

Production Diary – Neo Drive Creative Practice (M5X01568)

-Connor Hale (1701744)

Introduction

This is my Production Diary for Semester 1 of my second year of university. The plan is to create a block out version of a racing game at the end of the semester, one we can add to later on through the second semester.

To make sure that my project is up to date and does not corrupt, I have planned a few ways to make sure the project is always accessible. I have backed up work on my home desktop, personal usb, university usb and one drive.

(Turn on Navigation pane/ Bookmarks on the .pdf, for easier digital access)

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08/10/2018-

Discussions: What is our game?

This was our first week in production, in this lesson we had a discussion on the type of game we wanted. The main focus would have to be a racing game.

I came up with the idea of using VR as the narrative and use portals that jump from different theme to different theme. Since everyone wanted to implement their own ideas.

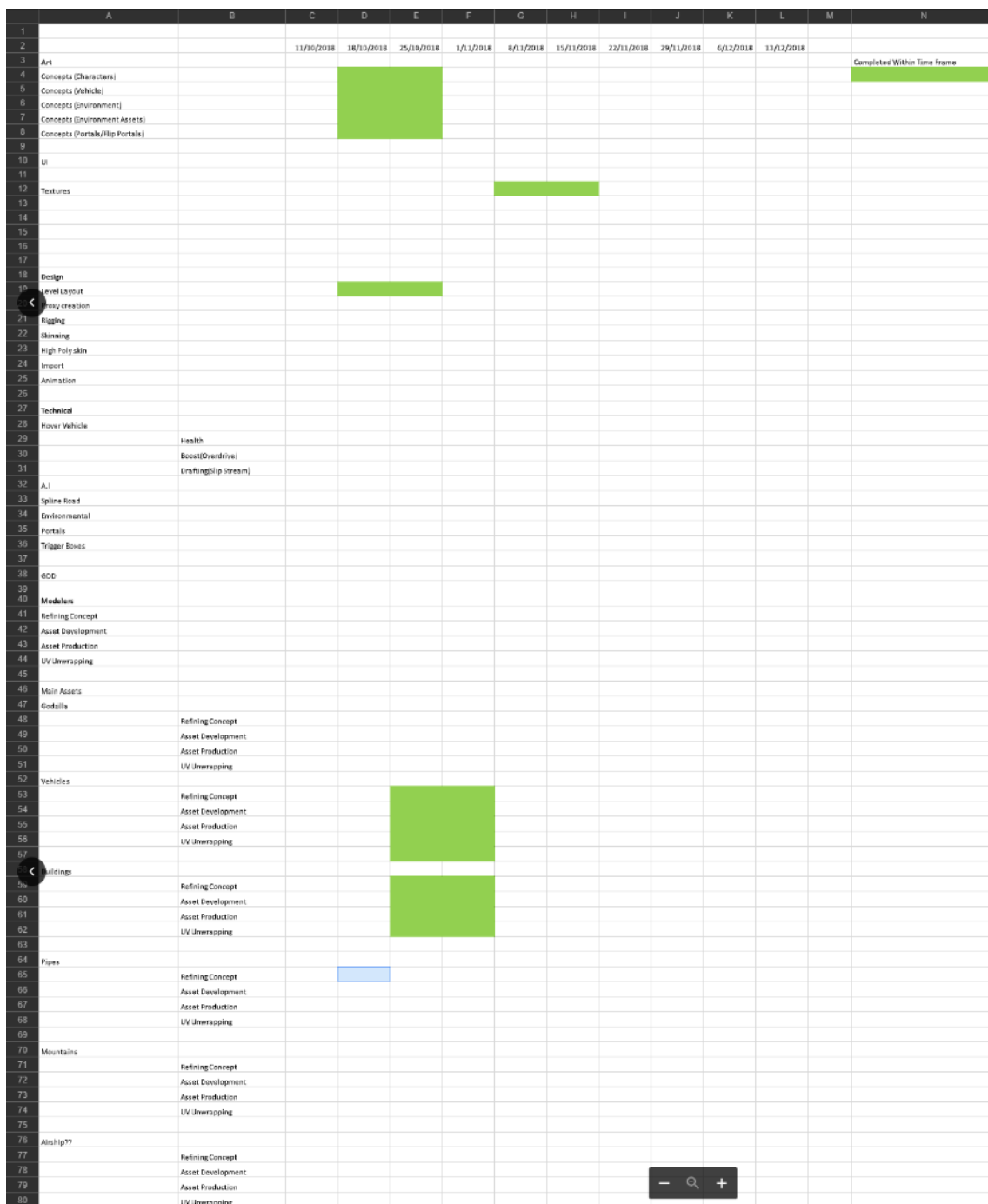
So, we came up with some ideas for the types of level we wanted and created some mood boards that will be shown in next lesson to give us some idea of what we want.

15/10/2018-

Mechanics Talk

During the next week of production, we started talking about the mechanics and how the game should work. However, without Unreal working yet we cannot get started on the actual game itself and can only theorize what we want.

I started my Gantt chart this week as we were talking about the roles and responsibilities of everyone. But we were still confused afterwards with what we had to do at this point.



22/10/2018-

Project Manager

This week I took it upon myself to create a Google Drive (Hale, 2018)

(<https://drive.google.com/open?id=1DFmmViUBz5rp8Hd7mke2Sn1Ty2aIJm7m>)

and put everyone into teams based on what everyone wanted to do this term. Each team was to work on one of the three final levels we wanted to do. I then started work on the GDD (To follow my Gantt Chart) and gave every team a list of what they needed to do as a team. Based on the Creative Practice lessons I devised a work sheet on what we needed to do.

The task was to create a level priority list and to work on a team Gantt Chart. This got the ball rolling, and everyone started to put work towards the actual game instead of just coming up with ideas.

The final idea was 4 Teams:

Engine Team

Neo-Tokyo Level

Overgrown City Level

Industrial Level

The rule was that the level designers would work in their teams and come to the engine team to ask if their ideas were doable in the engine. We would then advise them on what we could or could not do and then refresh the level design.

The level designer would then work with the artist to bring out a few concepts so that we can all have a visual example of the level.

The artist would then work with the modeler to start bringing out some of the main high priority assets, creating orthographics if needed.

This would then come back to the engine team, who will divvy out the tasks among ourselves to then create a level.

I pitched the idea to everyone and everyone was ok with their teams and how it would work. I took the role of project manager and it seems we can start to get to work.

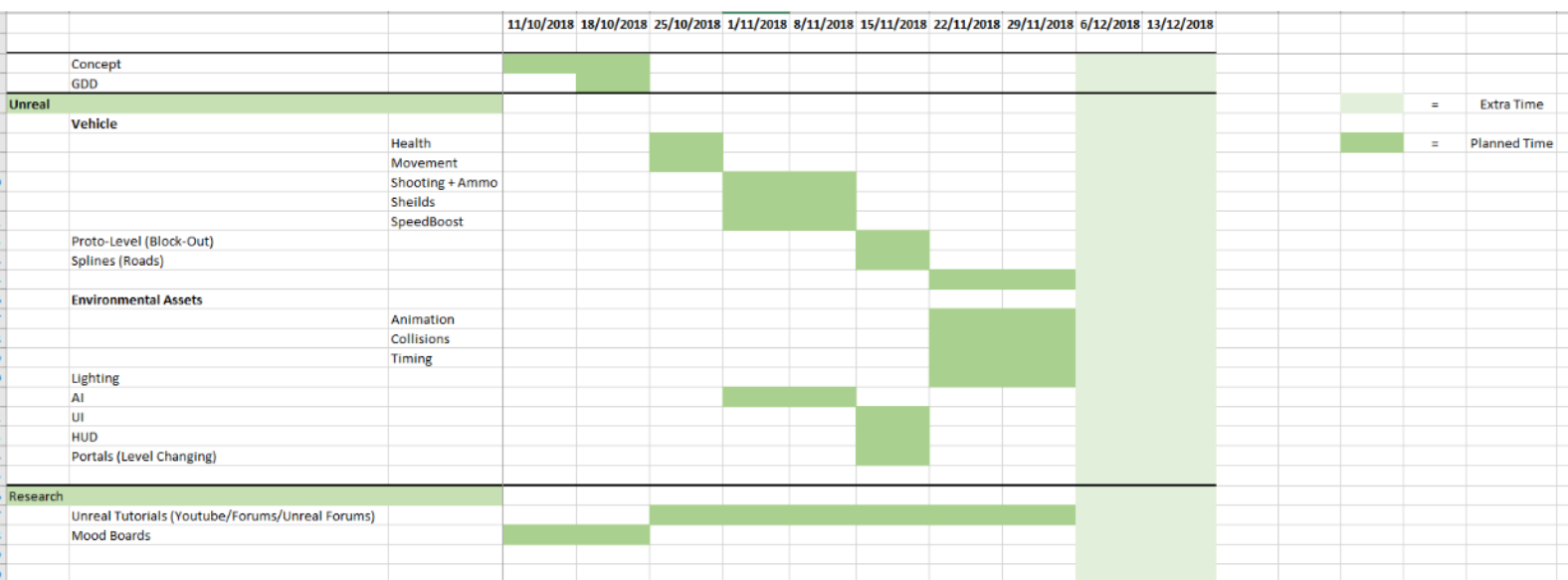
Using our creative practice lessons on project planning helped me a lot. Especially when it came to Gantt Charts, scheduling, and divvying tasks.

Everyone has now started to work in their teams and have produced feature lists and priority lists as asked. This turned out much better than I had expected and now we have work to actually start a basic game. This is due to the project managing techniques we've used this week.

This week in class we all started doing Unreal after it not working for two weeks. We started making a health system and damage system for a third person character.

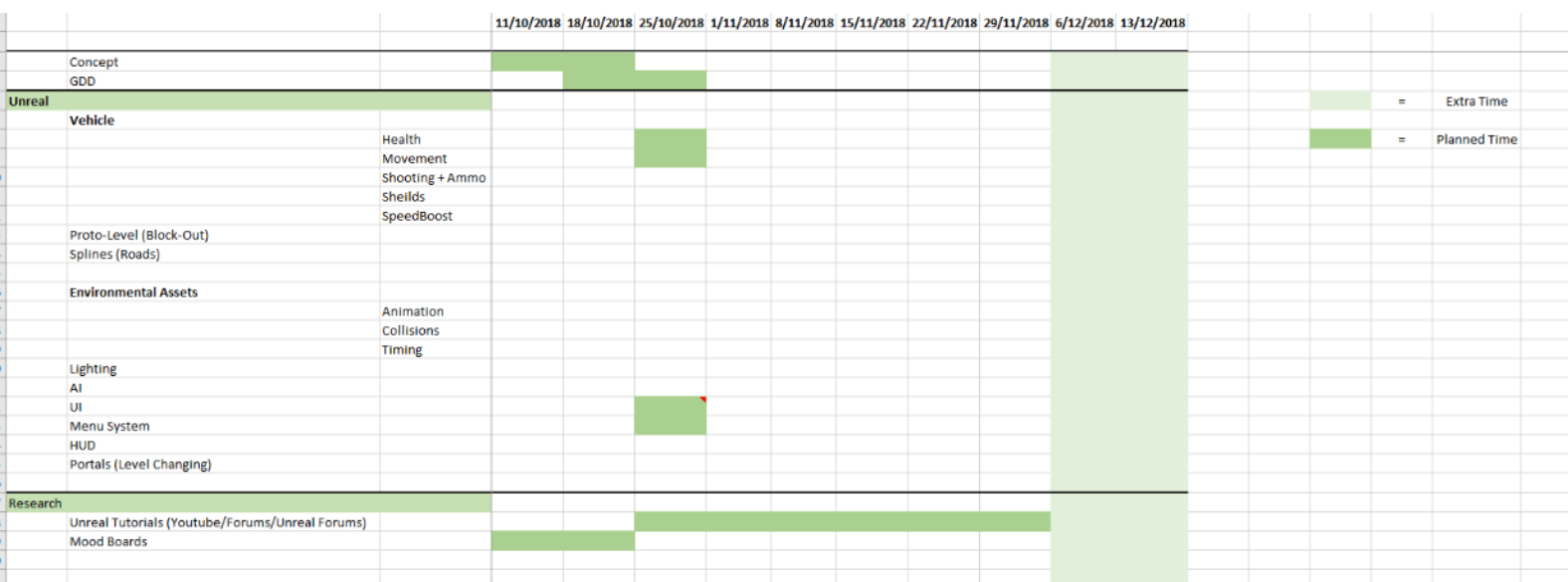
Me and Nathan both decided to work on a hover vehicle for the game. The first prototype was not controllable after a few hours of work in our own time. But we managed to get the object to hover off the ground and move, which is a step in the right direction.

Me and Nathan also started work on a basic menu system using the unreal tutorials. Some of the code did not work so we started to try do it ourselves. After a few attempts we got it too work and close the level before starting the game.



I also created my updated Gantt Chart this week. This is my first plan of what I want to be completed by the end of the semester. I have also left some extra time at the end of the semester in case we need it, as I have not created a full game before I am not entirely sure how to appropriately plan out how long each task will take.

I may add more to the list as the project is still in development stages.



I have two Gantt Charts, one explaining what I need to do and another for what I have actually done this week. Both will be updated every week until the end of the project. Using the “what I have done” Gantt Chart to make a new plan for that week.

For example, this Gantt Chart has differed from the original plan. The basic UI and Menu systems were covered this week. So, I have added it into the new plan. The vehicle also still needed more work, so I have to add more time into the new plan.

29/10/2018-

Unreal Basics

This week in class we started by making Halloween levels in Unreal. This includes basic AI, we go it to look at the player, but we did not know how to get it to move.

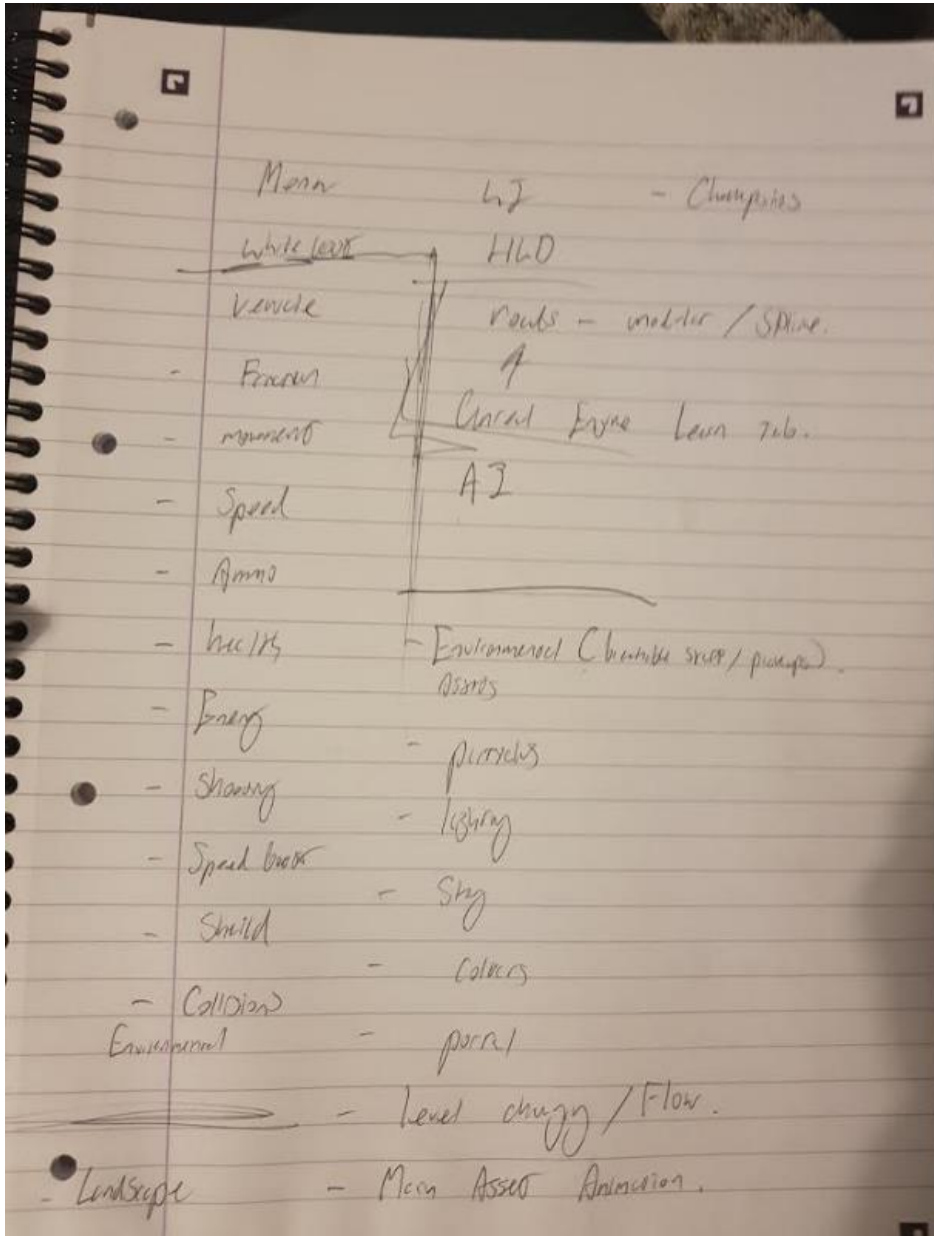
So, me and Nathan worked on another way of doing AI. This includes it moving and it spawning in random locations within a perimeter and it shooting at you. We showed this in class and fixed the AI in the next session.

I also investigated splines for the Prototype levels, I think we can start next week on it properly with a working level.

However, when looking at my initial schedule on my Gantt chart, at the rate of what we were learning, we cannot keep up with the schedule. So, I am going to have to change it to accommodate the rate we are learning in class.

I figured we would be working on a vehicle in class, but I feel that due to the technical problems of Unreal not working I may have to push it forward. Luckily, I accommodated for this by planning extra time in my Gantt Chart.

I also created my Priority List and Feature List. Both should help me in my project management and making sure I start completing tasks that need doing first.



Priority

Vehicle

Main asset (For Each Level)

Animation

Roads

Menu

Portal

Buildings

A.I.

U.I.

Speed Boost (Temp)

Health

Overdrive (Ammo, Speed, Shield)

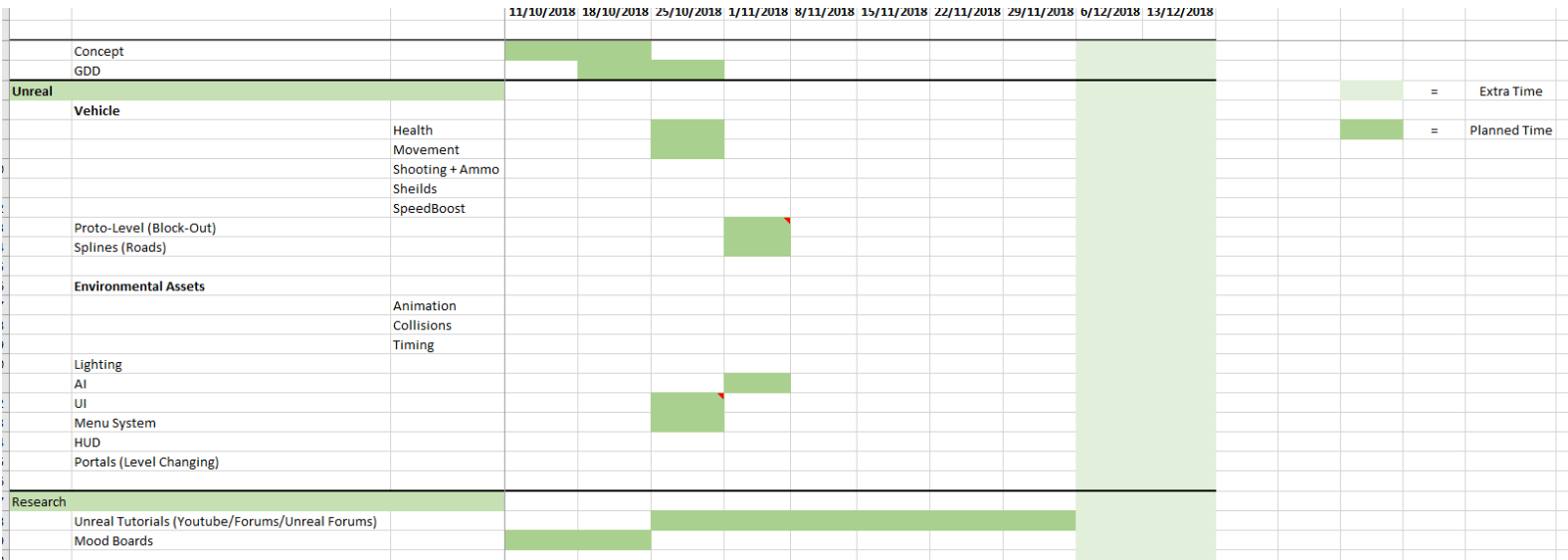
HUD

Environmental assets

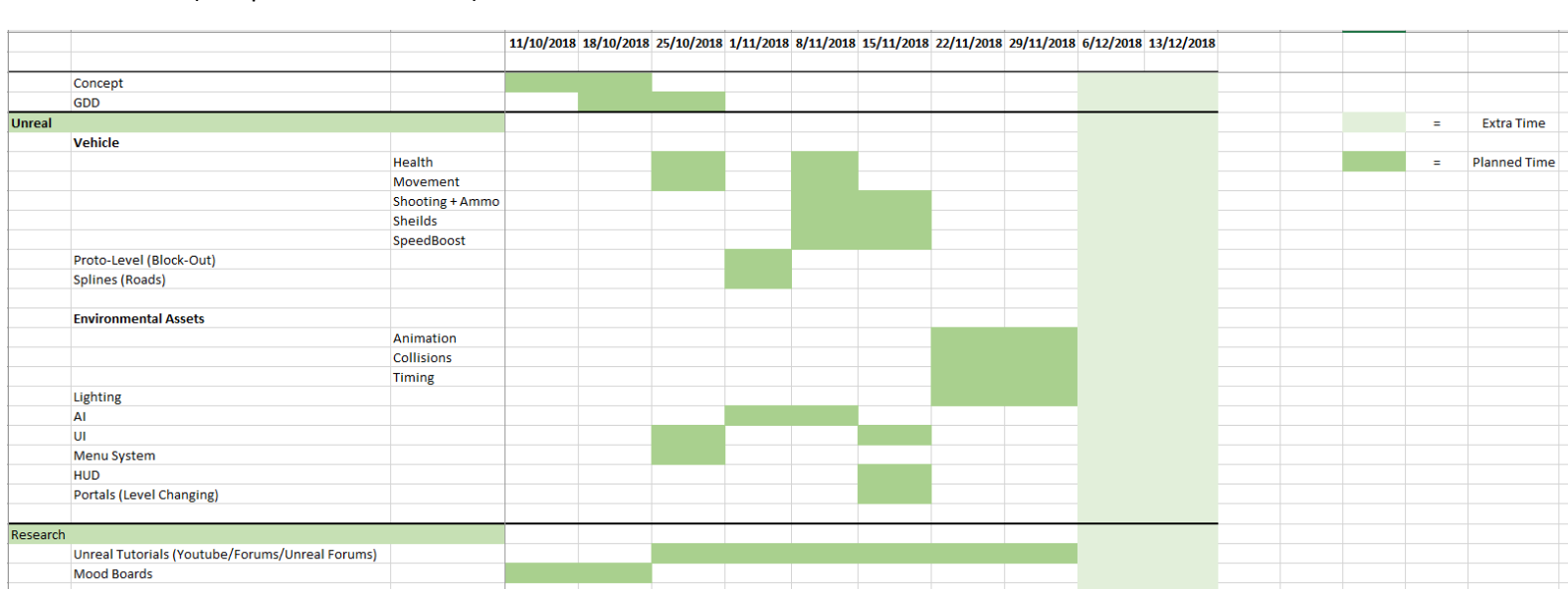
Collisions

Landscape

(What I have done this week)



(The plan for next week)



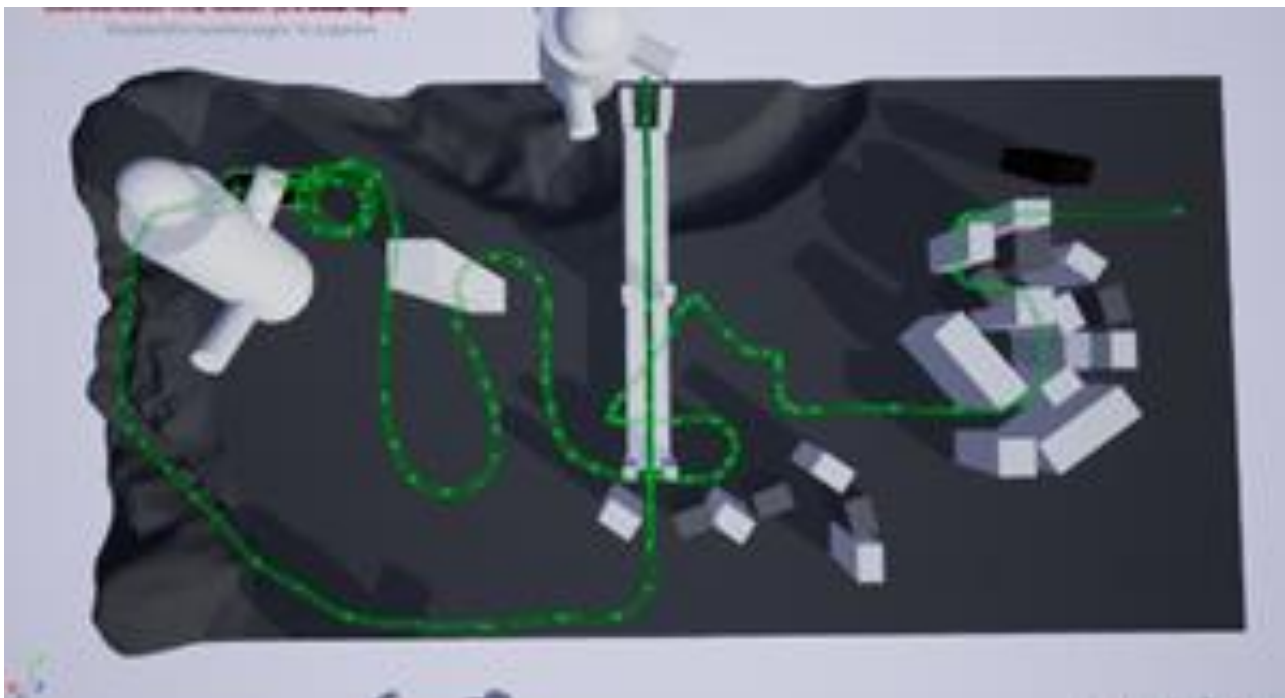
05/11/2018 –

Cardiff Halloween

In class this week we worked on a level for a Cardiff convention where Jess will show off her game with levels created by the first and second years, the hand in is by the 20th this month.

Me and Nathan decided to start on a block out for the level designers for Neo-Tokyo. We used the Unreal vehicle since we did not know how to make our own. But we learned how to use landscape splines to create a road and added in some buildings, with place holders for Godzilla and a working portal.

I also changed up the Gantt Chart, to accommodate for the lack of vehicle and movement.



08/11/2018 –

Concept/Inspiration: Hologram

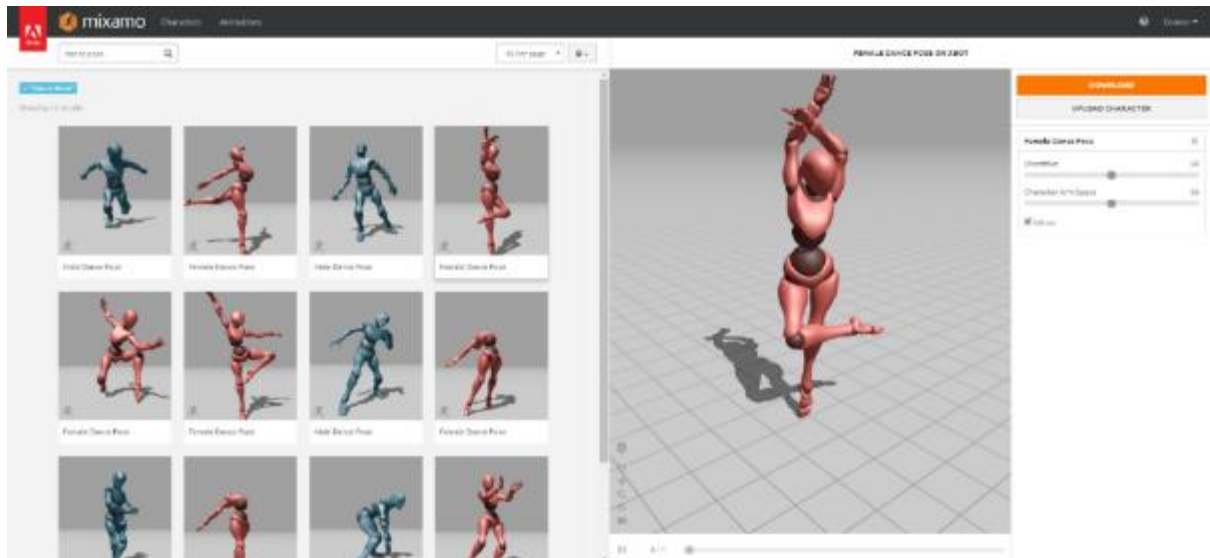
Today I decided to work on some hologram to make the “Neo-City” level more Sci-Fi. Since I was waiting on the Mecha Lizard Model to texture and we were about to learn the vehicle mechanics and environmental assets in class, I wanted the level to look more pretty.



My first idea that I wanted for a hologram would be a large purple/pink woman. Since, I saw the new blade runner recently I really wanted to make it in my game. I have not got a lot of experience with Unreal, but I figured I would give it a go.

3rd Party Website

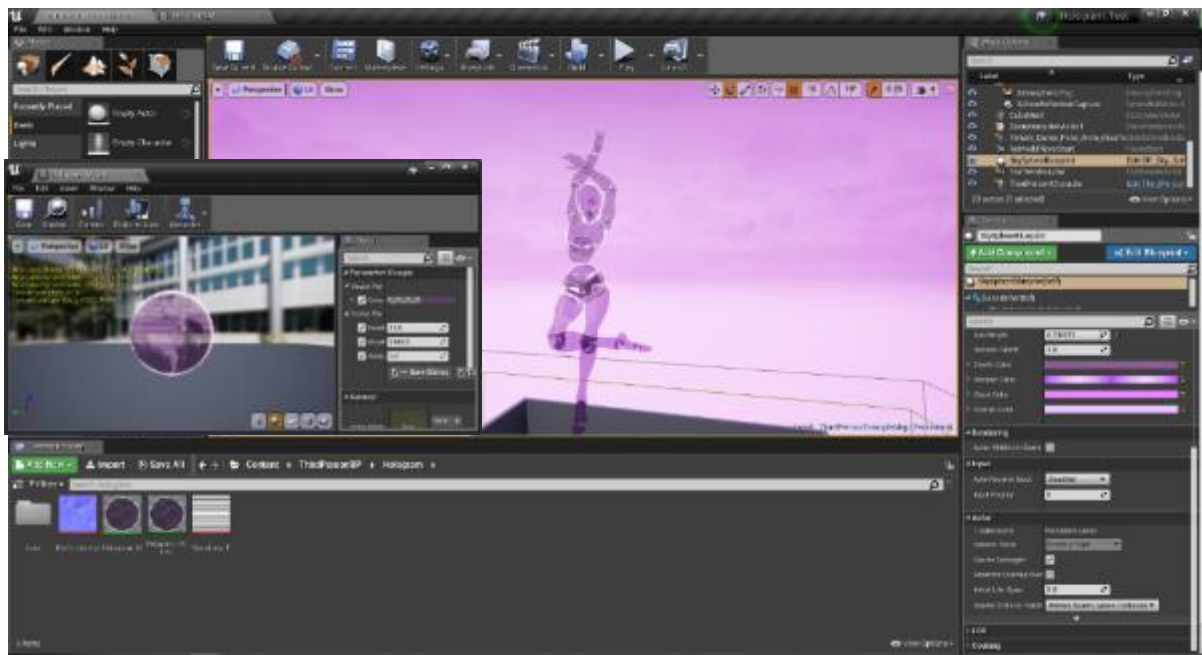
I found a model using Mixamo (Mixamo.com, 2018), a site that allows users to download a custom model and animation, viewing in real time, into an fbx that can go straight into Unreal.



<https://www.mixamo.com/#/?page=1&query=dance+pose>

I found the pose I wanted, but the actors they had were not Sci-Fi enough. The default model grew on me and I imagined how it would look in my head, so I kept the woman mannequin.

Creating a material



I used a YouTube tutorial to help create the material. (Ashford, 2017)

<https://www.youtube.com/watch?v=w1z6iy1Okys>

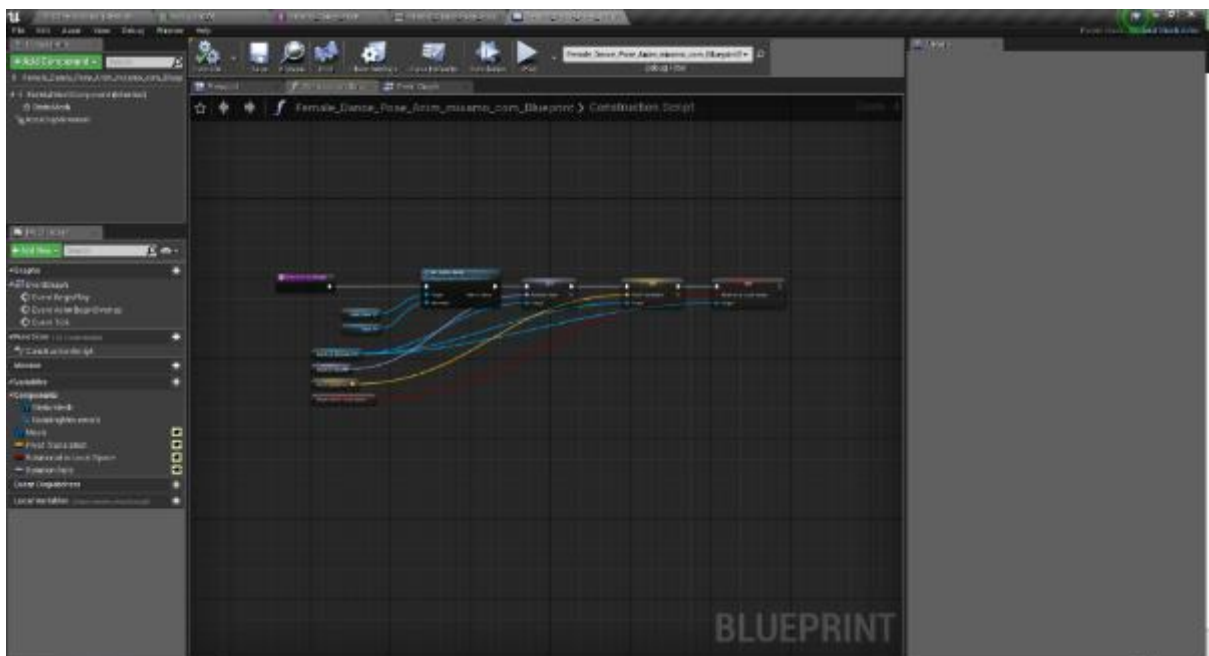
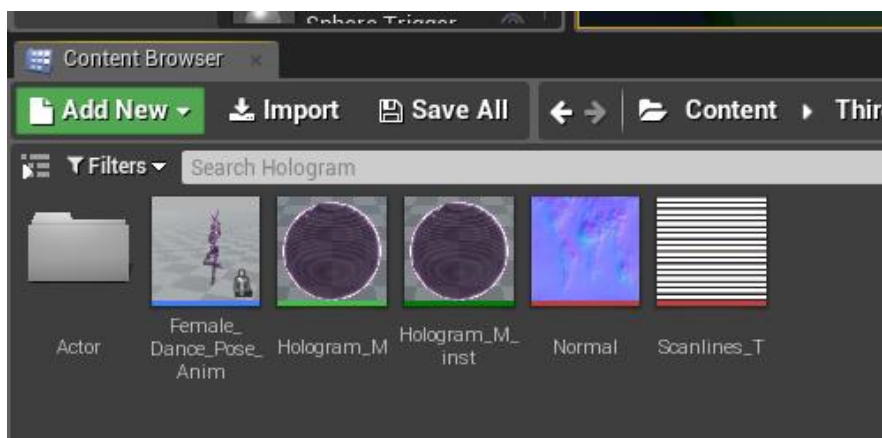
Rotation Blueprint

I then made a start on the hologram rotating. Since it looked too still, it needed to move around and look more dynamic. I used the Unreal Engine Forum (Unreal Engine Forums, 2018) and Unreal Wiki (Wiki.unrealengine.com, 2018).

<https://forums.unrealengine.com/development-discussion/blueprint-visual-scripting/38498-how-do-i-make-an-object-just-rotate-forever>

which lead to:

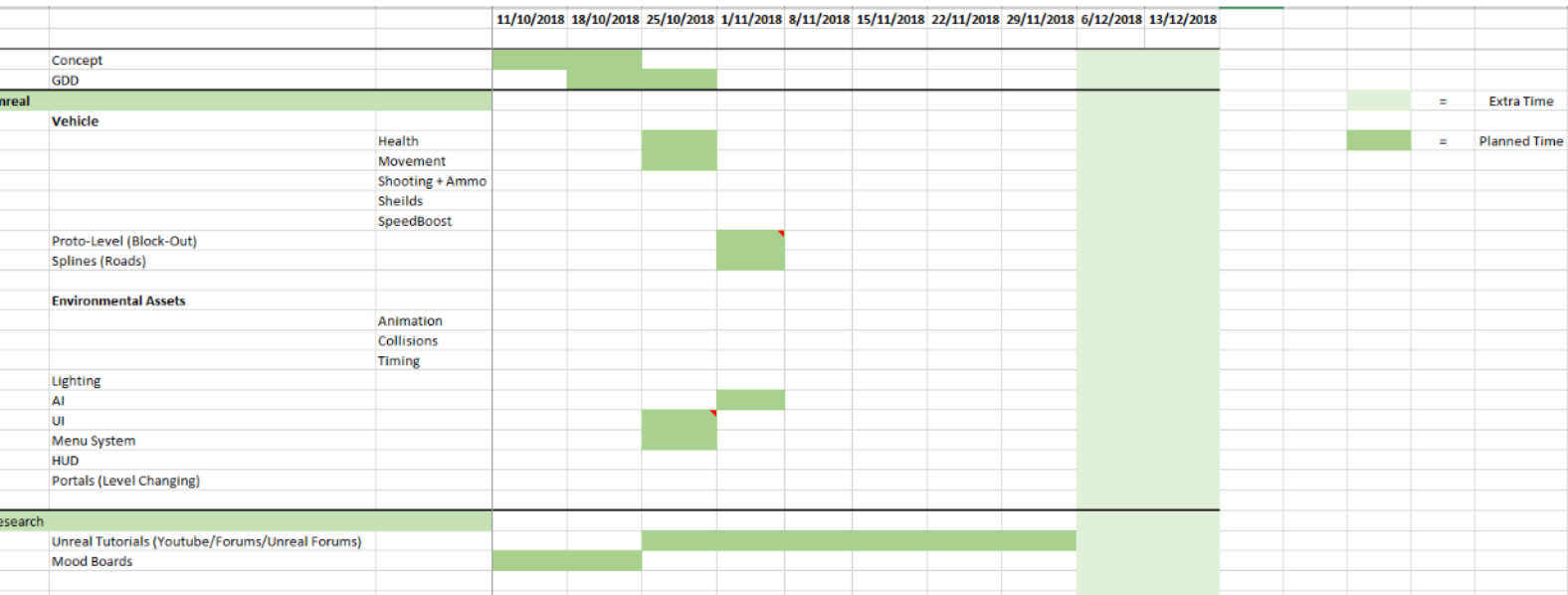
[https://wiki.unrealengine.com/Blueprint Rotating Movement Component](https://wiki.unrealengine.com/Blueprint%20Rotating%20Movement%20Component)



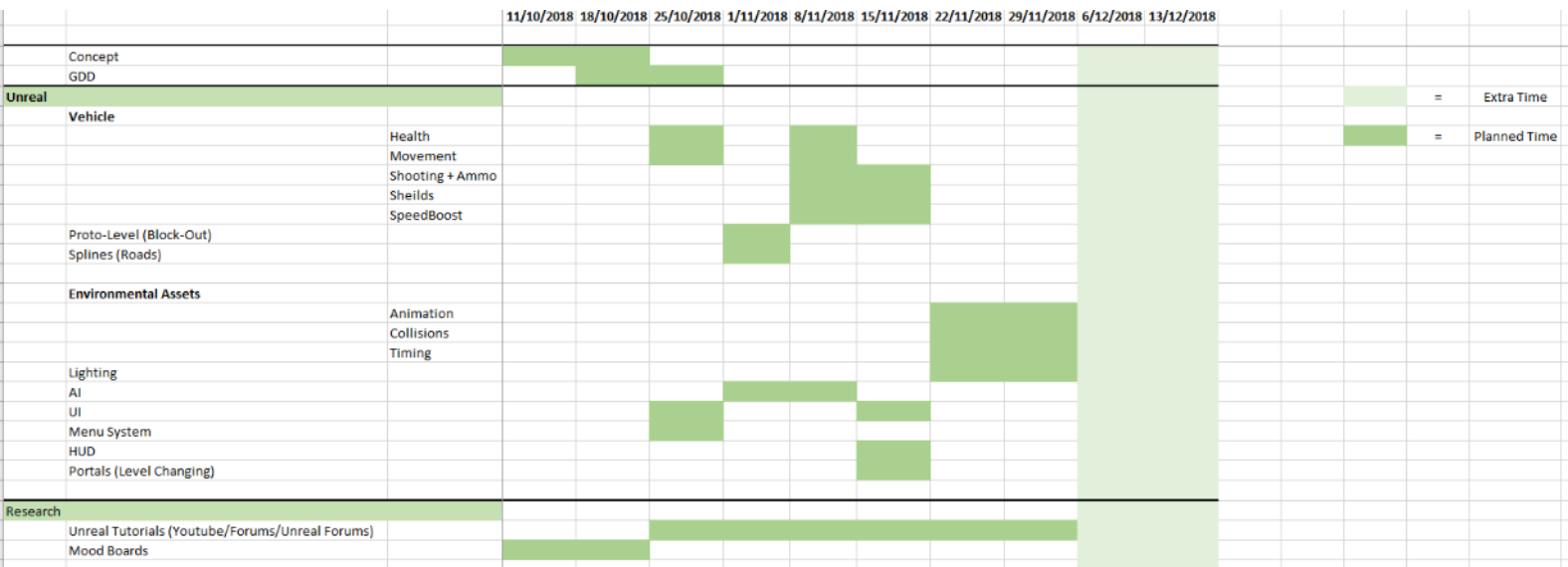


Result

(What I have done this week)

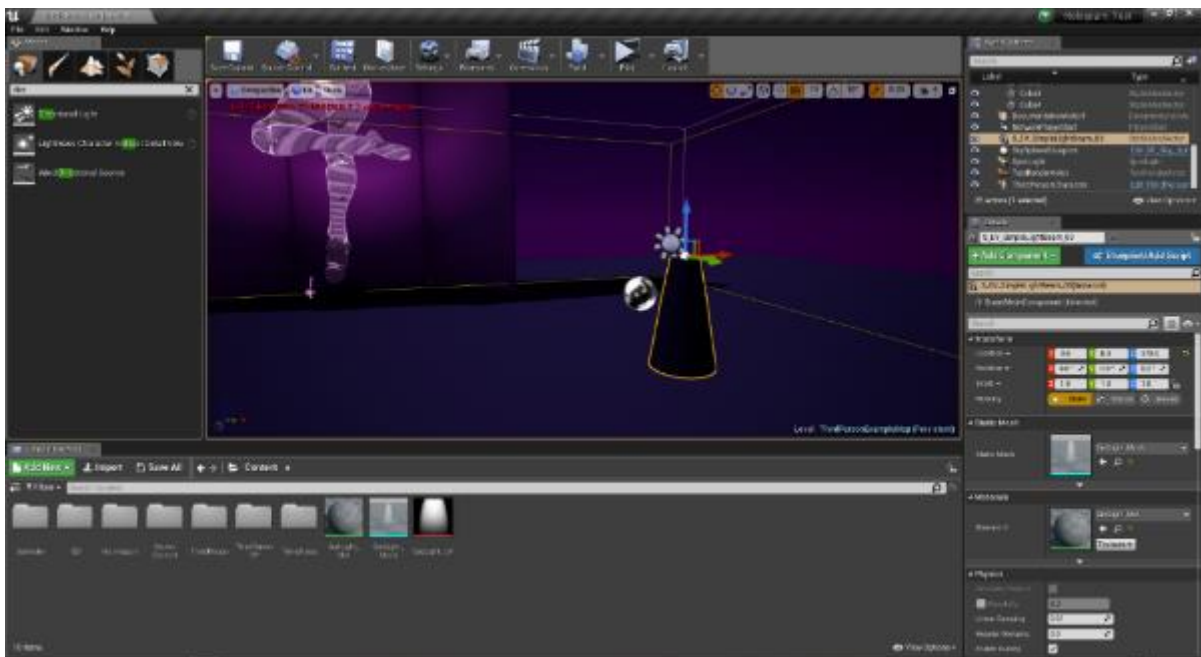


(The new plan)



09/11/2018 –

God Ray/Light Shaft



Using the tutorial, (Steve's Tutorials, 2016) I created a God ray/Light Shaft for the spotlight. This makes it look like its projecting the image, giving it a little sense of realism.

<https://www.youtube.com/watch?v=9qAXiVJSzxw>

Although Unreal already has a God ray system in the Engine Content, I used the static mesh of the light, the UV and I created my own material. This way I did not need to go into Maya and Photoshop to create the cone of light. This saved me at least 15 minutes sorting out the object itself and I could go right into the Unreal code.

13/11/2018 -

Speed Boost

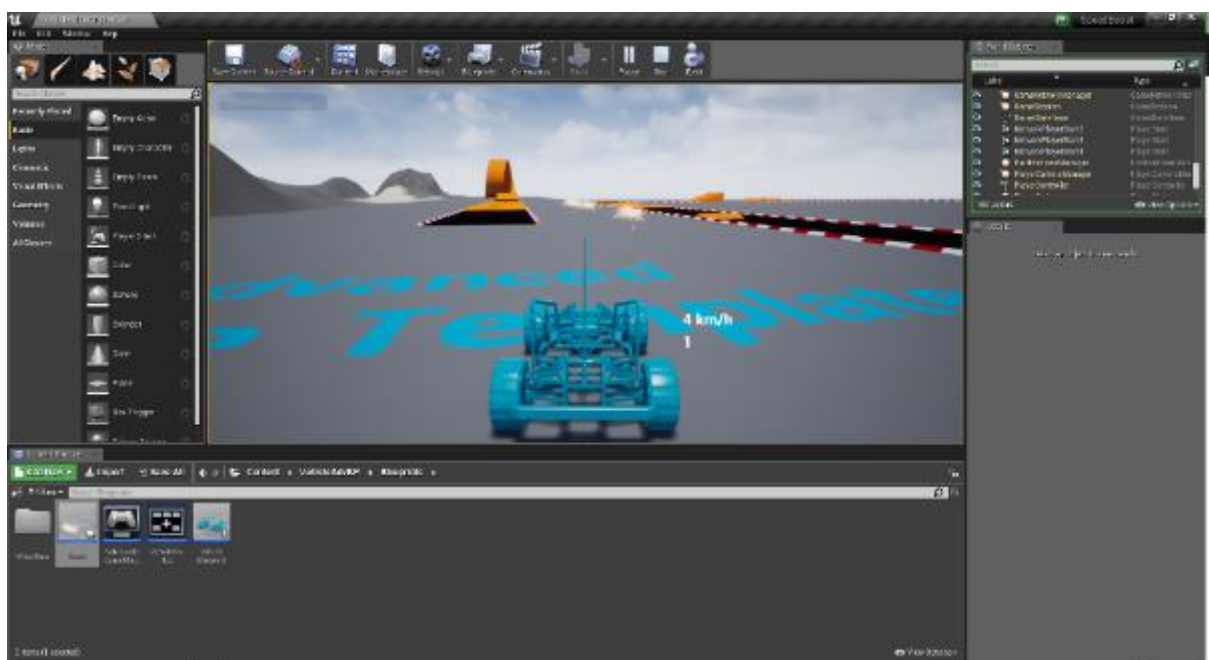
Today I worked on the Overgrown city track and a Speed Boost in game. Since I could not take home the new track from Uni due to zipping problems, I cannot provide any screenshots now.

I then jumped on my Gantt chart to look at the different parts of the game I could work on. Since we also discussed changing the mechanics for the speed boost to be a pick up, I decided to work on that.

<https://www.youtube.com/watch?v=oCL-dWwhQ8U>

Using this tutorial, (Edwards, 2018) I got the basic idea on how it effects the vehicle. But since some of the code did not work on the current version of Unreal, I did some tinkering myself and got it too work.

I added in a collision box to the actor and changed the starting “event”. After some trial and error, I got it to work.



I put in a blueprint, so it can easily be transported to a new level.

15/11/2018 –

Creative Practice (GDD)

Today in creative practice we went over the briefs with the lecturers, to clear up any misunderstandings when it comes to the approaching deadlines.

I also got everyone together to talk about the Game Design Document. Since everyone had to be marked on it and no one assigned tasks, I figured I would start it.

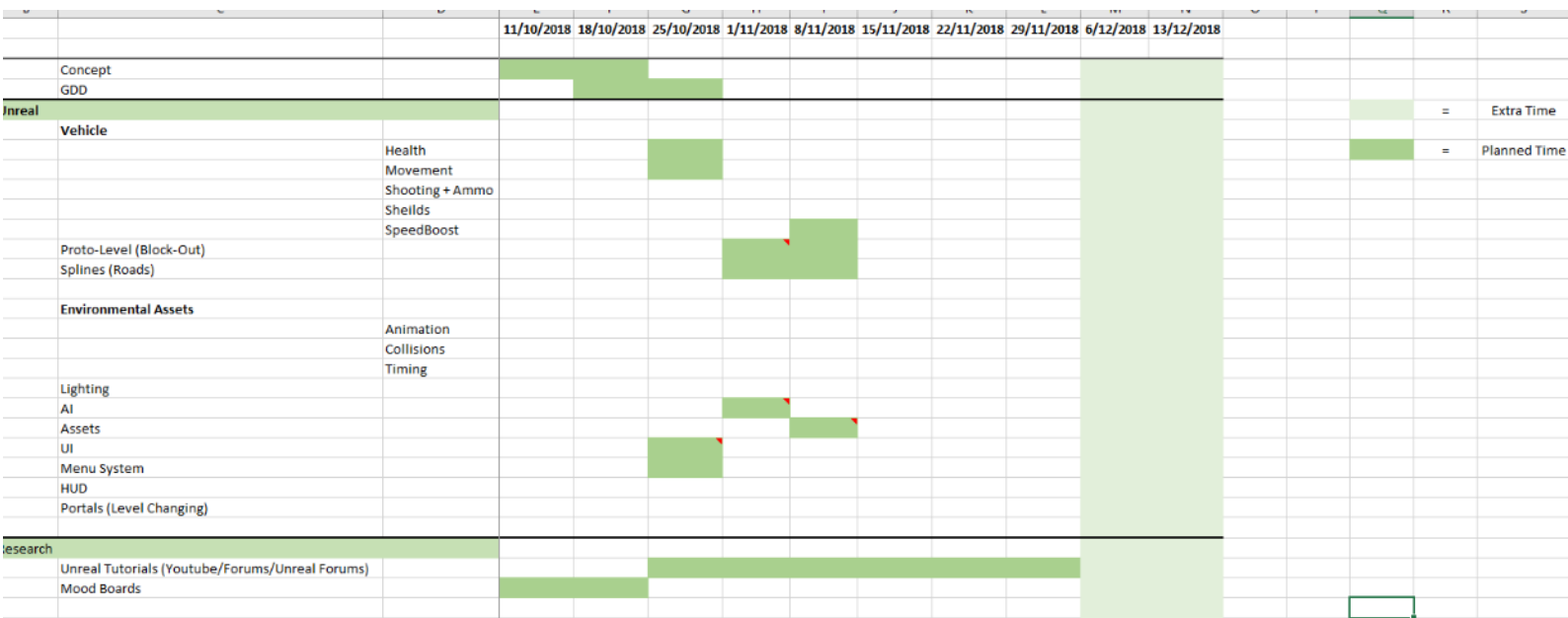
We went through the entire game design document format assigning tasks as fair as possible, removing and adding parts where necessary.

We then made it more of a high priority tasks to have a more in-depth and discussed meeting as a group. Hopefully we can stick to this format and find problems before they arise as a group.

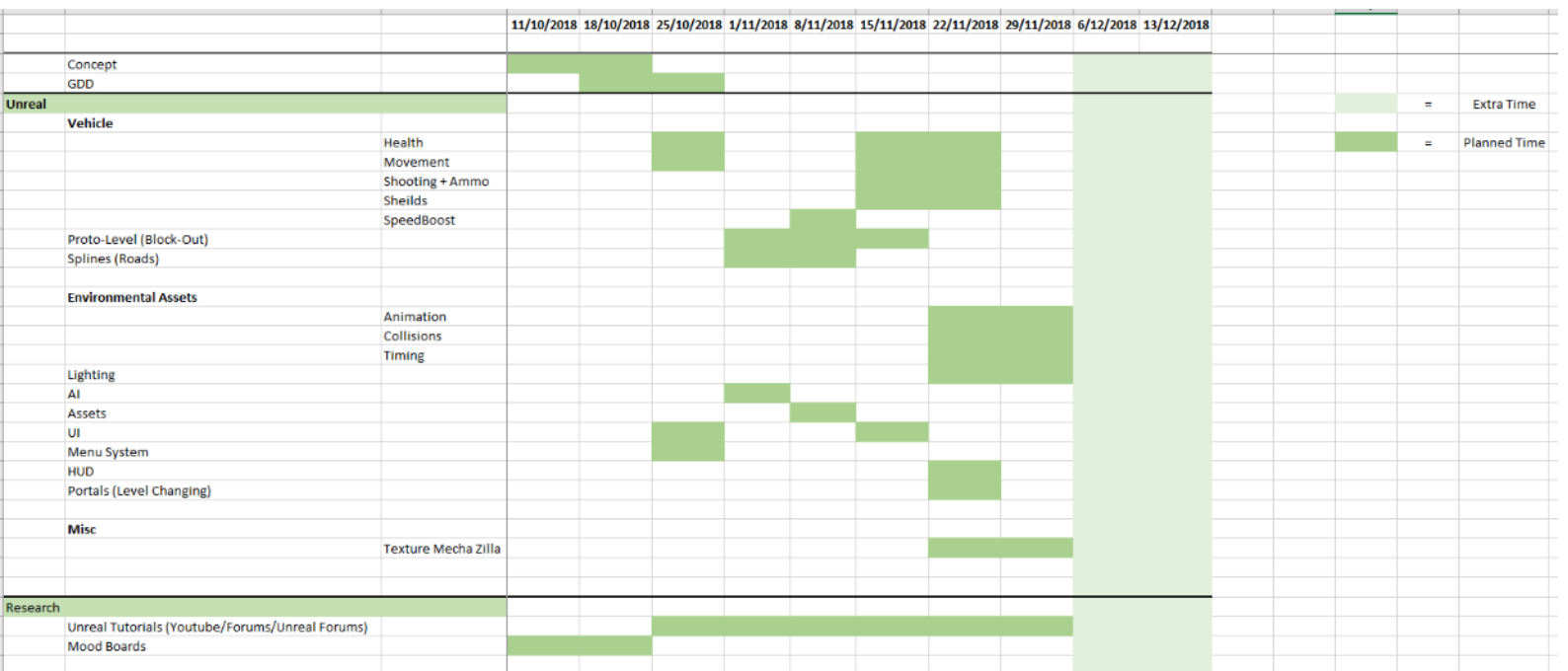
The Unreal Engine team also went over what the game would realistically be at the end of the project. We decided to mention that we would input the speed boost as a pick up instead of an “over drive” energy bar.

We would also get rid of the gun and shield on the vehicle. This was a decision based on the current Gantt Chart and that we did not know how to get the vehicle to work properly with its movement, let alone a gun and working energy bar.

We would need to change the current Gantt Chart accordingly.



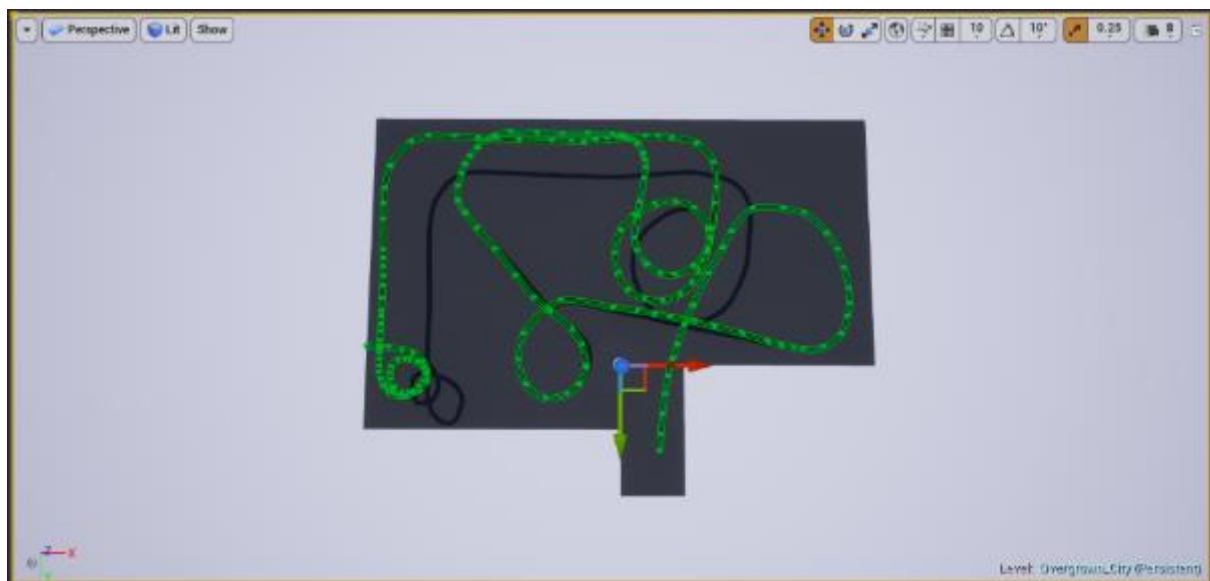
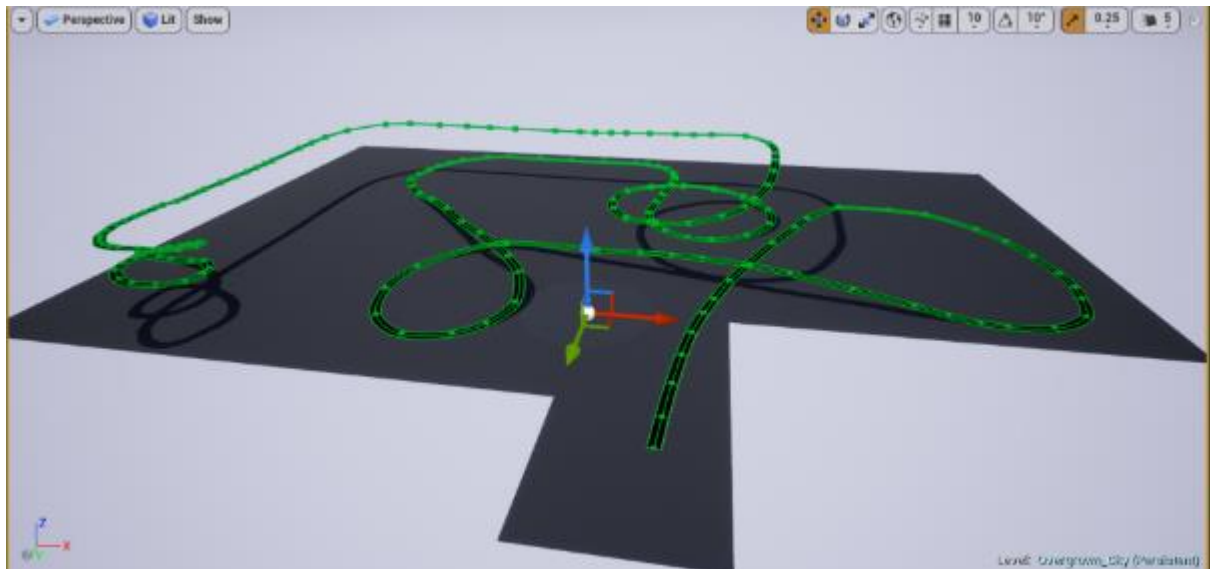
(What I have completed this week)

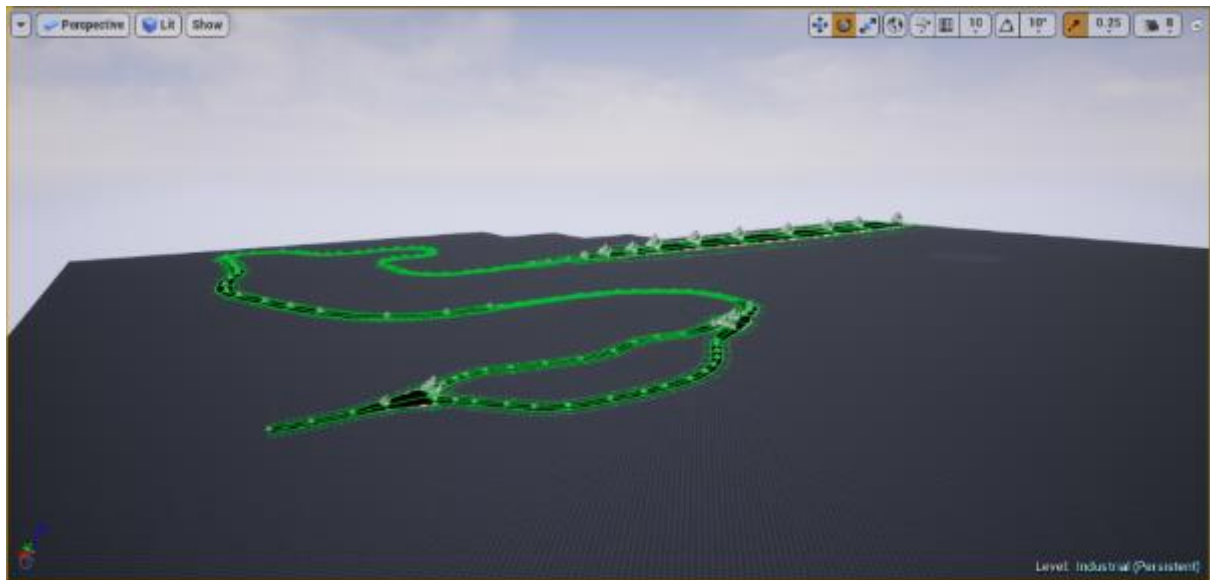
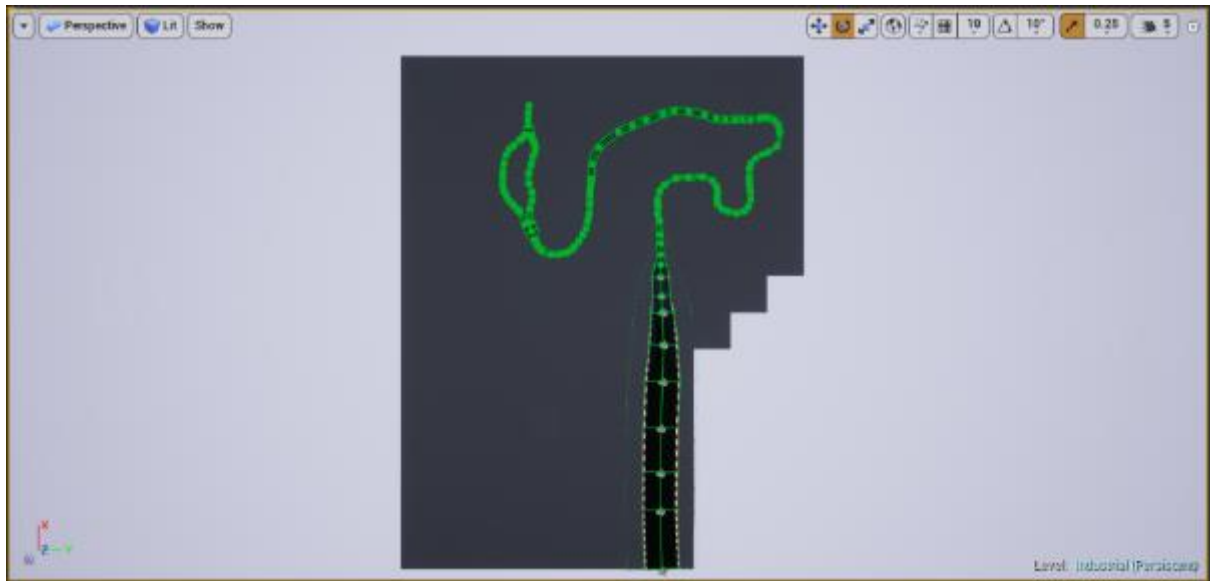


(The new plan for next week)

16/11/2018 -

Doing the remaining level block outs





After today's lesson, I worked on the full block outs of the updated level designs. I also used the in game "Advanced Vehicle" to test drive the track and give times on how long it would take. I put the results in the group chat and told the level designers their times to either work on them, or they were fine.

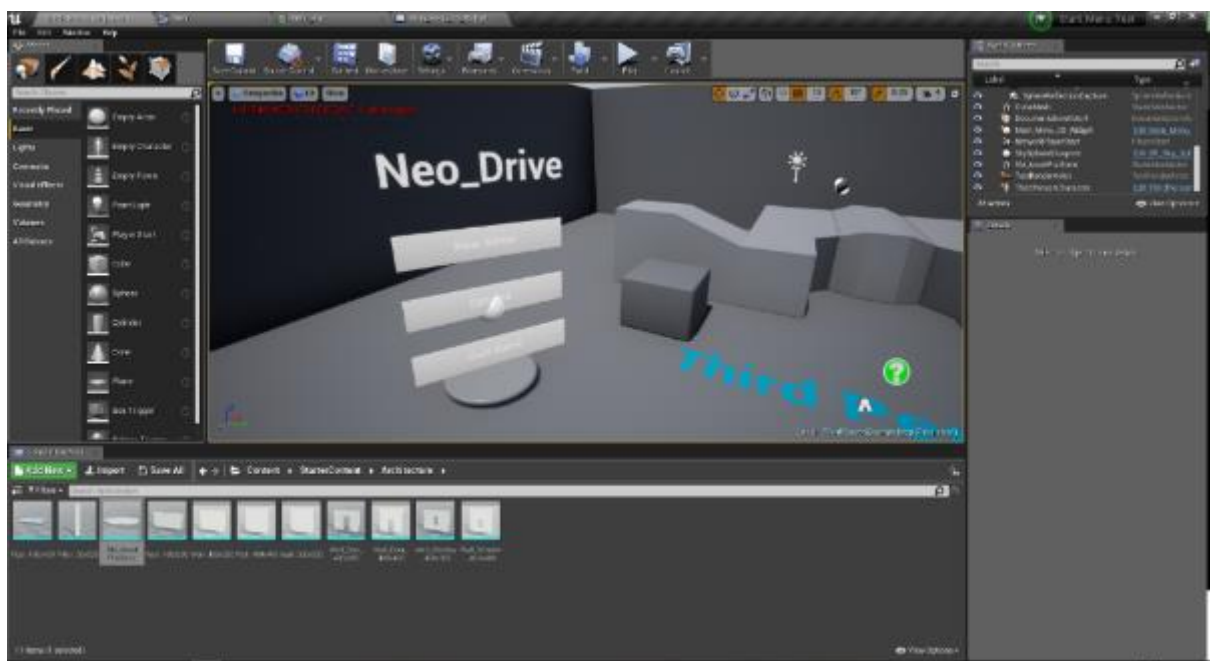
Matt also started making the vehicle movement, but we have not been taught it in lesson yet. We figured he could show it to Jess as it is and get feedback on whether it was a good start on the vehicle.

19/11/2018 -

Creating a Dynamic Menu

Since we barely touched on the Main Menu system we will use for the game, I put in my Gantt Chart to re-do it.

Since it is on the list this week, I plan to make a start. Plus, the fact that Matt is doing the updated movement for the vehicle, this gives me more time on this. I am hoping this will be completed by next creative practice lesson, this way we can solely work on vehicle movement and inputting the environmental assets into the levels.



<https://www.youtube.com/watch?v=DnbH8FOPsZ0>

The tutorial I am using (Meletou1, 2017) is in French, but I can make out most of what he is doing by watching him do it.

20/11/2018 –

Sorting out the Camera (Main Viewport)



Today I am currently trying to sort out the camera. Using a YouTube tutorial (CodeViper, 2016).

<https://www.youtube.com/watch?v=ulUO4EN8BG8>

After an hour of testing and research, I got the camera to show the menu in the place I wanted it to be. (Docs.unrealengine.com, 2018), (Docs.unrealengine.com, 2018), (Api.unrealengine.com, 2018), (Answers.unrealengine.com, 2018)

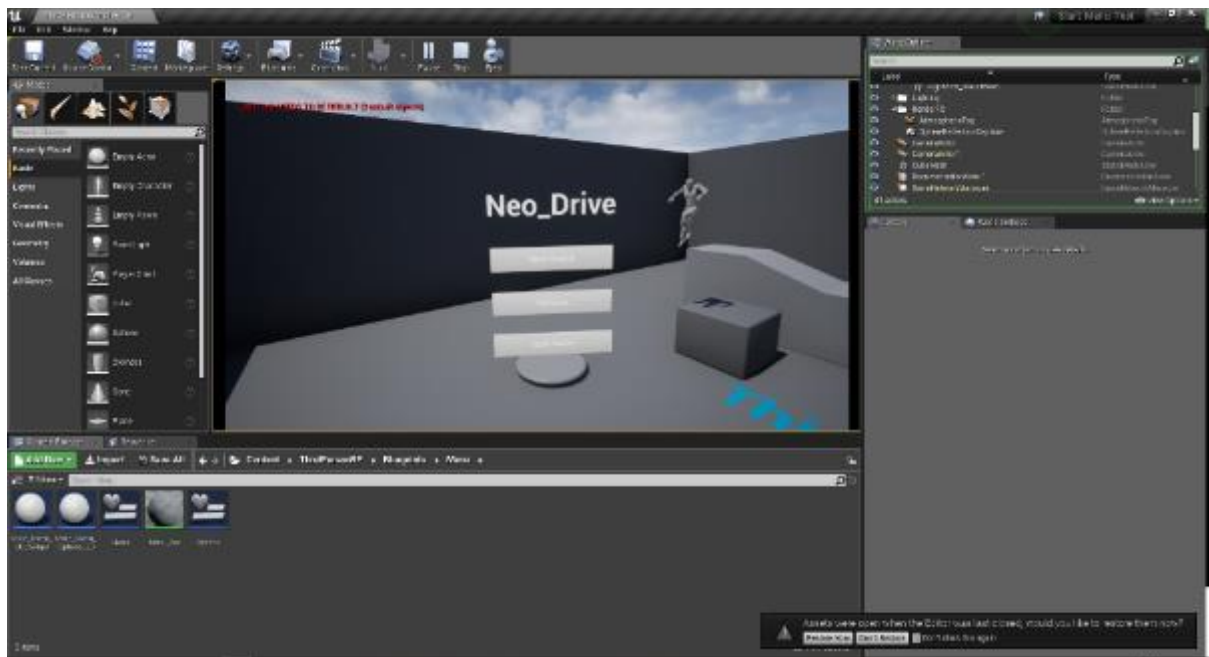
<https://docs.unrealengine.com/en-US/Gameplay/HowTo/UsingCameras/SwitchingCameras>

<https://docs.unrealengine.com/en-us/Gameplay/HowTo/UsingCameras>

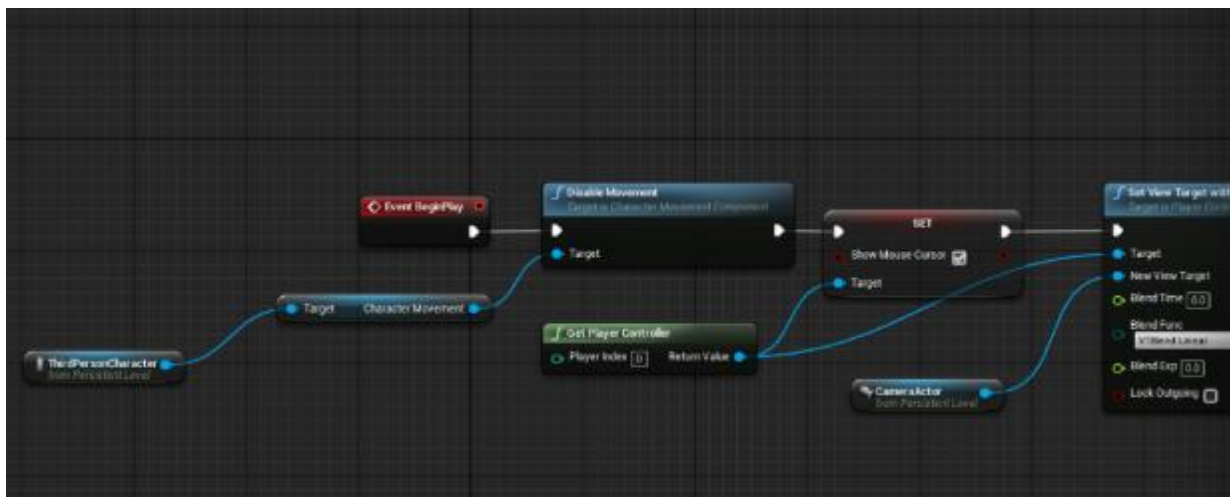
<https://api.unrealengine.com/INT/BlueprintAPI/AutoPlayerActivation/GetAutoActivatePlayerIndex/index.html>

<https://answers.unrealengine.com/questions/81304/how-to-set-my-new-camera-as-a-default.html>

Disconnecting the player



I have got the camera in the right place, it is just disconnecting the player from the character.



I found one solution to this issue, but I feel that there is a much better way of completing this other than disabling movement.

Re Disconnecting the Player

After having a few spawning issues, I realised I needed to change back to a character once the game starts. (Answers.unrealengine.com, 2018), (Answers.unrealengine.com, 2018)

<https://answers.unrealengine.com/questions/494518/remove-third-person-character-in-one-level.html>

<https://answers.unrealengine.com/questions/787841/spawn-whenever-you-press-play.html>

After a few forum searches not only did I learn to use a game mode blueprint, I figured if I made my own and set the camera as the default pawn class, I could delete the Third person character all together.

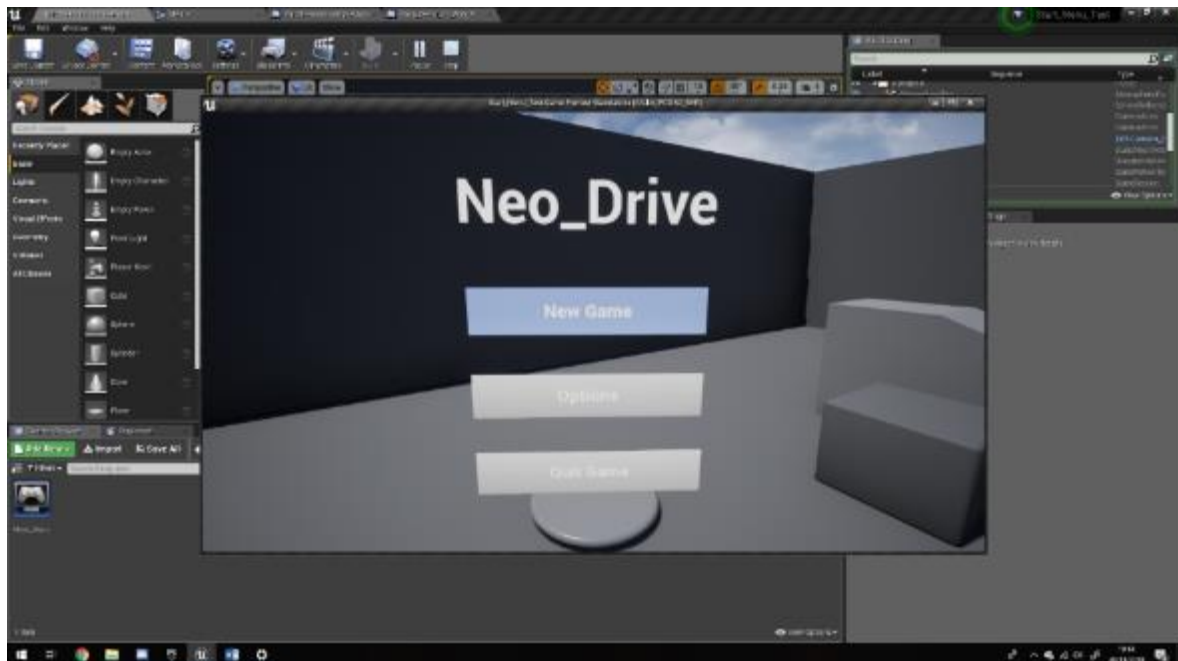
Getting the menu to work

Now I need to make the menu work in game. Since the tutorial is in French it is harder to understand the exact scenario, but I can still follow along.

Not Working (May have to pick another way)

After four hours researching and debugging using YouTube and Unreal forums, I could not get the mouse to interact with the 3D widget. If I cannot get this to work, I may have to find another way of implementing the menu.

DONE!



After another hour of tinkering I got it to work. Again, using multiple sources using Unreal's Forums and Answers (Docs.unrealengine.com, 2018), (Answers.unrealengine.com, 2018)

<https://docs.unrealengine.com/en-us/Engine/UMG/HowTo/InWorldWidgetInteraction>

<https://docs.unrealengine.com/en-US/Engine/UMG/HowTo/VirtualKeyboards>

<https://docs.unrealengine.com/en-US/Engine/UMG/UserGuide/WidgetBlueprints>

<https://answers.unrealengine.com/questions/603210/widget-interaction-component-with-mouse.html>

<https://answers.unrealengine.com/questions/199544/how-to-make-mouse-input-work-with-3d-widgets-compo.html>

These are just a few of the queries that I had researched that really helped me figure out the problem. I realised that it was not the code I was using, but the widget itself was not registering the mouse and turned out the "world" and "screen" user interface options were a big factor in working out the problem.

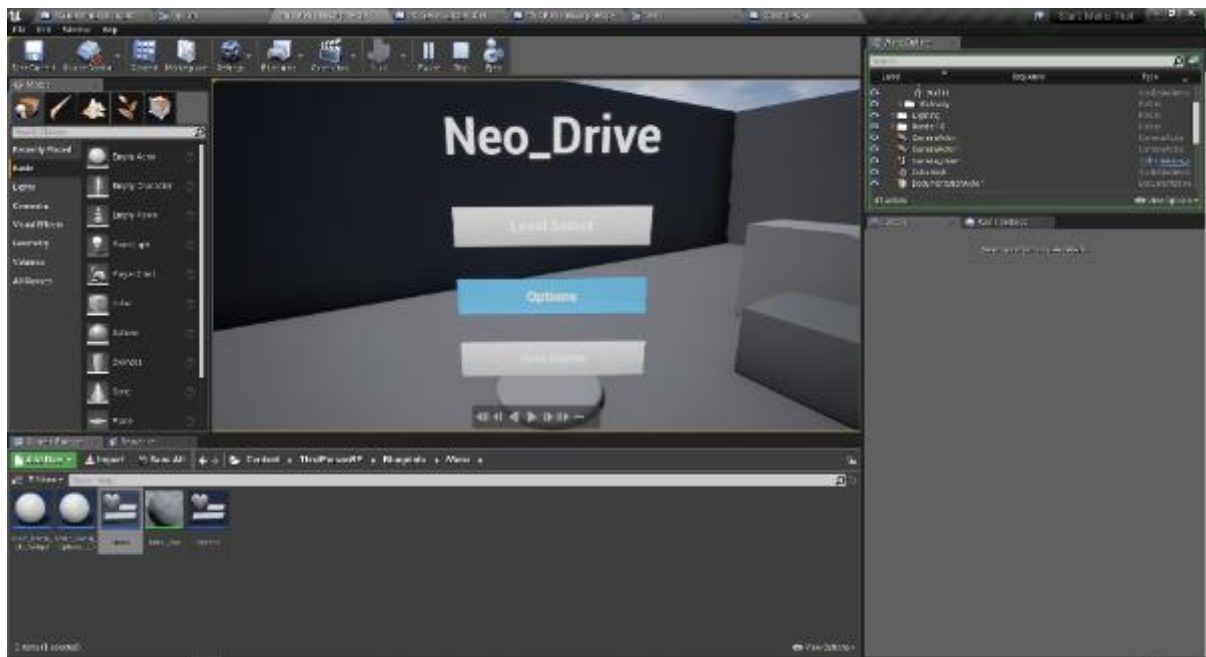
21/11/2018 -

Project Corrupted

The Unreal Project file has corrupted and the work I completed yesterday had to be deleted.

Luckily, I had a previous version backed up on my pen drive (Non-working one). I only need to re do the code but may take me some time to remember exactly what I had done.

Re doing the menu



I have redone the menu systems UI.

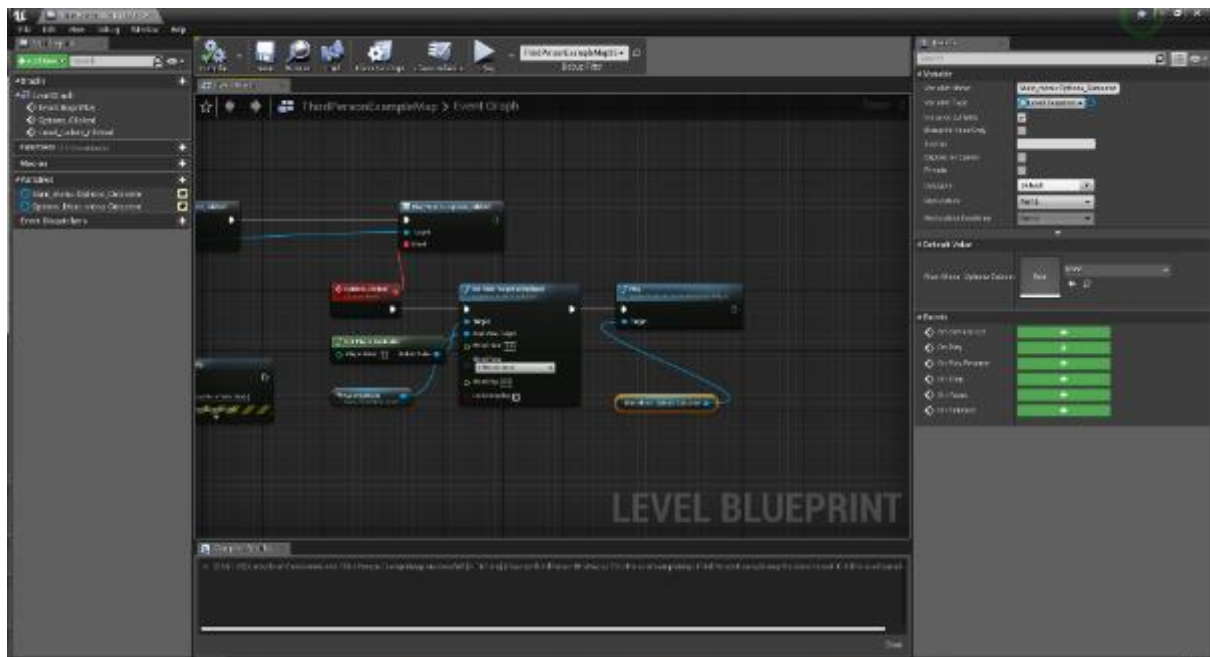
Now I need to connect the camera to the level sequencer. After I have completed that I can move onto menu functionality, like option buttons, a working level select and working quit button.

Backing up work (re-established)

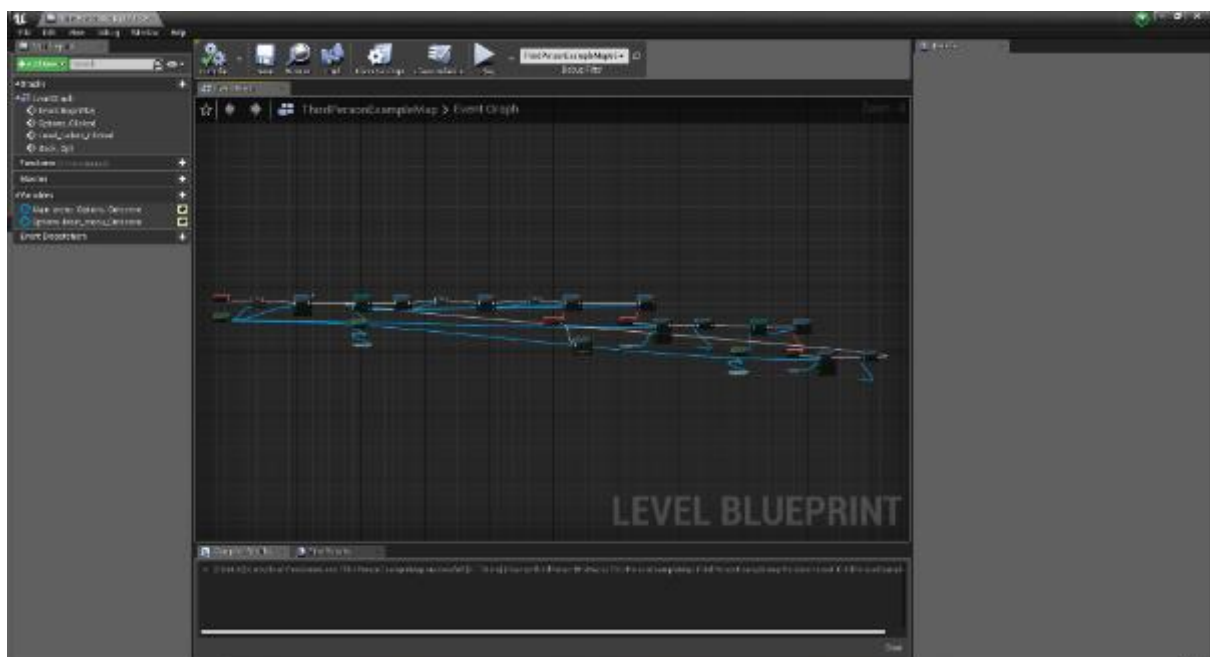
After the corruption scare, I put in more measures than I already had in place, to make sure my work was backed up. I.e. having zipped project folders on two flash drives and on both hard drives of my computer. I may also implement another backup on my student computer. This way I know I can access some sort of work on whatever device I am working off.

At the start of the semester I had OneDrive put in place for my backups, after hitting a “clean up” button it removed all my project files for every project I had worked on, on my computer since the start of university. Now transitioning to a more hands on approach to backing up my work.

Getting the camera to move

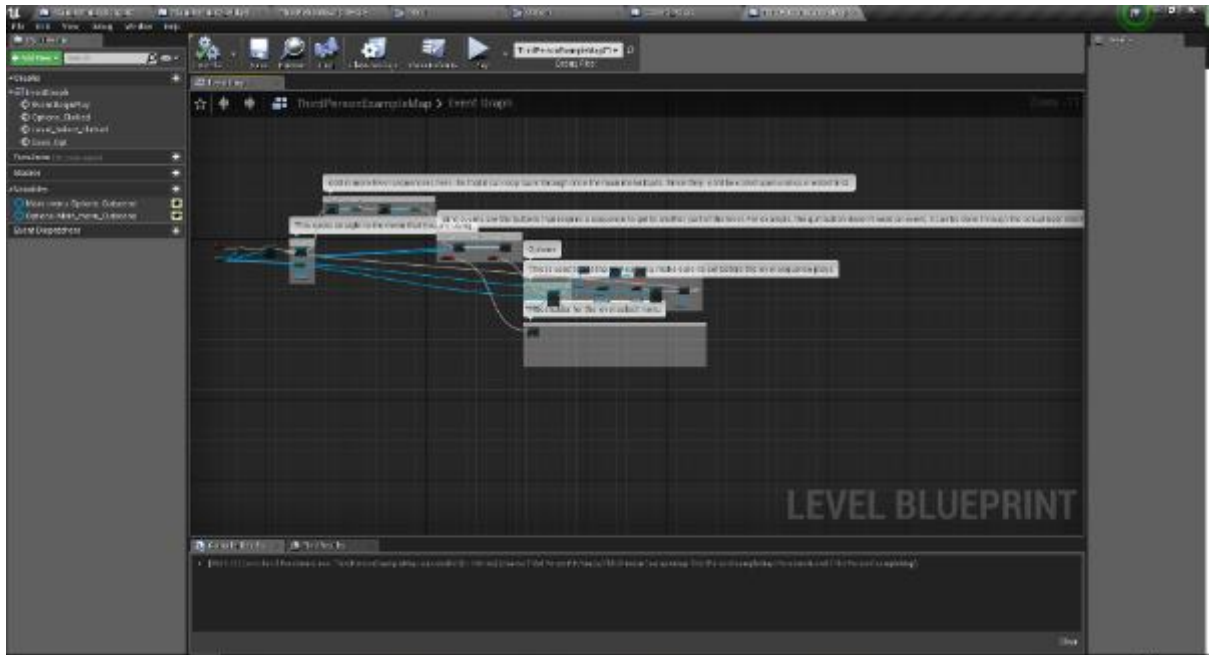


Using the set view target in the options clicked event, it sets the new camera and then plays the level sequence.



Now I have a loop in place where the player can go back and forth through the buttons and all the level sequence.

Tidy up code (To easily refer back)



I then tidied it up and added comments on the important parts in case I forget when I come back to it.

I then took the time to make the camera as smooth as possible, as it transitions to each menu.

Creating Level Select Screen



I made a start on the Level Select and synced up the cameras.

Now my plan is to send the player to a character screen once they have selected a level.

22/11/2018 -

Inspiration: The Vehicle Select Screen

Today I am going to work on the character (Vehicle) selection screen. Which will then transition to the game once the player has selected the vehicle.

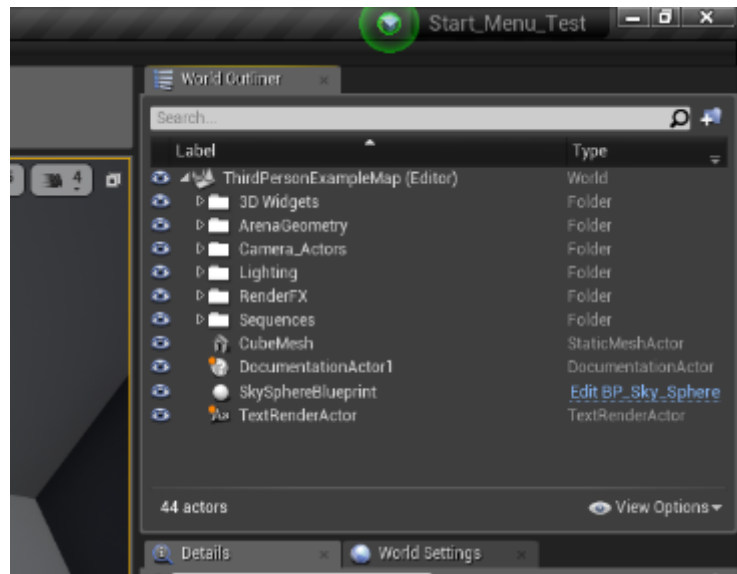


Taking inspiration from automated car parks, I want the player to select the vehicle and an animation will pull out one of the cars from the ground.

<https://www.youtube.com/watch?v=rXWrpE1Khkk>

Using this video as reference (Emirates, 2016), much like the “China” example given in this video, in where it opens from the ground and brings up another vehicle. After thinking of multiple ways this can be implemented, I feel that this way will be easier for me to code.

Tidy up the World Outliner



First, I tidied up the World Outliner section, so I know where all the assets in my level are.

Creating the Vehicle Select Screen



I created the vehicle selection screen and then set the camera sequences to the “play all” button on the level select.

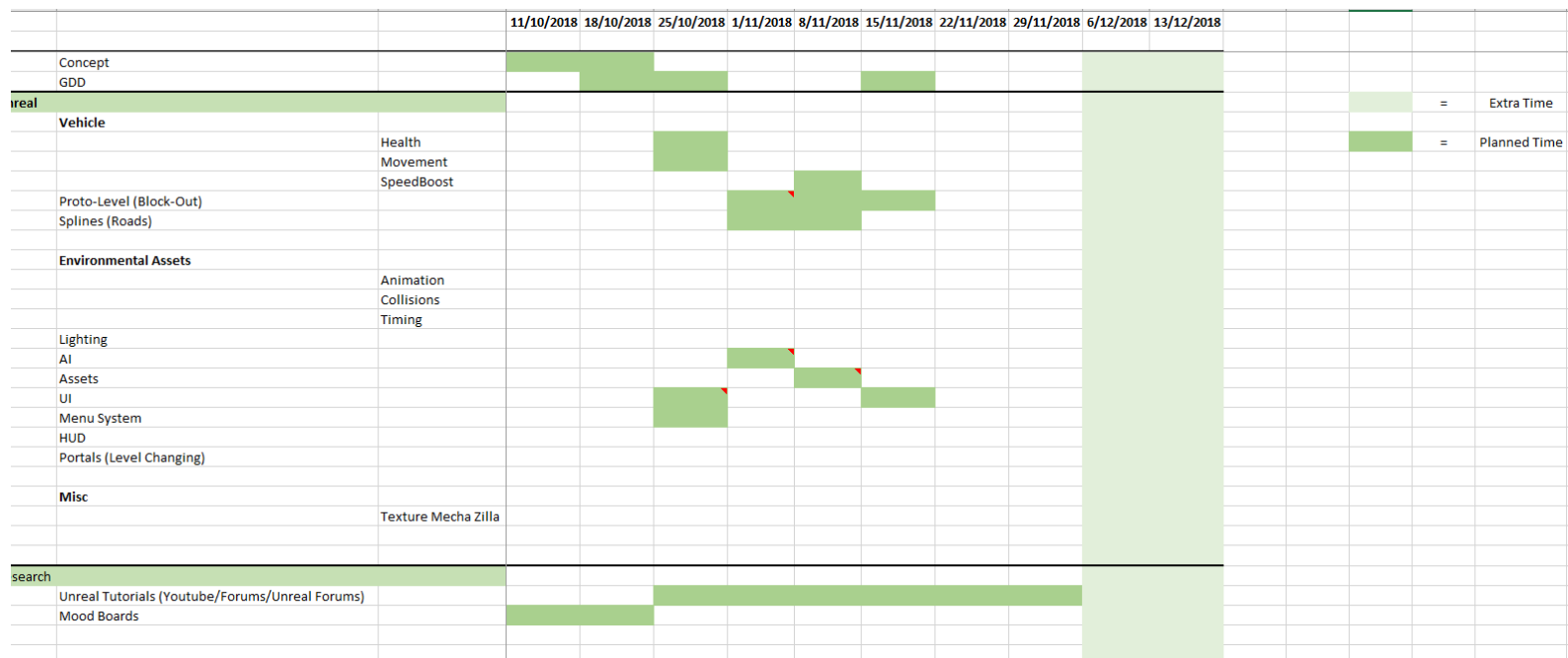
Creative Practice

In creative practice today, we talked about tasks and whether we were up to date with them. We also assigned tasks as the unreal team for this week. Matt is currently working on the vehicle and Nathan is working on modelling for Neo-Tokyo and sorting out checkpoints.

Matt also took the job of blocking out the Industrial level to lighten my load on work. (Since I did not think the menu would take as long as it does).

I will get the menu completed in the next few days and work on environmental assets working with each level.

(What I have done this week)



(Plan for next week)



As you can tell, I have changed up the format to accommodate for the other members and what they are completing.

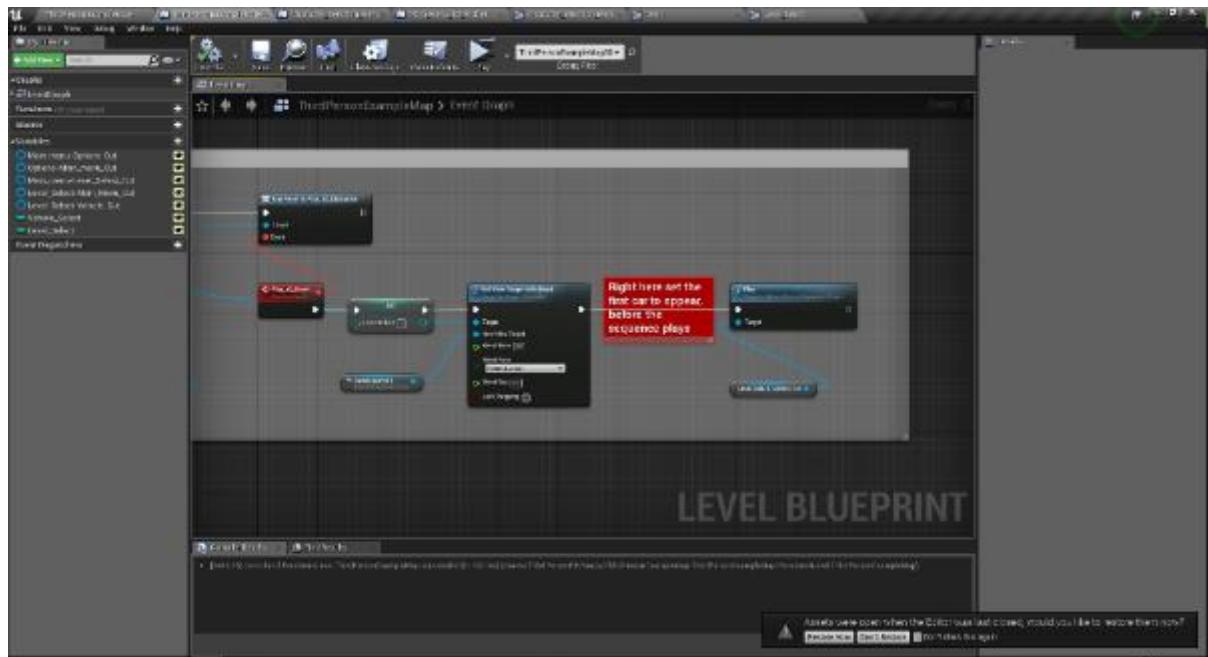
23/11/2018 –

Plan

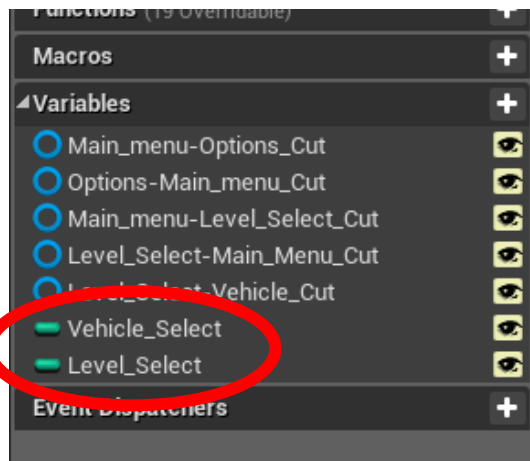
Today I am working on the vehicle selection. However, in the initial plan I wanted the menu system to be completed by last week. I had to compensate this week's Gantt chart because of it.

I still want the level to be complete before the 6th presentation, but if it is not, I still have two weeks of "extra time" on the Gantt chart as a backup plan in the worst-case scenario (my or my teams computer crashes, lose a flash drive or the game mechanics do not work with each other's code). These are all plausible scenarios in which we need more time so, it is good to have a backup plan in that case.

Using Comments as a Reminder



In this screen capture is an example of me using comments that I have set myself from the day before to remind me on what I should do at that part, appropriately coloured.



Theory

I also devised a plan to try and get the vehicle selection and map selection to work. The initial plan is to set two variables once a button has been clicked i.e. the player selects the “Neo-Tokyo” map on the level select.

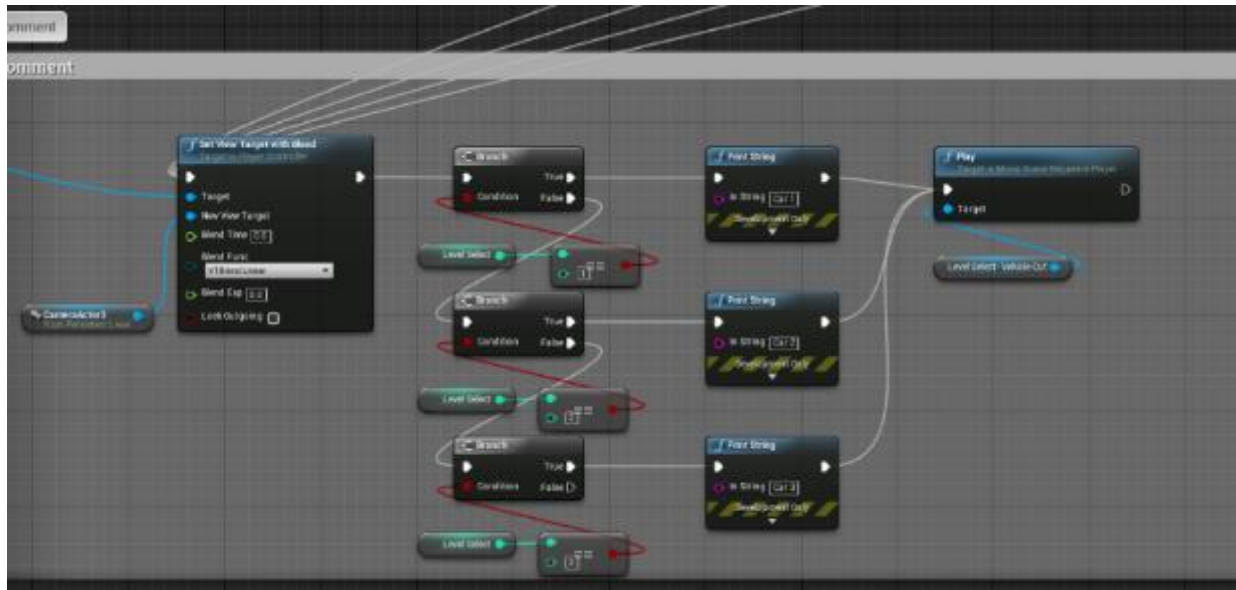
This should set the “Level_Select” variable to “1”.

Then the player selects the 3rd car.

This should set the “Vehicle_Select” variable to “3”.

Now the game knows what has been selected and should load the game appropriately, depending on the variables that have been selected.

Setting up a vehicle for each level



I have set the level variable to change once the button has been pressed. I now have a series of branches to check which level has been selected.

The plan is to select the default car for that level once the player has clicked that level.

i.e.

Neo Tokyo = Car 1

Industrial = Car 2

Overgrown = Car 3

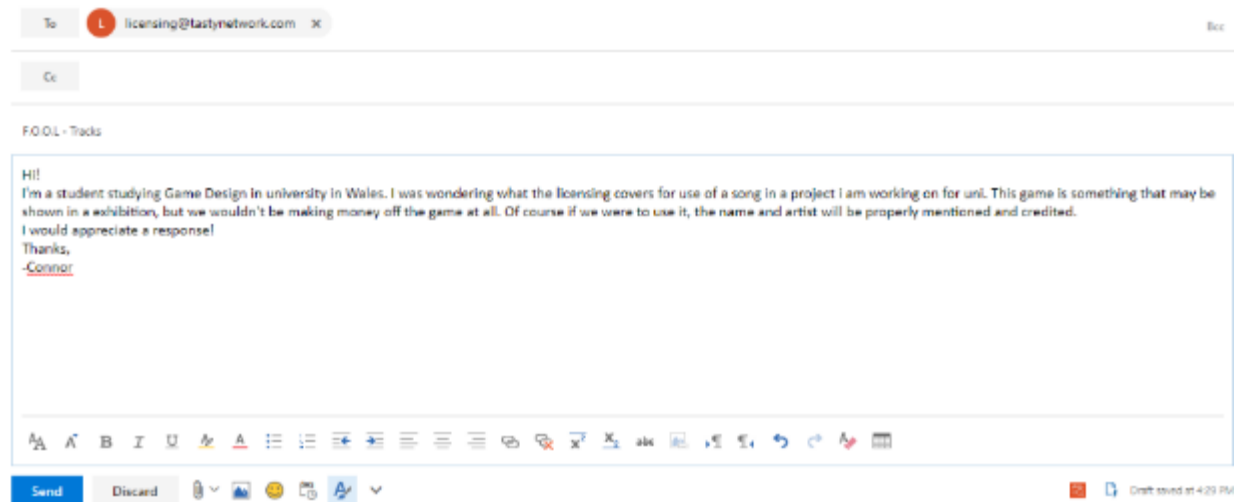
Now the check has been completed, I need to make a sequence that replicated an automated car park.

Logic Eureka

*Reminder if Vehicle and Level variable are the same number do nothing. This will stop the animation from replaying if the player selects the same car.

24/11/2018 –

Email for licensing on Music



Today I emailed the licensing team for a song, with a query on the licensing for use of that song in our project. Hopefully they can get back to us, with some good news.

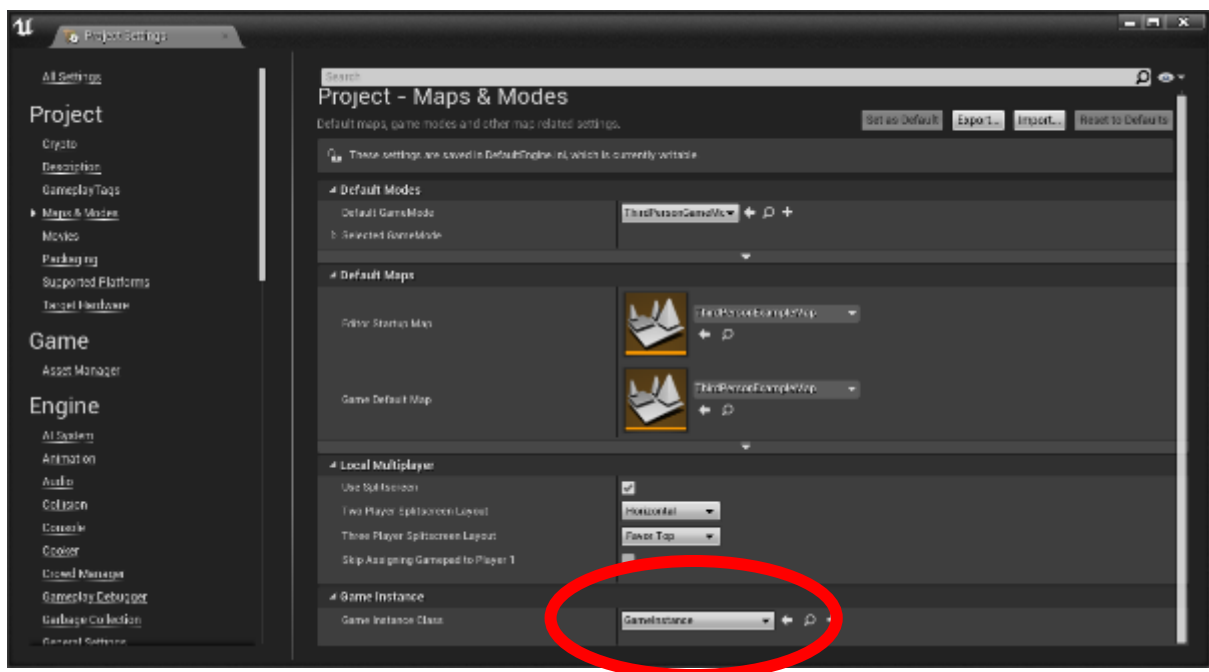
I made it explicit that we would not be making money off the game and it may be showcased.

Setting up the Game Instance (Store Variables)

For the unreal project, my next steps are to sort out animations for the cars to spawn once the corresponding buttons have been pressed. Also, sort out how the game will save the character selection and level select when the player hits the “Start” button.

I will sort out animation after I figure out how to get the start button to work.

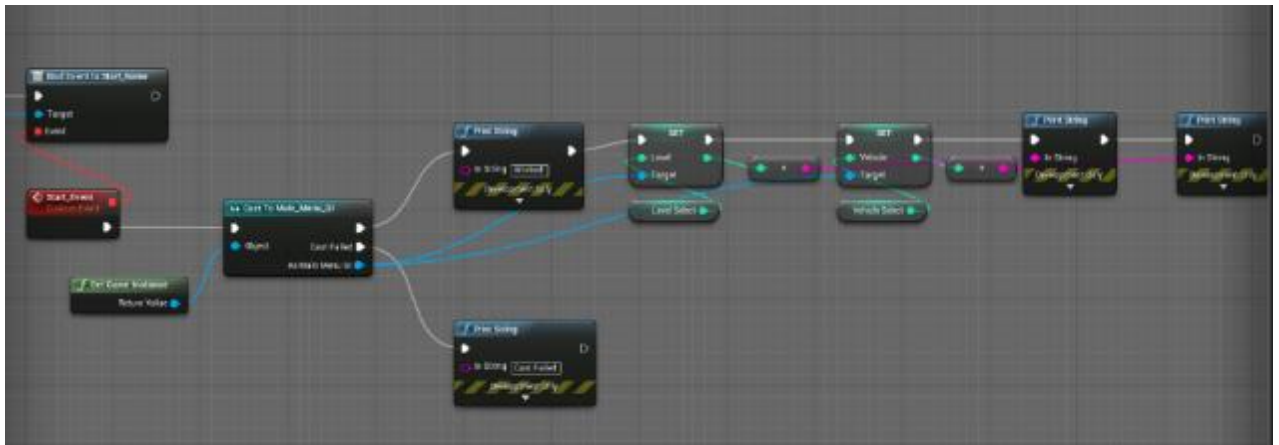
I have been directed to using game instance, so I did some research into it.



Using the tutorial (Wadstein, 2015), I can now set the game instance that I want.

<https://www.youtube.com/watch?v=5w594D3qtLs>

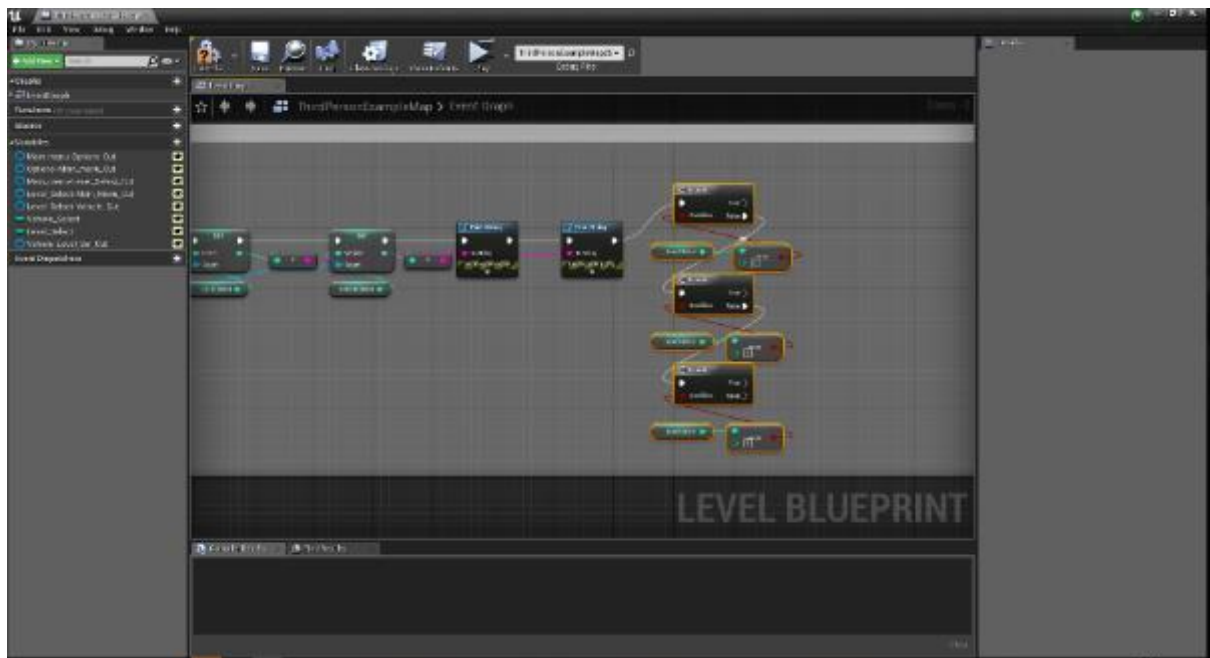
Coding the game instance



Using this code, I bound the level and vehicle variables to the game instance.

My next step is to set up two test levels and two vehicles for now.

Logic of Game Instance



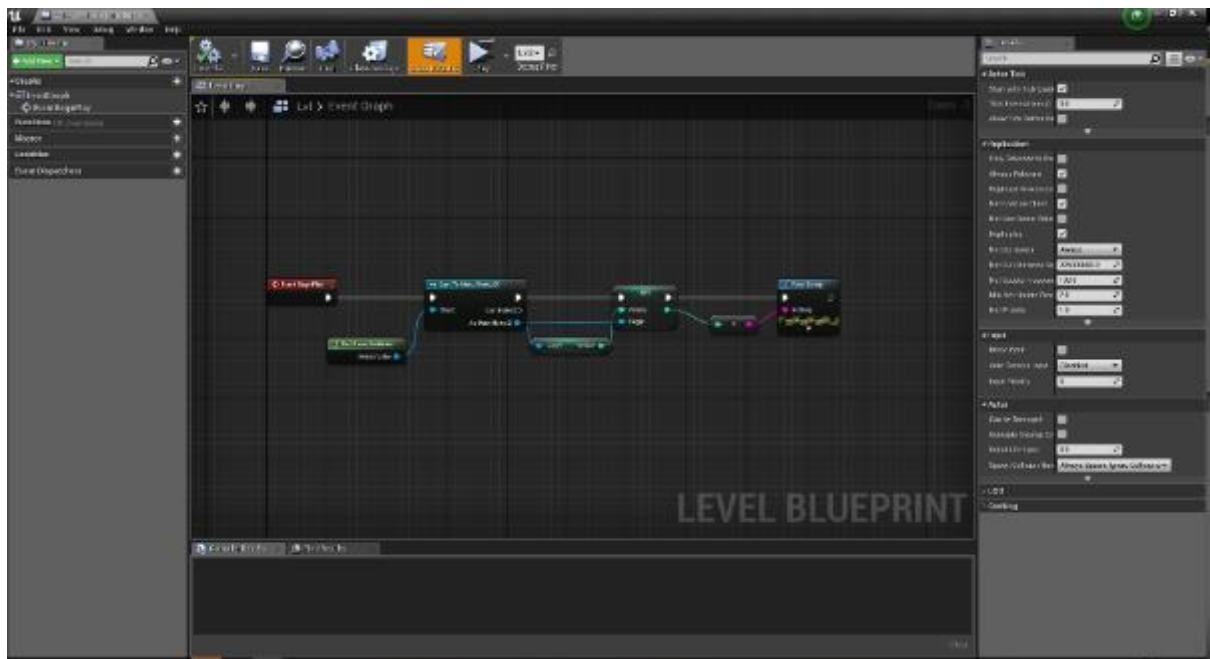
With both test levels set up I can now start opening levels dependant on what the user chose.

```
If Level_Select = 1 – Open (“ Lvl_1 – Neo_Tokyo”)
```

If Level_Select $\neq 1$ –

If Level_Select = 2 – Open(“Lvl_2 – Industrial”)

Etc...etc



In the level itself I set up a print string to tell me the current vehicle variable.

This will tell me if it stored it across levels.

Test

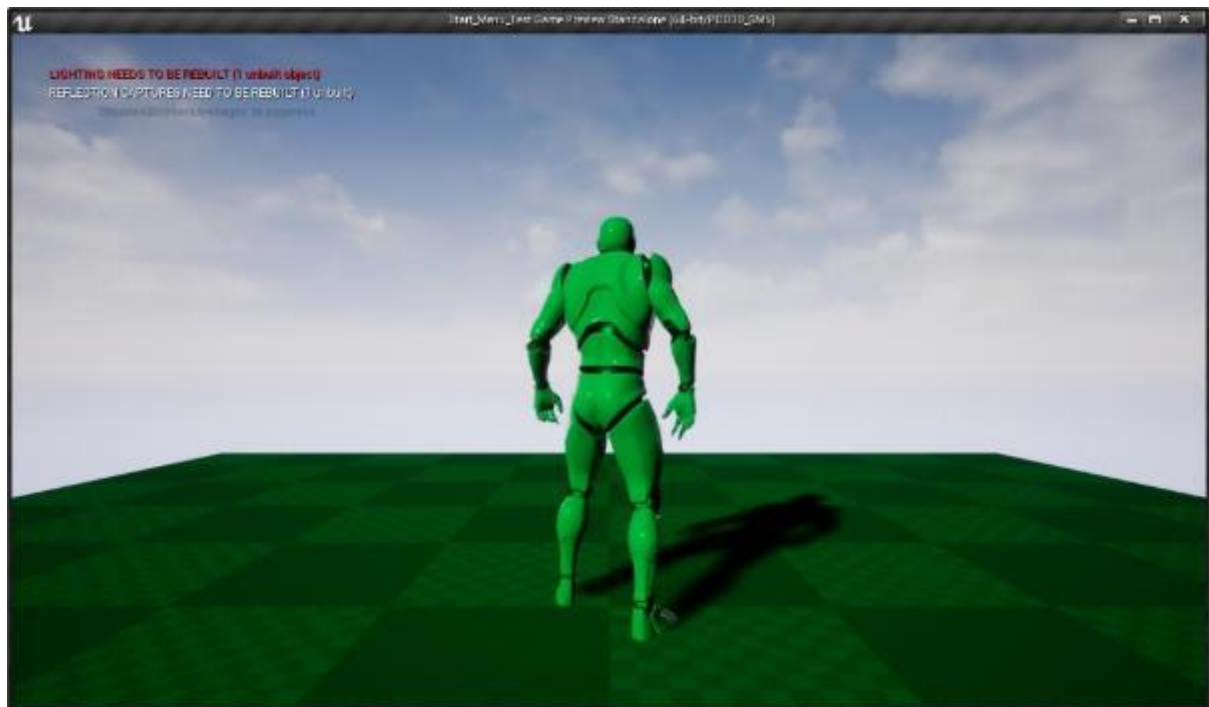
The level selection works. Here is an example.



(Neo highlighted)



(Start Highlighted)



(takes you to lvl_1)



(Industrial Highlighted)



(Takes you to Lvl_2)

Success

(Refer back, to change Character model)

<https://www.youtube.com/watch?v=mdtDm6uXJVQ>

Since we do not have multiple vehicles implemented yet, I cannot change the character. But the variable does store across levels since I have tested that it does using print strings and game instances.

I will need to refer to this tutorial (PyroDev, 2017) that shows you how to replace the mesh of the character with a click of a button.

26/11/2018 –

Plan

Today I am going to try work out how to sort out the character selection screen and have the animations sync up with what button has been pressed.

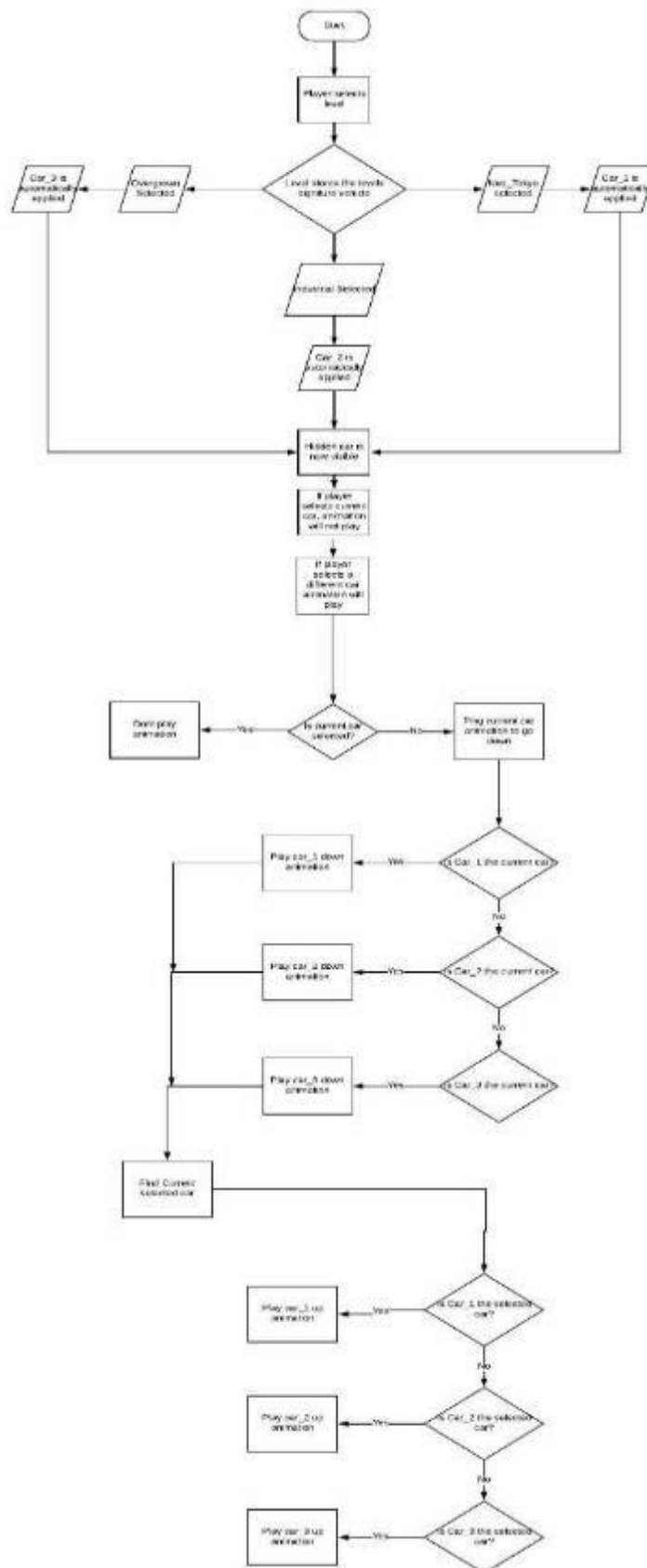
I started by making myself a flow chart, so I can follow along with the logic in my code. It might not be perfect, but I am going to need it, so I do not lose track of where I am.

I used LucidChart (Lucidchart, 2018) to generate my flowchart. It is an online tool used for creating flowcharts with ease and then exporting as a JPEG, so I can use it in Word.

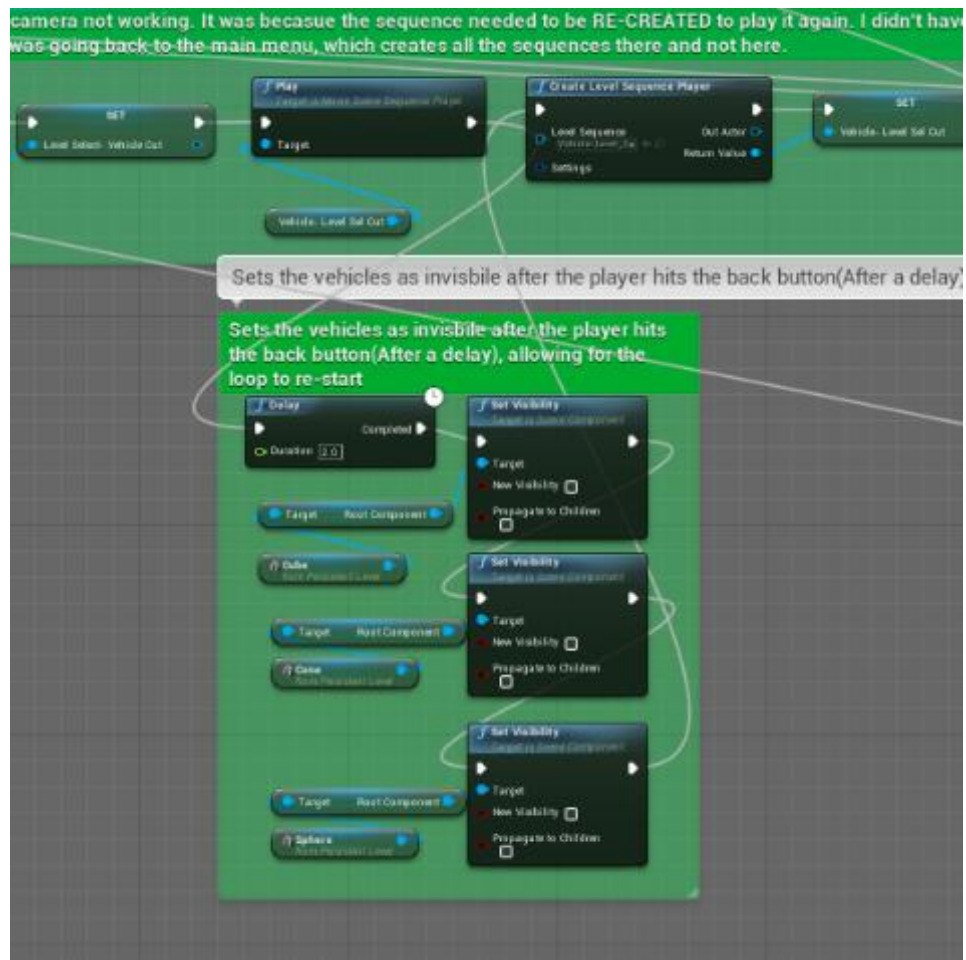
<https://www.lucidchart.com/?noHomepageRedirect=true>

Flowchart before implementation

This is the chart I came up with and I will try use it, so I do not lose track of where I am with my code.



Back Button



I have added in a feature that the chart did not have. It was turning all vehicles invisible as soon as the back button is pressed this allows the “invisible now visible cycle” to restart once the back button is clicked.

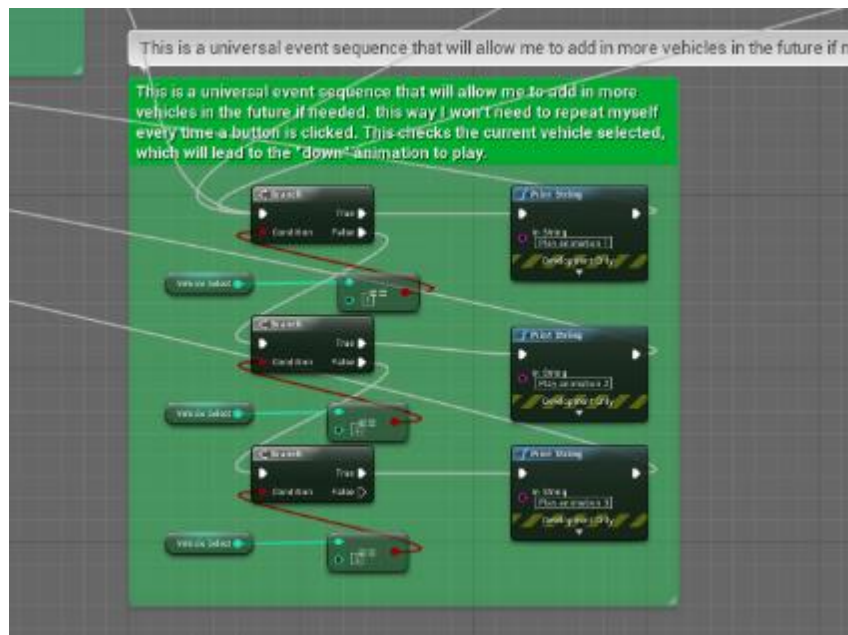
Now the initial loop can be restarted I now need to implement an animation with each button and make the vehicle switch as smooth as possible.

Theory

1. Call an event that checks the current vehicle selected and plays the down sequence accordingly. Then have another event that checks what button was selected and plays the up animation of the vehicle.
2. Assign a down event, on each button, based on what button was pressed and then play the up animation.

The first method I thought of is probably the most usable, if we want to add in more vehicles to the roster. So, I will try the first approach to the idea.

Logic Gate to play animation



This is what I came up with after my methodology. All buttons go through this event sequence, which will lead to the down animation to play and then the “up” afterwards.

I have realised this method is flawed since when you click the vehicle button its sets the current vehicle to that button. Not having a way to tell the players current vehicle before selecting the button.

I may need to implement another variable that holds the current vehicle before it transitions to the next one.

(Eureka moment)

I have resolved this issue by taking off the “set vehicle” node I had on each button. Now I am going to set the vehicle **after** the animation has been played. This way every time the player hits a new button the down animation will play accordingly and then set the new vehicle to the button and then play the up animation of the chosen vehicle.

Connecting Level Select to Vehicle (Dynamic)

I then set up a button click variable, so the system knows which button has been selected, which should lead to the up animation of that selected vehicle.

Example of the system working;



Me selecting Neo Tokyo which means vehicle = 1

Applying Logic Gate to Vehicle Selection



The game then made the box visible. I then clicked on the second vehicle and the code reads
(From bottom to top):

Play animation 1

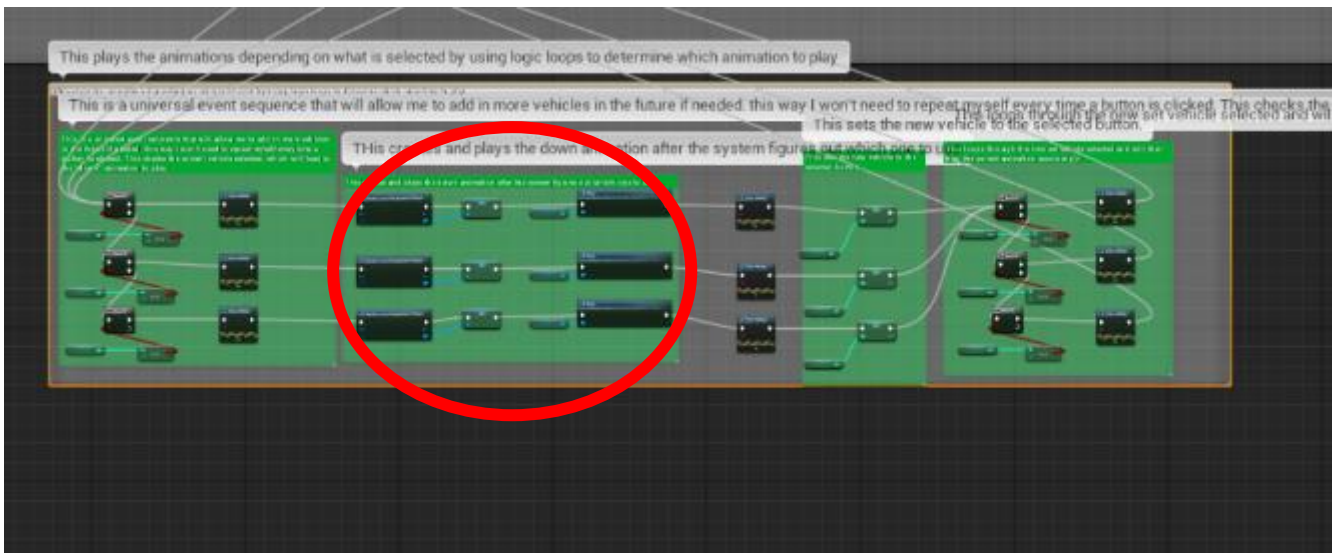
(This is a place holder for the animation of the first car going down.)

Set new Vehicle to

2

(This then sets the new vehicle which will then play the up animation for that chosen vehicle)

Now the code is working I can now make the animations of each vehicle going up and down. Then implement them into the menu.



The “down” animations have all been created and implemented with no issues. Now I need to create and implement the “up” animations and everything should work.

I have created all the up animations and implemented them which did not work as well as I had hoped. I will tinker with it until it works.

There was a problem with visibility, but the sequences will not play one right after the other.

Flaw #1

I realised that if I implemented a delay right after the first sequence the sequences will play right after each other.

But then another issue occurred where the platform would disappear after the sequence had been played. The selection system worked its just finding a way around making it appear again.



After a further 1 and a half hours on the issue I added in two separate delays which fixed the issue, it is just that after a quick split second the platform would appear on screen then disappear.

Resolve Flaw

I then tinkered further using a set visibility function, by turning it off and on whenever the platform would glitch. Technically the problem is fixed, but it would still occur if I turned visibility on.

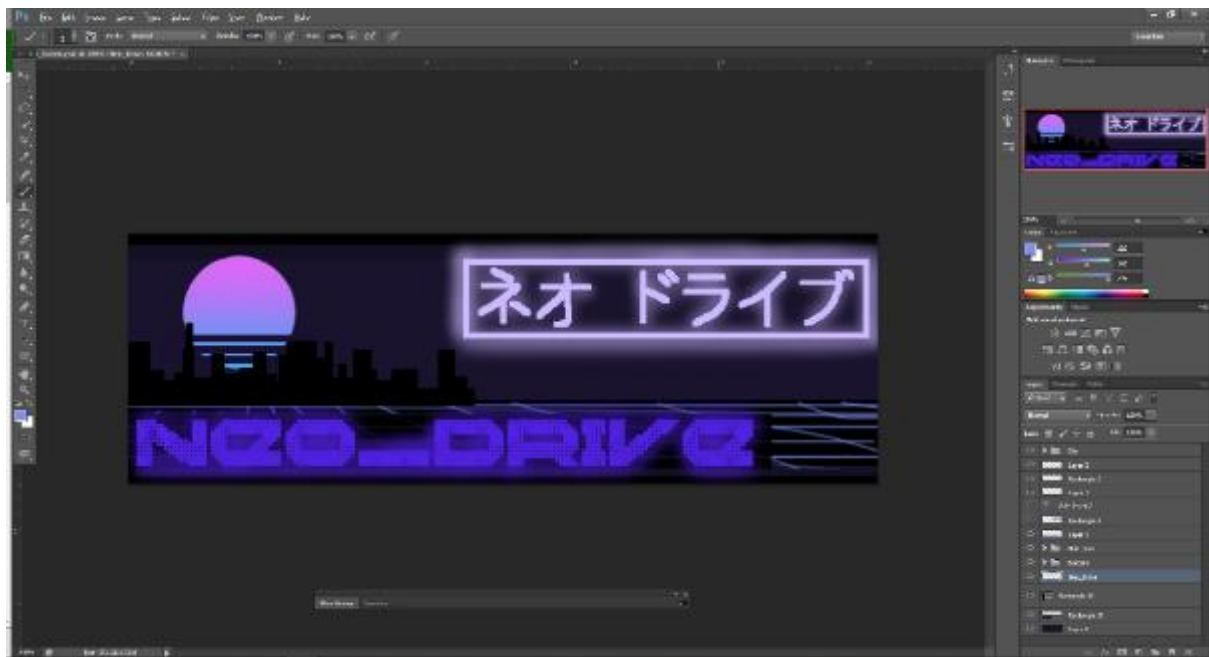
I DID IT

The menu system is now fully working, now I need to implement the character change like I have done with the level change. I may also need to implement some options for the game like resolution, quality etc.

The only problem I have with the menu, is that it is not fool proof. You can easily break the menu by spamming clicks on all the buttons. I am going to have to find a way to disable any input once a button has been clicked.

This is a problem for later since I have spent so much time working on the menu already.

Having a Break (earned)



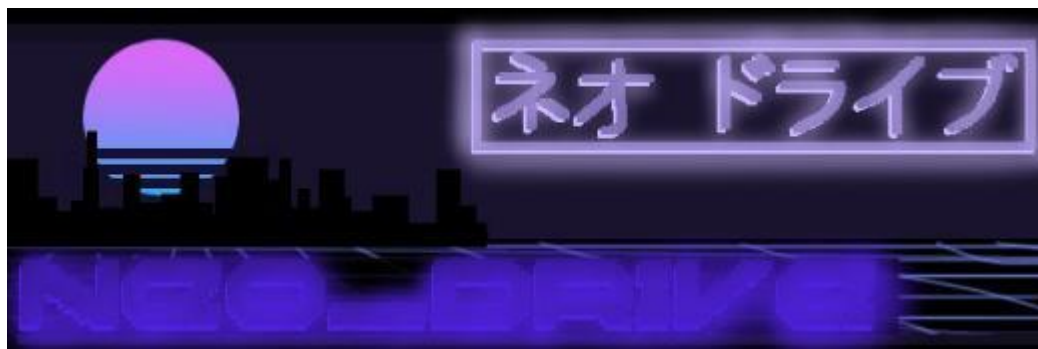
I decided to take a break from Unreal and work on a quick splash screen for the game.

<https://www.pinterest.co.uk/deathdealer642/mood-board-new-neo/>

Using my mood board (Pinterest, 2018), I came up with this using shapes, colours and gradients to make a cool logo. This is only a rough sketch and will likely change it in the future.

https://www.dafont.com/neonize.font?text=NEO_DRIVE

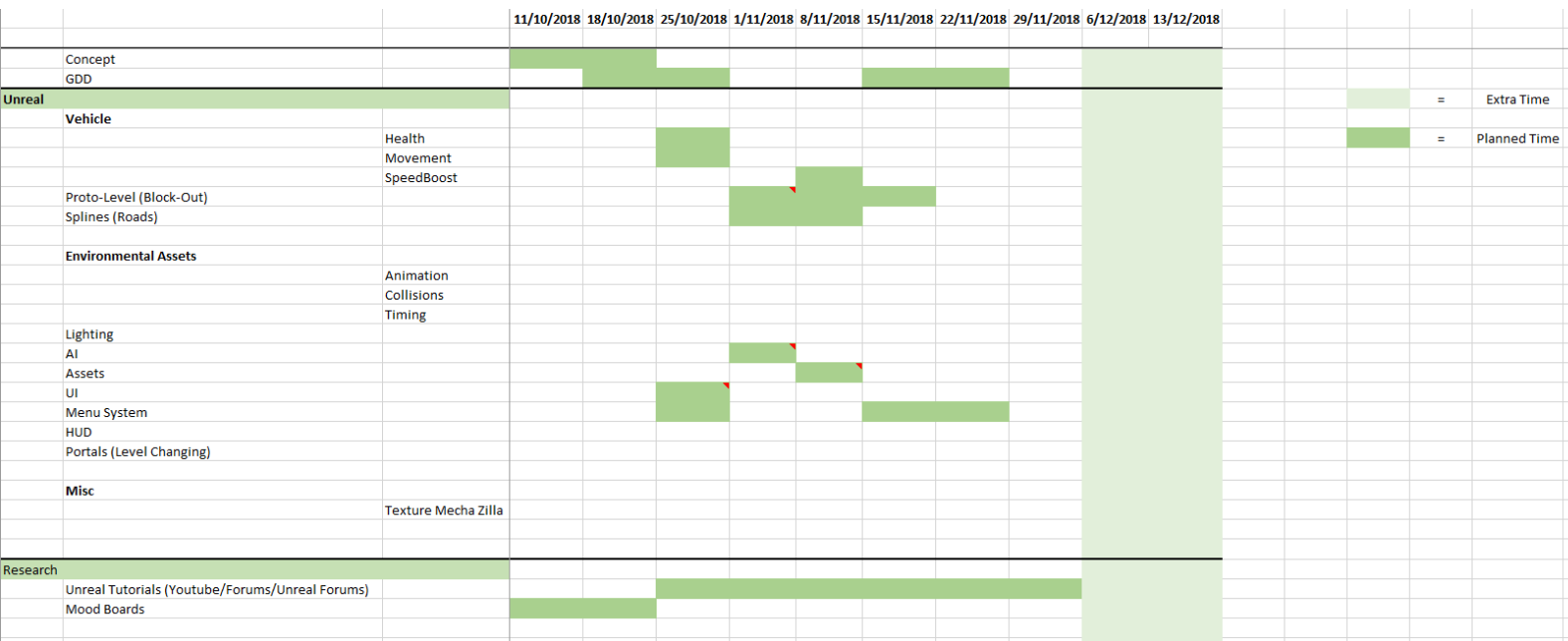
I also found a cool font using Dafont (Dafont.com, 2018) that is free for commercial use, I just need to contact the owner that I am using it.



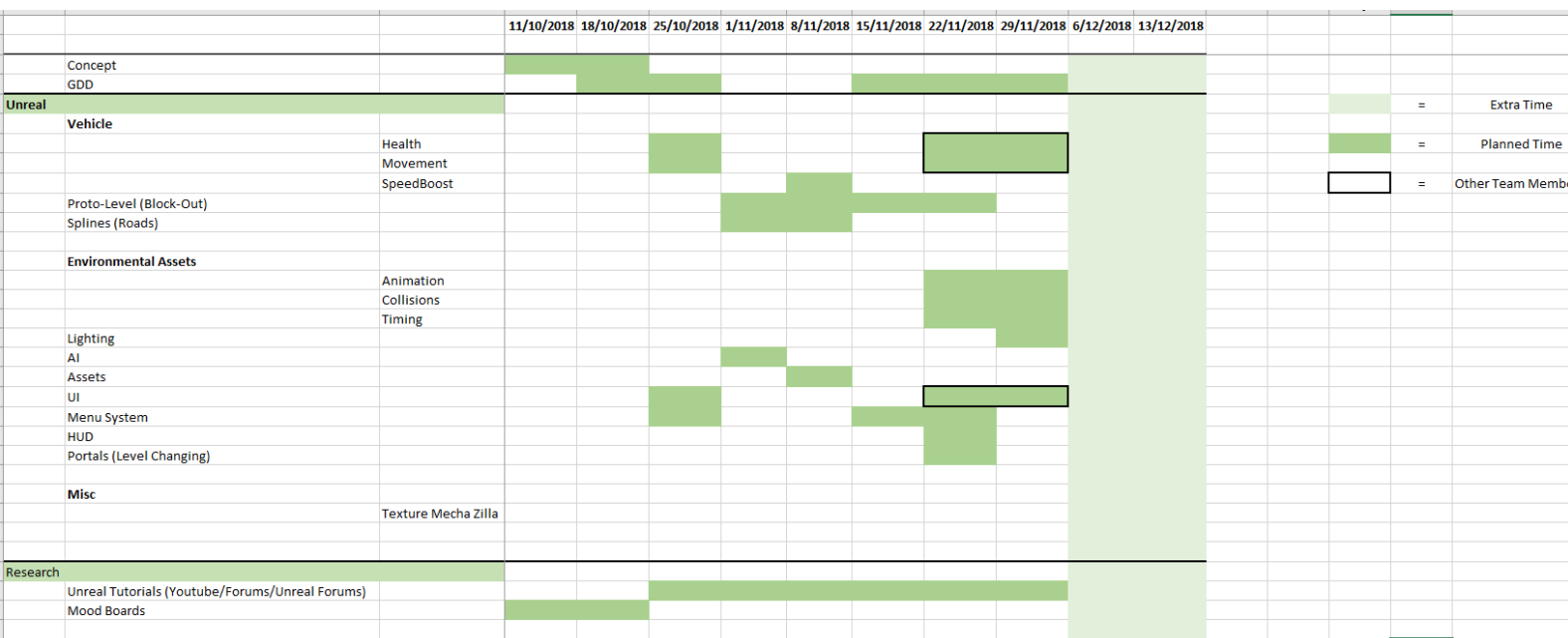
29/11/2018 –

This is just a quick overview of my Gantt Chart for this week, since I am mostly on track I wont be creating another plan for next week.

(What I have done this week)



(The plan for next week)



30/11/2018 –

Demo: Open Day

Today me and Nathan were asked outside of class to see if we could get a demo for our game, for the open day.

We created a basic loop in the game and made a very basic main menu system.

The game starts > Main Menu appears > Quit or Play > Play leads to the block out of Neo_Tokyo and a basic portal closes the level and reopens the main menu> Loop



We made a quick show board with our game name and controls. We also left a feedback form next to the game.

"Feedback

Anything you liked?

Anything you hated?

Let us know!!"

We are hoping to get some basic feedback, since the game is still in its development stages.

Also, as a team today we discussed that on the Tuesday us Unreal Team will put all our levels together. Ready for the presentation on the following Friday.

This should also give us some time to work on any kinks on the game before the presentation

01/12/2018 –

Overgrown (Block out, again)

After working on other assignments for other projects I am jumping back into Unreal. Today I am going to make a start on the block out for my level "Overgrown".

I am going to do some research on some basic game design theory, to make sure the level feels nicer to play, but I will also implement cinematography to make some scenes in the level better.

(Rouse, 2004)

02/12/2018 –

Plan

Today/tomorrow my list of things to do consists of:

Import mechanics

Creating the blockout of Overgrown again

Creating the falling building trigger box.

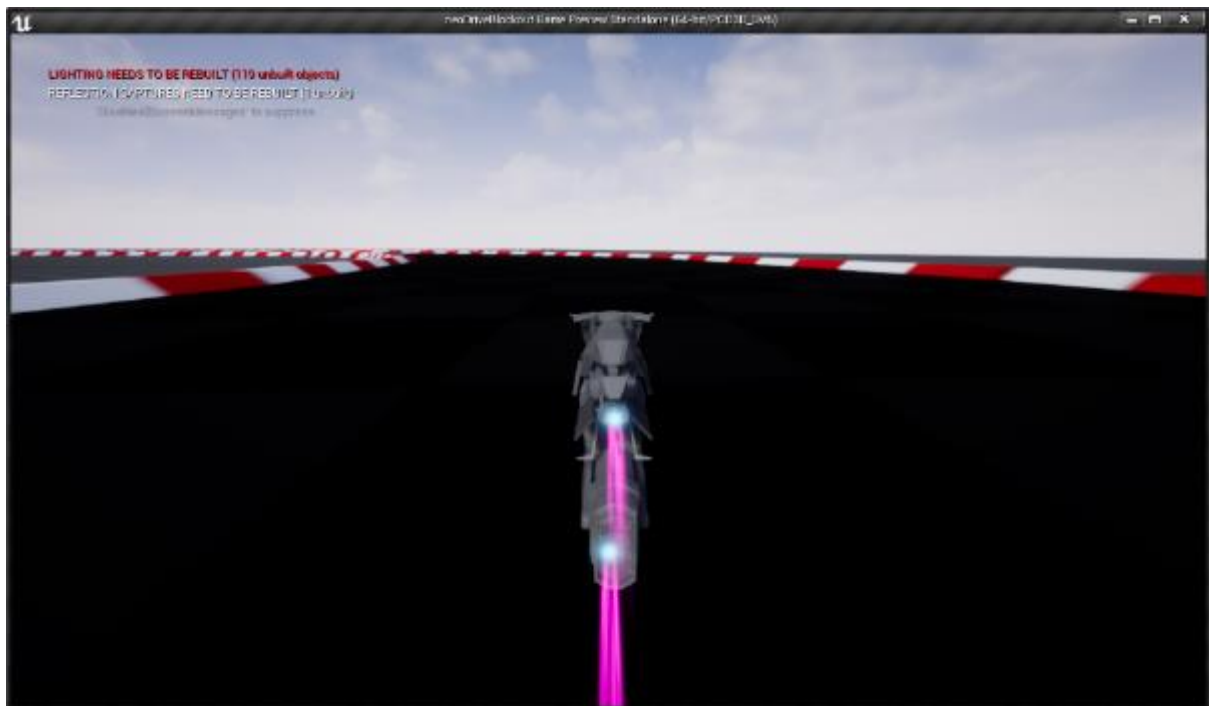
Create particle effects

Make the main mechanics work

I have been having problems setting up the project. I tried migrating all the assets I needed from Matt using Google Drive. However, some variables that had been previously set disappeared. So, I had to redo the project on Matt's project file. This works fine.

I am hoping to create a 3-4-minute race with the level design I currently have. I may need to elongate some parts since the last block out timed in at around 2 minutes.

I started working off Matt's level and had to replace the spline material with a physics material for it to work.

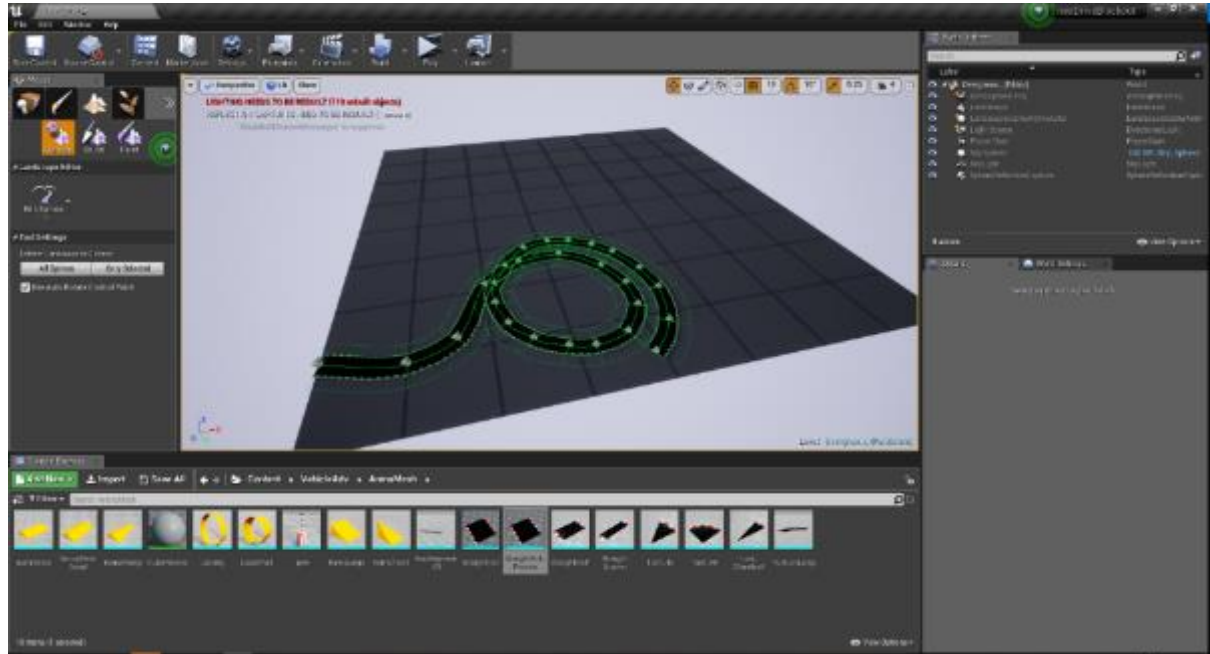


(Example)

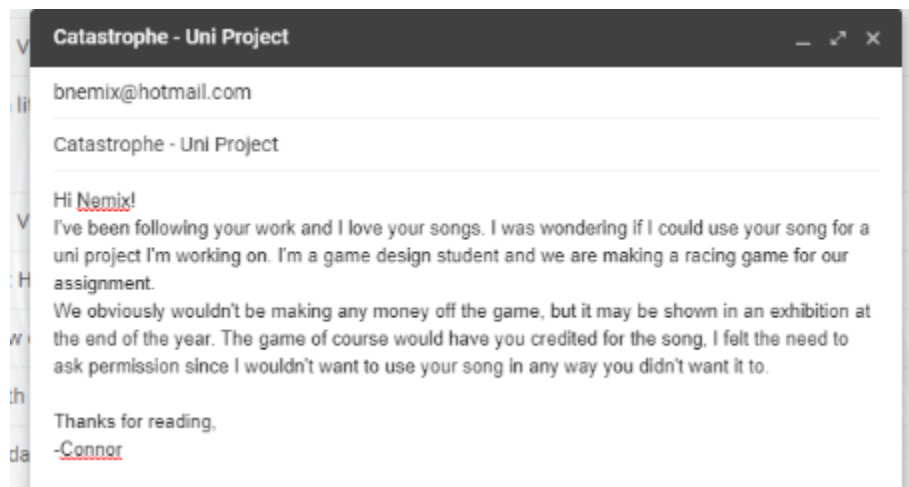
Spiral #1

Now the core mechanics are in place, I can start building the map again.

Since we are using a completely different system as to the last block out, I made the decision to start again.



Email for licensing music #2

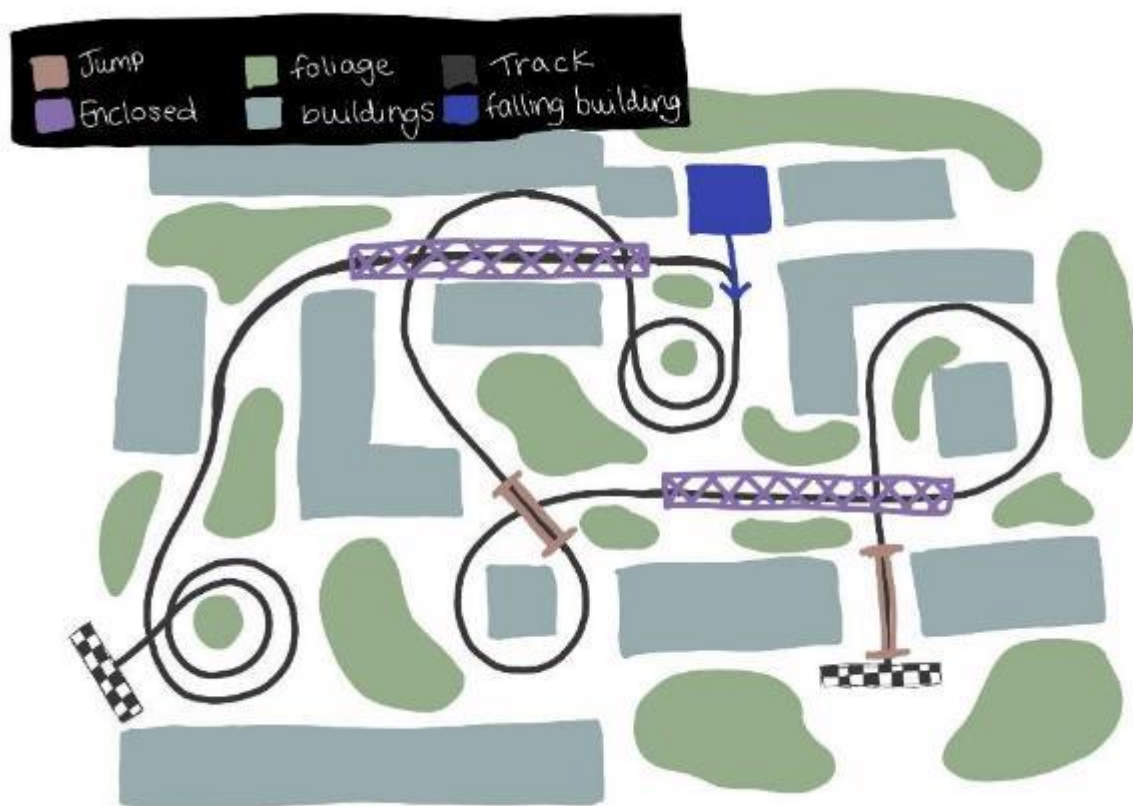
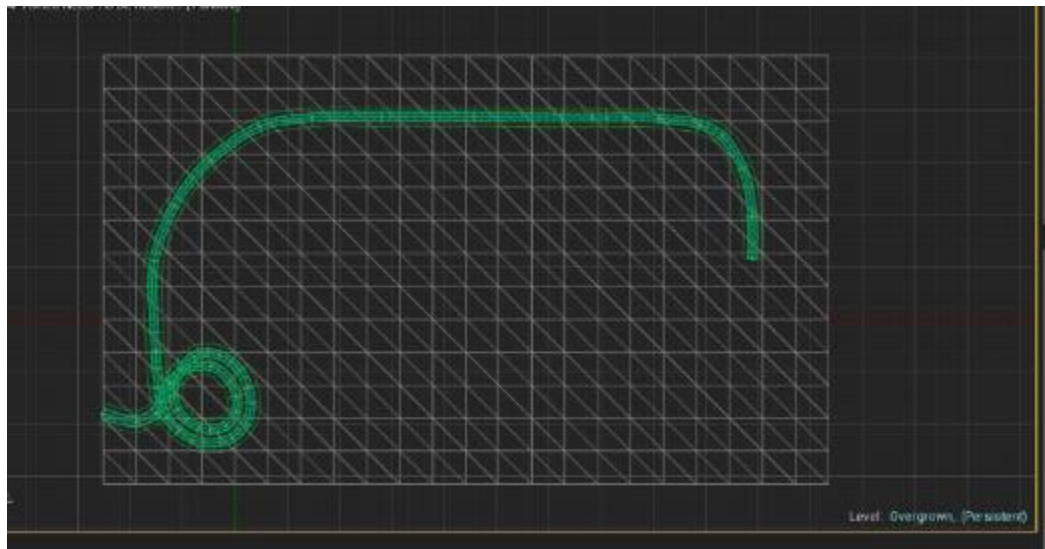


I also emailed about another song I wanted to use in our game, this time using a personal email.

I found his music on YouTube (Nemix, 2016) then tried to contact him about his music.

Long Straights

Top down view of the current level, I made some changes to the exact level design.



Stopwatch Test

I made the straights longer, this way when the level sequence happens where the building collapses the player can see it more clearly, without having to worry about moving the vehicle.

=====

Hover Bike (Full Speed) Stopwatch

First straight (Just after loop): 15 secs

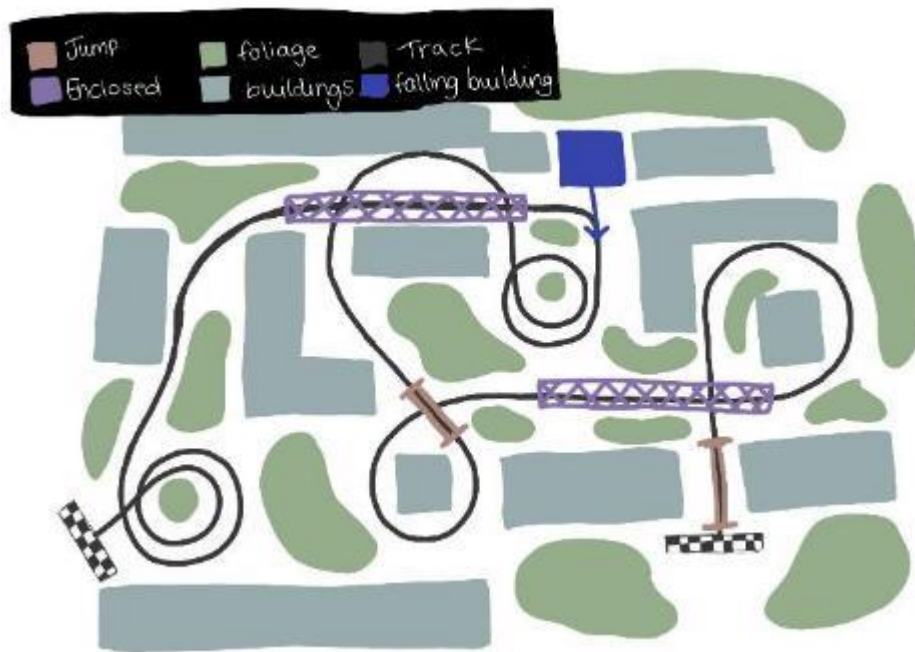
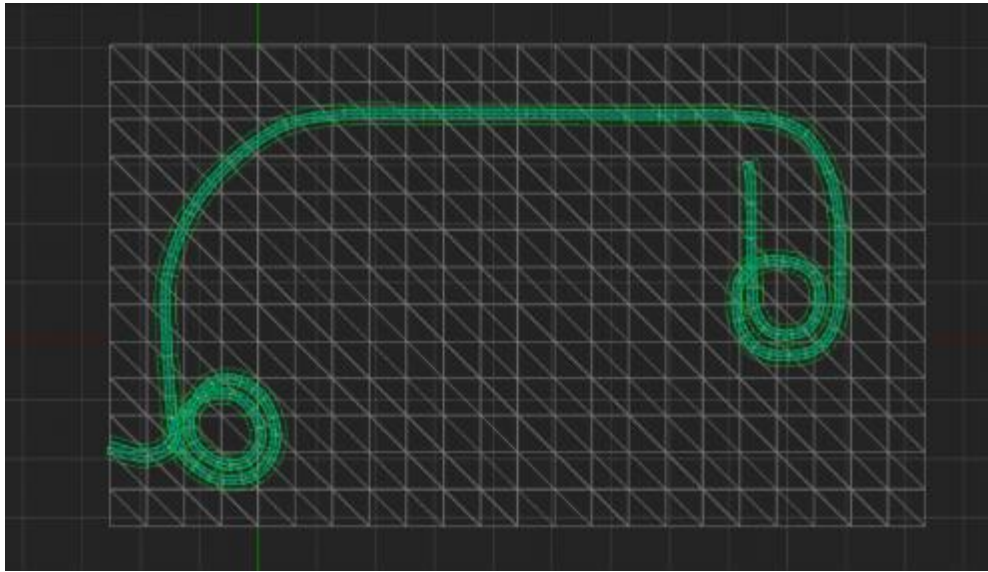
Second Straight (Looking Directly at building) : 11secs

Total straight time: 26.64 sec

=====

Using these times, I can work out how long each sequence has.

Spiral #2

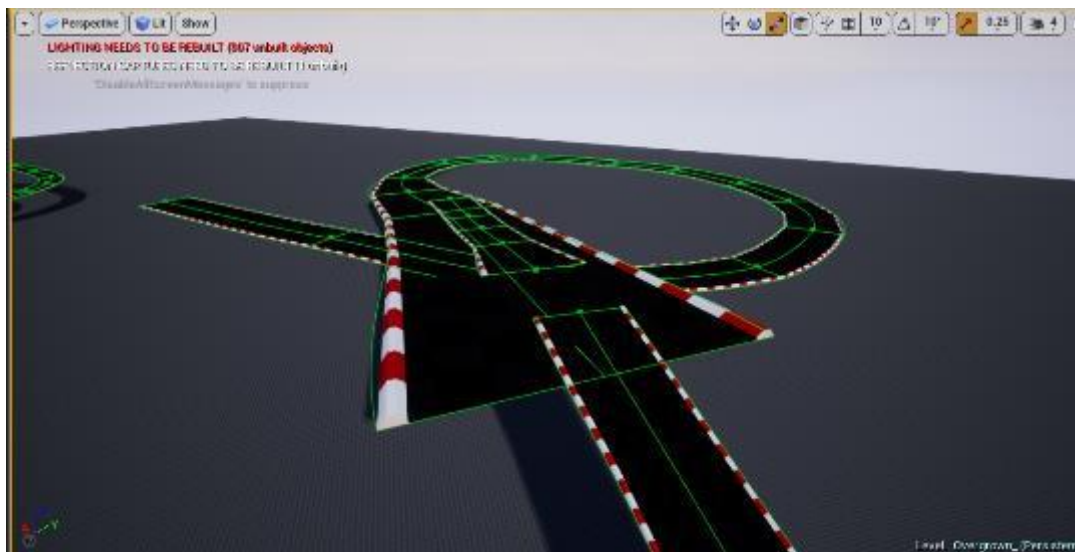
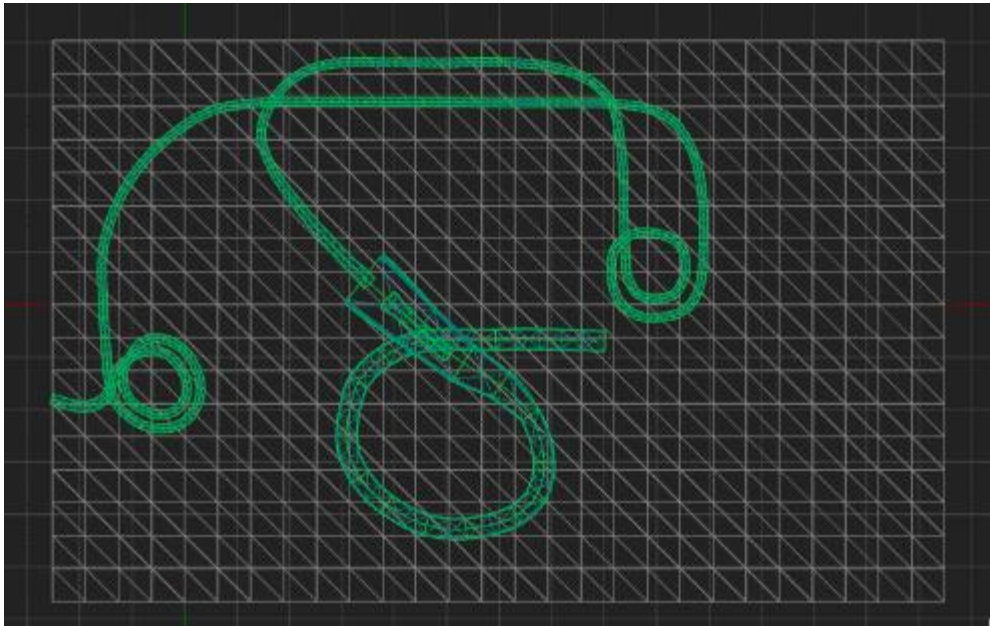


=====

Time: 1:21 as is Hover Bike (Full Speed)

=====

Jump #1



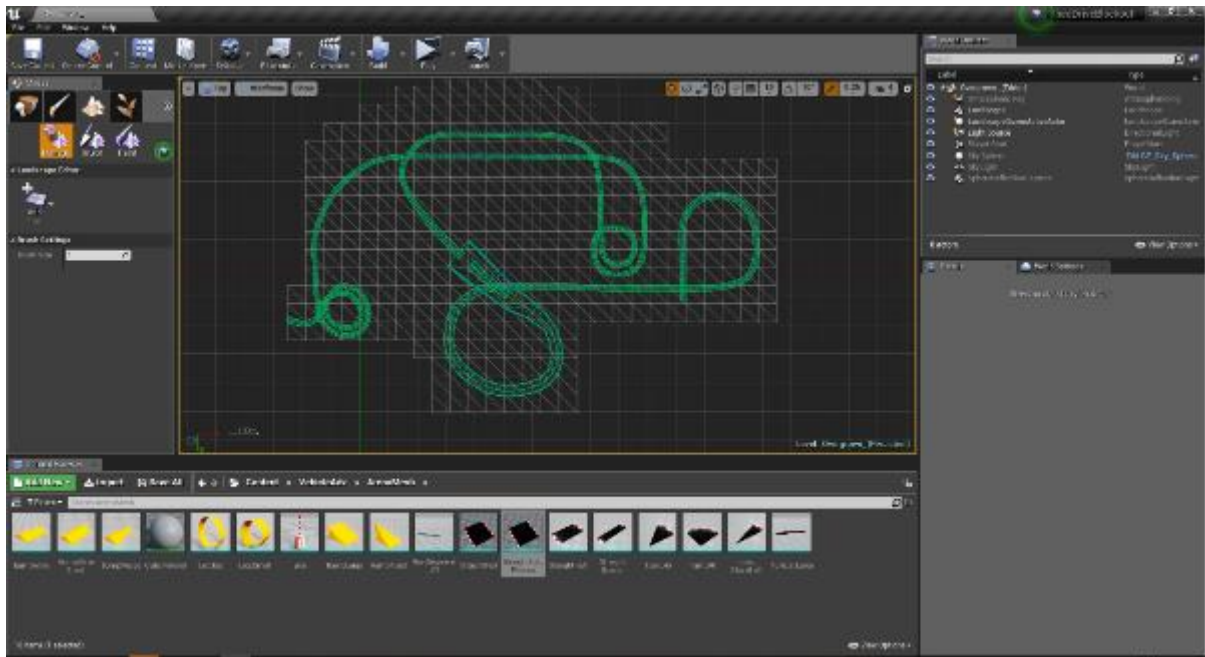
I have added in a jump with a catch on the bottom, in case a slower player cannot make the full jump.

=====

Time: 2:22 as is Hover Bike (Full Speed)

=====

Jump #2



=====

Time: 2:46 as is Hover Bike (Full Speed)

=====

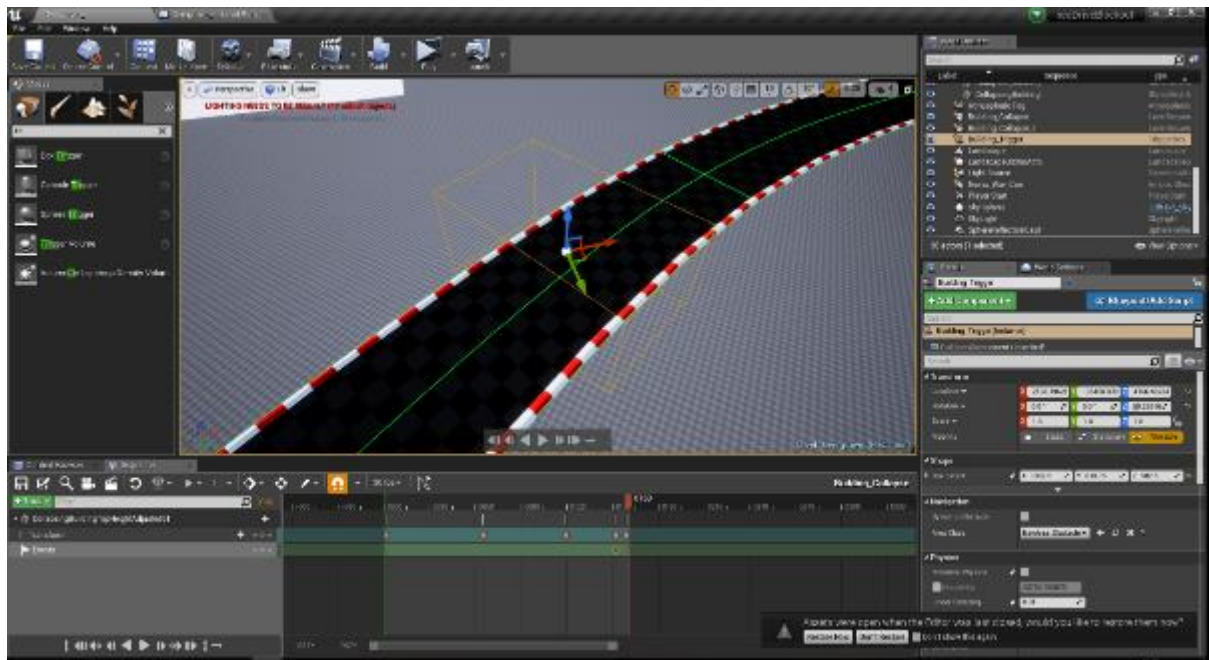
2:46 is the total time it takes to get to the end of the level by Hover Bike at full speed. This is not too long but I was expecting it to be longer. For now, I think this is fine, I may come back to this later.

Adding the moving building

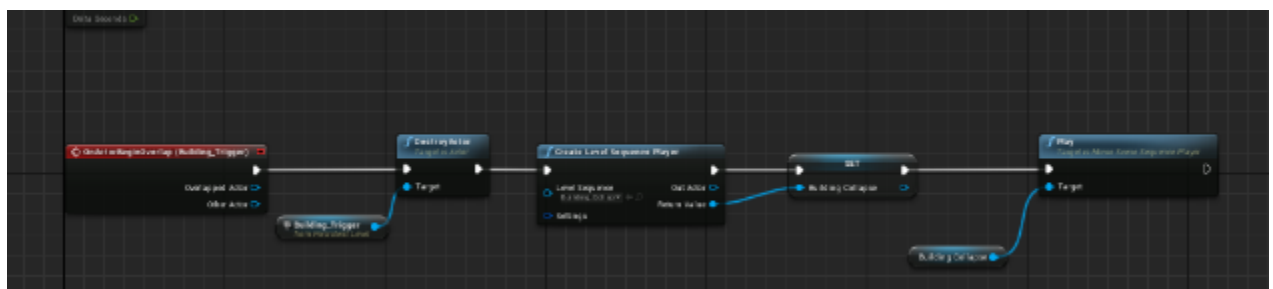
Using a Level sequence and the imported assets from google drive, I will make the building fall once the player reaches a certain point.



(Start and end of level Sequence)



(Trigger Box)



(Level Blueprint Code)

By adding both a level sequence and trigger box the building falls. After multiple attempts to make the building fall more naturally I settled on one, since it takes too much time. I will have to come back once the game has been white boxed.

03/12/2018 –

Today I am going to make the level a bit more dynamic. Making some sounds and the building fall look more real.

Audio



Using a website called FreeSound (Freesound, 2018) I have found a few sounds that could work together to get the falling building sound I want.

<https://freesound.org/people/Robinhood76/sounds/99197/>

<https://freesound.org/people/TurtleLG/sounds/80450/>

<https://freesound.org/people/Autistic%20Lucario/sounds/142606/>

<https://freesound.org/people/benjaminharveydesign/sounds/366089/>

<https://freesound.org/people/roccapl/sounds/86322/>

Working these sounds together is the next step.

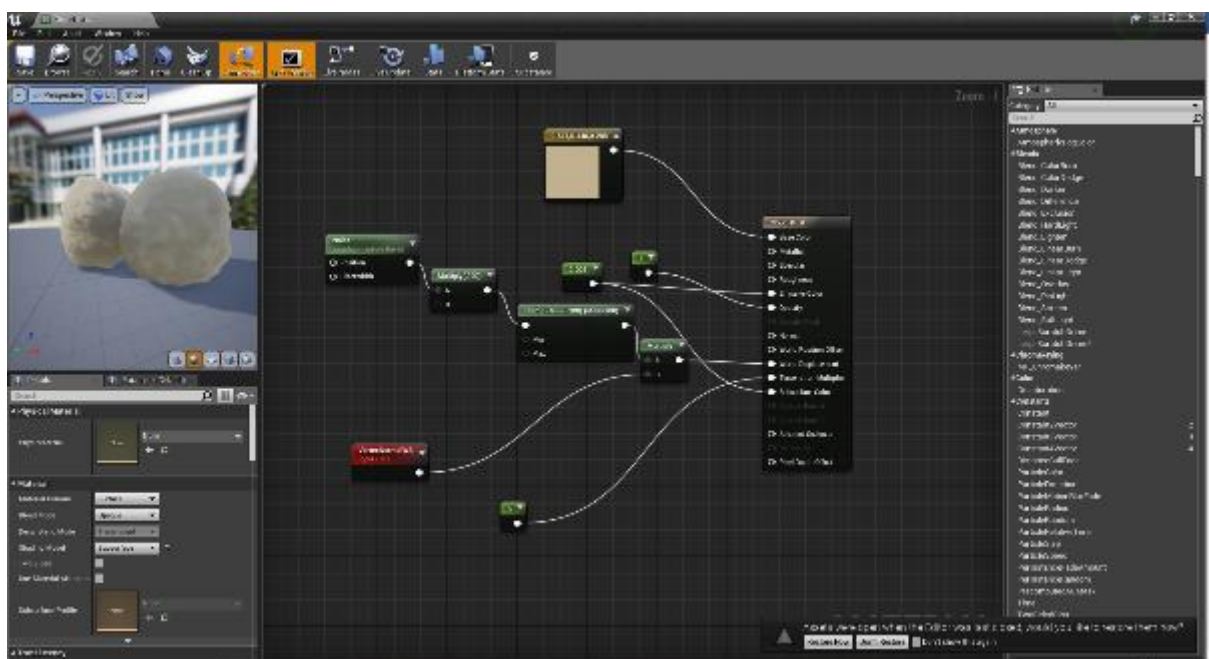
Dust Cloud

<https://www.youtube.com/watch?v=g8A0Etf-ekY>

Using this tutorial (Steve's Tutorials, 2016), I also created some temporary dust clouds, for when the building falls.



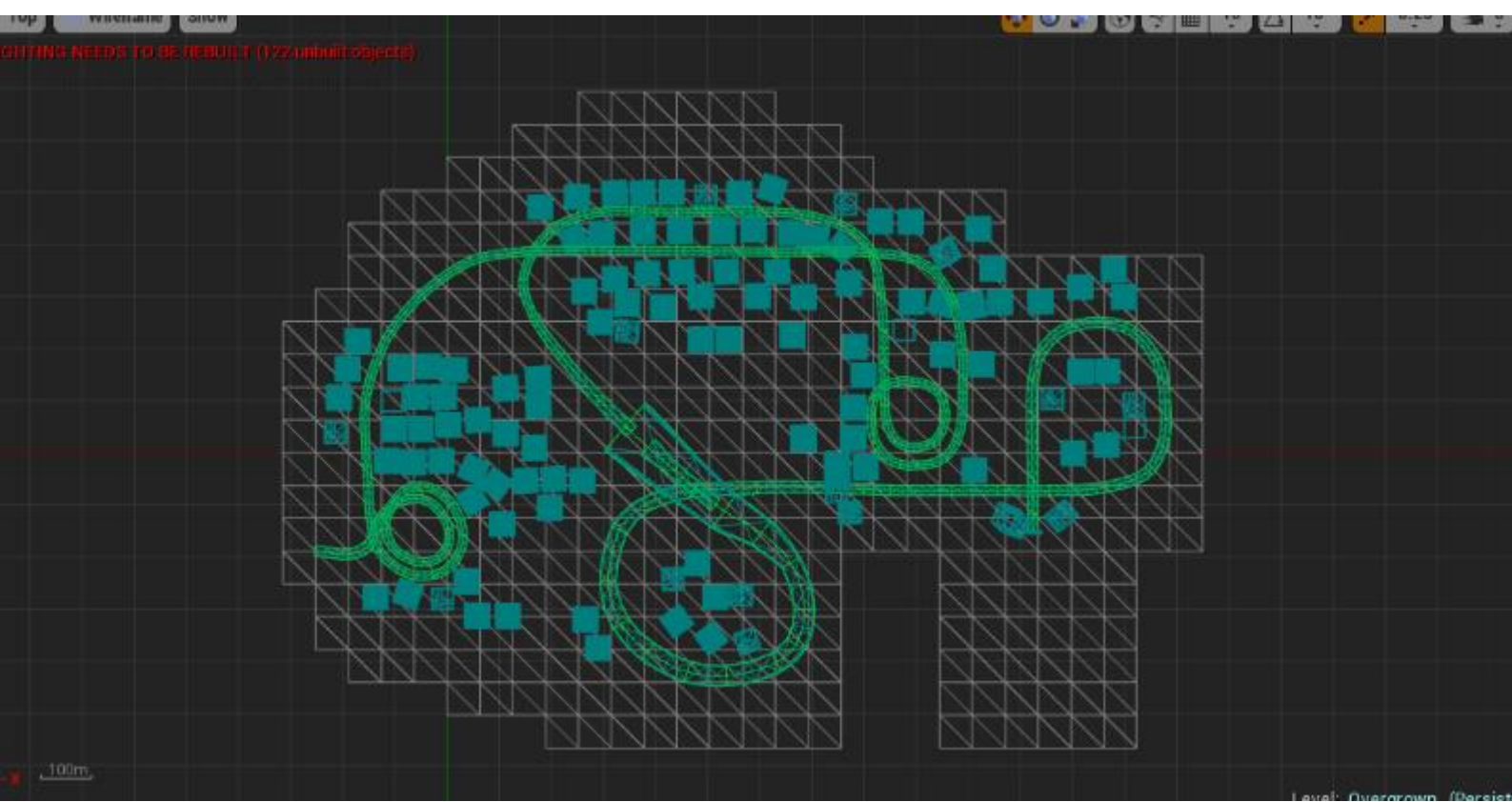
I had some flaws with the clouds becoming transparent, but its only temporary.



(Example of the code)

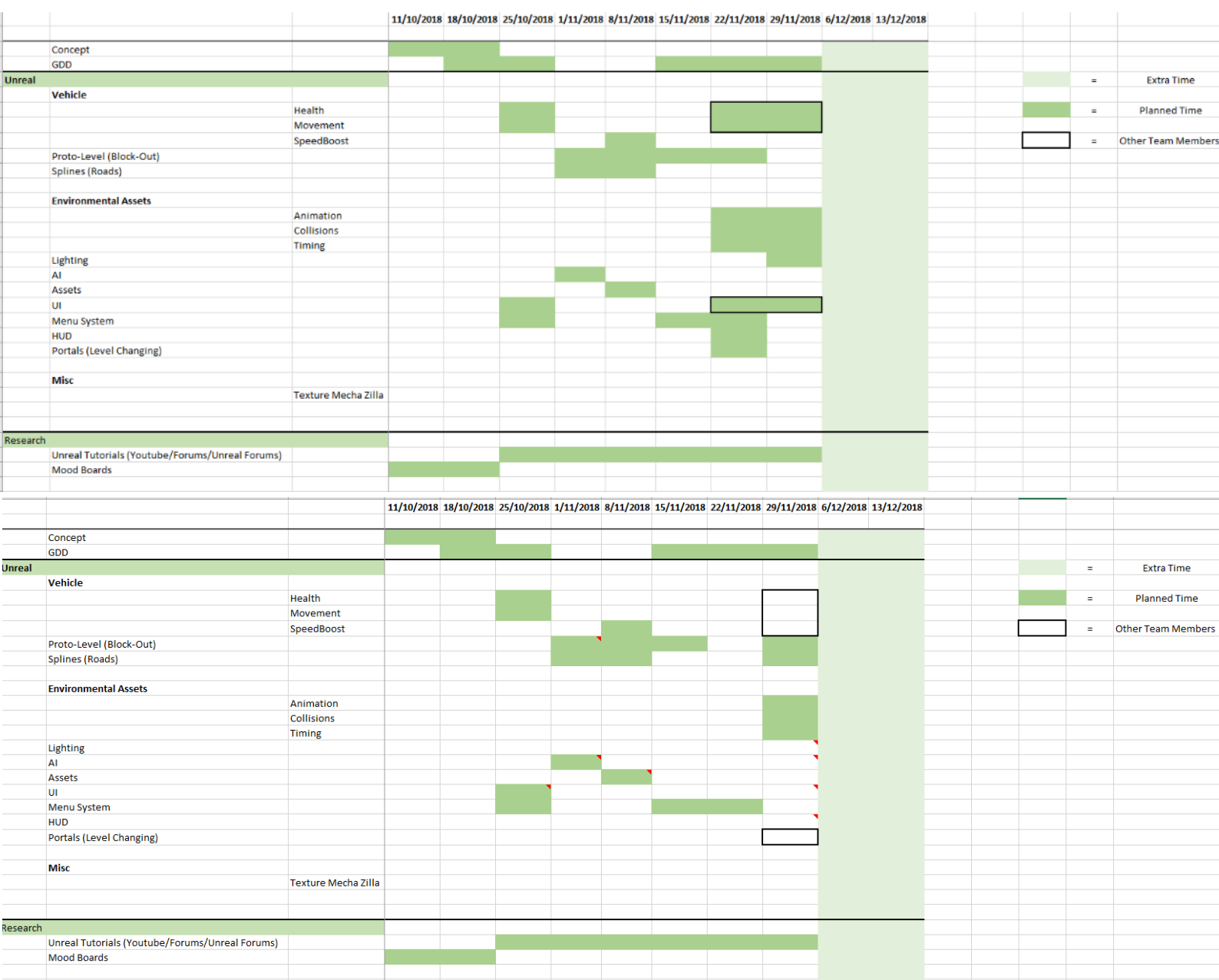


(Establishing shot)



(Adding more buildings/ Fleshing out the world.)

I have left a lot of space open for the foliage part of the level, which will be added later.



This is the final comparison between both of my Gantt Charts, the final plan I had for this week (Top) and what I had completed this week (Bottom). Due to our lack of scope some mechanics were not implemented but will be next semester.

04/12/2018 –

Neon Arrows

Today I am working on a texture for the Neo_Tokyo Level.

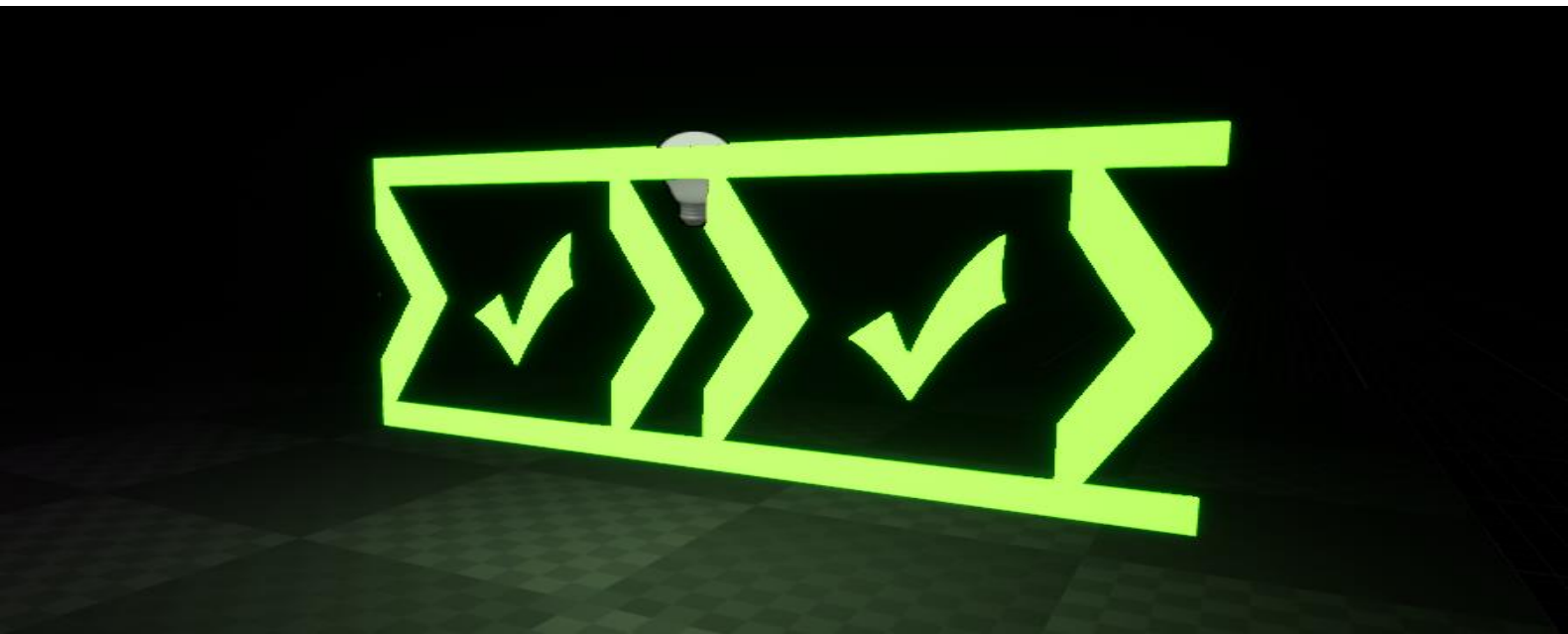
Nathan wants neon moving arrow, so I used two tutorials on YouTube to get this done. (Steve's Tutorials, 2015)

<https://www.youtube.com/watch?v=3NiOLIEZzLo&index=9&list=PLuB7NQxkpPJF5ZfJKNIGVzundVz2VF->

https://www.youtube.com/watch?v=G7rj_QlhNGI&index=14&list=PLuB7NQxkpPJF5ZfJKNIGVzundVz2VF-



Using a panner I made the arrows move in sync, to get a cool hologram look.



Conclusion

This semester we have created a basic block out of each level, which we set out to do from the start. This was mostly due to our project management techniques over the coming weeks. Including the use of Gantt Charts and putting everyone into teams.

Everyone has been using priority lists and feature lists as instructed. We then came together on the Creative Practice lessons to go over everyone's work and sort out tasks for the coming week. This strategy proved to work and also help prevent any bottlenecks.

However, I could have used some better project management techniques. Like Scrum development, waterfall diagrams at the start or use an agile development cycle. All of which could have produced a better end product for us to show. This is something that will have to be rectified in the coming semester.

Another fall-back was the use of team Gantt Charts. Which seemed to be a good idea at the start but was hard to organise the 11 people to use a single collaborative document. So, we scrapped this idea and just had every team make sure every member knew what they were doing during the creative practice lessons.

On the Unreal side, we could have planned out our shortcomings of the lack of mechanics. However, this did not prove to be that much of an issue due to the fact that we had a priority list of the main mechanics that needed to be completed first before implementing more complex mechanics.

Bibliography:

These are links to all references in this Production Diary. They have been categorised as YouTube tutorials, Unreal Documents and Audio. Each has been placed chronologically from date accessed.

YouTube:

Ashford, D. (2017). *UE4 - Tutorial - Hologram Material*. [video] Available at: <https://www.youtube.com/watch?v=wlz6iylOkys> [Accessed 8 Nov. 2018].

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Emirates (2016). *Automated Car Parking System | CARS | SAVE CAR CRASH # CAR PARKING TECHNIQUE * CHINA VS GERMANY*. [video] Available at: <https://www.youtube.com/watch?v=rXWrpE1Khkk> [Accessed 22 Nov. 2018].

Wadstein, M. (2015). *HTF do I? Use the GameInstance Object in Unreal Engine 4*. [video] Available at: <https://www.youtube.com/watch?v=5w594D3qtLs> [Accessed 24 Nov. 2018].

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