

**Name : iKumapayi Isaiah Adebajji**

**Company : Maverick MetaLabs**

**Test:Unity Game DeveloperCode**

### **GuiManager:**

- Responsibility: Manages UI components in the game.
- Key Features:
  - Displays the current round, total monsters spawned, and the duration of the current round.
  - Provides a pause menu with options to resume, view level stats, and quit the game.
  - Supports additional functionality for displaying saved round data.

### **Monster:**

- Responsibility: Attached to the monster prefab; contains logic for moving the monster.
- Key Features:
  - Handles the movement behavior of individual monsters.
  - Checks if player exit the camera space and then destroys(deactivate)

### **CameraSetting:**

- Responsibility: Attached to the Camera; contains logic for setting correctly the spawnPoint of the monsters so it adjust well to the screen
- Key Features:
  - Contains a spawnPointOffset that sets a slight offset to the left of the camera

## MonsterManager:

- Responsibility: Manages all spawned monsters on the screen.
- Key Features:
  - Tracks active monsters and updates their state.
  - Communicates with the `MonsterController` script for overall game flow.

## MonsterController:

- Responsibility: Main game controller; the only `MonoBehaviour` script handling updates and starts.
- Key Features:
  - Orchestrates the overall game execution.
  - Manages updates and starts of other scripts in a top-down approach.

## MonsterObjectPool:

- Responsibility: Handles object pooling for monsters.
- Key Features:
  - Efficiently manages the instantiation and destruction of monsters to improve performance.
  - Ensures that monsters are properly deactivated and returned to the pool.

## RoundManager:

- Responsibility: Manages game rounds, including spawning monsters and saving round data.
- Key Features:
  - Implements rounds based on the Fibonacci sequence.
  - Manages the duration of each round and the delay before the next round.
  - Saves round data, including round duration and monsters spawned.

## Additional Functionality:

- Pause Menu:

- Pauses the game and provides options to resume, view level stats, and quit.
- UI Elements:
  - Displays the current round, total monsters spawned, and the duration of the current round.
- Level Stats:
  - Allows players to view saved data for each round, including round number, duration, and monsters spawned.

## Tests:

- `MonsterObjectPoolTest`:
  - Tests the object pooling system for monsters.
- `RoundManagerTest`:
  - Tests various functionalities of the `RoundManager` script, including initialization and spawning.