Assignment : Your first full game (15%)

Due date : Octobre 11 2024
Individually

This assignment tasks you to make a full game. It is a platformer where you need to grab pickups to add to your score. You can double jump provided you have the power up and when you hit a red obstacles you die and restart the level.

> **You need to create an assignment repo by going to https://classroom.github.com/a/XnBO1o_v and clone the template.**

Requirements :
Menu Requirements :
1. A main menu scene with 2 Button
    a. Start Button (Goes to the first level)
    b. Exit button (Quit's the game)
2. A End Menu with a Restart Button to restart your game.
    a. **Restart** should load the first level again with your score reset.

Player requirements:
1. Player avatar should be able to play an idle animation
2. Player avatar should be able to play an walk cycle
3. Player avatar should be able to play a run cycle.
4. Idle/Walk/Run should use a BlendSpace
5. **Run input should be shift.**
6. **Player should be able to jump.**
7. Your Jump input should be Space bar.
8. Player should be able to **double jump** when pressing space bar in the air if the ability is enabled.
9. **Double jump** should a use the Flip animation
10. Player should be able to pick up power ups by going over a power up
11. Going over a pickup makes it disappear and in a burst of particles from the particle system.
12. When a player pickup a yellow power up his score add **50 pts**;
13. You should be able to move smoothly the camera with your mouse movement
14. The camera should follow the player and rotate around Y when the mouse moves in it's X axis.
    a. Hint : Create a script that follows the player instead of attaching it.

   b. Use the "Mouse X" axis to monitor Mouse Movement.
15. You can add more animation but must use the one included in the Assignement.
16. Make sure the transition is smooth between animation.
   a. Choose which animation should use the "HasExit Time " boolean and which shoundnt.
17. Animation should be handle in the AnimationController
18. You need to create your own animator
19. You must use the code provided and modify it. You **cannot** use the Third Person Template.

HUD requirement :
1. You should see the player Score at **all time** on the top left corner.
2. You should see the score at the end of your game with a button to restart your game

Game requirement
1. You need game managers that stay active for all levels. And it needs to reset to the previous value of score when you die in a level.
2. Your game needs at least 3 original levels.
   a. You can modify the SampleScene for your first level.
3. All levels should be separate scene.
   a. You will need to be able to go from one scene to the next with an end goal.
4. Player should be able to pick up blue pickups to be able to double jump.
5. Player should be able pickup yellow pickups for points
6. **All** pickups needs to hover and rotate on their own.
7. **All** pickups should be destroyed when you walk on top of them adding to your score.
8. **Blue pickups** should give you the ability to double jump for the next 30 seconds.
   a. Hint : You can modify parameter and add in CharacterMovement that unlocks the double jump ability
   b. Make sure the ability to double jump disables after 30 seconds
   c. You can only do a maximum of 2 jumps.
9. **Blue pickups** should only disappear for a 30 seconds and then re-appear.
10. There should be **Red Traps** that kill you and makes you restart the level by reloading the current scene.
11. Falling off the level should also reload the current scene.
12. There should be a goal that when you reach the end it loads the next level.

13. There should be a end goal that loads the end plate with your score on the middle.
14. Game manager should be a Singleton.
15. Game manager should be Don't Destroy on Load.
16. Dont use the same script for everything.

GRADING CRITERIA

Criteria	Marks
Proper naming convention (both in the Scene, the folder names and code) -Every object added to the project hierarchy should be added in the proper folders.	5%
Compliance, completeness, and correctness of the implementation according to the specified instructions.	90%
The accuracy of the points displayed in the heads-up display.	5%

How to submit your project :
1. Submit your changes on Github.
2. Add me to your repo if it's private so I can see your work