Learning Journal

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Since starting this module, I've had a lot of difficulty doing the coursework mainly because it is my first time coding and creating a game prototype using code I've made. However during the semester, I began to learn more and more about programming and understand that there are many ways to solve one problem.

17/10/23

One of the problems I encountered when doing coursework for this module was creating a coin pick-up item and ensuring the player could pick it up and collected by the player rather than just destroying the object when the player collides with the box collider. I fixed this by making sure that when the player collides with the coin's box collider it also would plus one to a counter I put in the code as well. Because of this, I know that every time the player enters the coin's collider, it adds one to the counter.

31/10/23

Another problem I had when coding was creating the player's movement system and making sure that it worked in general. I fixed this by adding code that makes sure that when buttons are being pressed or held down it moves the player's sprite and when the player takes their finger off the button then it stops whatever the sprite was doing. For example, when I was programming how the player jumped, I made sure that I put in the code that if the jump input button was being pressed the player would jump but as soon as the button isn't being pressed the player would stop

jumping. However, if the jump button was being held down the player would constantly jump. I also made sure that the player would have enough jump force to get on the platform where there is another pick-up by editing the amount of power the player will have in the code and also making sure it's a header so I won't need to go into Visual Studio to edit it and I can just do it through Unity and also edit the player speed as well.

I also made sure that when moving the player's sprite would flip depending on which direction they would be facing. I did this by putting in the code that if the sprite's x-axis is greater than or equal to 1 then make the sprite face right but if the sprite's x-axis is less than 1 flip the sprite so it faces left.

14/11/23

Another problem I encountered when coding was with the health pick-up I created and it did not add health to the player when colliding and destroying the object. I fixed this by tagging the health pack with the name "Health" and putting in the code "if(collision.tag == "Health")" and putting underneath that "HealthSystem.currentHealth +=1". This means that when colliding with the health pack, it adds +1 to whatever the health is when entering the box collider. I also had to link the health pack to the health system so when there is a collision with the pick-up it also made sure to affect the health of the player as well.

21/11/23

I also had another problem with the health pack. Before I fixed the code the health pack did not appear on screen whenever I started to play. Because of this I tried tagging the health pick-up and hoped that would fix the problem but it didn't. In the end, I had to use "Debug" in my code which solved the problem straight away. "Debug" is used in programming to make it easier to help solve a problem that someone has with a piece of code and also contains methods to ease debugging while developing a game.

28/11/23

Another problem I faced was when I was creating the health system and making sure that the current health of the player would be less than or equal to the maximum health that the player could get. I solved this by putting in a simple code of setting the maximum health as “3” and then setting the current health as the maximum health. However when the player had max health and also got a health pack, the current health would go over the maximum. After realizing this I quickly figured out that I needed to also add that if the current health is greater than the maximum set health, the current health would still equal the max which made sure that the player's health wouldn’t go over the limit I’ve already set. To make sure this worked I set my current health to my max and then collided with a health pack to see if after creating that code the current health would still go over.

I also wanted it when the player collided with an item in the game, that item got destroyed. I did this by adding 2D box colliders to all the items so they and the player can also detect what it is colliding with and also adding code to the items that says destroy this item when the player collides with it.