Developer Diary

# 05/10/2019

Although I have been working on my game for just over a week already, I was not aware that a developer’s diary would be a required along with the game so I have quite a bit of work already done on the project that will go undocumented in this diary.

I will quickly go over my progress up to this point however to try and cover what’s already been done:

**September 27th**

As I do with any project or piece of work, I created a git repository for the project and pushed it to Github.

**September 28th**

I got a good amount of work done on this day including:

* Created a player and a Player Controller script
* Designed the map/level that the player will be playing on.
* Created a camera controller script
* Created a reload scene feature that instantly reloads the level when pressed.

**September 29th**

This was a less productive day. I created the animations for the player but didn’t fully get them working very well.

**September 30th**

I finished the animations for the player although I’m still not happy with how they make the player look. I will probably come back to them once I have the game completed.

I also fixed an issue I had with the player where he would not stop moving along the x axis even after the movement key was not being pressed. At first I added more mass to the player and linear drag to try and weigh him down more hoping it would fix it and it sort of did. However, in my move method all I needed to do was add an else statement setting the players horizontal movement to 0 if he wasn’t moving along the x axis.

Lastly, I added a player flip feature where the player sprite’s local scale would be -1 if the player was moving left on the x axis.

**October 5th**

That brings us to today where I have added a trigger event on 3 switches. Each one when interacted with will destroy a platform overhead which then drops a box for the player to move along the level. I also added a change color feature when they have been interacted with to make the user experience a bit nicer and make the level more colorful.

Lastly I added an empty game object into where the player must get the block (the goal). This will act as a trigger and has a very simple trigger check script attached to it to check to see if the correct block has entered the collider.

# 08/10/2019

Today I have almost completely finished level 1. I have 3 separate triggers checking for their specific colored box using tags. All 3 triggers share the same ‘Trigger Switch’ script. It took me awhile to figure out how to do this and I considered using a different script for each trigger but knew it would be bad practice and figured there had to be a simpler way.

I had been checking the tag of the colliding object then trying to run a function for each specific box, but this only led to each trigger acting the same as the other. Now it first checks which trigger the collider has entered, if the correct collider (defined by the name of its tag) enters the correct trigger, we run the correct method, otherwise, the level is automatically reset.

I’ve also added a new block prefab and set its initial color to white. I did this because when I try to recolor the blocks to red and blue, they came out very dark as their initial true color was green.

Having play tested the game a bit now I can see that I may need to spawn a platform over the goal area once the correct box is put in it. This is because the boxes don’t push over each other very well and they will get stuck in place before the level can be complete as it is now.

# 15/10/2019

Today I started on level 2 which is a top down scene. This presents some challenges as I will have to do a new player movement script as the player will not need to jump on this scene, also I will need to be able to move along the Y axis as well as the X.

I thought I would be able to flip the localscale of the transform in order to get the sprite facing the direction I was walking in however having done some research I discovered that I would need to move the rotation as this was a top down, my camera is still acting as if it is looking sideways at the level so I couldn’t treat it like the last level. this took me longer than id care to admit to get working!

I’ve also added a boundaries script to the player to ensure he doesn’t walk out of the camera.

# 22/10/2019

Today I added the final scene. This scene will be similar to the first one in that it is not a top down view and the player is limited to horizontal movement as well as jumping.

The goal of this level is also the same, although there is a twist, there is an automatically generated box spawning every couple of seconds and the player must combine the colors of two boxes to equal the color of the goal. For example, if the goal is orange, the player would need to put both a yellow and a red block in that goal.

I have also messed around with the player’s box collider in order to fix the issue I’ve been having where we sometimes get stuck when walking along the ground as if the player is caught on something. Having done some research I found that it is better to have two colliders on a player; a circle collider on their bottom half (legs) and a box collider on the top. The circle collider works better on the bottom as it is curved and is less likely to become stuck.

Scene two remains unfinished but I just wanted to get 3 up and running as it is similar to one and will take less time.

# 05/11/2019

Today I went back to work on level 2. There wasn’t very much to do other than add the goal/trigger area for the player to push the box into and just design the level so it is moderately challenging and would make the user have to restart at least once or twice.

I also added a particle effect on the goal area so the user knows that’s where they have to push the box.

# 12/11/2019

Today I added a start menu containing a play button, options menu and a quit button. I also added a soundtrack provided by the developer as well as some sound affects. I added a volume slider in the options menu which takes audio from an audio mixer. I have also added a mute button using a toggle game object but I haven’t gotten it functioning properly yet.

The sound affects are very basic and include jump and action noises as well as some others.

# 20/11/2019

I have chipped away some more at level 3. I removed the auto spawning boxes over time and instead added a button that the user can press to instantiate a box. I have changed the color of the box using the renderer’s material.color function. My next task will be to have it spawn a selection of randomly colored boxes and for those boxes to have corresponding tags. E.g: a red box must have a tag named “redBox” for when the user places them in the goal.

# 21/11/2019

Have got the boxes spawning in different colors and with corresponding tags. I simply set a variable to be a random digit between 1 and 3 using the Random function and used if statements to set the boxes off that.

I also added a tilemap background having spoken to the designer and gotten his aproval.

# 26/11/2019

I have added an in game pause menu activated with the ‘Escape’ key. Might add a clickable button on screen at a later date time permitting. I’ve also gotten the mute button functioning in the settings menu and have improved the responsiveness of the slider. Previously it felt like the sound wasn’t coinciding with the slider value. Bringing the slider to the very end didn’t sound much different than it did when it was 25% full for example. I did this by experimenting with the min and max value of the slider. I also learned that the audio mixer’s min and max volume ranges from -80 to 20 rather than 0 to 100.

# 30/11/2019

Have added a mute button for sound effects which is separate from the theme music. Now the player can choose to have either, or none at all. I did this by adding a new audio mixer. All sound effects use the soundEffects audio mixer and the theme music uses the soundtrack audio mixer. These can then be easily manipulated in script. There is also a new button, “Instructions” in the main menu this just tells the user of the objective of the game and the controls.

# 06/11/2019

Added credits menu once the last level is complete. Tidied up the whole project as well as added a good amount of comments. Also finished the test plan containing 5 test cases. Project ready for submission.