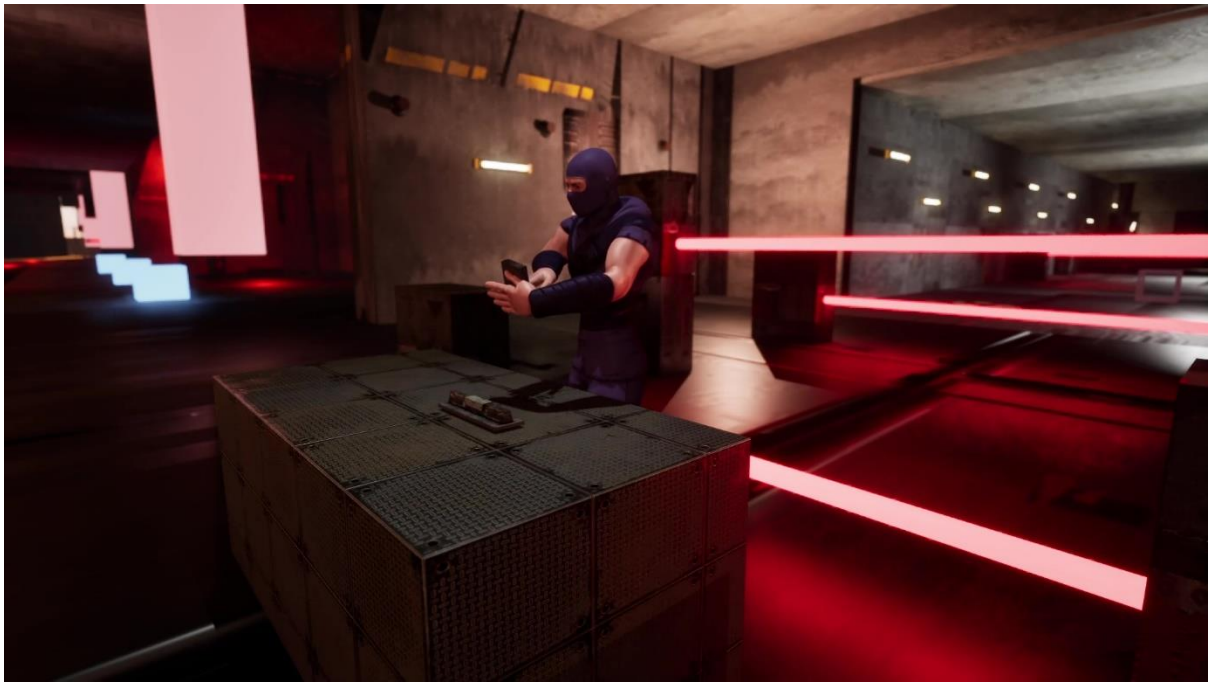
Reconnect

Artefact Development Report
By Guvvy Atwal



Contents:

Aims, Objectives and Deliverables:

‘Creating a cinematic game that explores the symbiotic relationship between game design and cinematography.’

The Problem:

Over the last few decades, the cinematic presentation of games has been steadily improving. Some would argue a game can provide a cinematic experience that is on par with a film. So this begs the question, do audiences value the narrative or gameplay experience games provide. Or can both mediums work together in harmony?

By creating a cinematic game this project will combine game design principles with cinematography techniques to examine how both mediums interact with each to enhance the player experience. Through the lens of cinematography and game

design methodology; this project aims to create an experience that keeps players immersed and achieve ludo-narrative harmony.

Areas for Research, Investigation and Methodology:

To best tackle this project, there will be three main areas of research:

- **Game design**
- **Cinematography/editing**
- **Mocap animation**

To investigate game design, I have selected the following book to read:

- The Design of Everyday Things, revised and expanded edition (Don Norman)

Reading this book will be of great value to the project with enhanced knowledge on design, I can evaluate the state of the project's design more effectively. For example: do the gameplay systems fit cohesively with the level design? How can camera movement and props be used to communicate ideas and information. Without conducting research into these areas, could limit the validity of the design.

To investigate cinematography/editing, I have selected the following book to read:

- Film Art: An Introduction (David Bordwell, Kristin Thompson, and Jeff Smith)

This book will be essential to deepen my understanding on film analysis. Being able to understand the language of film and examine filmmaking techniques analytically, should prove highly beneficial when planning the cinematics in the project. Especially since this is an area, I don't have a formal background in.

To investigate **mocap animation**, secondary research sources like YouTube and forums on the internet will be used. This research is primarily related to exporting the FBX mocap animation data from Shogun Post to Motion Builder (for retargeting animations) before putting it in Unreal Engine on a character. This is an area that goes beyond the course content I have been taught. Luckily, I am already trained to use the university's motion capture studio. It is just the postproduction process that will prove challenging to implement.

A Waterfall production methodology will be used throughout the development of this project. This is a suitable methodology because this workflow defines the key milestones that need to be met before moving onto the next stage of development. Stages will include research, pre-production, production, testing, evaluation and final build.

What are the deliverables?

The deliverable experience will be **a highly polished level**. That takes around 5 minutes to complete. To heighten player immersion, the level **will feature cinematics, audio, animations and intuitive gameplay**. Once research has been completed, the specifics aspects of these features will be defined because they are supported by academic theory. Thus, aligning with the projects goals because it is actively applying 'cinematography techniques' and 'game design principles', in the attempts of creating a harmonious experience between two mediums.

Research:

Game Design Research Summary:

From reading **'Norman, D. A. (2013). The Design of Everyday Things, revised and expanded edition (MIT Press)'**, I have improved my knowledge on practical design. There are several principles of design, I wish to apply to this project. Firstly, visible affordances provide clues to the operation of things. Using visible affordances like switches highlights there is an interaction required. This in turn leads to signifiers being used communicate what actions should take place and how they should be done. Such as doors having red lights, to showcase its locked, or the same outcome can be achieved with a locked symbol. Symbols can be more effective than colours because if a player has visual impairment, a locked symbol can communicate the door is locked, no matter its colour. Furthermore, adding feedback to the most relevant information is a good design practise. For example, if the player opens a locked door, then perhaps the light changes colour, a sound effect plays or a visual effect appears.

It is efficient to have an idea for the conceptual model the player thinks how the level works. As it can save time later on after playtesting because potential iterations are likely to be less drastic because the level was designed with the conceptual model of how the player is likely to behave in the space they are operating in. Finally, 'we conceptualise there to be a cause and effect, even if there is no relationship between the actions.' This essentially details the point of ensuring actions in the game should not appear or feel random. Every action should be purposefully designed. Therefore, if the player completes the same action, response should be consistent, to ensure player immersion isn't lost by a random response to the same action.

Cinematography and Editing Research Summary:

From reading **'Bordwell, David, et al. Film Art : An Introduction, McGraw-Hill US Higher Ed ISE, 2019. ProQuest Ebook Central'**, I have boosted my knowledge on filmmaking, lighting, cinematography, editing, sound and film style. Firstly, storyboarding all cinematics in the project, is an essential planning practise. Since it results in all the action and dialogue being planned in advance. Saving time later on because I won't be second-guessing myself. Thus providing clarity for what to specifically film whilst completing mocap animation and using the Sequencer tool in Unreal Engine.

Lighting is an important pillar of filmmaking and can be used instead of acting to convey an emotion. In addition to providing contrast between different settings. Another useful practise is to not have characters face squarely forward. The camera should be positioned at a slight angle to capture more details of their body. Hence why 'The Rule of 180°' is useful to ensure the audience doesn't get disoriented with where the characters are positioned. Finally using spatial distance can indicate emotional distance. An example of this is in Spider-man (2002), where the camera zooms in closer and closer, as Peter and MJ get to know each other more. This principle is applied in my project during the most climatic scene near the end (C3). As the camera stops, both characters seem to get further and further away from each other. Therefore, spatial distance can be used to indicate emotional distance and potentially assist with coming up with camera positioning/movement.

Development:

Pre-production:

During weeks 1-7, research was conducted, including brainstorming, sourcing assets, designing storyboards & level design diagrams.

Upon sourcing some **Level 4- Game animation PowerPoints (2021-2022**), the following production process was defined before using MotionBuilder to clean & export Mocap animations:

MotionBuilder Production Pipeline to Follow:

1. **Characterise game character**
2. **Import Mocap animation data**
3. **Remove background markers & T-pose skeletal mesh**
4. **Bake the animation skeleton onto characterised character**
5. **Trim animation to a suitable length**
6. **Clean the animation, by adding missing keyframes to fix uneven joints/limbs.**
7. **Export animation sequence as an FBX to Unreal Engine.**

Completing this knowledge acquisition provided myself with more confidence to use MotionBuilder because Mocap animation is an area outside the contents of my course.

Brainstorming:

Story summary:

C1- Inciting incident

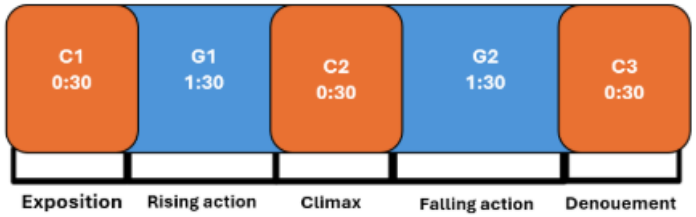
G1- Walking simulator

C2- Transition to 2D gameplay

G2- Platforming and stair sequence

C3- Ending

Structure and pacing:
5 mins



Character information:

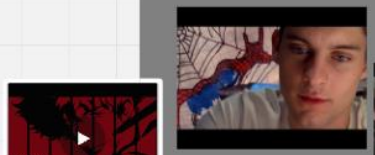
Jack: Main character

Trying to reconnect with friend, repair device has the only proof of his memory.

Yume: Jack's friend

C1- Inciting incident- montage

Inspiration



(Through montage imagery explain, key exposition, show don't tell)

Top secret memory card, government bans travel, flights cancelled, fossil fuels ran out, climate change. Airplane travel is for the rich because runs on electricity.

Use key words

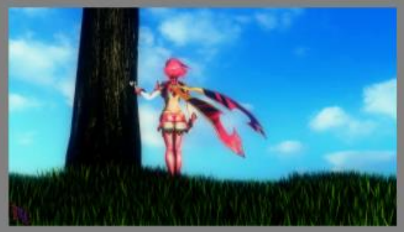
Moving objects/text

Change colours and opacity

Glitch, smoke effects?

Post-process volume

Reverse. Or zoom and then quickly expand.



Lighting:

-Maybe like neutral grey, with some yellow to make it clean and links to final scene colour scheme wise

Sound:

-Cool music
-Subtle glitch sound

G1- Walking simulator

If 3D, could make it open. Yet there is a linear golden path. Thus game design theory is honed in on that.

Firewatch

www.linkedin.com

nima arghiani on LinkedIn: #ue5 #unrealengine #unrealengine5 #gamedev | 25 comments

Even when I wasn't feeling well, I couldn't resist adding more features to my project. This week, I added 15 new interactions and a modular dynamic camera... | 25 comments on LinkedIn

Idea for making exploration more dynamic. Yet slow paced.

Gameplay objectives:
-Open locked door
-Find key (its dark, turn on lights) Path is illuminated,
-Do some crouching underneath something camera shifts
- Do some button presses to acivate lights or key.
-Password for key is written on wall
-If players turned on the light, they would be able to see the password. Written in Hiragana, because it looks cool. Name of girl- ゆめ

Lighting:

- Blue, starts out fairly muted grey. But then once lights come in it gets well blue

Sound:

- Footsteps
- Clicking button
- Door opening
- Error sound for wrong input
-

C2- Transition to 2D gameplay

Jack obtains X item,
but security systems activate!
Alarms going off, red lights
flashing.

Every blue light switches to red

Like someone else is watching

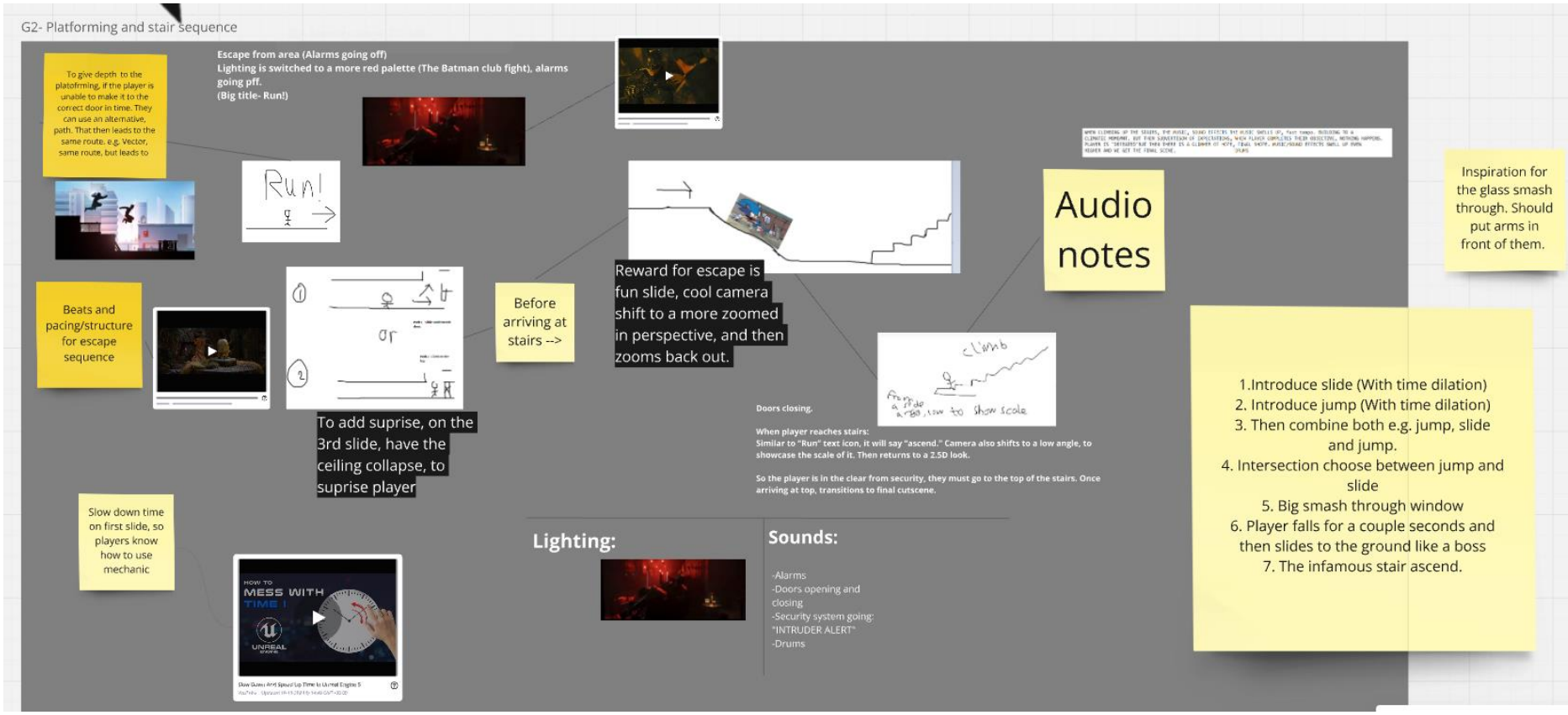
Lighting:

Shift from blue to red!

Sound:

-Alarms

-Explaination warning e.g. MGS


G2- Platforming and stair sequence
To give depth to the platofrming, if the player is unable to make it to the correct door in time. They can use an alternative, path. That then leads to the same route. e.g. Vector, same route, but leads to
Escape from area (Alarms going off)
Lighting is switched to a more red palette (The Batman club fight), alarms going off.
(Big title- Run!)
Run!
Beats and pacing/structure for escape sequence
Before arriving at stairs -->
To add suprise, on the 3rd slide, have the ceiling collapse, to suprise player
Reward for escape is fun slide, cool camera shift to a more zoomed in perspective, and then zooms back out.
Audio notes
Inspiration for the glass smash through. Should put arms in front of them.
Doors closing.
When player reaches stairs:
Similar to "Run" text icon, it will say "ascend." Camera also shifts to a low angle, to showcase the scale of it. Then returns to a 2.5D look.
So the player is in the clear from security, they must go to the top of the stairs. Once arriving at top, transitions to final cutscene.
1.Introduce slide (With time dilation)
2. Introduce jump (With time dilation)
3. Then combine both e.g. jump, slide and jump.
4. Intersection choose between jump and slide
5. Big smash through window
6. Player falls for a couple seconds and then slides to the ground like a boss
7. The infamous stair ascend.
Slow down time on first slide, so players know how to use mechanic
HOW TO
MESS WITH
TIME !
UNREAL
Lighting:
Sounds:
-Alarms
-Doors opening and closing
-Security system going: "INTRUDER ALERT"
-Drums

1) Camera starts out over looking the top of the stairs, and from a front angle, we see our character start to get taller, as they reach the top of the stairs. Then camera moves slightly to the side, to show they are exhausted. As they activate the device, we see them drop to their knees and cry out. Camera pans down to the device and it says file corrupt. Then some time passes, music comes back in and then we get the final scene with Yume.

2)

Starts walking, cuts back to Jack, then Yume stops. Turns half of her head, says final line. Then continues walking

Lighting- Yellow, warm colours

Final shot

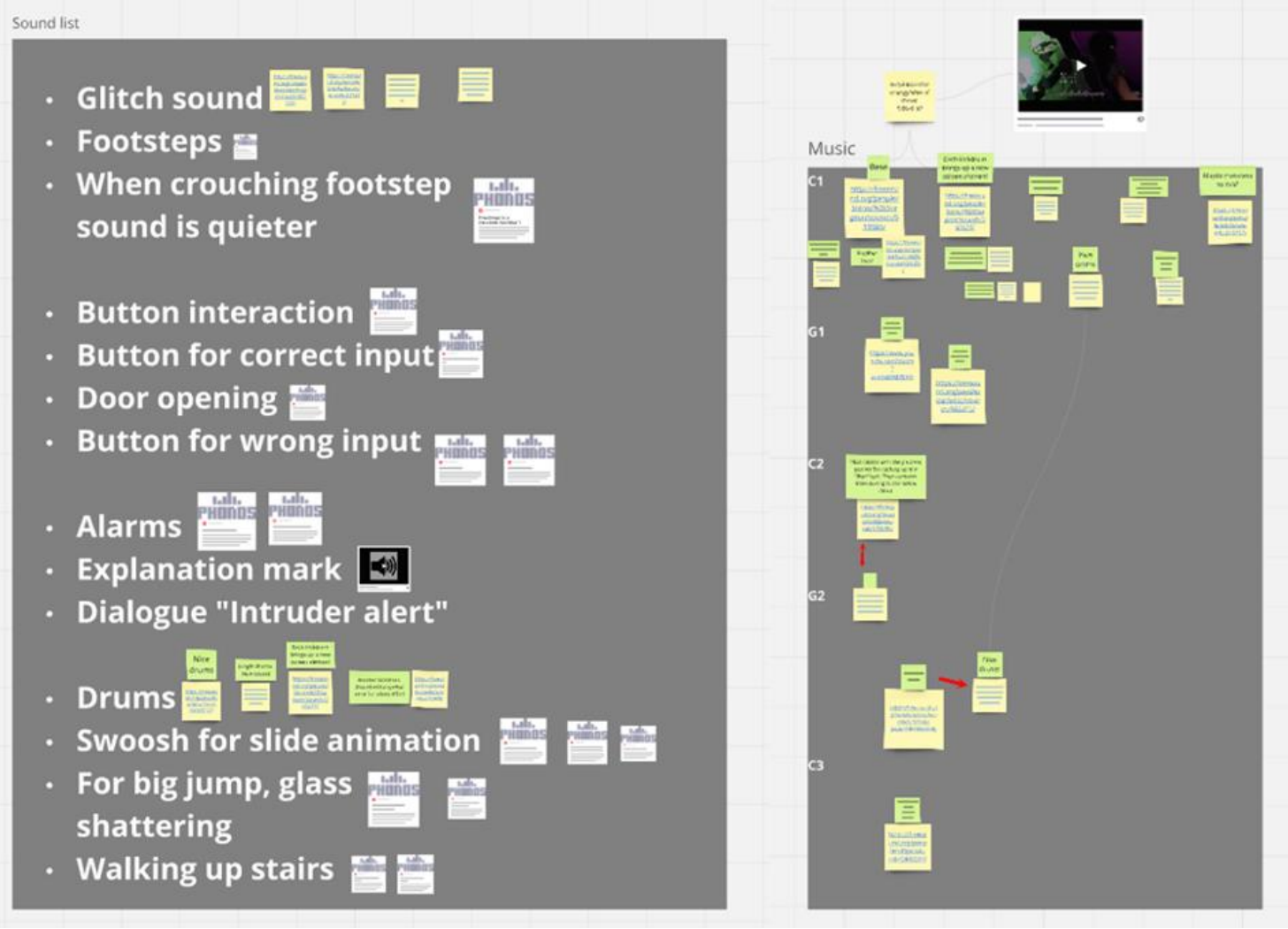
Basically, friend turns around, to face camera. Says final line, then cuts to credits. Or cuts to character, then back to friend and they say final line. Then character fades

Edges of screen have shadows, until it transitions to the circle. pauses on it, before cutting to title screen

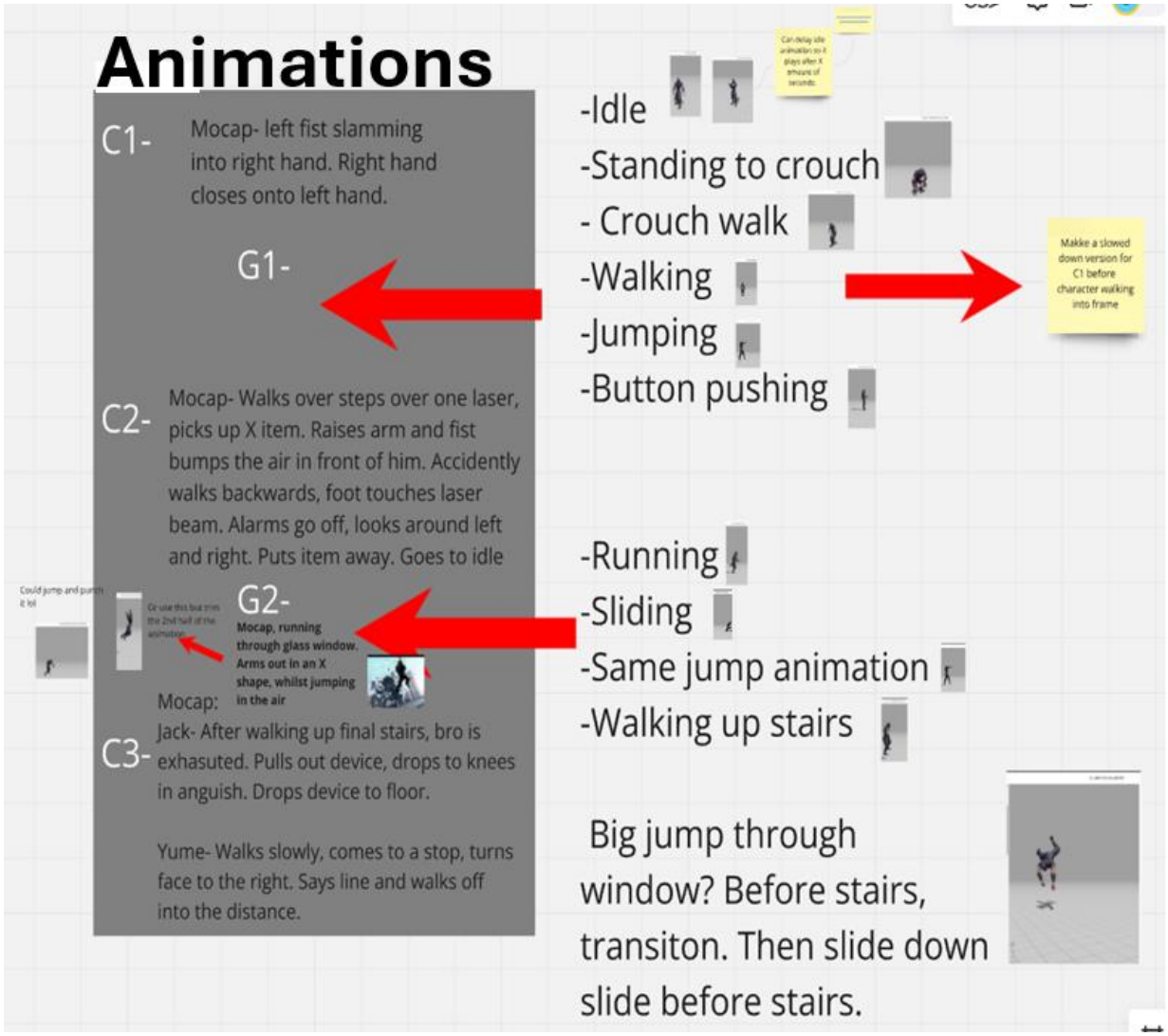
Cuts to title screen and then roll credits

Like Mario 64 level transitions

Sourcing assets:

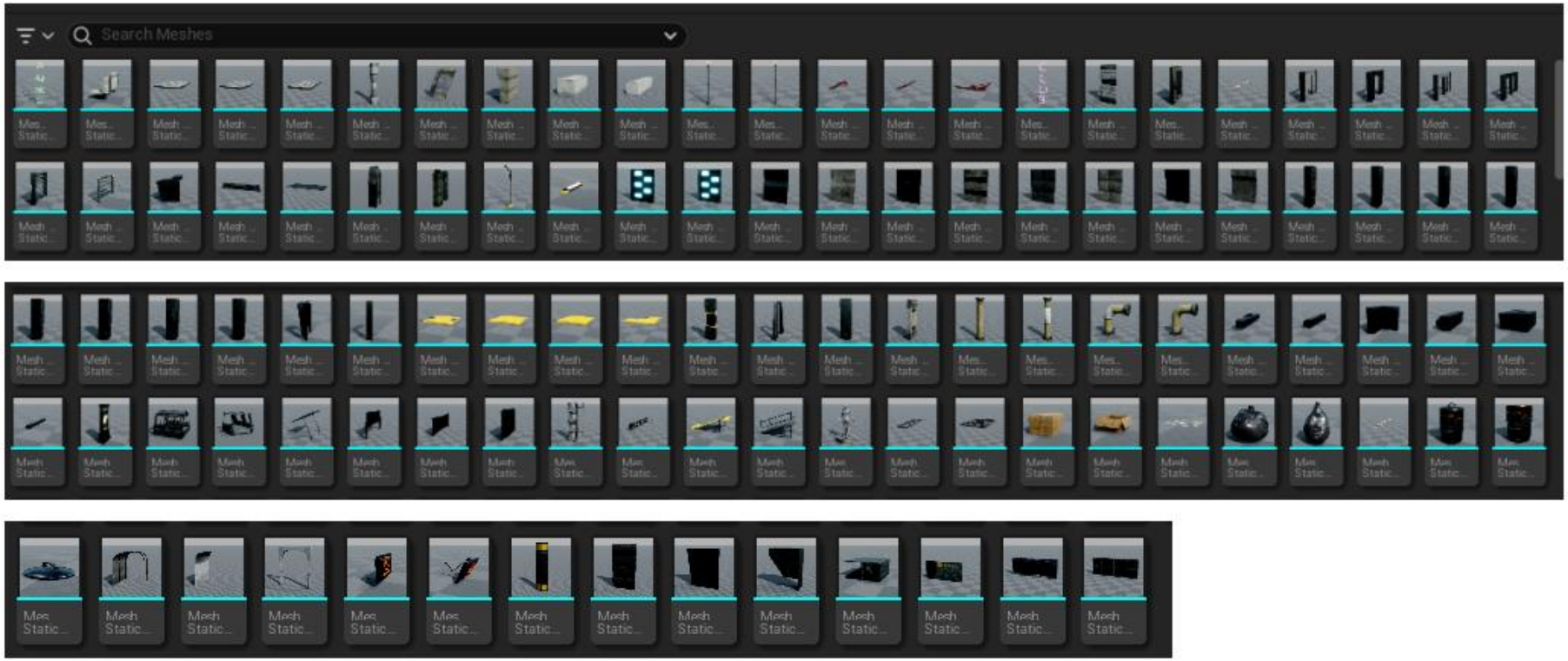


Audio sourced

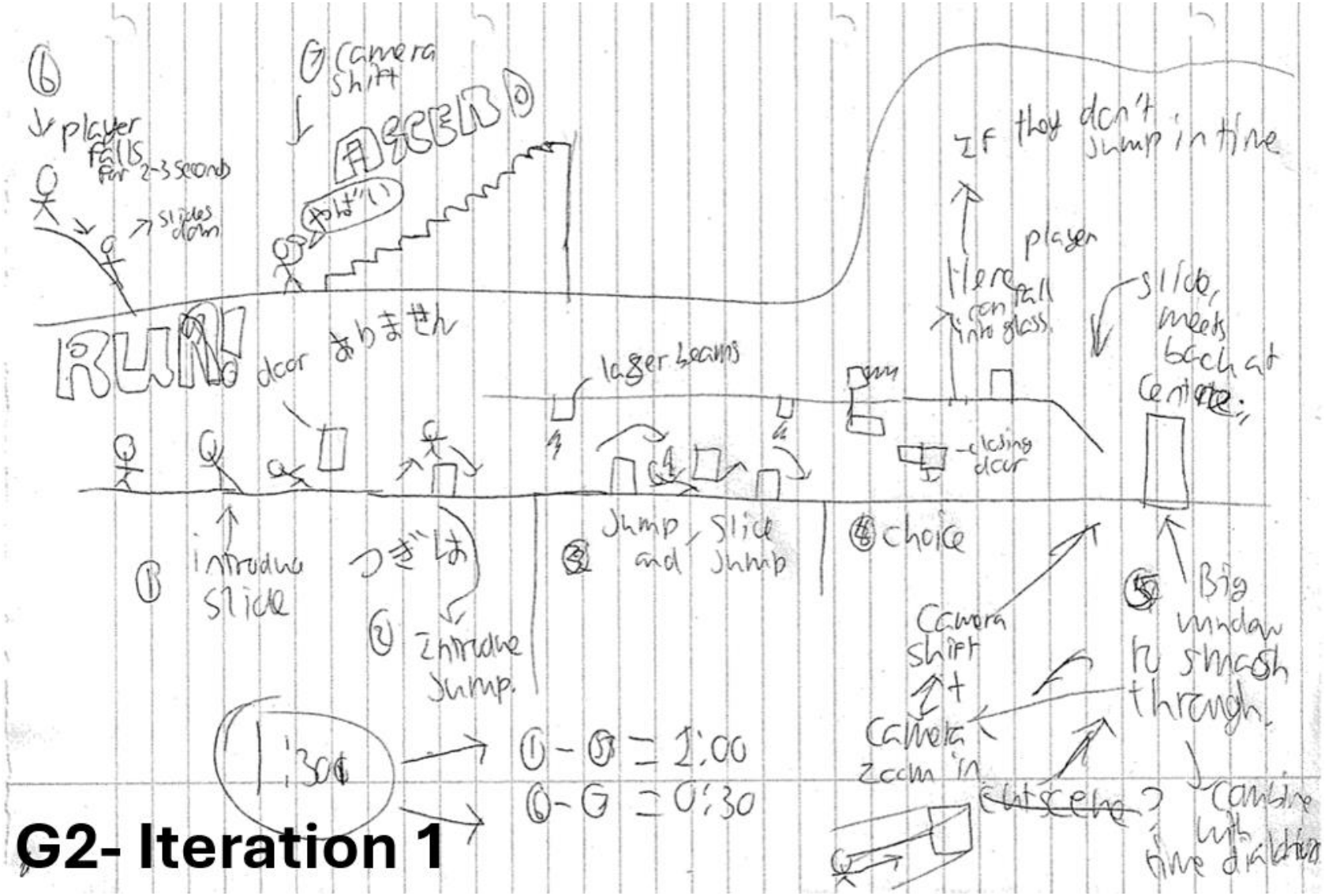


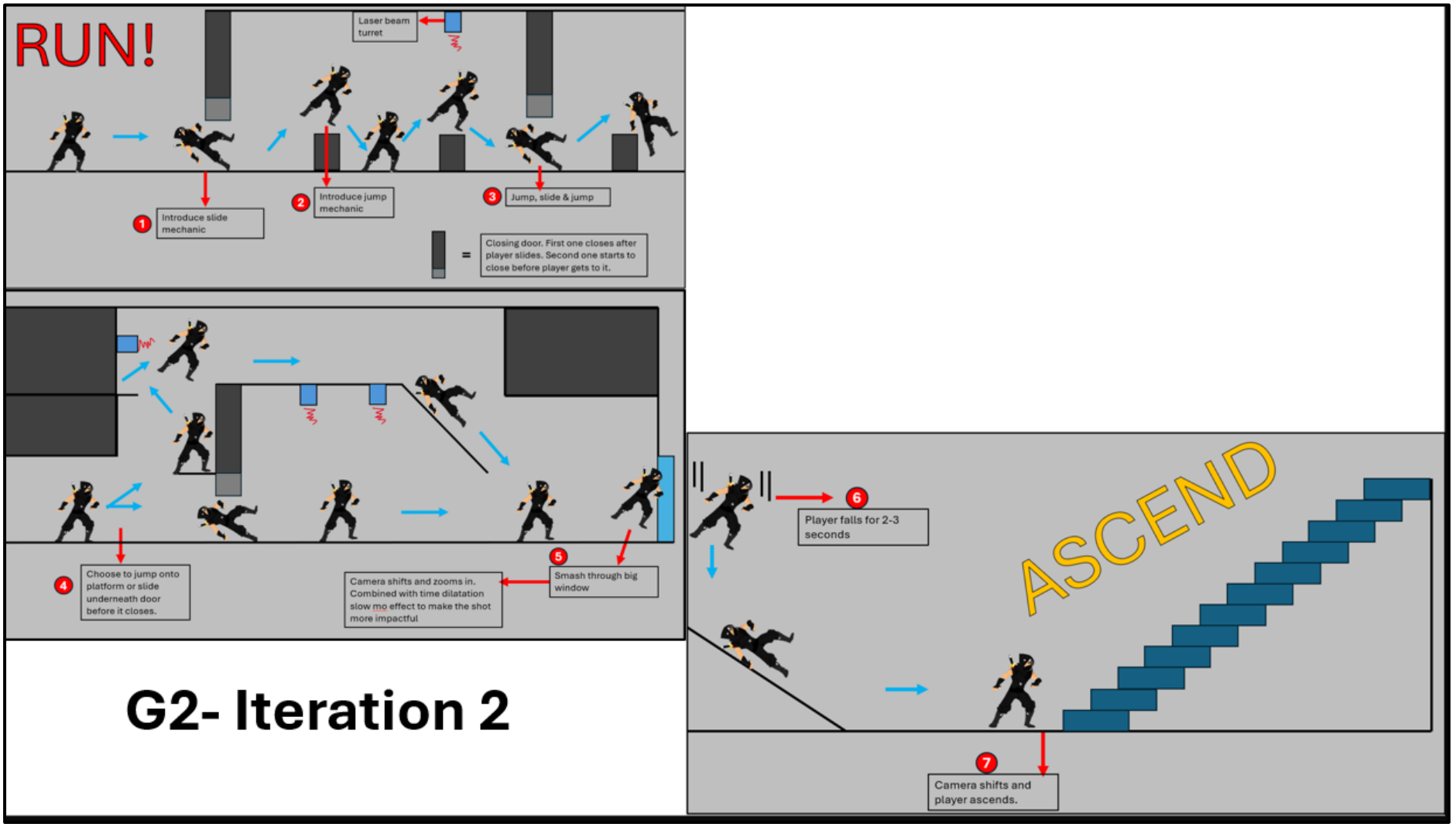
***To ensure project was suitably scoped Mocap animations would be used for cutscenes & Mixamo animations would mostly be used for gameplay animations.**

Sourced Assets

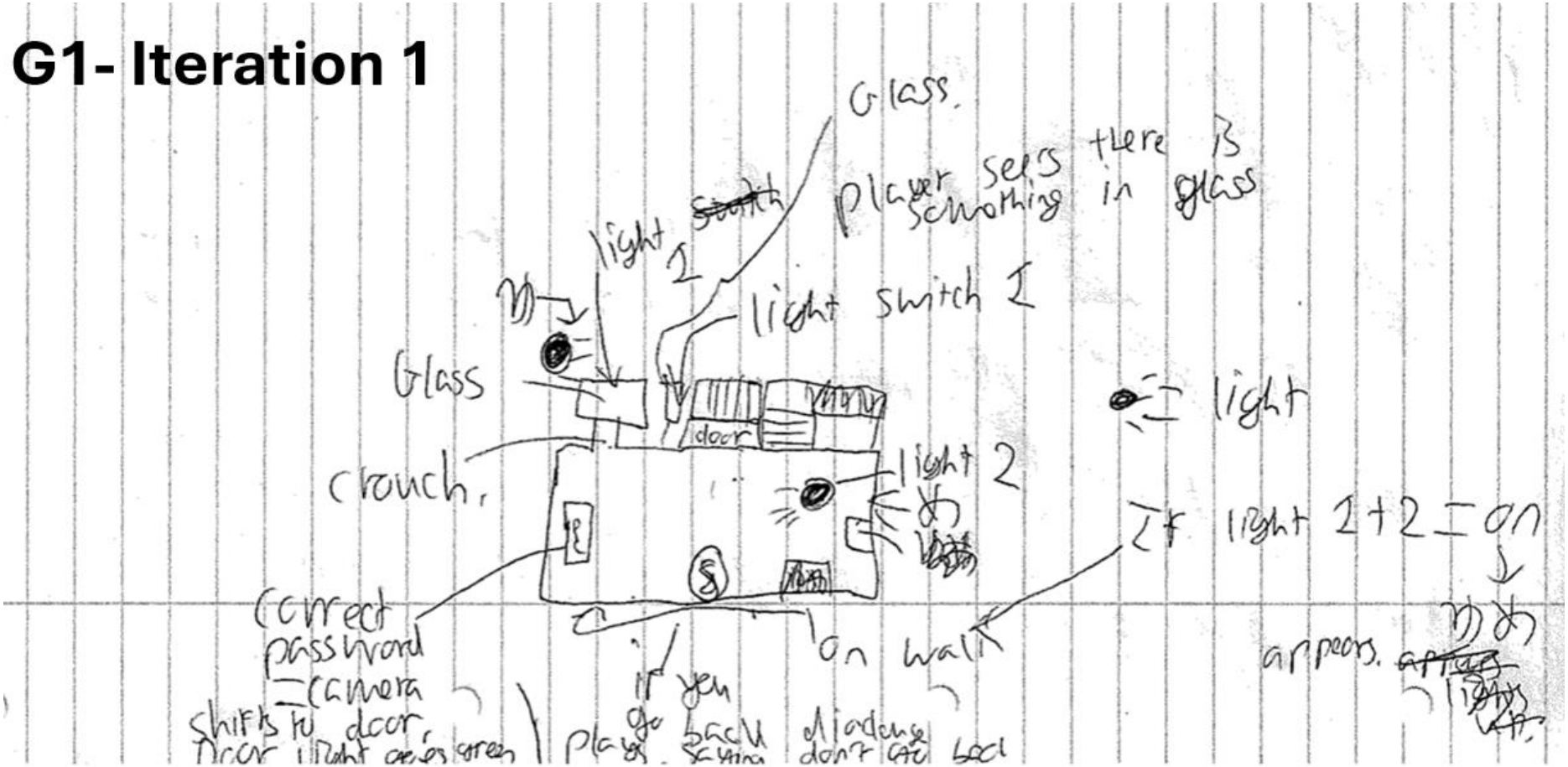


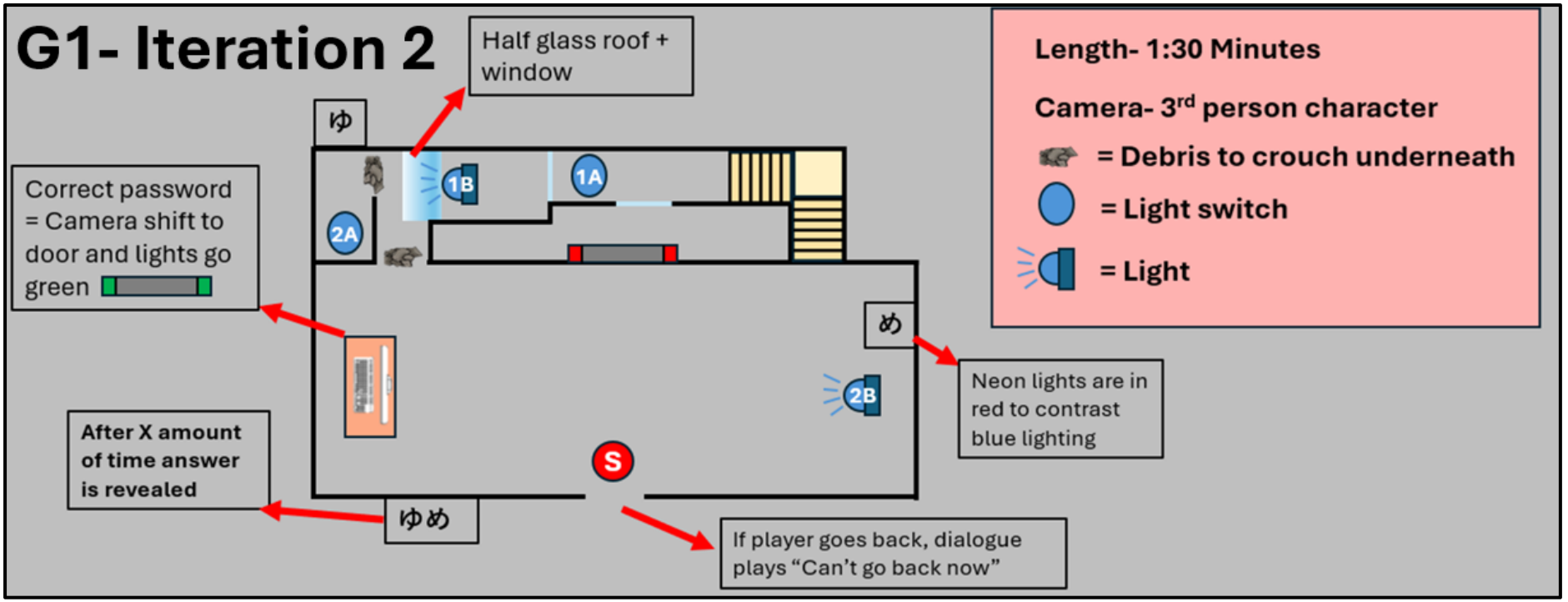
Level Design Diagrams:




RUN!
Laser beam turret
1 Introduce slide mechanic
2 Introduce jump mechanic
3 Jump, slide & jump
= Closing door. First one closes after player slides. Second one starts to close before player gets to it.
4 Choose to jump onto platform or slide underneath door before it closes.
5 Smash through big window
Camera shifts and zooms in. Combined with time dilatation slow mo effect to make the shot more impactful
6 Player falls for 2-3 seconds
ASCEND
7 Camera shifts and player ascends.
G2- Iteration 2

G1- Iteration 1

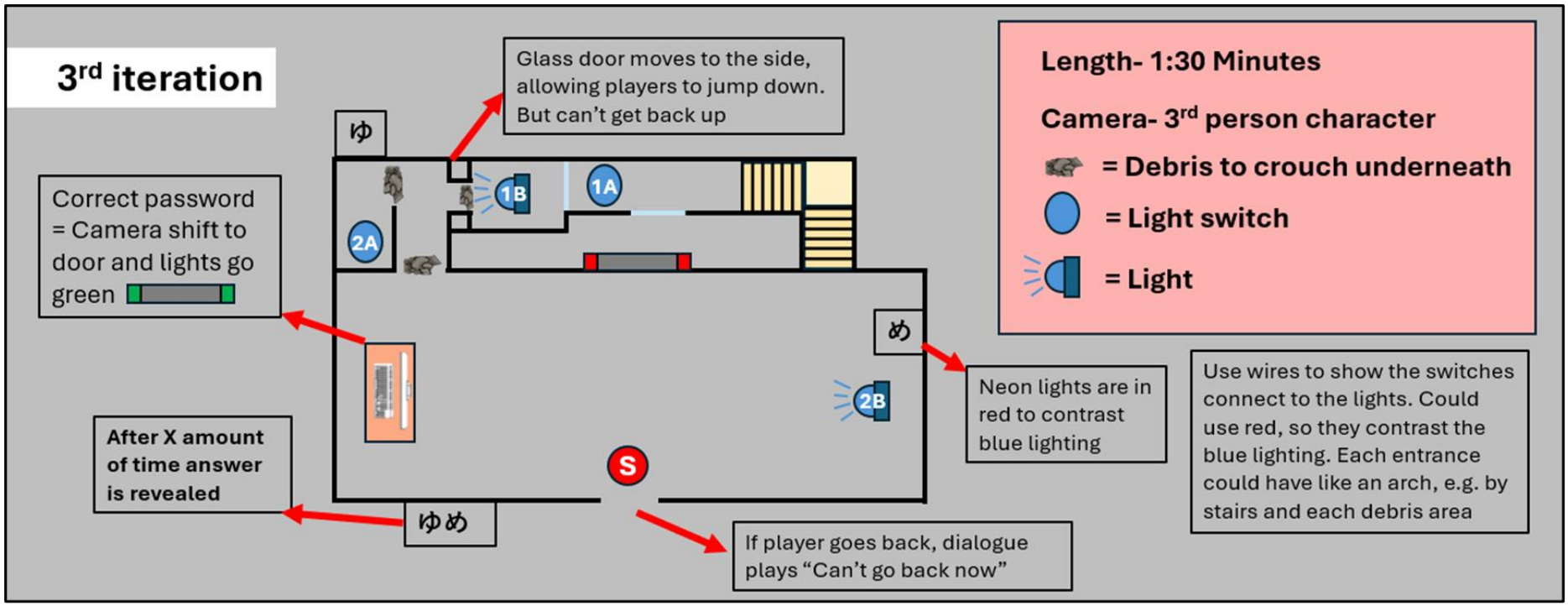




Asked a Level 6 Level-design student for verbal feedback on the design and he said something along the lines of:

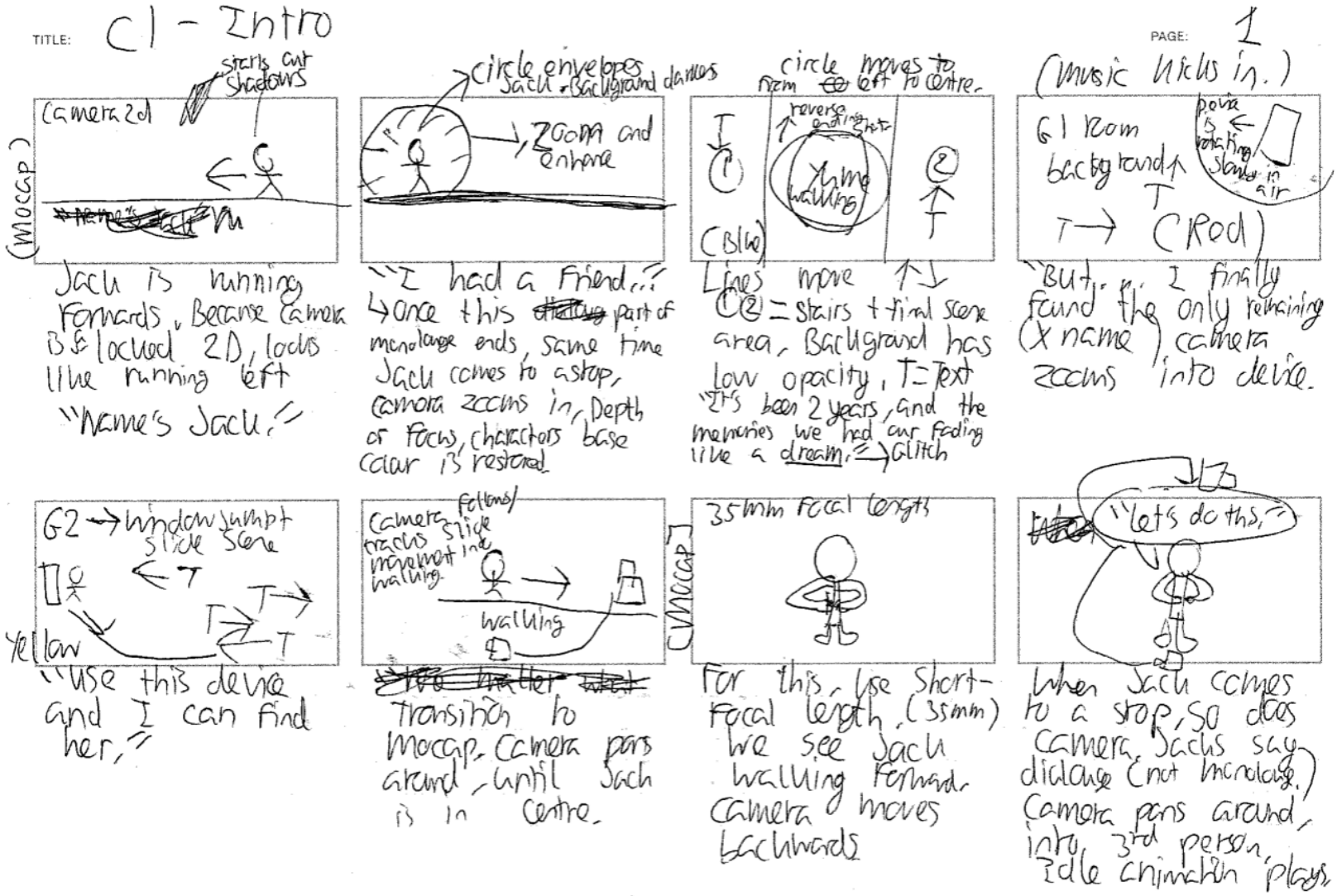
"Make sure player can go from window viewing down below. But also, does crouching. Also indicate that the right-hand side lights have been turned on. E.g. wires."

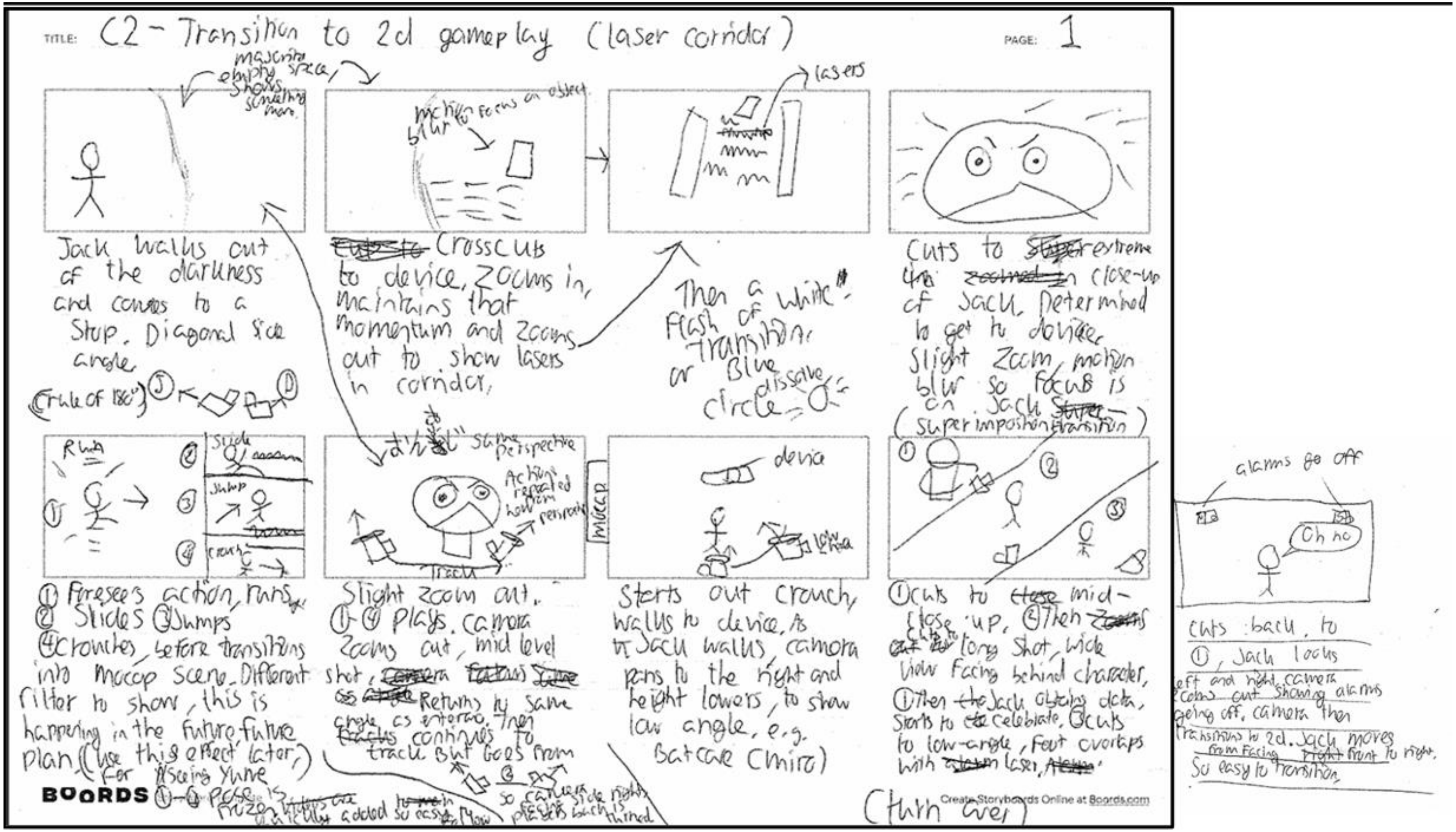
Based on this feedback, I made the following iteration:



***By having a ledge, players can go below, which improves pacing and wires facilitate the connection players make between the location of the switch and the source. Thus, making gameplay feel more organic and purposeful.**

Storyboards:




TITLE: C2 - Transition to 2d gameplay (laser corridor)
PAGE: 1
lasers
Jack walks out of the darkness and comes to a stop. Diagonal side angle.
(rule of 180°)
Crosscuts to device, zooms in, maintains that momentum and zooms out to show lasers in corridor,
Then a white flash of transition or Blue circle dissolve
Cuts to extreme close-up of Jack. Determined to get to device. Slight zoom, motion blur so focus is on Jack (super imposition transition)
same perspective
Action repeated from
device
alarms go off
Oh no
① Foresees action, runs, ② Slides ③ Jumps ④ crouches, before transitions into mocap scene. Different filter to show this is happening in the future plan. (Use this effect later for seeing future)
Slight zoom out. ①-④ plays. Camera zooms out, mid level shot, Returns to same angle as exterior, then continues to track but goes from
Starts out crouch, walks to device. As Jack walks, camera pans to the right and height lowers, to show low angle, e.g. Batcave (Mirro)
① cuts to mid-close up, ② Then long shot, wide view facing behind character, ① Then Jack obtains data, starts to celebrate, ③ cuts to low-angle, foot overlaps with laser,
cuts back to ①, Jack looks left and right, camera zooms out showing alarms going off, camera then transitions to 2d. Jack moves from facing front to right. So easy to transition
(turn over)
BOORDS
Create Storyboards Online at Boords.com

TITLE: C3 - Ending

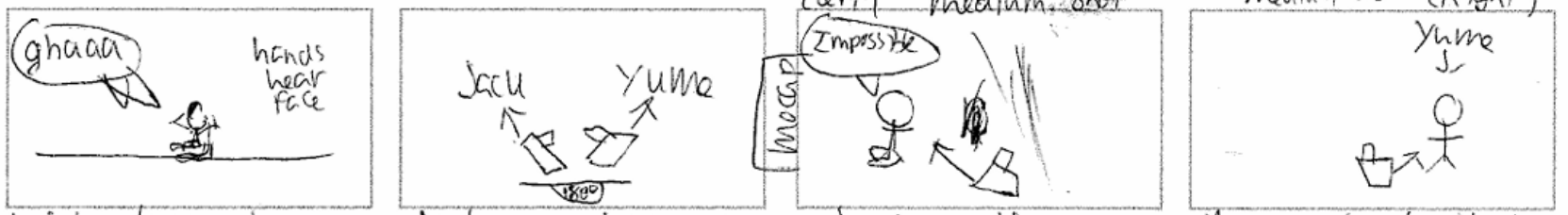
PAGE: 1

(player walks up stairs) Camera starts at top of stairs. As player walks up stairs, more of their body is revealed, can hear them sound out of breath slightly Camera is in middle, low angle

As Jack walks forward (~~She~~ catching up on breaths) taps on device to get it working. Camera tracks, as Jack is moving forward. But when Jack ~~to~~ stops. So does camera.

As Jack is in anguish. camera slowly pans to the left to get Jacks reaction, (2-sh→2d) Jack drops device to the right.

Camera pans down to device, Depth of focus is ~~chose~~ enhanced.



wide lens, long shot. In middle (central framing) to show how alone and hopeless Jack is.

Rule of 180°, set up for final scene.

Jack notices something in the distance, He exclaims "Impossible" Making audience feel curious as to what he means, set up complete

Yume facing to the back of us. walks ahead, a bit fast, only see part of their body (torso) [Brisk walk] we get a ~~glimpse of~~ brief glimpse of her.

BOORDS Storyboard Template

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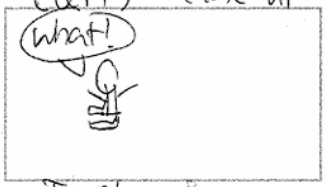
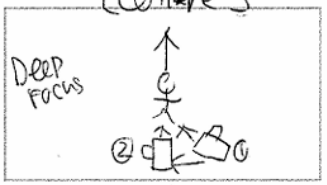
TITLE: C3 – Ending (continued) PAGE: 2

(Left) close up



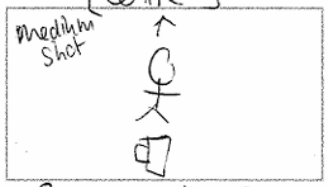
Jack is stunned.

[Centre]

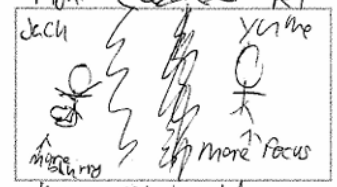


camera slowly moves to centre, as Yume continues walking. [If looks better just start shot at centre]

[Centre]

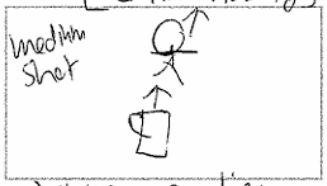


Camera moves forward as Yume walks,

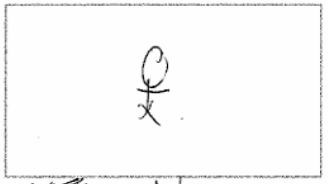


New shot where we see Jack and Yume, Jack's side gets more deep focus, same time Yume gets enhanced focus and Jack's screen is moved left,

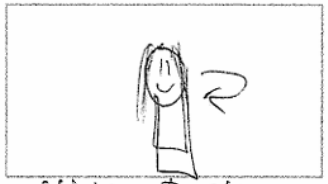
[Central framing]



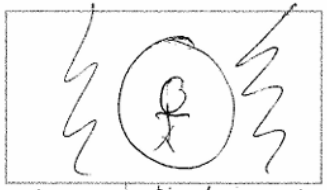
Yume continues walking forward, camera continues to track, (follow) forward.



~~Yume~~ when Yume comes to a stop, & Camera stops tracking. A slight pause,



Slight ℤ close up, Then Yume turns half face to right, behind and says 'Final line'

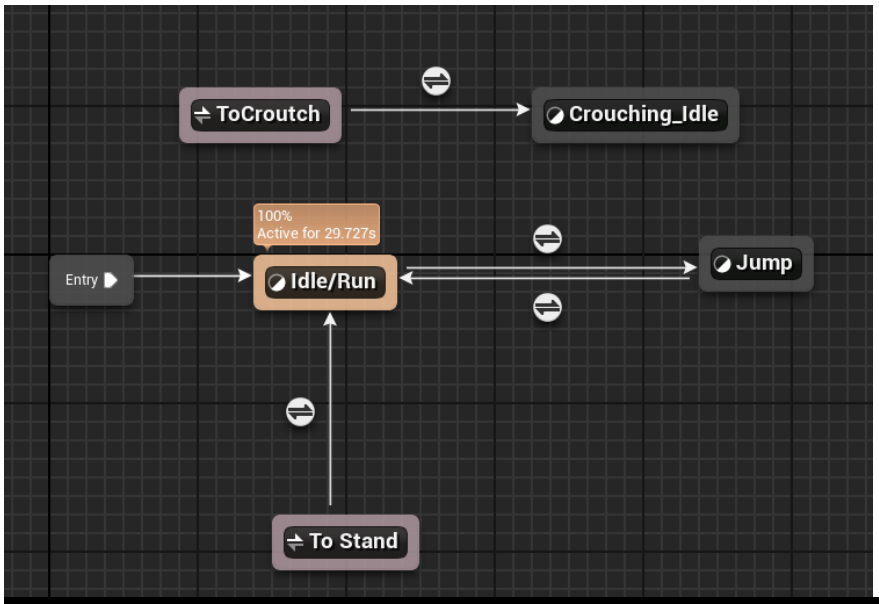


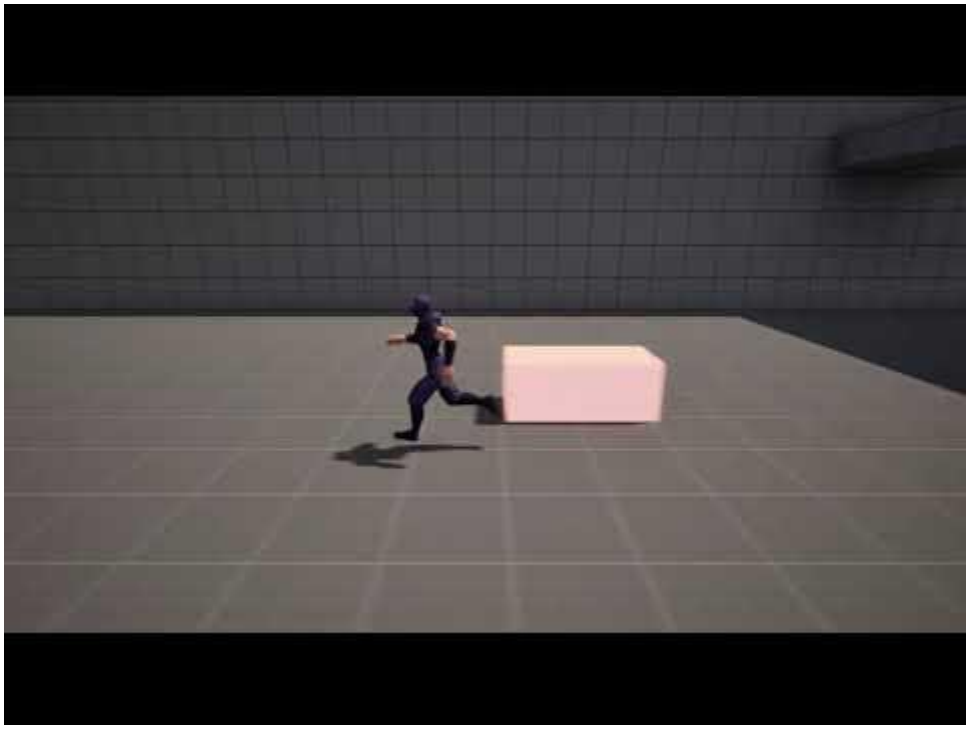
Camera & does not move, But as Yume ~~moves~~ walks ahead, screen edges darken and circle envelops Yume. Transition to title screen drop → Then roll credits

Production:

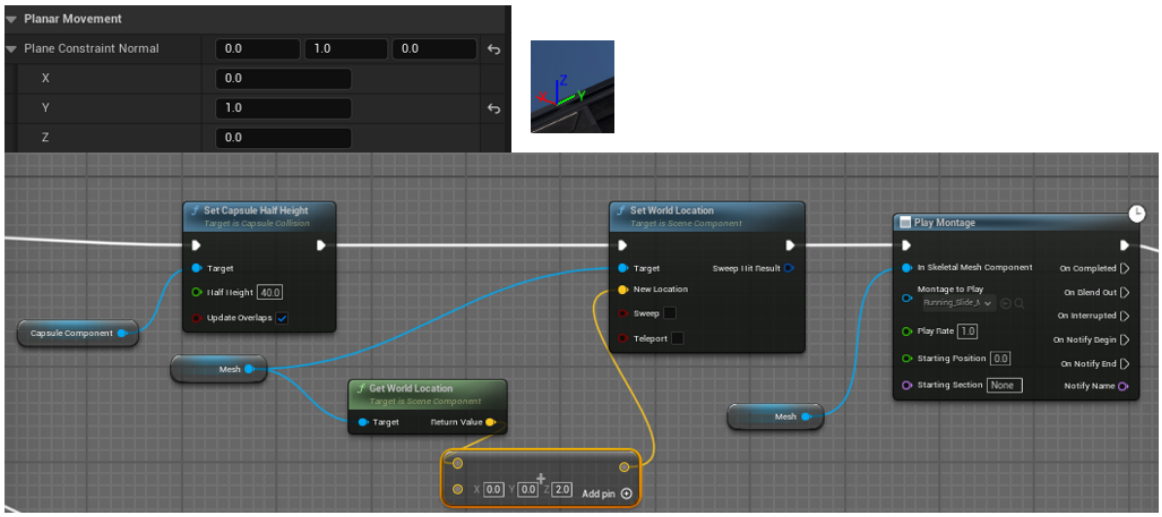
Project setup:

- Set up Unreal Engine framework, defined characters movement and animation Blueprint for 3rd person and 2D character.





When implementing the slide mechanic, it took some time because I ran into an issue where the character started twirling in the air like it was caught in a tornado, when the animation montage played. So to fix this I locked the Y Plane Constraint to 1. Initially, I thought I should lock the Z axis because that was the direction the character was moving. But it only made a difference when Y was changed. Then I realised the reason was because Unreal Engine's local axis have Z and Y flipped for some reason.

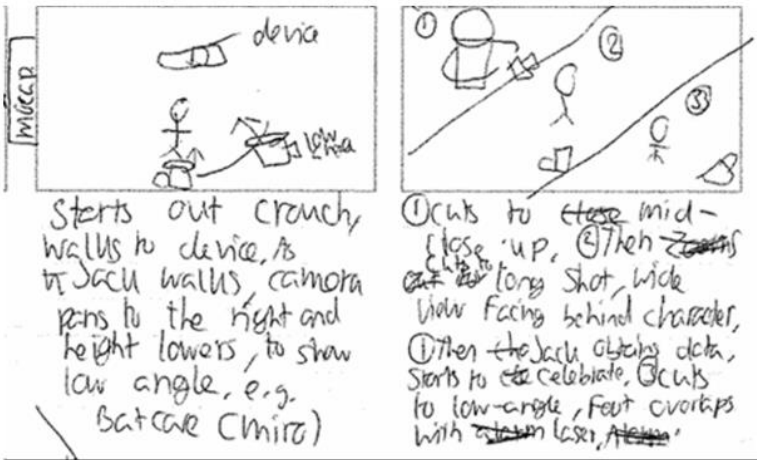


To implement the slide, I had to temporarily shrink the capsule component, whilst moving the character mesh location, so the animation looks natural and allows the player to go underneath the block.

- Created blockout for level:

- Used storyboard & story script, to give Motion Capture actor specific directions for their performance:

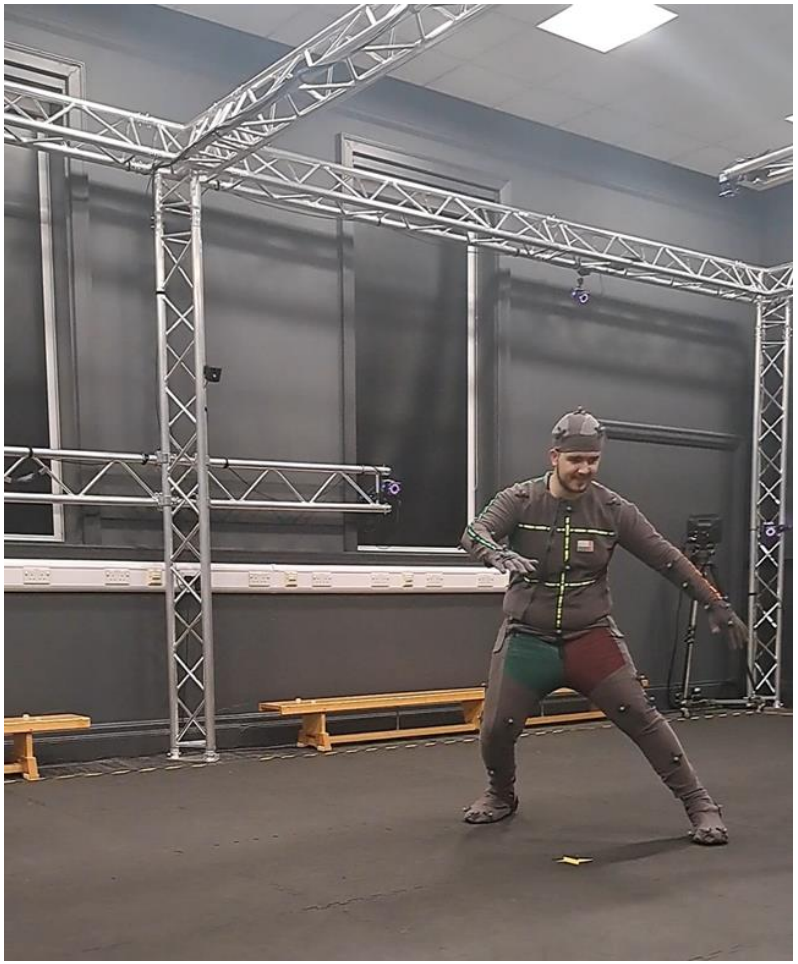
Example of storyboard and script direction, assisting with recording C2:



Ryan_C2_FindDevice

Starts out in crouch, walks to desk. Steps over laser nearby table. Picks up device from table (someone passes Ryan a phone, as if it was on a desk). Jack raises right arm and fist bumps the air in front of him. Accidently walks backwards, foot touches laser beam. Alarms go off, looks around left and right. Turns to face right hand side (so easy to transition to 2D G2). Puts item away in left pocket, (someone grabs the phone) and then go to an idle stance.

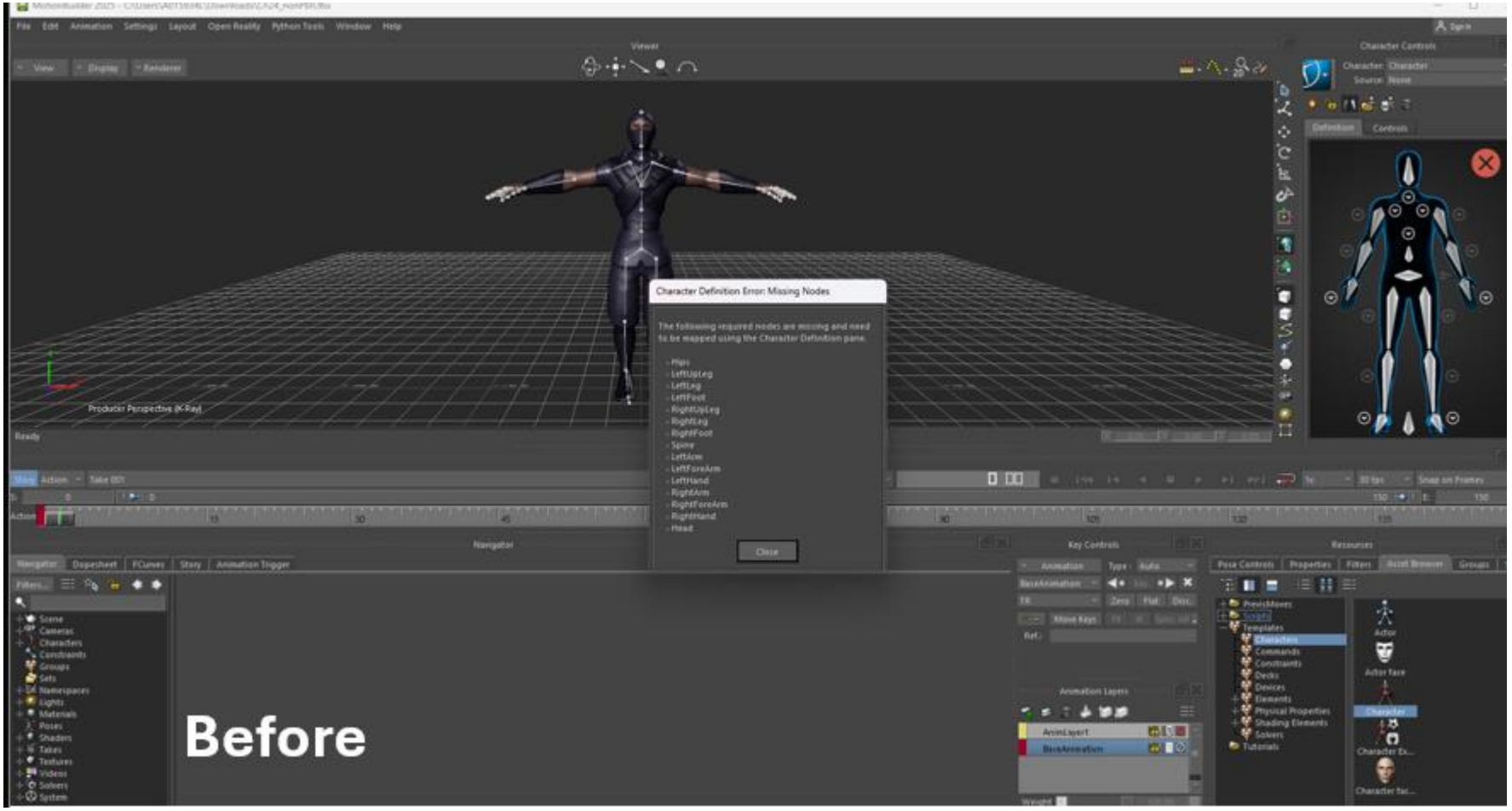
- Recorded motion capture:



*Actor- Ryan Banks

MotionBuilder exporting:

Following the Motion Capture production pipeline (see above), Jack was characterised:

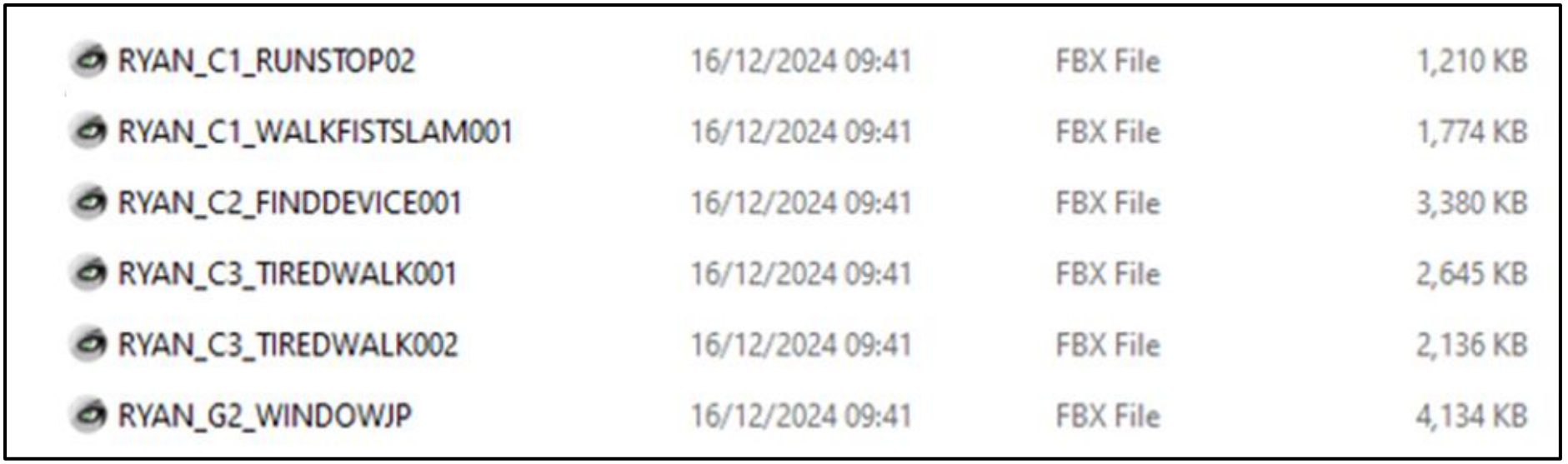


First I fixed the T-pose to be more T-shaped:

After

^^^Then I defined and matched the correct bones/joints, to ensure the character was suitable to be characterised

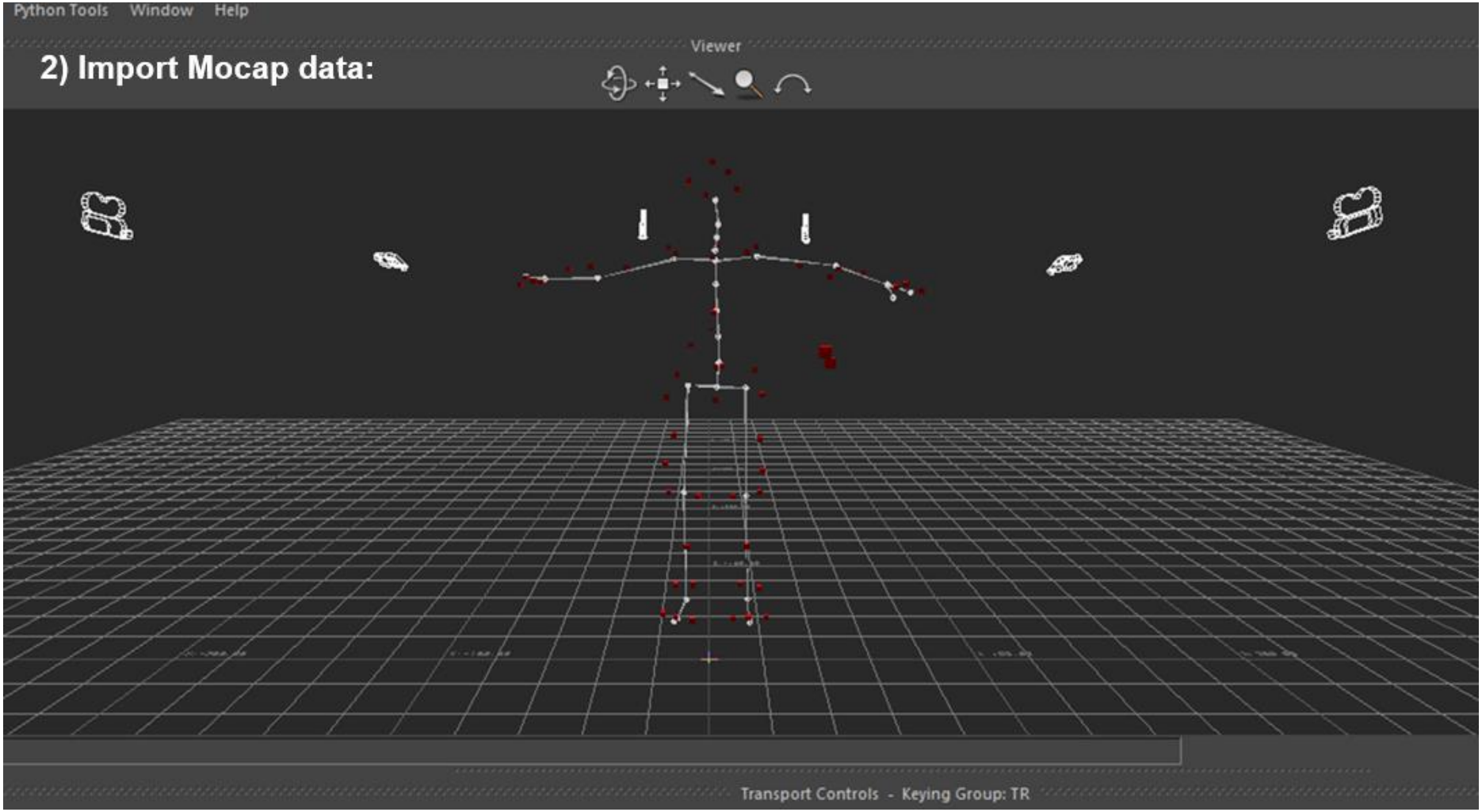
Next, I applied the remaining exporting steps for all 6 individual mocap animations for Jack.

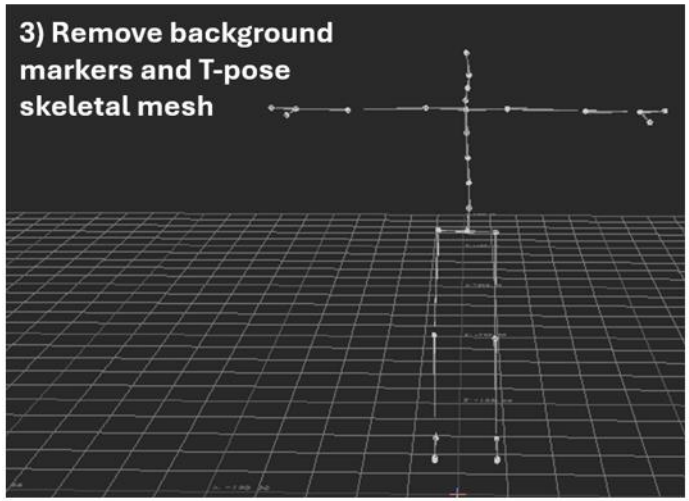


RYAN_C1_RUNSTOP02	16/12/2024 09:41	FBX File	1,210 KB
RYAN_C1_WALKFISTSLAM001	16/12/2024 09:41	FBX File	1,774 KB
RYAN_C2_FINDDEVICE001	16/12/2024 09:41	FBX File	3,380 KB
RYAN_C3_TIREDWALK001	16/12/2024 09:41	FBX File	2,645 KB
RYAN_C3_TIREDWALK002	16/12/2024 09:41	FBX File	2,136 KB
RYAN_G2_WINDOWJP	16/12/2024 09:41	FBX File	4,134 KB

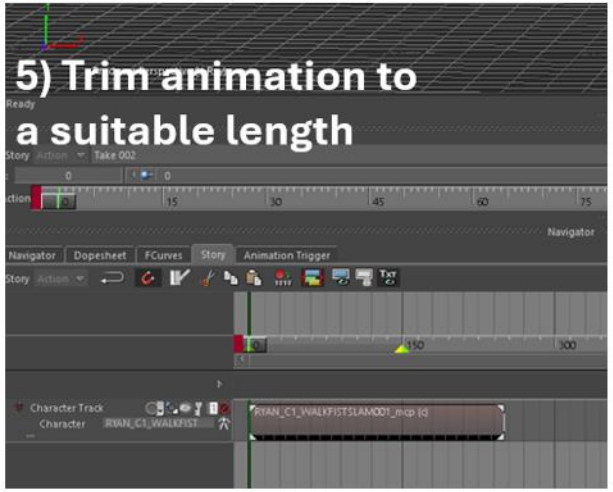
To minimise risk of losing time spent learning how to use MotionBuilder, additional research was conducted to investigate clean-up techniques for misplaced bones/limbs because of the severe challenge this process posed. (Specially referring to Simon Kay (2025)- https://mocappys.com/#gsc.tab=0)

Example of MotionBuilder production pipeline:


Python Tools
Window
Help
Viewer
2) Import Mocap data:
Transport Controls - Keying Group: TR


3) Remove background
markers and T-pose
skeletal mesh


4) Baked onto skeleton


5) Trim animation to
a suitable length

6/7) Cleaned up via keyframing and exported to Unreal Engine:

Improved work methodology:

Animation cleanup reference frames.txt

```
1   116:
2   X -6
3   Y -7
4   Z 8
5
6   413
7   X-14.04
8   Y-84.64
9   Z-237.21
10
11  Rotation
12  Y- -12.98
13
14  441:
15  Rotation:
16  X -7
17  Y -16
18  Z 4
```

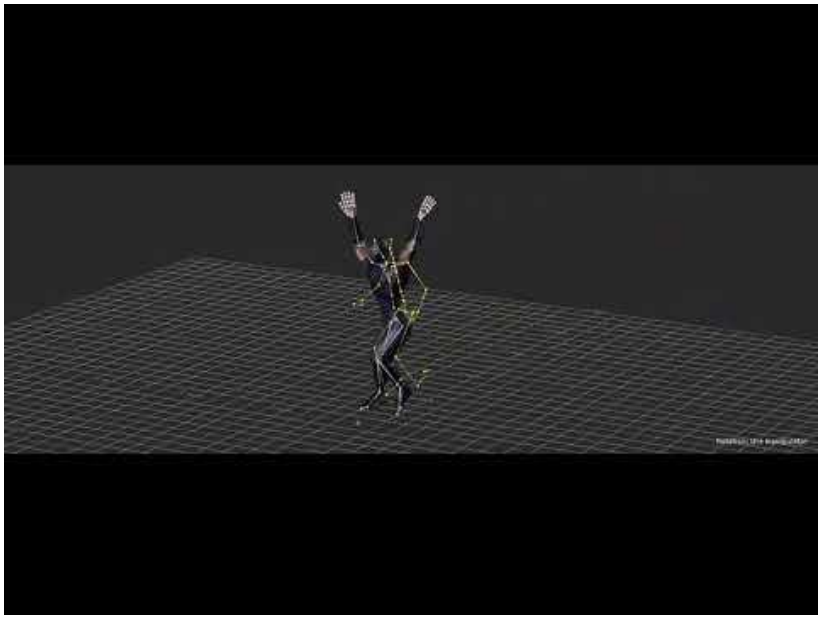
Noted down a reference of frames, when doing clean-up. This proved useful because it meant there was less cognitive load to remember so many different numbers because each frame has a different number for X, Y & Z coordinates for both location and rotation. Therefore 6 different numbers for every frame. This improved work practise proved useful when completing future clean-up because I had less items to memorise.

This methodology is supported by Donald Norman's findings on 'Knowledge in the Head' (Norman, D. A. (2013). The Design of Everyday Things, revised and expanded edition):

'Knowledge in the world, external knowledge is a valuable tool for remembering'

This improved work practise proved useful when completing future clean-up because I had less items to memorise in my working memory.

MotionBuilder reflection:

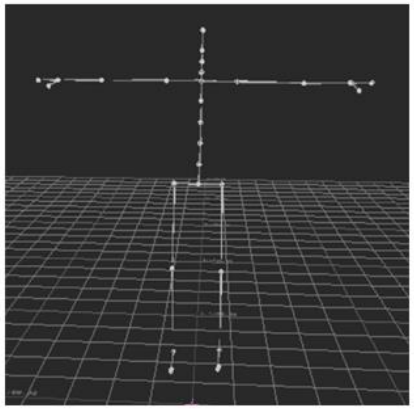


While most animations were exported fine, the Run-stop animation was quite messed up. This might be partly because it is the 2nd take in the scene. Perhaps the motion capture suit markers got dislodged out position whilst recording the first take, causing the cameras to track the movement data wrong. Given the motion capture is tracking in real-time. In hindsight, this is risk that is susceptible to occur. As upon examining the multiple takes for the Window jump animation, it also appeared to be the case. Luckily, the markers were fine during the first take, so no major clean-up was required for that animation.

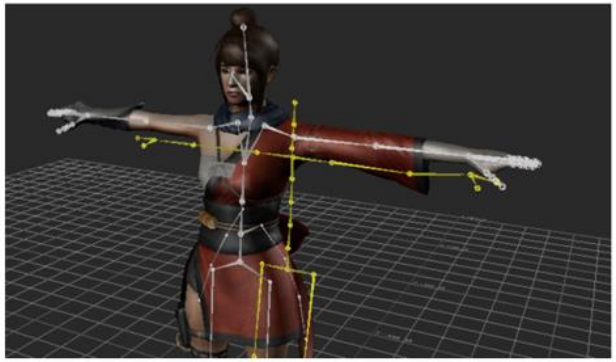
One way this risk could have potentially been mitigated, would be to plant the suit markers in better positions. Thus giving the camera an easier job to track the data and reduce the changes of recording inaccurate movement data. Moving forward I will keep this in mind when recording motion capture in the future.

Repeated MotionBuilder exporting process for Yume's 1 mocap animation:

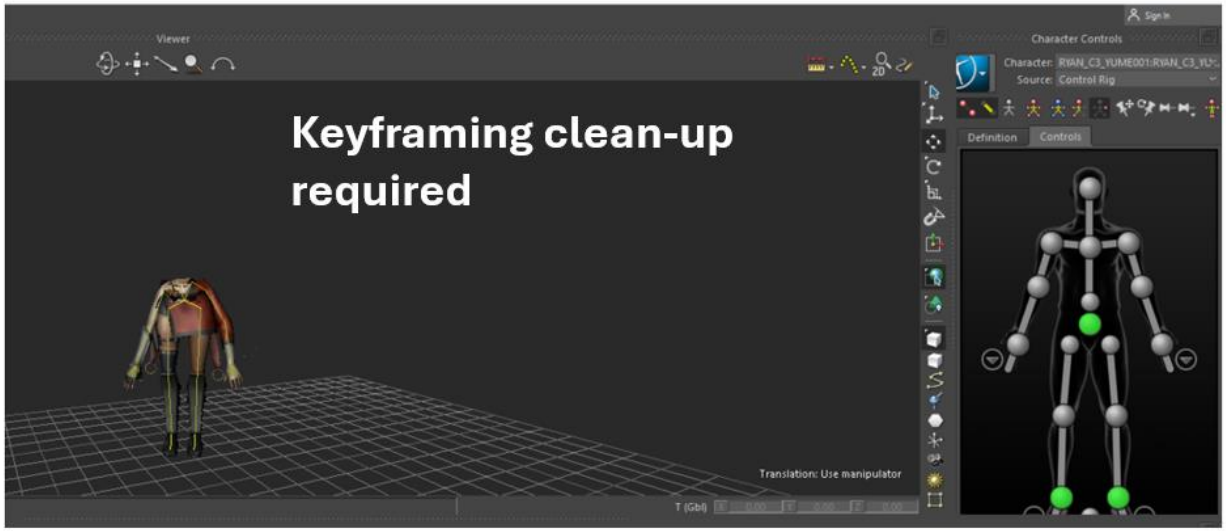
Animation skeleton mesh adjusted:



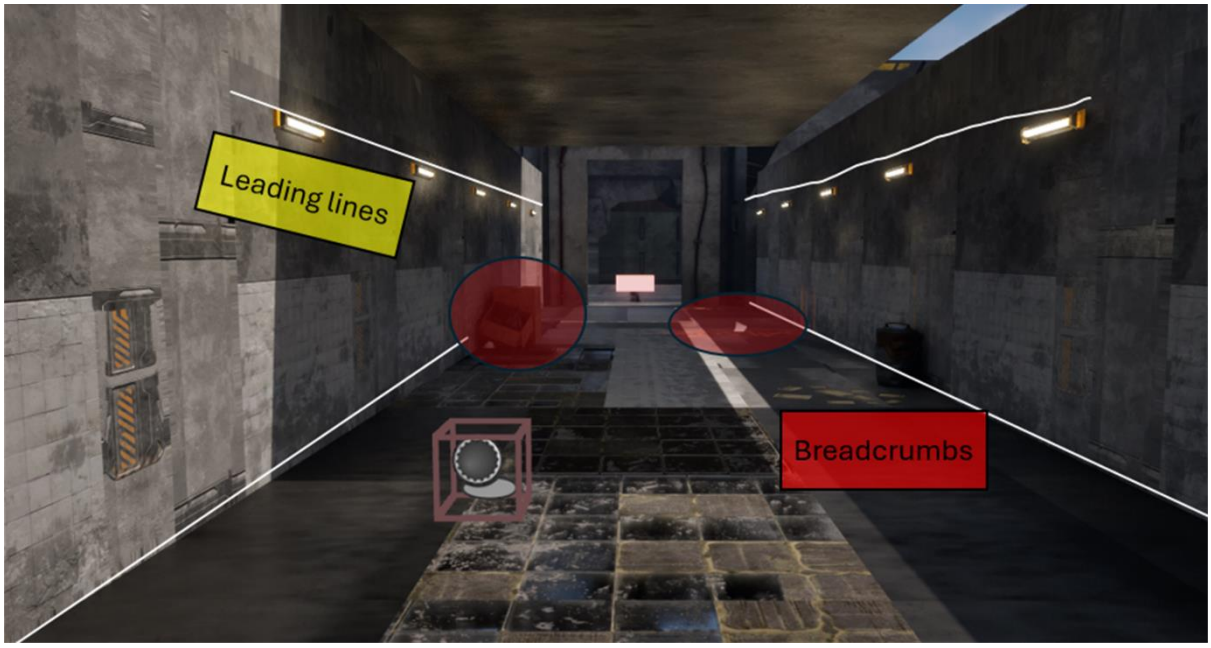
Time to characterise:



Oh dear:



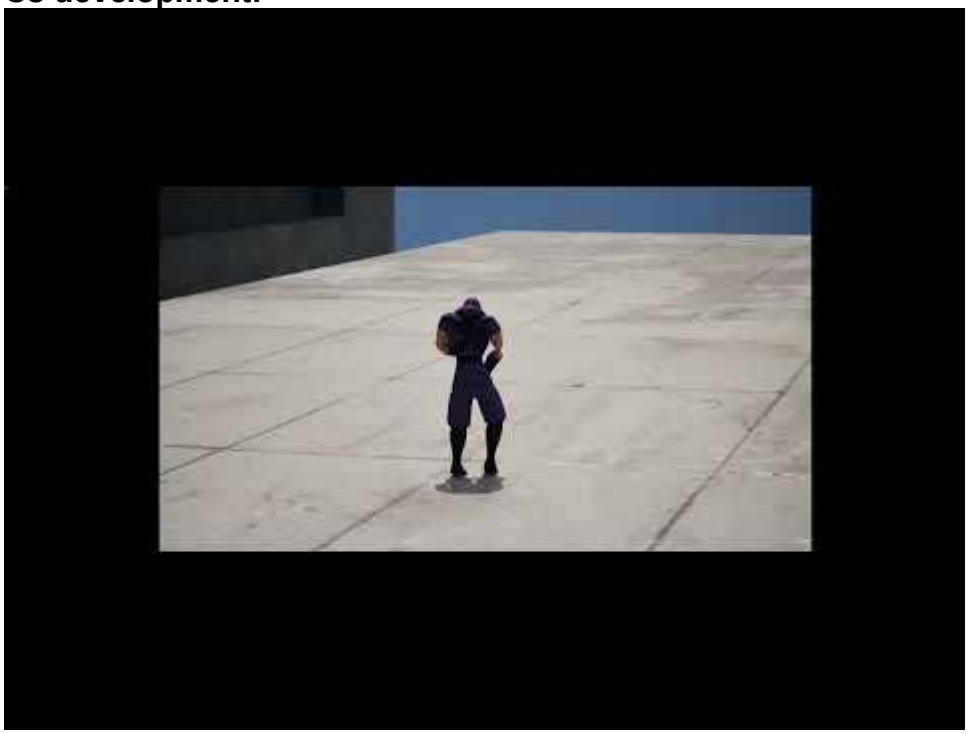
Meshing with consideration of level design:



Final stretch of Production:

Created a UI widget for the Device

C3 development:

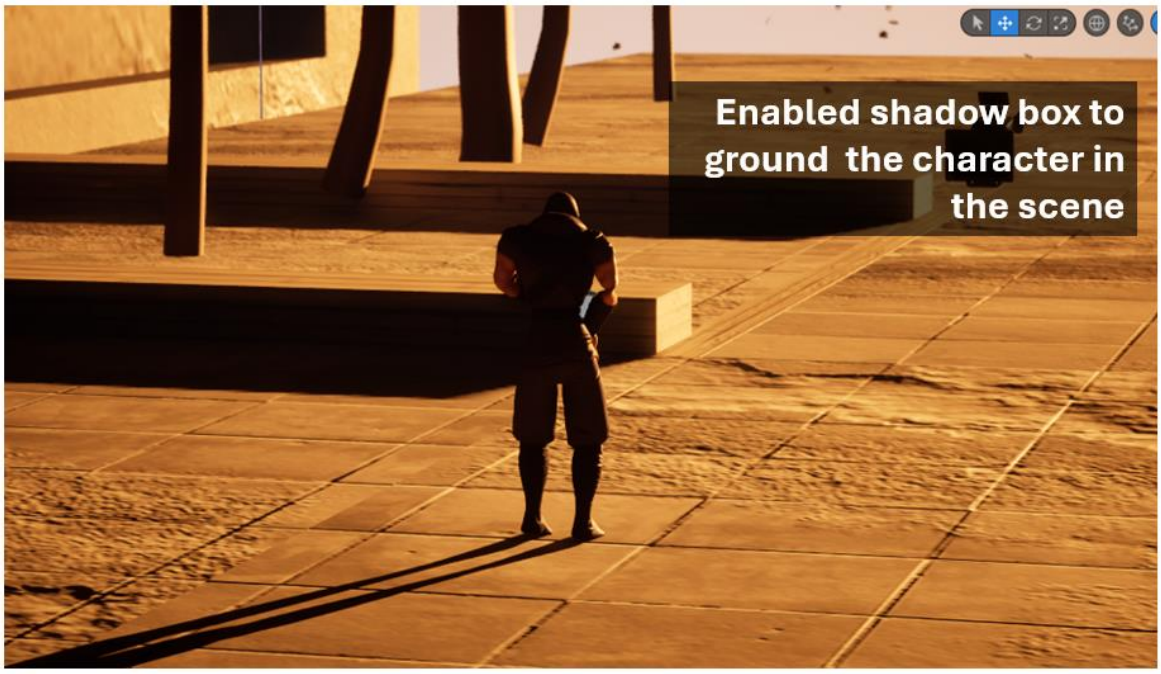


Added lighting and updated floor mesh's

Despite encountering a problem with animation of the arm, instead of spending time cleaning up the few persistent frames. I decided to use this issue as a design constraint and thought of cutting to an entire new scene that still fits thematically with the themes of this cutscene. As the idea of the scene is about separation and a loss of connection. So to foreshadow this, I created a VFX for leaves falling and also

thought the weather should reflect this by having it be sunset. This is an example of using constraints to inform the design decisions made and can be supported by the following passage:

"The thoughtful use of constraints in design lets people readily determine the proper course of action, even in **a novel situation." Norman, D. A. (2013). The Design of Everyday Things, revised and expanded edition**



Result of research applications:

At this point, knowledge acquisition was needed to investigate how C2 could be implemented and also evaluate the state of the project:

Knowledge acquisition:

- Whilst making C3, I discovered I could use Widget blueprints to create editing transitions. This will be useful when making C1 later on!
- Add transition of switch blueprint once it is ready. As changing its time sequence mess things up.
- Reimported previous gameplay animations to ensure it can transition to mocap scene in C2.
- Created a Laser blueprint
- Need to complete C2 in reverse order, to get correct timings
- Realized I can blend between animation by dragging them over each other
- To get the different (future/vison) filter use a dirt mask. Then it applies onto the action shots.
- **To get multiple videos to overlayed on top of each other, I need to:**

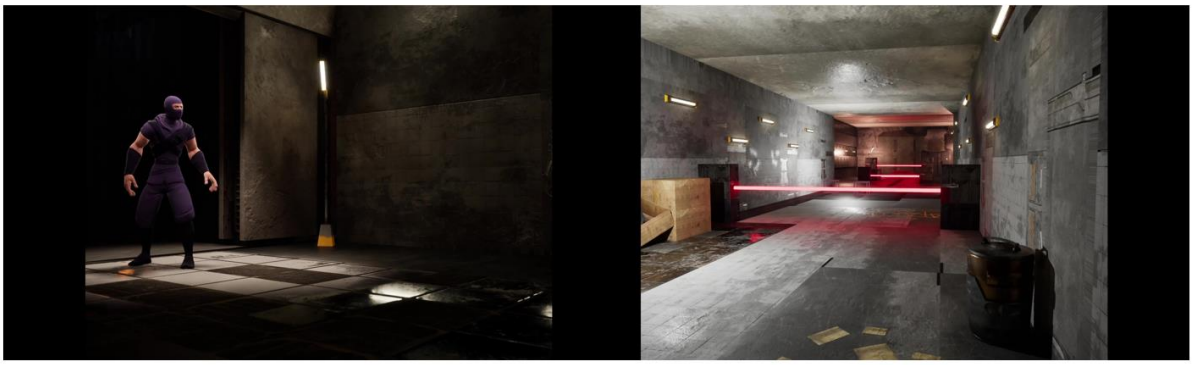
  1. Export the shots as MP4 videos
  2. Import these shots back into engine
  3. Afterwards complete 2nd half of cinematic

```
- Add alarms to C2
-For end of C3, instead panning from right to left for Yume, continue momentum for left and right
-Re-edit C3, replace shot of camera with both Jack and Yume in frame. Have reverse shot of
camera pulling back, with Jack in front. (Dolly shot)
-At the start, do an cinematic, that opens the reverse of C3 ending
- Add wires meshing to show connection
-Add background meshing for 2D section
-Update background walls for C3
```

C2- Shots 1 & 2:

These 2 shots are examples of following the 180° rule by having camera placed on the same axis, so the audience isn't disoriented with the position of the characters.

Both shots follow the rule of 180°,
to maintain spatial continuity



This production methodology is a good practise because ‘The 180° system ensures that relative positions in the frame remain consistent’ **(**Bordwell, David, et al. Film Art : An Introduction, McGraw-Hill US Higher Ed ISE, 2019. ProQuest Ebook Central’).

C2 shots 6-9 scene set up apart from cameras:

C2:

C2-Superimposition shot:

Thanks to prior knowledge acquisition, to get this to work I was able to export individual Level Sequence actors as videos, reimport them as media files, create a UI material and then display them in multiple UI widgets that are called at specific timings during the sequence. This special effect is supported by Bordwell, David, et al. *Film Art : An Introduction*, McGraw-Hill US Higher Ed ISE, 2019 :

‘For decades filmmakers presented dreams, visions, or memories superimposed over a character’s face.’

In this example, the aspect ratio shifts to full screen, to display Jack's confidence, whilst providing the viewer an insight into his thought process before executing the correct actions to overcome the obstacles.

This process took lots of trial & error, because there was no guarantee it would work. At one point when working on another computer, the media files would not display! Until I realised it was because the video folder was saved in a different folder and had to be on the same file path.

Testing:

Testing data has been converted from MS Word documents to MS Forms to display an overview:

Guvvy's FYP playtesting survey

1. What data did you play the game?

Please input date (dd/MM/yyyy)

2. How long did it take you play the game?

- ◯ 1-2 minutes
- ◯ 2-3 minutes
- ◯ 4-5 minutes
- ◯ 5 minutes or longer

3. Was the game difficult to complete?

Enter your answer

4. How was the pacing of the story?

Enter your answer

5. Did you resonate with the story? If so/not, then please explain why.

Enter your answer

6. Did you enjoy the cinematic presentation of the game?

Enter your answer

7. Was the transition between gameplay and cutscenes seamless?

Enter your answer

8. Did controls feel satisfying to use (If not, then please explain why)?

Enter your answer

9. What was your favourite part of the game?

Enter your answer

10. Did you have a least favourite part of the game?

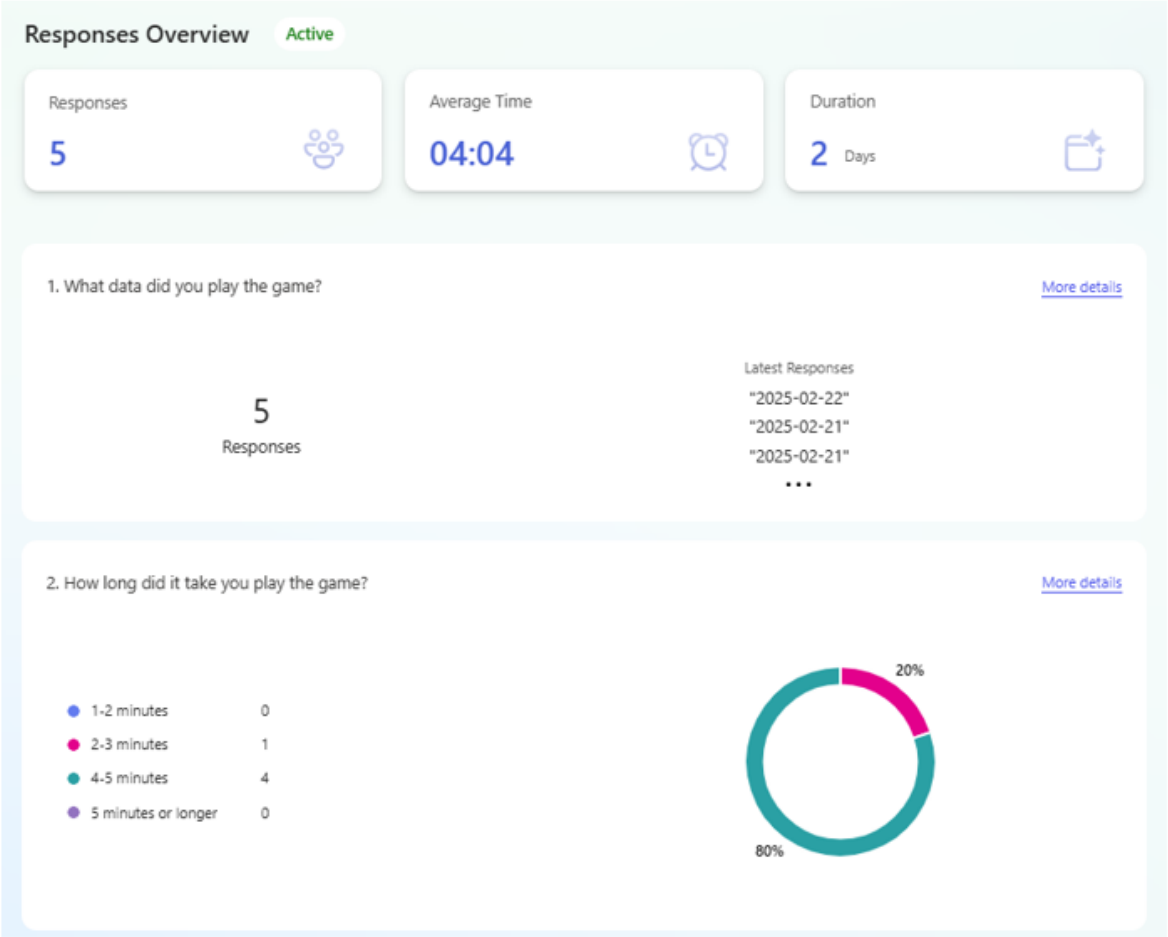
Enter your answer

11. Any suggestions to improving the game?

Enter your answer

12. What would you rate the game /10?

1	2	3	4	5	6	7	8	9	10



This quantitative data shows 5 participants tested the project and spent an average time of 4-5 minutes. Thus, meeting original deliverable object of creating an experience that lasts '5 minutes.'

3. Was the game difficult to complete?

5 Responses

ID ↑	Name	Responses
1	Guvvy ATWAL	Easy but I may be the goat so it could just be me being to good ngl
2	Guvvy ATWAL	No, but I was quite confused on that to do after the first cut scene
3	Guvvy ATWAL	Not too difficult, although there are no direct directions on where to go it was not difficult to navigate, there was a section that was a little bit difficult due to the lack of lighting which is the parkour section.
4	Guvvy ATWAL	No it was not, I found it quite easy to figure out what was going on.
5	Guvvy ATWAL	No it was very easy to understand once I had been told the controls. The premise was generally quite simple so it was easy to follow.

4. How was the pacing of the story?

5 Responses

ID ↑	Name	Responses
1	Guvvy ATWAL	Good was a bit confused who the women was at the end but I got the general idea
2	Guvvy ATWAL	IT Very Good
3	Guvvy ATWAL	The pacing was good, nothing felt directly rushed, the story had a mix of emotions and suspense added to it which made me want to learn more about the story, as the story doesn't try to info dump on you through cutscenes and leaves you wanting to know more and what happens next each cutscene, it's very engaging to a viewer.
4	Guvvy ATWAL	The pacing was just right, it did not feel to fast or too slow.
5	Guvvy ATWAL	It was good, I didn't really know what was happening if I honest but thought the cinematics were pretty good.

5. Did you resonate with the story? If so/not, then please explain why.

5 Responses

ID ↑	Name	Responses
1	Guvvy ATWAL	Yes and no, just was a bit confused at the end but it was good ngl.
2	Guvvy ATWAL	Not really, because its kinda missing some dialog and music while I play tested this. So it was quite out of place, not quite immersive.
3	Guvvy ATWAL	While I was very engaged with the story it did not resonate with me however not entirely sure maybe it's because I didn't have the full context of the story just yet and usually for myself I need to be very deep into the story before resonating as I normally play super long JRPGS like Persona and even then I don't resonate from the story from the initial get go it takes me a while and need more narrative context.
4	Guvvy ATWAL	I resonated with the story as the character portrayed the feeling of loss very well, I could clearly feel he was going through a tough time in the second cutscene.
5	Guvvy ATWAL	As I said I didn't really understand what was happening and why we were where we were. It wasn't completely sure what happened at the end as well.

6. Did you enjoy the cinematic presentation of the game?

5 Responses

ID ↑	Name	Responses
1	Guvvy ATWAL	Yes there were very pleasing to look at and watch the guy go around the world
2	Guvvy ATWAL	Absolutely, the animation is amazing to see.
3	Guvvy ATWAL	Yes! It was very fun I enjoyed watching it and was very impressed with what has been created and was engaged with the cutscene form start to end I feel like some games now a days use cutscenes in unnecessary ways but I feel like in your game it works really well and fits in place which I really like how you make use of teaching the mechanics and pacing the story at the same time.
4	Guvvy ATWAL	Yes the cinematics were very well done, and well shot. I really enjoyed the frame where the character was thinking how to get past the layers and it showed three different previews of dodging the lasers. TLDR Absolute Cinema!
5	Guvvy ATWAL	Yes, I thought it was really sick and the scene where the character is staring at the screen and other scenes are playing over it. I thought that was really well done and clean looking.

7. Was the transition between gameplay and cutscenes seamless?

5 Responses

ID ↑	Name	Responses
1	Guvvy ATWAL	yes
2	Guvvy ATWAL	Yes and no, the animation was smooth but there is some points where the transition was lagging-like.
3	Guvvy ATWAL	The blend was quite good could do with having the player spawn in the location at the end of the cutscene, as at the end of the first one you spawn a little further away and the second one you spawn by the stairs rather than where you originally were it would be better maybe for the character to spawn where they were where the cutscene ends.
4	Guvvy ATWAL	Yes there were, although there was an instance after the first cinematic played where the character started a bit to the right of where he was when the cinematic ended.
5	Guvvy ATWAL	Yes, they transitioned pretty well.

8. Did controls feel satisfying to use (If not, then please explain why)?

5 Responses

ID ↑	Name	Responses
1	Guvvy ATWAL	There were weird bro like wtf is crocuh doing on Q you are better then this ngl bro
2	Guvvy ATWAL	Yes, E to interact and WASD is fine but Q to duck is kinda off compare to other games input layout
3	Guvvy ATWAL	Yes, the controls were seamless and didn't have any issues with playing, maybe add a tutorial in certain areas for button presses so players know what to do could be a quick input pop up like "Press S to slide downwards!"
4	Guvvy ATWAL	The controls were okay but very confusing as they were not standard to typical platformer conditions. I would change crouch to CTRL instead of C, and slide to LSHIFT or LALT instead of S.
5	Guvvy ATWAL	Yes I like the use of the Q key as the crouch, it was convenient and it made the quick game play easier.

9. What was your favourite part of the game?

5 Responses

ID ↑	Name	Responses
1	Guvvy ATWAL	The part when ruuning on a 2d angle 😊
2	Guvvy ATWAL	The ending
3	Guvvy ATWAL	I would say the cutscenes they brought the game its uniqueness and fun to it, I really enjoyed watching them it felt like a mini movie told in a silent way like a visual narrative sort of style which is cool and something I would love to see more in games rather than info dumping in one big cutscene.
4	Guvvy ATWAL	The second cinematic as it was shot very well with cool lighting and shots within it. My favourite shot was the leaves blowing off the tree.
5	Guvvy ATWAL	The cutscene I mentioned earlier where the character is staring at the screen and other scenes are playing over it. I thought that was really well done and clean looking.

10. Did you have a least favourite part of the game?

5 Responses

ID ↑	Name	Responses
1	Guvvy ATWAL	The end
2	Guvvy ATWAL	The beginning is was quite confused of what to do.
3	Guvvy ATWAL	Not really, I didn't have an area I disliked I enjoyed the whole experience!
4	Guvvy ATWAL	The confusing crouch and slide controls!
5	Guvvy ATWAL	No.

11. Any suggestions to improving the game?

5 Responses

ID ↑	Name	Responses
1	Guvvy ATWAL	Make controls better and some of the animation looks a bit of
2	Guvvy ATWAL	Some indication on interaction, some audio and music for the immersion, and UI for Player Engagement.
3	Guvvy ATWAL	Maybe adding lighting to the area, I mentioned before just a little and the starting area may need a little lighting too as it was a little too hard to see and maybe a SFX for when you press the button.
4	Guvvy ATWAL	Please change the controls!
5	Guvvy ATWAL	Maybe make the story a bit clearer and also make it so you don't have to run away from an obstacles to be able to slide under them.

12. What would you rate the game /10?

5 Responses

ID ↑	Name	Responses
1	Guvvy ATWAL	8
2	Guvvy ATWAL	8
3	Guvvy ATWAL	8
4	Guvvy ATWAL	8
5	Guvvy ATWAL	8

Testing evaluation:

Following from testing, the following iterations were made to address playtesting feedback:

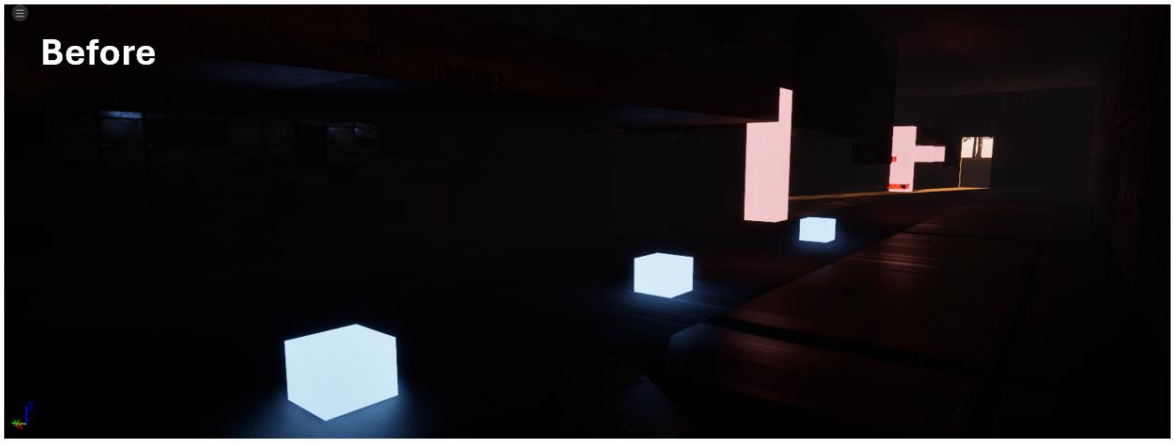
```
Polish checklist from playtesting:


3)
-Add lighting to 2D section
7)
-Improve location of G2 character for ending of C2
8) + 10):
Link to design of everyday things, aligning controls to conceptual model the user has. Via standardised
control layouts
-Use CTRL instead of Q for crouch
- At the table add a UI pop up that says Press E to interact, then it plays a level sequencer, showing the door, and a switch. A
- Add a quick UI input popup like "S to slide"

11)
- Add audio and music
- Slightly change timing of C2, so you don't see run animtion pop-in
- Change the colour of light switch from red to green
```

3. Was the game difficult to complete?

5 Responses

No, but I was quite confused on that to do after the first cut scene

Not too difficult, although there are no direct directions on where to go it was not difficult to navigate, there was a section that was a little bit difficult due to the lack of lighting which is the parkour section.



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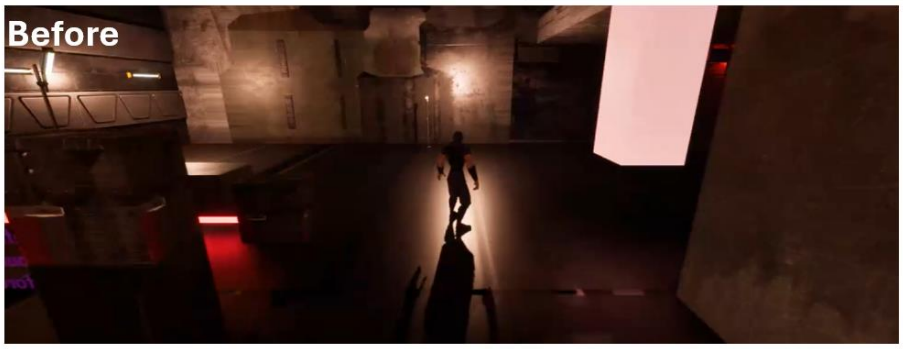
7. Was the transition between gameplay and cutscenes seamless?

5 Responses

The blend was quite good could do with having the player spawn in the location at the end of the cutscene, as at the end of the first one you spawn a little further away and the second one you spawn by the stairs rather than where you originally were it would be better maybe for the character to spawn where they were where the cutscene ends.

Yes there were, although there was an instance after the first cinematic played where the character started a bit to the right of where he was when the cinematic ended.



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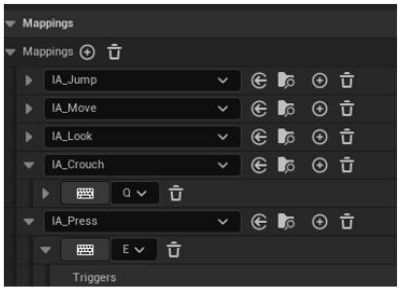
Yes there were, although there was an instance after the first cinematic played where the character started a bit to the right of where he was when the cinematic ended.

8. Did controls feel satisfying to use (If not, then please explain why)?

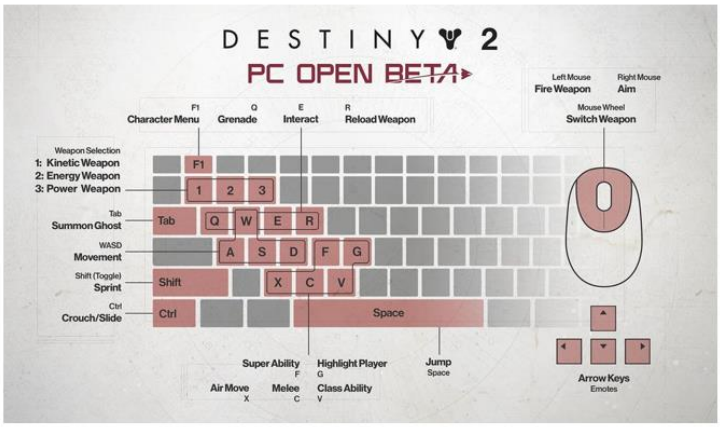
5 Responses

Yes, E to interact and WASD is fine but Q to duck is kinda off compare to other games input layout

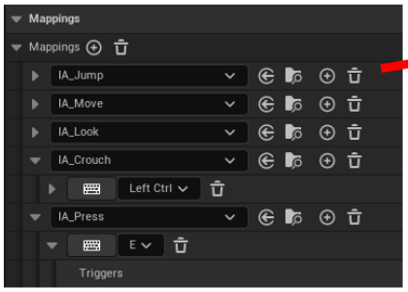
Before



Example of a standardised control scheme:



After



A standardised mapping layout forms a conceptual model the player can understand. Minimising the risk of confusion.

As supported by Donald Norman's findings on Conceptual Models:

'A good conceptual model allows us to predict the effects of our actions.'
*(Norman, D. A. (2013). The Design of Everyday Things, revised and expanded edition)

8. Did controls feel satisfying to use (If not, then please explain why)?

5 Responses

Yes, the controls were seamless and didn't have any issues with playing, maybe add a tutorial in certain areas for button presses so players know what to do could be a quick input pop up like "Press S to slide downwards!"

10. Did you have a least favourite part of the game?

5 Responses

The confusing crouch and slide controls!

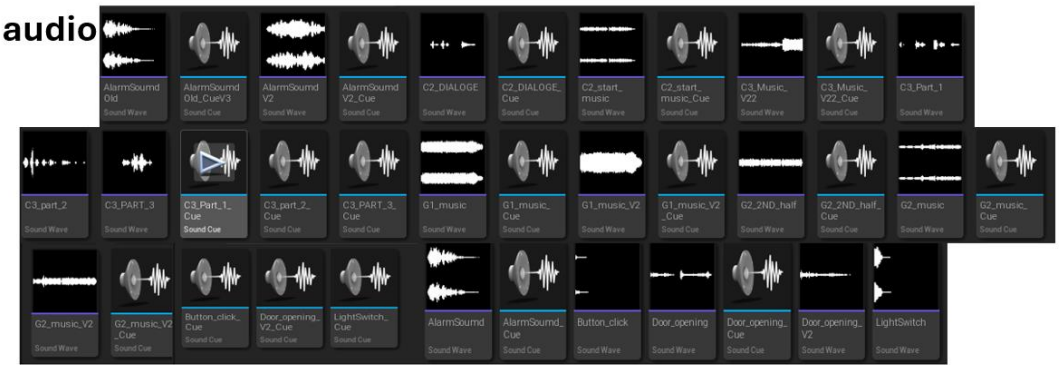
Created Spatial UI widgets, to introduce controls

11. Any suggestions to improving the game?

5 Responses

Some indication on interaction, some audio and music for the immersion, and UI for Player Engagement.

Added audio

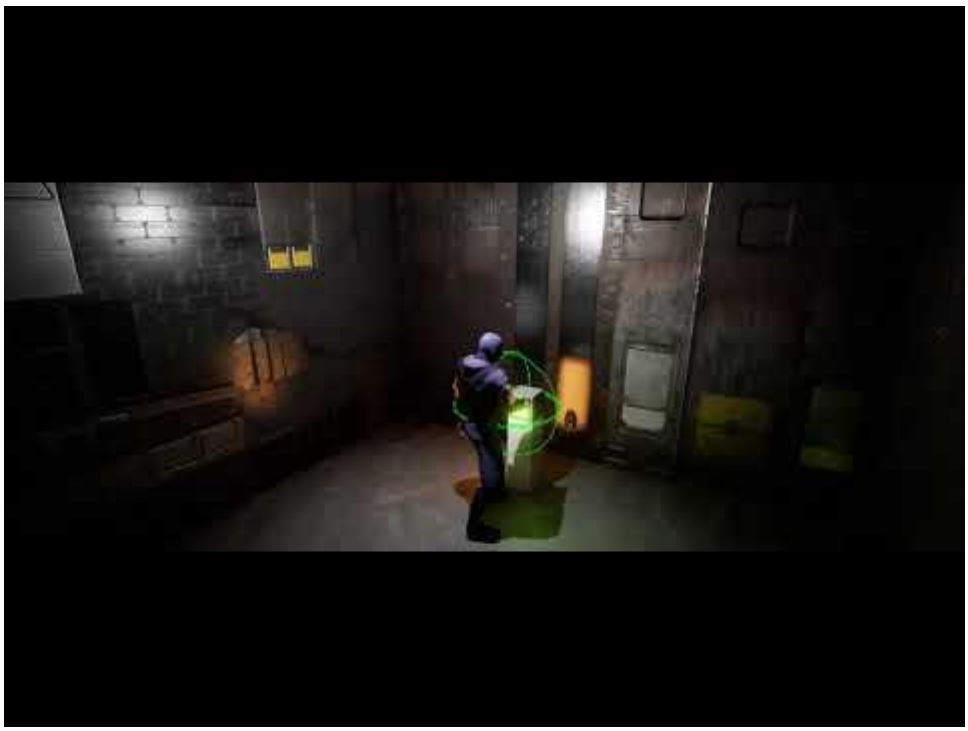


11. Any suggestions to improving the game?

5 Responses

Some indication on interaction, some audio and music for the immersion, and UI for Player Engagement.

Light switch
Colour change



11. Any suggestions to improving the game?

5 Responses

Make controls better and some of the animation looks a bit of

- Slightly change timing of C2, so you don't see run animation pop-in

Final Artefact:

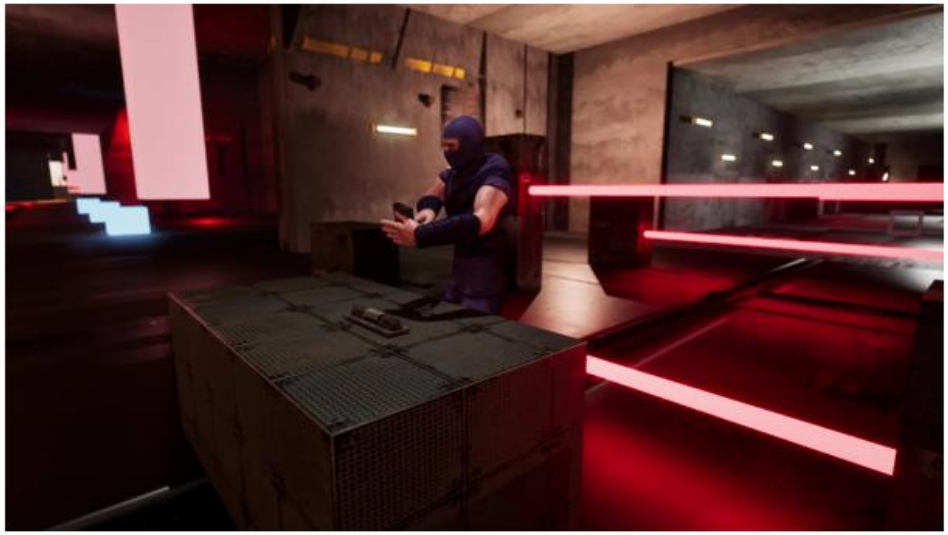
Comparison to industry:

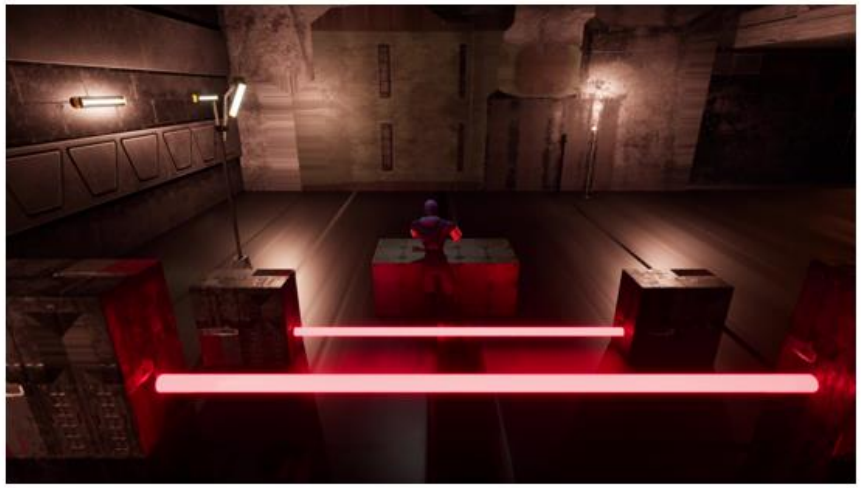
THE BATMAN

Lighting comparison

To visualise danger and increase tension

Similar use of framing to isolate character





Examples of Superimposition:

A superimposition shot provides an opportunity to get into the headspace of a character.

Example of Dolly Shot:

Pulling back, the camera, visualises Jack's shock with seeing Yume. In turn building anticipation for the next scene.

'Editing can repeat story actions' - Bordwell, David, et al. Film Art : An Introduction, McGraw-Hill US Higher Ed ISE, 2019. ProQuest Ebook Central'

Example of repeat editing same action at different angles:

Used to emphasise impact of action!

Applications of using repeat editing:

Critical Evaluation:

In conclusion, the artefact has mostly addressed the project problem. In terms of deliverables, it meets all required components. Such as being 5-minutes because according to testing data, most participants spent between ‘4-5 minutes’ to finish it. Furthermore, there is strong evidence of ‘cinematography techniques’ and ‘game design principles’ from applying research throughout development.

However, in terms of ‘polish’ the artefact could be stronger. For example, cleaning Mocap animations in MotionBuilder was a time-consuming and challenging process. While the Mocap animations contained the life a of a real performance, some animations contained a few frames where the limbs were misaligned. Therefore, I decided to use this problem as a constraint. For example, in C3 the camera cuts to another scene of a tree when the animation of the character is jittery. The new scene fits thematically and has helped shape the direction of the experience. Thus, highlighting how through either cinematography or game design, constraints can be applied to inform the project’s development. As supported by Donald Norman’s findings on constraints:

"The thoughtful use of constraints in design lets people readily determine the proper course of action, even in **a novel situation." Norman, D. A. (2013). The Design of Everyday Things, revised and expanded edition**

During the production of C2, I realised cutscenes, despite being well paced, were double their intended length. As originally, cinematics were planned to be no more than 30 seconds. Resulting in scope being much larger than originally planned. Therefore, to ensure scope remained in-line with the intended 5-minute duration, puzzles were streamlined (1-button interaction, instead of a spatial widget with multiple interactions) and C1 became smaller than the initial storyboard (Used a UI widget animation to contrast the ending UI widget).

Finaly, it can be deduced cinematography and game design strongly resonates with each other. When examining C2 and G2, both mediums apply the rule of 3. In the context of level design, this details: introduction, heighten challenge and remix. In relation to easing the player with the slide and jump mechanics, through specific placement of the platforms. Whereas in terms of cinematography, there is evidence of repeat editing. To foreshadow and introduce the gameplay actions. Whilst simultaneously adding dramatic weight to builds excitement for the player to try these actions later-on during G2. Finally, superimposition was an effective shot to convey Jack’s thought process through imagery, without the need for dialogue or exposition. It is storytelling, only possible through cinematography.

Therefore, in conclusion, cinematography and game design principles can work cohesively together! Rather than use techniques for each respective medium in isolation. This artefact highlights the vast possibilities, with applying principles across both mediums to forge a harmonious, cinematic experience!

Bibliography:

- **Norman, D. A. (2013). The Design of Everyday Things, revised and expanded edition**
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