Programming Journal

# Tuesday 5th October

<https://www.youtube.com/watch?v=_QajrabyTJc&list=PLAqTcV6VyEHQMYDyElqoQYS1oJRZz3Mkg&index=63&t=521s>

Following tutorial by Brackeys on how to add first person movement into unity

Started following tutorial, got halfway through and then realised the tutorial references other scripts which are not linked

Need to find new tutorial which has no links to other scripts

Camera movement works fine from tutorial, but player movement is wrong

Followed a new tutorial on player movement, got the player moving again, but player moves the wrong way when the camera is turned around

Need to find a new tutorial and follow from the start again as the combination of tutorials does not seem to be working

# Saturday 9th October

<https://www.youtube.com/watch?v=b1uoLBp2I1w>

Found a new tutorial on first person movement within unity, attempting to follow this one

Rigidbody - useful for physics based games (player interacting with environment

Character Controller - not physics based, just involves player moving around a static environment

Tutorial complete - managed to get the camera movement and player movement to all work together, even managed to add in jumping to the player

Camera fully rotates and needs work - math.f clamp seems to work, so need to research into that next, may also look into making the player sprint and crouch for next time

# Monday 11th october

Got the player and camera movement working, need to add crouch, sprint and stop camera fully rotating round

Camera rotation issue solved - xRot = Mathf.Clamp(xRot, -90f, 90f); - apply this to the camera movement code and it will stop the player from rotating all the way

<https://www.youtube.com/watch?v=Ew4l5RPltG8&list=PLfhbBaEcybmgidDH3RX_qzFM0mIxWJa21&index=2>

Sprinting has been added, nice and simple tutorial - just had to add in a few variables into the code and add to a current piece of code that was used to determine walk speed of the player

<https://www.youtube.com/watch?v=-XNm7dPVVOQ&list=PLfhbBaEcybmgidDH3RX_qzFM0mIxWJa21&index=4>

Crouching has now been added to the player movement - this tutorial took a bit longer to understand and follow as there was a lot more code to go into it

Ran into some trouble at the end where the player would stand up and get stuck if they crouched while under an object - used a raycast projection to fix this and had to alter the height a couple times to make sure that it worked

# Tuesday 12th October

Attempting to add sliding to character- ran into some trouble where crouch controls would override the sliding controls and not work

# Wednesday 13th October

Took a break from character controller to work on 3d level, decided to add a pause menu to my game, so watched and followed a brackeys tutorial as well as having a helping hand from a fellow student. With the two combined, I have managed to successfully make a pause system that works in my game and across all levels, main menu included.

# Tuesday 19th October

Working on the 3d racing game today, attempting to add a lap timer to the game - scripts and triggers are working, need to add the timer details to the hud and apply the scripts to the timer displays

# Thursday 21st October

Finished adding details to the hud and the lap timer - lap timer works on first two levels, but doesnt seem to work on the last level, need to look at this in more detail

Managed to fix issue of the timer not working - just simply deleted it from the scene and copied back over again and reapplied all the objects that needed to be applied

# Monday 1st November

Working on 3d level design work, decided to go for an isometric 3d game - had to get the camera set up in a 3d way and attach a script to the camera that makes it follow the player

This was simple enough to do, found a quick tutorial online and took one line of code to make the camera follow the player - to get the isometric view, i added an empty game object and changed the x and y rotation to 30 and -45 respectively, i then made the camera a child of this object and that gave me my isometric view

# Friday 5th November

Following a tutorial on melee attack for my player for my 3d level design work - code did not seem to work with the third person controller that it already a part of my project, need to look into how to get these to work together

# Tuesday 9th November

Following tutorial on moving player between scenes using the OnTriggerEnter - managed to get this working to switch player between outside and inside scenes. When the player goes back outside, they don't spawn by the door - looking for a fix.

# Wednesday 10th November

Player attack, dealing damage to enemies and animations

# Thursday 11th November

Player attack, dealing damage to enemies and animations - continued

# Friday 12th November

Player pickup/ inventory script - following 2d example, not working with 3d, so need to look for a fix

# Monday 15th November

Worked on a script for the player stats - this included setting the max health and current health of the player and also included setting up the health bar, which required a script as well, this script also included setting up the player being able to take damage, will work on a death script at some point during the week as well for this script.

# Tuesday 16th November

Cartoon water shader tutorial - <https://www.youtube.com/watch?v=Vg0L9aCRWPE>

# Friday 19th November

Player death screen - making the death screen was simple enough, had a few issues trying to implement it into the game as i was trying to add a respawn function as well. Decided to remove the respawn function and just had the player reload the game from the main menu.

Then also had an issue with the death screen game object being destroyed when the player was switching between scenes, this was solved by making another script that was empty and using this as a reference.

# Thursday 18th November

Got the scene switcher script working properly, had to set the last known position and rotation of the player so that when they enter the new scene, it remembers where they left and will spawn them back where they were. Also flipped the rotation so that they face away from the door when they spawn back in the main scene.

# Tuesday 23rd November

Finishing off the cartoon water shader tutorial - had issues setting up the project and with some of the names of variables as it was an older video

# Friday 26th November

Finishing off the player pickup/inventory script - found solution to issues from previous attempt at the task

# Tuesday 30th November

Don't destroy objects on load - working on a simple script that can be attached to multiple game objects within a scene and will keep them between scenes and not destroy them on load.

<https://www.youtube.com/watch?v=HXaFLm3gQws&t=143s>

# Wednesday 1st December

Worked on an enemy ai and health script - used different states that the enemy would use in game (patrol, chase and attack).

Also worked on the nav mesh for the enemies - used the ai navigation to define where enemies can and cannot walk.

# Thursday 2nd December

Worked on a dialogue system for my 3d level - created a scene that displays text that shows up before a level loads to inform the player on what they need to do in the level. Very simple script and used an easy to follow tutorial to complete this.

<https://www.youtube.com/watch?v=8oTYabhj248>

# Tuesday 7th December

Made some last minute bug fixes to my 3d level, this included making the health bar object stay on the player as it was going missing between scenes and sorting out the scene switcher as it was not working properly in the build.