making them spawn again so that these can be reused rather than wasting resources and generating new copies of the fish and bomb sprite. These game objects have been set up as Rigid body 2D, Box/Circle Collider 2D along with setting them as “triggered” to ensure smooth collision detection.

**Back end:** These game objects have been connected to C# Scripts such as “Score.cs” for updating and displaying the score. “NetMovement.cs” to make the net move left and right using left and right arrow keys As well as to ensure the net does not go beyond the game screen. “ObjectFallMovement.cs” for spawning the fish and bombs and detects collision using Box Collider 2D, Collections, Instantiate method, Quaternion.identity, StartCoroutine methods and using Random coordinates to spawn them on various parts of the screen, every few seconds. Finally using “ObjectCollect.cs” to collect the fishes and bombs using a game object which were not picked up by the net so that these can be reused rather than wasting resources and generating new copies of the fish and bomb sprite. This was possible using OnTriggerEnter2D method.

Here are some screenshots of the game







