



# HELP MARK ESCAPE

DES310 | Professional Project

Personal Portfolio

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SpicySpaceChickens



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This portfolio showcases my work for Spicy Space Chickens and Embodied throughout the DES310 module.

My main roles for this project were Gameplay and Narrative Designer, as well as Gameplay and Levels Programmer.

I was responsible for creating the Game Design Document and most design related decisions for the team along with implementing all the levels in Unreal Engine and helping the programmers where required.

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# CLIENT BRIEF

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## BRIEF

The brief our team was given was to create a 2D interactive visual novel game that allows players to explore difficult scenarios in a safe space. The game aims to help players improve their self defence via decision making, de-escalation and other skills.

Our client was looking for us to create a functional prototype of the game that they could take further, to try get gain the funding required to fully complete the project.

The full brief can be viewed [here](#).

SCHOOL OF DESIGN & INFORMATICS

PROJECT BRIEF

### Creative Brief - Template

**Proposer:** Arizona Brodie (founder), on behalf of Embodied Self Defence Limited.

**Concept:**

Briefly describe what the high concept for the project is. You might want to list 2-4 bullet points that highlight the unique selling points or key features of the project.

*An interactive fiction style game designed to help players increase self defence capability experientially online through simulated self defence scenarios in game play.*

- *Players validate and improve skills such as; decision making, self supportive mindset, de-escalation, identifying manipulation and boundary setting*
- *Players can explore consequences of "bad decisions" in a safe space*
- *Players exit gaming experience with improved mental, emotional and physical self defence.*

**Purpose:**

Briefly outline what the purpose of the project is. What should the team aim to achieve? What would a successful project look like?

*The purpose of the project is to explore different avenues to realise the game design vision, then deliver a functional prototype which can attract public and funding interest, and also feedback. Our desire is to attract funding for full game development. Our aim is to create a series of stories in the future covering many other self defence situations and themes. We'd like our games to encourage players to take their learning further and sign up for our 8 week online self defence course and Student membership.*

*Although probably categorised as Interactive Fiction, we'd like the game to be more visual and dynamic than a static, fully text based, reading-heavy, text adventure style game. We like comic book style themes and we'd like the game to be in a 2d format for speed of development and cost saving. Predominantly static visuals with a sprinkling of animation/gifs/motion comic/open to other suggestions, could work quite nicely. It's important to us that we are able to take stories from concept to release in a matter of months rather than years so we can be responsive to current events and player demand.*

*A story line has been mind mapped for the project. At certain points as indicated on the mind map (pink-ish, round edged boxes), there are*

# RESEARCH

## PREVIOUS CLIENT WORK

To prepare ourselves for creating our concepts, we played through some of our clients previous work they had available on their website. This included: [The Interrupting Friend](#), [A Dodgy Landlord](#) and [Bus Attack](#).

These games gave us an idea of what sort of games *Embodied* has been creating and the ideas and themes they feature. The games we played through were mostly text based, with a few pictures but overall limited interaction other than picking options via text.

Each game was focused on providing feedback about their choices and encouraging the player to keep learning from the experience.

It will be important for us to continue these themes in our concept to ensure we meet our clients desired themes and ideas for the game as well as match previous games.

It would also be good to expand outside of text based games as this could provide a more engaging experience for players and improve their learning.

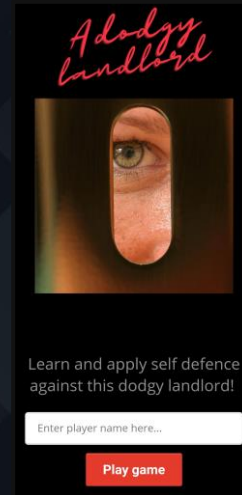
The clients games can be played via the [Embodied](#) website.



(Embodied. 2020)



(Embodied. 2021a)



(Embodied. 2021b)

# RESEARCH

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## INSPIRATIONS

Part of the provided client brief included some inspirations that had features they believed would be beneficial to include in the prototype. These games were: The Walking Dead, Choices, and Life Is Strange.

Whilst designing mechanics for the concept pitch I researched these games specifically to understand the features they were inspired by.

Two key themes I noted down whilst researching were:

- Story driven gameplay, focusing on narrative instead of action scenes. Trying to avoid physical conflict where possible.
- Previous choices the player makes should effect the outcome of the story to show the effect of previous actions.



*(IGN, 2013)*



*(Fandom, 2021)*



*(GameSpot, 2022)*

# CONCEPT

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## CONCEPT

Initially, as a team we were worried about our assigned brief as we believed the brief wouldn't work great with our team being predominantly 3D focused with 3D artists and animators. As our first sprint, we had to produce a pitch for our client where we decided to propose the idea of a 3D game instead to better suit our strengths.

We produced a concept pitch for the client with some proposed mechanics and art styles we had designed around the clients initial brief. We also highlighted some concerns we had with the script and how much flexibility we had with it.

Whilst we made some changes to the brief for our pitch, we ensured that we kept as many themes and ideas so we didn't deviate too much from the clients ideas. We stuck to their theme of positive encouragement by designing mechanics that would assist the main storyline in encouraging the player to learn and improve their skills. A comic book style was chosen from their list of inspirations for the visual side of the game.

Our client was fantastic in response to our proposed concept and addressed all our concerns with the brief. They were open to the majority of ideas we designed, most importantly the switch to 3D.

The original concept pitch for the client can be viewed [here](#)

# UX DESIGN

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One of my first tasks as a designer was to create some concepts for UX design that our UI artists Charlotte could take further and produce final assets. I used an online wireframing tool called Miro to outline the objects as these could be viewed online which was useful when working with other team members.

## MAIN MENU

I started with the main menu where I designed two variants. The first was a scrapbook style menu where the player would flip through pages in a book to access different menus. This would fit with the comic book themes the client was wanting to portray.

However, this type of menu may not function well on mobile devices or may prove too difficult to implement in-engine so I created a more traditional overlay style menu as well.



*Scrapbook main menu*



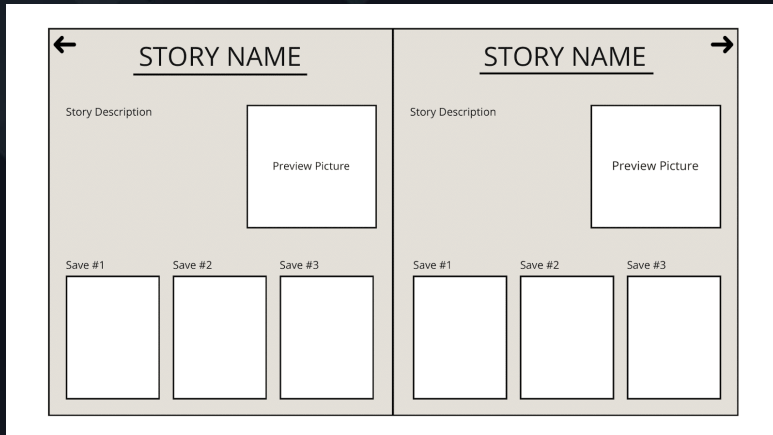
*Traditional main menu*

# UX DESIGN

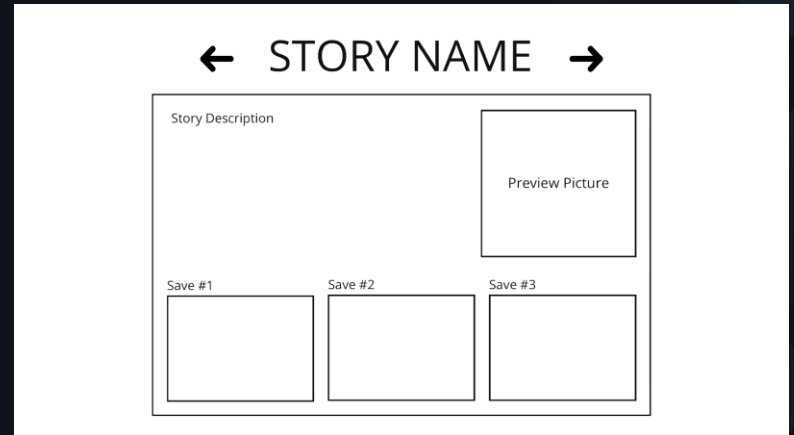
## STORY SELECT

Next I worked on a story select menu as the client mentioned using the game to showcase multiple stories, not just *Help Mark Escape*. This menu would allow the player to switch between each story as desired. These menus would give the player some information about the story and also function as a save select for each story.

I once again created two versions of this menu, one with a scrapbook style and another more traditional menu. This was eventually scrapped as we decided to lower the scope to focus on *Help Mark Escape* itself.



Scrapbook story select



Traditional story select

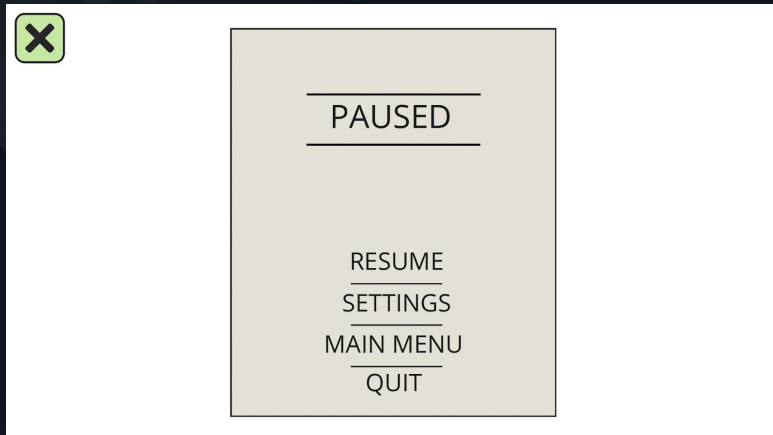


# UX DESIGN

## PAUSE MENU

I also created a pause menu using the scrapbook format. This would allow the player to access the main menu and settings.

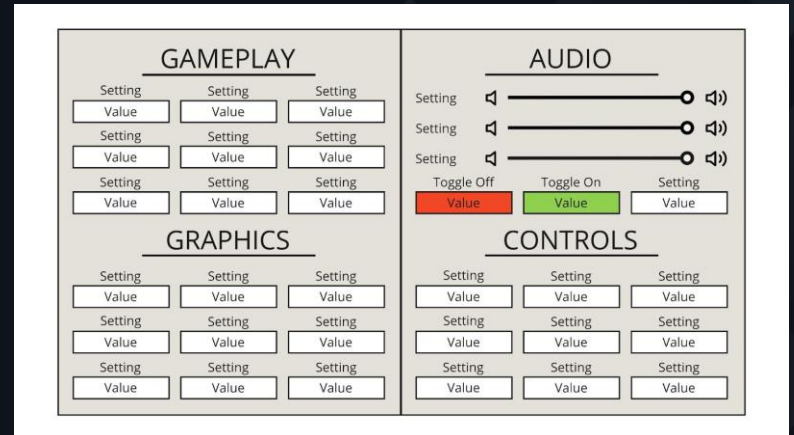
This was not used in the final prototype as we decided to cut it out of the scope as it was not as vital as other features at the time. This would ensure we completed a prototype on time.



Scrapbook pause menu

## SETTINGS MENU

I created a settings menu for the game using the scrapbook style. I was unsure what settings would be featured in the game at this time so created a variety of input types that could support touch input.



Scrapbook settings menu

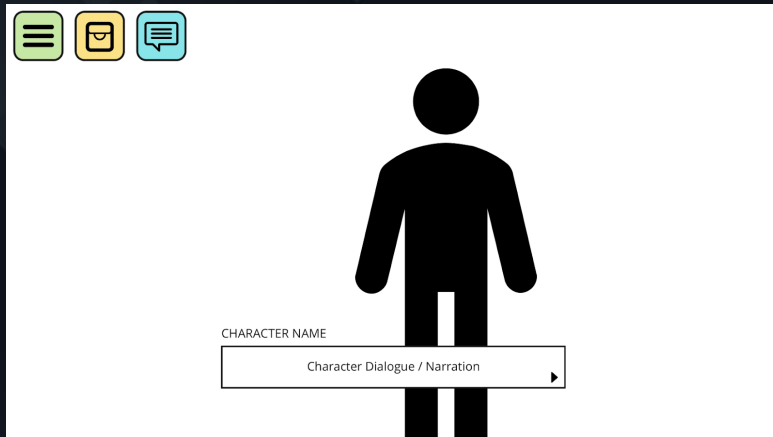
# UX DESIGN

## IN-GAME DIALOGUE

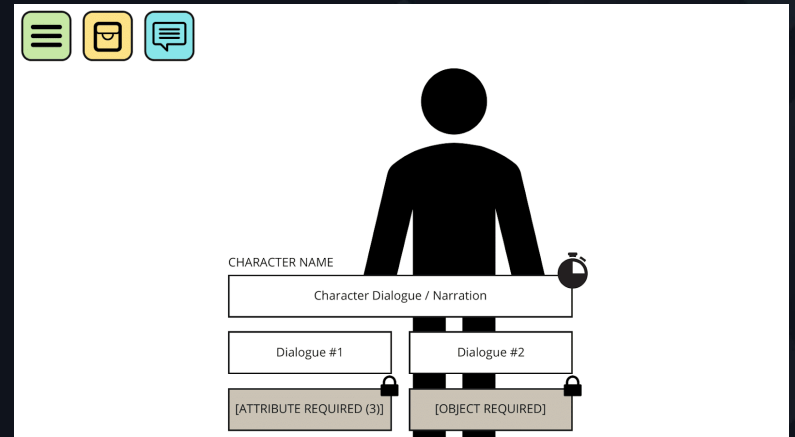
Next I outlined some ideas for an ingame interface that featured some of our concept mechanics. These included pop ups for dialogue as well as menu buttons for various menus. Buttons were kept fairly large and obvious to better fit a mobile layout and size.

The dialogue pop ups were kept on the smaller side, to try let the player see as much of the character as possible. This should allow the player to more easily interpret the various animations the characters will use.

Later in production, these were scaled up as we found that they were too small for a mobile screen.



*In-Game Dialogue (Standard)*



*In-Game Dialogue (Choices)*

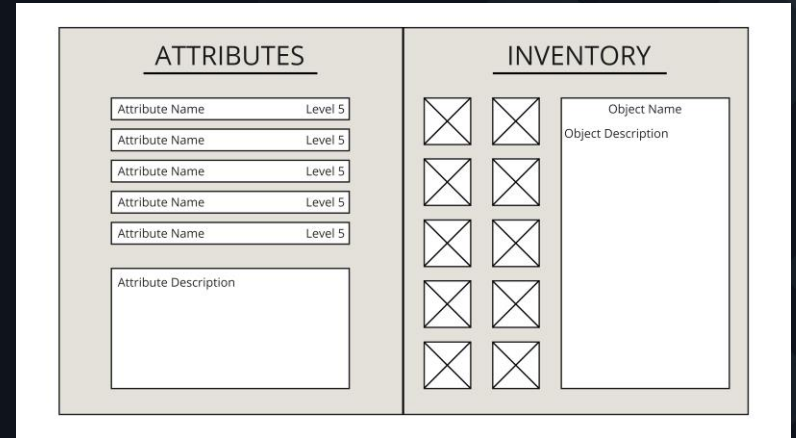
# UX DESIGN

## INVENTORY MENU

To allow the player to view their attributes in-game I created an inventory menu that would display their attributes, their current level and a description of the attribute.

Alongside this, there was also going to be a menu that would show you what objects you had interacted with previously that you could revisit here too.

This menu was ultimately scrapped from the final prototype due to time constraints.



*Scrapbook inventory menu*

## FURTHER UX ITERATIONS

The designs I created were only meant as initial concepts, primarily for the client brief. These were later expanded on and redesigned by our UI artist Charlotte using an online tool Moqups.

As we were targetting a mobile release she ensured the UX designs would function well and as expected with a mobile layout.

We decided to leave the scrapbook menus and go for a more traditional menu to avoid overwhelming the programmers with a 3D menu to implement with the rest of the gameplay.

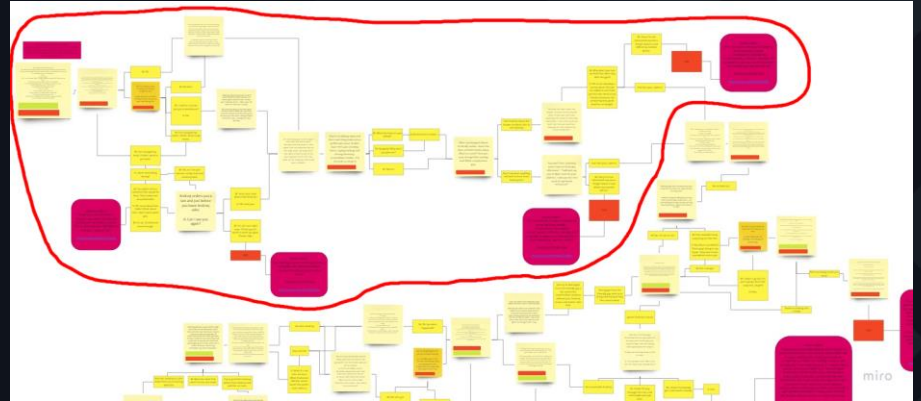
# NARRATIVE DESIGN

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## ORIGINAL NARRATIVE

Alongside the initial brief, our client also provided a narrative breakdown for the story. This was via a Miro board link. As a team we reviewed the story and chose a section of the story that we felt comfortable in delivering to the client for our prototype.

We felt this section included enough of the story to include most mechanics and features required and give the client a prototype that could be used to gain the funding they required for further production



*Vertical slice taken from Embodied Miro board*

While the narrative the client provided was detailed and created the story for the prototype, it would not fit our desired mechanics and gameplay design we were hoping to create as part of our pitch.

Embodied Narrative Miro Link: [https://miro.com/app/board/o9J\\_lqbR2b4=?invite\\_link\\_id=563526678873](https://miro.com/app/board/o9J_lqbR2b4=?invite_link_id=563526678873)

# NARRATIVE DESIGN

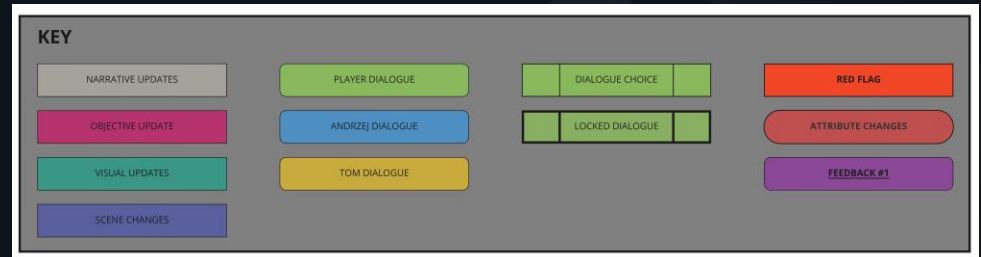
## FIRST REDESIGN

To improve the narrative to better suit the features we were planning to implement, I decided to redesign the narrative, making use of planned mechanics such as attributes and interactions to better match the narrative to gameplay.

I decided to continue using Miro just as the client had been as it seemed it would be a useful tool for plotting out the narrative, especially with it being online, allowing sharing with my team and the client for feedback.

I worked my way through the vertical slice, breaking up the large dialogue boxes into individual dialogue boxes to improve readability for my team and the client. I also used colour coordinated boxes for specific character dialogue as well as any other mechanics or effects the game would use.

I found this redesign be highly beneficial later as it was much quicker to find exactly where a red flag was used in the story, or how dialogue should flow.



*Diagram key used in first narrative redesign*

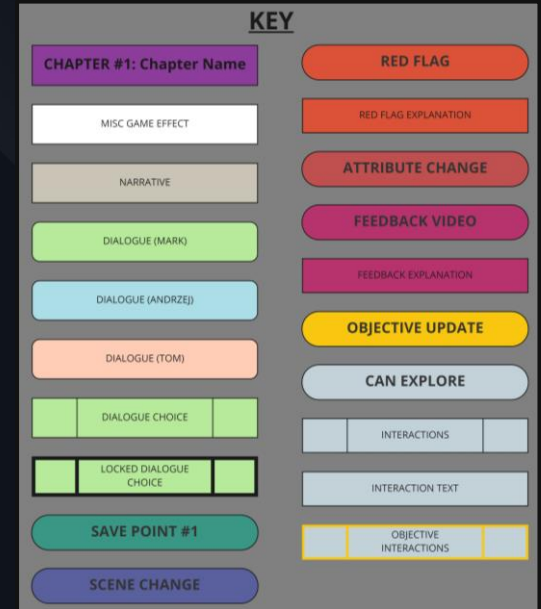
# NARRATIVE DESIGN

## FINAL NARRATIVE DESIGN

A few weeks later, after I had finished designing the mechanics and gameplay in more detail, I decided to revisit the narrative design to include the mechanics so we had a complete story breakdown. This would help us when implementing the levels, narrative and interactions as we would already have a detailed plan of exactly when and where gameplay features should take place.

This version included all the previous information but also added objectives, interactions, chapters as well as many other boxes to help break up the narrative into easily identifiable sections.

This redesign was met with positive feedback from my team members as they said it helped them understand the narrative and story much more efficiently than before with the original design.



*Diagram key used in final narrative redesign*

# MECHANICS - MOVEMENT

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## POINT AND CLICK PROTOTYPE

Originally, the movement was going to be fairly static, with set points in the environment that the player could move between. This was then prototyped by our programmer Lochlainn.

While this would work for our game, we were unhappy with the static movement. After analysing other mobile games, we decided to switch to a side scrolling camera instead.



*Point and click prototype (Lochlainn)*

## SIDE SCROLLING MOVEMENT

The side scrolling movement felt much more dynamic and allowed the user to explore the environment more than the static point based movement.

We played around with the speed as originally it felt too slow, especially when compared to the near instant teleporting between rooms.



*Final side scrolling movement mechanic*

# MECHANICS - DIALOGUE

## STANDARD DIALOGUE

The dialogue was the most important mechanic for the prototype as it was the primary way for the player to advance the storyline and experience the scenarios. There were a few key points I wanted to ensure stuck with the design throughout its iterations.

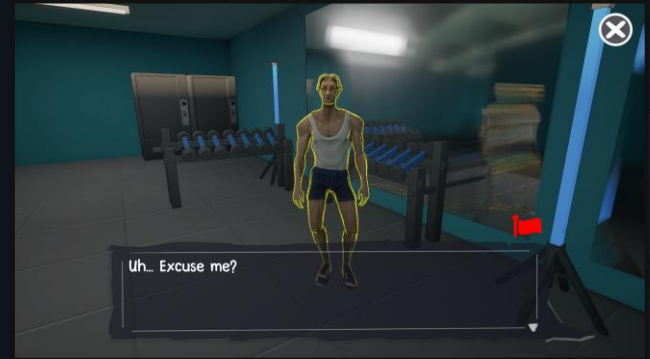
- Minimum of two choices for dialogue options, outside of locked dialogue options.
- Quick time events should be used to increase intensity and realism.
- Design the UX for touch controls and ensure its accessible for mobile users.

The dialogue is used to communicate with the different characters in the game. When in dialogue, the player can tap through to progress the dialogue. There is also an autoplay feature in the setting that will progress the dialogue automatically if the player prefers that.

The dialogue prompt should change dependent on if the player or character is talking as show in the images.



*Andrzej's dialogue in final prototype*



*Player's dialogue in final prototype*



# MECHANICS - DIALOGUE

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## DIALOGUE CHOICES

Choosing options in dialogue will be one of the main ways the player can effect the outcome of the story. Depending on what choice they choose they may improve or harm the relationships they have with the characters which may lead them down a darker path.

## LOCKED CHOICES

Sometimes dialogue choices may be locked to the player due to the player not having the correct attributes or interactions unlocked.

When this occurs, the choice should be greyed out and an indicator of what attribute or interaction is required to unlock it. This will allow players to replay the story, acquiring the necessary unlocks to have full access to the story.

Unfortunately, this particular design was left out of the final prototype due to time constraints.



*Choice dialogue mechanic in final prototype*

# MECHANICS - DIALOGUE

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## QUICK TIME EVENTS

In some sections of the story, choices may have a quick time event attached to them. This gives the player a limited time to react and input their choice. This is meant to simulate a high intensity situation and help immerse the player to think quickly and appropriately.

To show a quick time event is present, a timer will appear on screen that counts down gradually. This should be adjustable depending on how intense the situation should feel or how complex the choices are.

## HAPTIC FEEDBACK

As the game is being designed for mobile devices, I looked into haptic feedback, which the majority of mobile devices would support. Haptics could have been used to improve game feel and further simulate the intensity of the situation through the device physically shaking.

Unfortunately I did not explore this option any further due to scope limitations.



*Quick time event in dialogue*

# MECHANICS - INTERACTIONS

## OVERVIEW

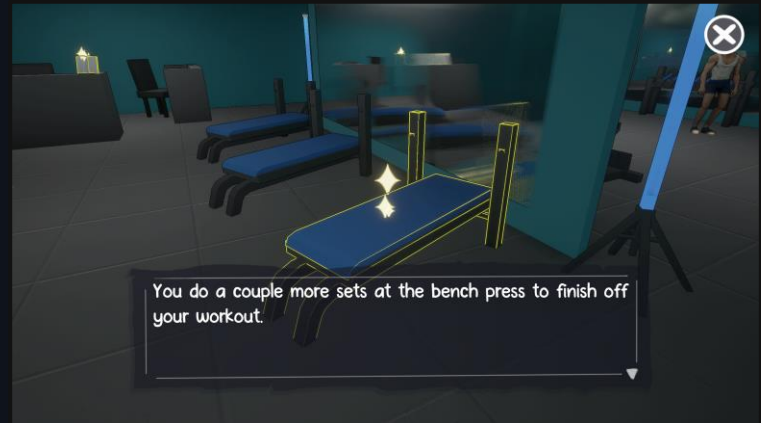
Interactions are another way the player can progress the story or interact with the environment. Interactions are split into three categories: Dialogue, Object, and Location. These all function similarly, but may have different outcomes depending on the type used.

## OUTLINE & PARTICLE EFFECT

To ensure interactions wouldn't disappear into the environment and make them more obvious to the player, each interaction should have an outline to indicate they are interactable. This outline should only appear when the interactable can be interacted with relative to the story.

Along with the outline, a particle effect should be used to make the interactables stand out from the environment as well. This will add a dynamic effect that should draw the player to the interactable.

The original design had the particle effects and outline changing colour depending on the interactions relevance to the current story. For example, white outlines and particles would be used for any interactions that won't impact the story just yet. This could be doors between rooms. When an interactable is directly related to the story, the outline and particle effect should change to a gold or yellow colour to signal its importance and help the player stay on track. This was unfortunately scrapped from the final prototype for scope reasons.



*Outline and particle effect*

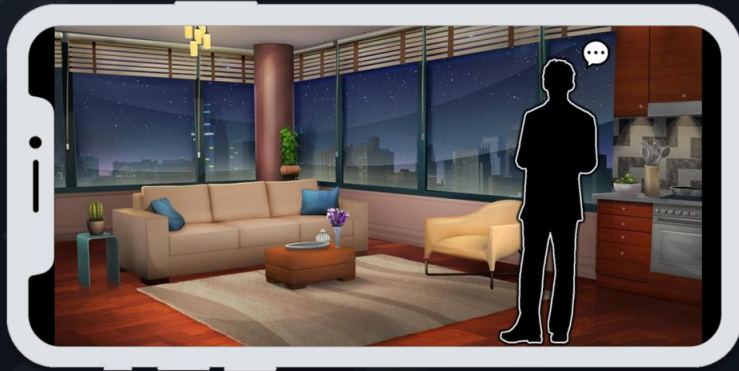
# MECHANICS - INTERACTIONS

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## DIALOGUE INTERACTIONS

Dialogue interactions are used to start the next section of dialogue. These were mostly used for characters, however we also used them on exit doors and some other assets if they were needed to start some dialogue. If the player clicks on a dialogue interaction they would be lead into the appropriate part of the [dialogue mechanic](#).

My original design had a speech bubble above which did not make it into the final build due to time constraints. While this had to be skipped for the final prototype I believe it would finish off the dialogue interaction nicely if we took the project further.



*Original Design Concept*



*Final prototype version*

# MECHANICS - INTERACTIONS

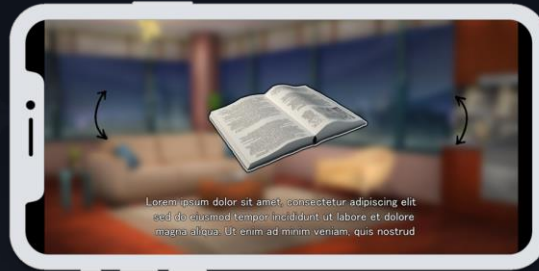
## OBJECT INTERACTIONS

My original design for object interactions was to allow the user to “pick up” the object and inspect it. The player should be able to then rotate the object around to view all sides of the model in greater detail. A description of the object was also shown to help the player come to a conclusion as to what the object meant for the story.

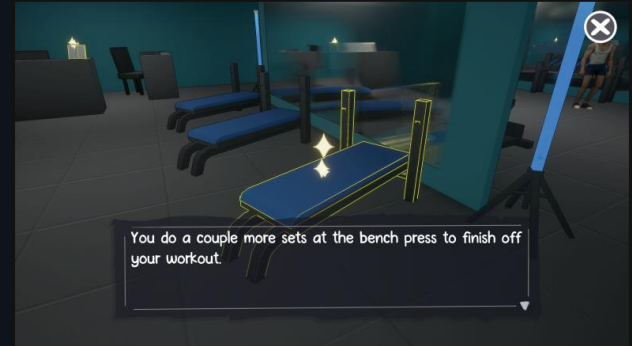
Unfortunately this mechanic would be too time consuming for the programmers to implement with the rest of the game so I had to simplify the mechanic slightly. We decided to use a similar method to the dialogue mechanic as we had most of the functionality in already. When inspecting the object a text pop-up appears with the object description as in the original concept.



*Original Design Concept  
(Environment)*



*Original Design Concept (Interacting)*



*Final prototype version*

# MECHANICS - INTERACTIONS

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## LOCATION INTERACTIONS

These interactions are used to move the player between rooms or spaces in the environment. These are mostly door interactions in the final prototype.

The transition between rooms/locations uses a slight fade in/out to be less jarring for the player.

In the final prototype, location interactions did not have an outline as we were unable to add to different colour outlines which added more confusion if they were yellow like the objective interactions were.

Location interactions still kept the yellow outline when they were related to the players current objective.



*Final prototype version*

# MECHANICS – RED FLAGS

## RED FLAGS

Red flags are used to help teach the player to identify actions people might do that could lead to a dangerous situation. The player does this by a gesture or button input depending on platform.

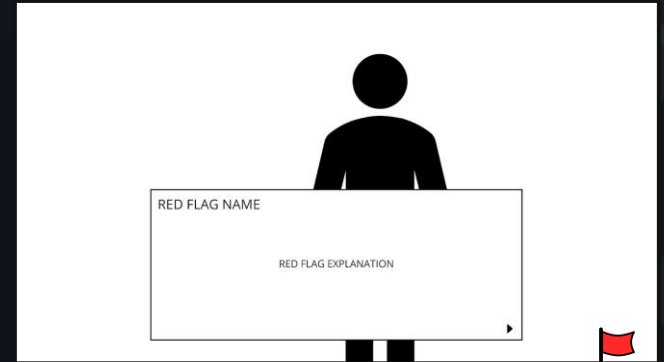
Players should be able to identify red flags at anytime in gameplay, whether a red flag is present or not. To make sure we were encouraging the player no matter if they got a red flag correct or not, I designed a system that would reward the player for correct guesses, but also avoid punishing the player for wrong guesses.

I designed an accuracy system that would record the amount of red flag identifications and compare it to the correct amount guessed. This would give the player a score that would be displayed at the end. This would also encourage replaying the game to improve your score at the end.

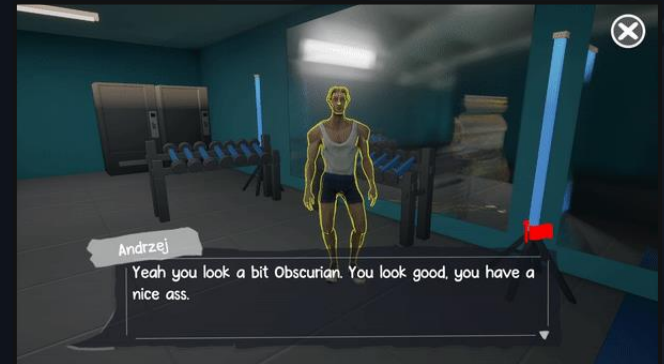
Accuracy formula:

$$(\text{Total Correct Identifications} / \text{Total Identification Attempts}) * 100$$

The accuracy system was not implemented as we adjusted the scope later in the project and had to cut back on some features.



*Red flag UX concept*



*Red flags in final prototype*

# MECHANICS – ATTRIBUTES

## OVERVIEW

Attributes are one of the mechanics used to calculate what paths are available to the player at any point in the story. Each attribute is rated 1-10, starting at 5. These will increase or decrease throughout the story, primarily through their choices in dialogue but some may be effected by their interactions with the environment.

Originally I designed a pop-up effect that would show when an attribute was updated, to make the player aware of what their choices were causing, however this was not added outside of developer testing. Alongside this I also designed an interface where players were able to view their attribute levels at any time.

## ATTRIBUTE LIST

- Awareness: Exploring the environment
- Composure: Staying calm in tense situations
- Courage: Making brave decisions
- Instinct: Appropriate initial reactions to situations
- Negotiation: Avoiding and defusing conflict
- Strength: Physical strength, working out

The image shows a wireframe for a menu with two main sections: ATTRIBUTES and INVENTORY.

**ATTRIBUTES**

Attribute Name	Level 5
Attribute Name	Level 5
Attribute Name	Level 5
Attribute Name	Level 5
Attribute Name	Level 5

Attribute Description

**INVENTORY**

<input type="checkbox"/>	<input type="checkbox"/>	Object Name
<input type="checkbox"/>	<input type="checkbox"/>	Object Description
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	

*UX design concept for attribute menu*

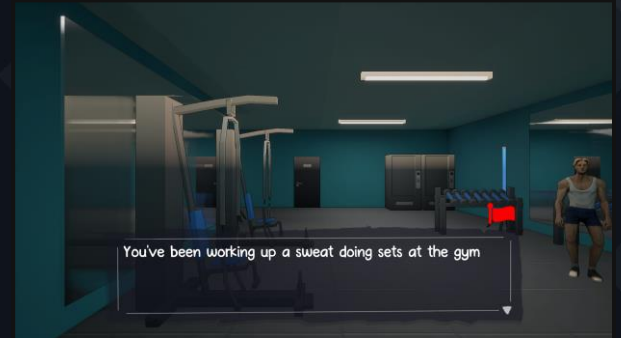


# MECHANICS – NARRATIVE & FEEDBACK

## NARRATIVE

For more descriptive parts of the story we needed a way to describe what was happening without needing to visually show it as this would be time consuming to create the animations and functionality.

I decided on a similar approach to the dialogue with a text box explaining what is happening.



*Narrative prompt in final prototype*

## FEEDBACK VIDEOS

Along with the narrative, our client also provided feedback videos hosted on YouTube. These videos were intended to be played at various points in the story to provide more encouragement to the player and go into more detail about the scenario.

I had originally designed the feedback mechanic to play the videos in the game itself, either with the video directly in the game or an embedded youtube link. Unfortunately we were unable to implement this feature so we decided on a link being opened automatically which would take you to the YouTube video.

This worked for functionality however it was quite jarring to suddenly be taken out of the app and into a YouTube video.



*Feedback prompt in final prototype*

# MECHANICS – HISTORY TREE

## HISTORY TREE

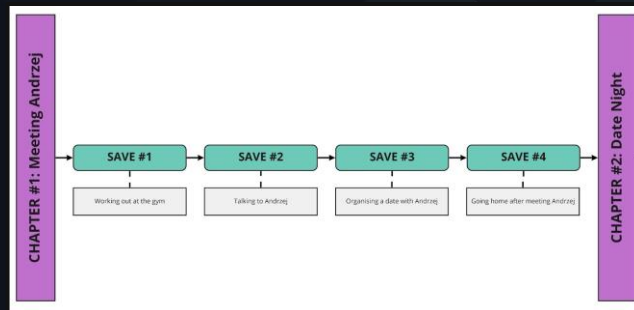
We wanted a way for the player to replay the game to discover each scenario in the game without needing to start from scratch. We were inspired by *Detroit: Become Human* and I designed a menu along those lines.

The history tree should show what path the player has currently taken via a blue line, with unvisited areas greyed out and locked. This was partially implemented with greyed out sections, however displaying the lines for the current path was not fully functional.

## SAVE POINTS

To ensure the history tree worked as intended and to keep track of each save, I mapped exactly when the game should be saved relative to the narrative.

I also updated the narrative design on miro to accommodate the new save points mechanic.



*History tree and save points concept*



*History tree in final prototype*

# MECHANICS – OBJECTIVES

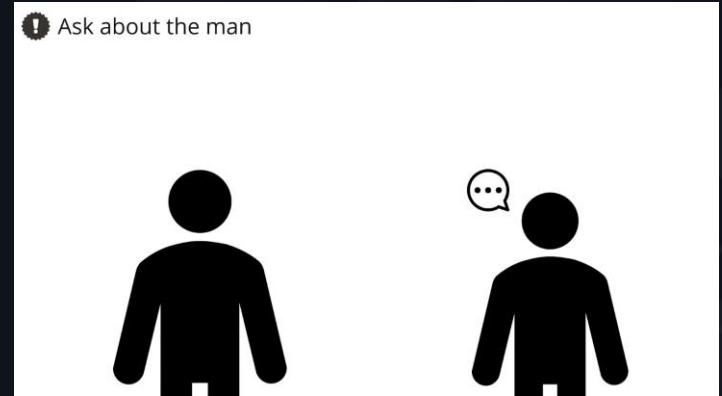
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## OBJECTIVES

Along with the outlines for interactions, I designed an objective system that would help keep the player on track with the current story. The objective would be shown in the top left with a short title explaining what the player should be doing.

Part of this mechanic would be on the settings menu where the player can turn the objective reminders off if they would prefer to explore the environment themselves to discover the objectives.

Finally, I also added these objectives to the narrative design to keep track of when objectives should change.



*Objectives UX concept*

# GAME DESIGN DOCUMENT

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Along with designing the majority of mechanics for *Help Mark Escape* I also worked on the Game Design Document to provide an overview of the planned project and what we were aiming to create. This document can be viewed via our OneNote wiki as part of the group submission

## OVERVIEW

I started with the overview where I outlined a short summary of the game to explain the main gameplay and what it is trying to achieve. I defined the theme, genre and setting along with our target platform (Mobile, specifically Android) and target audience (ages 17-30).

I also listed some of the core mechanics we were planning to implement: dialogue, interactions, red flags, attributes, narrative, reflection and feedback, and history tree.

Finally, I also proposed a freemium business model for the game as this would give *Embodied* the most reach and could be an introduction to some of their paid self defence courses later.

## UNIQUE SELLING POINTS

I also decided on the unique selling points for our game based on the mechanics and features we had been concepting so far. These are:

- Storylines derived from real experiences
- Educational to improve real life skills
- Comic book inspired toon visual style

## CORE GAME LOOP

To give people an idea of the how the repetitive gameplay may play out. I created a core game loop with the primary features.

1. Complete objectives
2. Talk to characters
3. Interact and explore the environment

# GAME DESIGN DOCUMENT

## CHARACTERS

Once the first concept art for the characters were created, I designed some backgrounds and characteristics for our characters.

Andrzej is a confident individual, who is attractive and muscular. He appears great at first but as the story develops he becomes more direct and controlling with his actions.

Tom is introduced as one of Andrzej's employees, but as you get to know Tom, it's clear he is almost afraid of Andrzej and usually speaks when spoken to rather than starting conversation himself.

## STORY

I added a brief description of the story to the GDD, however I avoided going into great detail as this was already worked with the narrative design and Miro board.



*Character concepts by Paige*

## ASSET LIST

To aid the 3D artists in their asset creation I created a table for an asset list. This kept track of what assets were required for the prototype, if they had been textured, if they were implemented in engine, and who they were assigned to.

An asset list was only created for 3D assets, however it would have been beneficial to have asset lists for audio, 2D art and other assets. I would have liked to have created this, however as I was the only designer I had limited time to complete this.

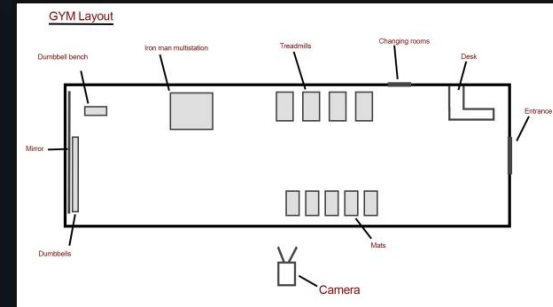
# IMPLEMENTATION - LEVELS

## GYM

After I had completed the majority of design work, I started working on implementing the level designs provided by Robyn and Jake. I began with the gym as Jake had completed the most assets at this point so I had a decent selection to start with.

He had not provided any structural assets at this point so I used Unreal assets to block out a level, relative to the design he made. The biggest problem I found with the gym layout he provided was that everything was spaced out and didn't feel realistic. There was too much empty space and limited exercise equipment.

After v1.0 was complete I gathered feedback and decided that the gym level was a priority to have a redesign to make better use of assets and space.



*Gym Level Design by Jake*



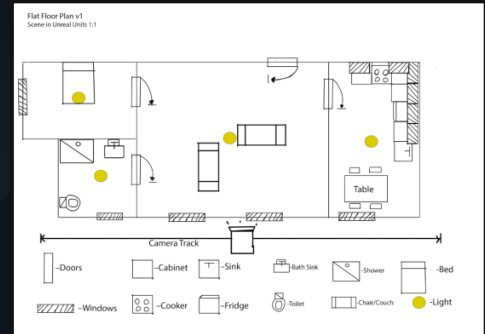
*v1.0 gym implementation*

# IMPLEMENTATION - LEVELS

## ANDRZEJ'S APARTMENT

For Andrzej's apartment, Robyn had provided some template walls and door assets which I could use to block out the environment. These assets did not snap together perfectly in Unreal, which wasn't a huge issue at the time, but in hindsight I should have requested these be fixed by Robyn to allow for more flexibility in creating the environments.

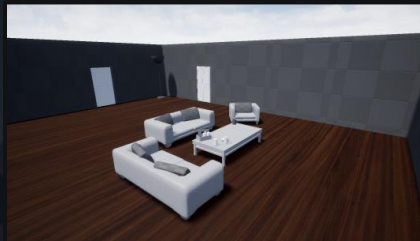
Once I completed the environments, I looked very empty, as the assets did not fill the space well. While there were a few more assets to be added to the scene I did not feel these would fill up the space enough. Feedback gathered from tutors and classmates later confirmed these thoughts.



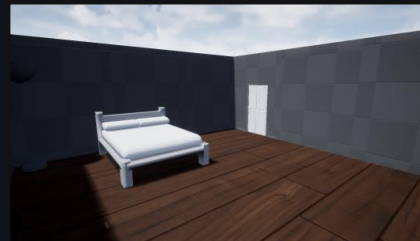
*Andrzej's Apartment  
Level Design by Robyn*



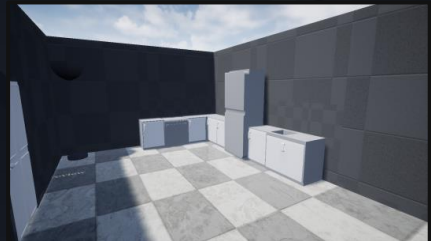
*Bathroom*



*Living Room*



*Bedroom*



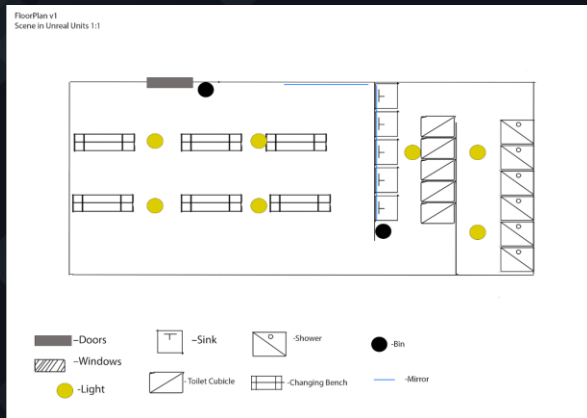
*Kitchen*

# IMPLEMENTATION - LEVELS

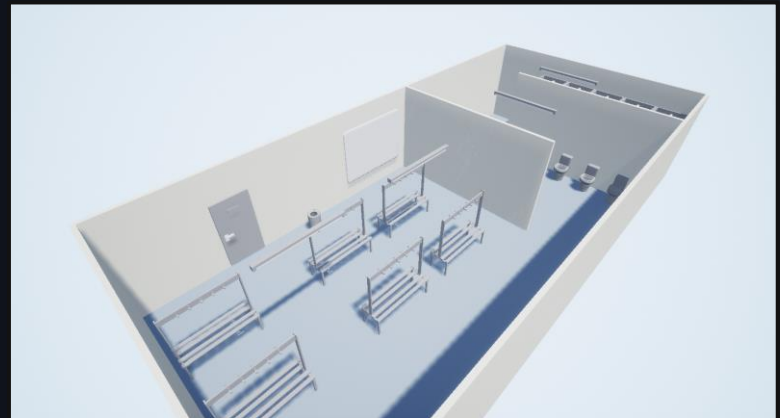
## CHANGING ROOMS

Next I worked on the changing rooms, which had been designed by Robyn. They had not provided structural assets for this level yet so I used a similar approach to the gym and created walls and floors using Unreal assets.

Overall, this level was much more successful for a first design, there was an appropriate use of space and it did not feel too crowded or empty. This level had the most positive feedback from classmates and tutors and would need minimal adjustments later.



*Changing Rooms Level Design by Robyn*



*V1.0 Changing Rooms implementation*

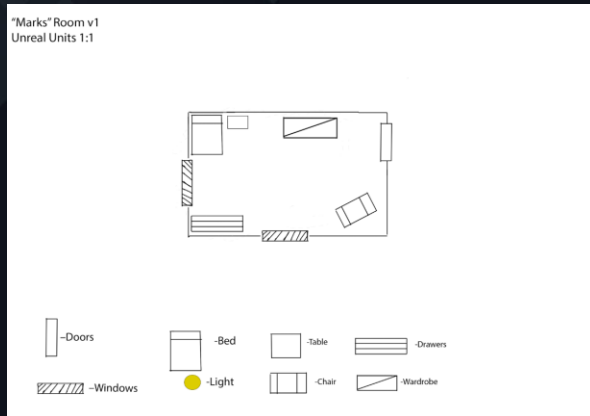


# IMPLEMENTATION - LEVELS

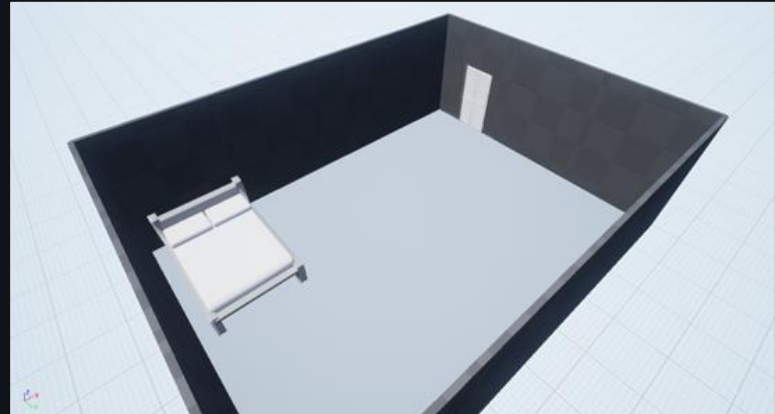
## MARK'S APARTMENT

The last level designed by Robyn was Mark's Apartment, this is only featured a couple of times in the story so I decided to just ask for the bedroom as this would be sufficient for the prototype and minimise unnecessary workload for Robyn and myself.

I reused the wall assets from Andrzej's apartment, but did not have many furniture assets available yet so this level was very empty at this stage. The biggest problem I could see with this design was that it would not accommodate our side scrolling movement very well. There was no space in the level design where I could position the player to see most of the environment and minimise collisions with objects.



Mark's Apartment Level Design by Robyn



V1.0 Mark's Apartment implementation

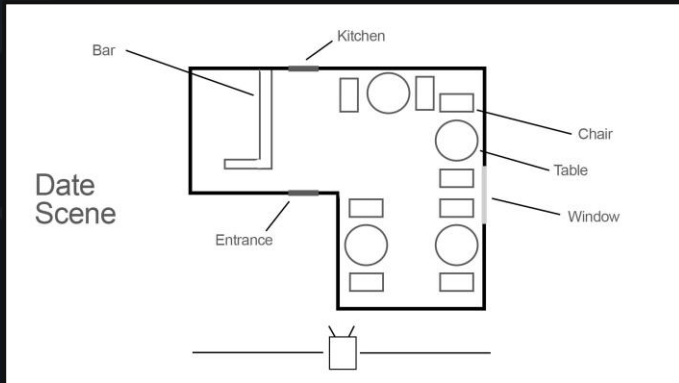
# IMPLEMENTATION - LEVELS

## RESTAURANT

The last level I implemented was the restaurant, which was designed by Jake. He had supplied some wall and window assets that I could use to build the level. These assets however were rather large which made building the level challenging as I had limited freedom to structure the level without overlapping the walls.

I did my best to create the layout Jake had designed, however with these initial assets it felt crowded and awkward so I knew I needed to redesign this layout and most likely get new assets either from Jake or use Unreal assets.

Another issue was that the layout did not accommodate the side scrolling camera that well, and may cause parts of the environment to be missed or inaccessible for the player.



*Restaurant level design by Jake*



*V1.0 Restaurant implementation*

# IMPLEMENTATION - NARRATIVE

## DATA TABLE

As part of the dialogue mechanic, Lochlainn had created a data table that stored all the relevant information for each piece of dialogue. To implement the narrative I took the data from the [narrative design](#) and inputted into this table.

The table functions similarly to Excel, with different data types required for each line. This was quite time consuming and I made mistakes which did cause the story to break later on as we found in testing. This was fairly easy to fix and usually was related to the linking between each row in the data tree being wrong.

Row	Level	Name	ObjectTag	Text	Destination	GoToLevel	EndDialogue	Option1	n1Destin	n1Require	sm1	Rewa	Option2	end2Destin	Option2Requirements	sm2	Rewa	Option3
2	Gym	Interactable		It's about time you had a break, drink some water.	3	None	True	None	0	0	0	0	None	0	0	0	0	0
3	Gym	Andrezj	Andrezj	<Obscurean Greeting>	6	None	False	None	0	0	0	0	None	0	0	0	0	0
4	Gym	You	Andrezj	Uh... Excuse me?	5	None	False	None	0	0	0	0	None	0	0	0	0	0
5	Gym	Andrezj	Andrezj	Ah, do you not speak Obscurean? I thought you we.	6	None	False	None	0	0	0	0	None	0	0	0	0	0
6	Gym	You	Andrezj	Oh sorry, no I don't. Why? Do I look Obscurean?	7	None	False	None	0	0	0	0	None	0	0	0	0	0
7	Gym	Andrezj	Andrezj	Yeah you look a bit Obscurean. You look speak you.	8	None	False	None	0	0	0	0	None	0	0	0	0	0
8	Gym	You	Andrezj	Oh... um, I thank you.	9	None	False	None	0	0	0	0	None	0	0	0	0	0
8	Gym	Andrezj	Andrezj	My name's Andrezj. What is your name then?	10	None	False	None	0	0	0	0	None	0	0	0	0	0
9	Gym	You	Andrezj	It's Mark.	10	None	False	None	0	0	0	0	None	0	0	0	0	0
10	Gym	Andrezj	Andrezj	So where are you from Mark?	11	None	False	None	0	0	0	0	None	0	0	0	0	0
11	Gym	You	Andrezj	I'm from around here.	12	None	False	None	0	0	0	0	None	0	0	0	0	0
12	Gym	You	Andrezj	So do you have a boyfriend or not?	13	None	False	None	0	0	0	0	None	0	0	0	0	0
13	Gym	Andrezj	Andrezj	Um, no I don't.	14	None	False	None	0	0	0	0	None	0	0	0	0	0
14	Gym	You	Andrezj	Do you want to go out with me?	15	None	False	None	0	0	0	0	None	0	0	0	0	0
15	Gym	Andrezj	Andrezj	Sure. What were you thinking?	16	None	False	None	0	0	0	0	None	0	0	0	0	0
16	Gym	You	Andrezj	What do you mean? On a date or something?	19	None	False	None	0	0	0	0	None	0	0	0	0	0
17	Gym	You	Andrezj	We can go out for a few drinks.	19	None	False	When were	20	0	0	0	Can you do	23	0	0	0	0
18	Gym	Andrezj	Andrezj	Sure, we can have a few drinks and a nice chat.	20	None	False	When were	20	0	0	0	Can you do	23	0	0	0	0
19	Gym	Andrezj	Andrezj	That sounds great, when were you thinking?	21	None	False	None	0	0	0	0	None	0	0	0	0	0
20	Gym	You	Andrezj	Do you have plans for this Saturday?	22	None	False	None	0	0	0	0	None	0	0	0	0	0
21	Gym	Andrezj	Andrezj	No, I have nothing planned.	24	None	False	None	0	0	0	0	None	0	0	0	0	0
22	Gym	You	Andrezj	That sounds great. Can you do this Saturday?	24	None	False	None	0	0	0	0	None	0	0	0	0	0
23	Gym	You	Andrezj	We go out on Saturday then. Give me your number.	25	None	False	None	0	0	0	0	None	0	0	0	0	0
24	Gym	Andrezj	Andrezj	You need, giving Andrezj your number. Without any.	26	None	False	None	0	0	0	0	None	0	0	0	0	0
25	Gym	Andrezj	Andrezj	You think that was a bit abrupt, but okay I will.	27	None	True	None	0	0	0	0	None	0	0	0	0	0
26	Gym	Andrezj	Andrezj	You decide to head home after a good workout.	30	MaskApartment	True	None	0	0	0	0	None	0	0	0	0	0
27	Gym	Interactable		It's been a lovely evening so far. You're feeling lag?	29	None	False	None	0	0	0	0	None	0	0	0	0	0
28	Restaurant	Interactable		You're practically hanging on for every word, he's so	30	None	False	None	0	0	0	0	None	0	0	0	0	0
29	Restaurant	Andrezj	Andrezj	Do you want to come back and hang out at my pla	31	None	False	None	0	0	0	0	None	0	0	0	0	0
30	Restaurant	You	Andrezj	Oh course, that sounds great.	32	None	True	None	0	0	0	0	None	0	0	0	0	0
31	Restaurant	Andrezj	Andrezj	You take a taxi to Andrezj's apartment and head o	33	AndrezjApartment	True	None	0	0	0	0	None	0	0	0	0	0
32	Restaurant	Andrezj	Andrezj	You arrive at Andrezj's. His quite plain, looks like a	34	None	False	None	0	0	0	0	None	0	0	0	0	0
33	AndrezjApartment	Interactable		You notice a guy sitting on the sofa drinking a beer	35	None	True	None	0	0	0	0	None	0	0	0	0	0
34	AndrezjApartment	Andrezj	Andrezj	Oh hello, who's this Andrezj?	36	None	False	None	0	0	0	0	None	0	0	0	0	0
35	AndrezjApartment	You	Andrezj	Ah one of my employees. He's waiting for accomm	37	None	False	None	0	0	0	0	None	0	0	0	0	0
36	AndrezjApartment	Andrezj	Andrezj	Are there more of you? What's your name then?	38	None	False	None	0	0	0	0	None	0	0	0	0	0
37	AndrezjApartment	You	Andrezj	He looks at you, after a moment he replies to you	39	None	False	None	0	0	0	0	None	0	0	0	0	0
38	AndrezjApartment	Andrezj	Andrezj	Andrezj steps into the conversation, responding in	40	None	False	None	0	0	0	0	None	0	0	0	0	0
39	AndrezjApartment	Andrezj	Andrezj	Sorry, he doesn't speak good English. He name is	41	None	False	None	0	0	0	0	None	0	0	0	0	0
40	AndrezjApartment	Andrezj	Andrezj	Oh, Andrezj. He doesn't speak good English. He name is	41	None	False	None	0	0	0	0	None	0	0	0	0	0
41	AndrezjApartment	Andrezj	Andrezj	Oh, Andrezj. He doesn't speak good English. He name is	41	None	False	None	0	0	0	0	None	0	0	0	0	0

Data table in Unreal Engine

Row Editor

Level: Gym

Name: Interactable

ObjectTag: Interactable

Text: You've been working up a sweat doing sets at the gym.

Destination: None

GoToLevel: None

EndDialogue: None

Option1: None

OptionDestination: None

OptionRequirements: 0 Map elements

Option2: 0 Map elements

OptionDestination: None

OptionRequirements: 0 Map elements

Option3: 0 Map elements

OptionDestination: None

OptionRequirements: 0 Map elements

RefTagText: None

SaveName: Save?

FeedbackVideo: None

Objective: None

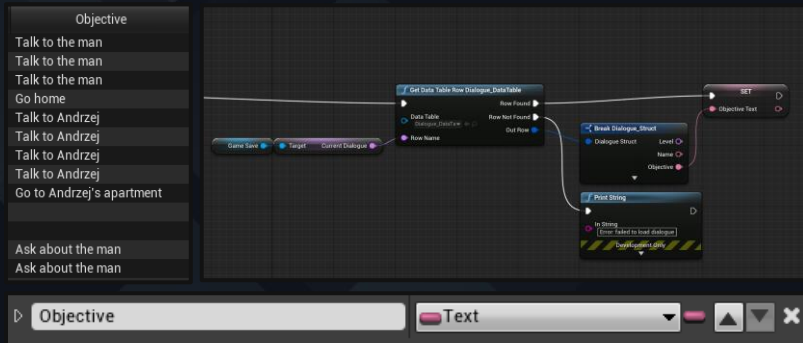
Input fields for data table

# IMPLEMENTATION – MECHANICS

## OBJECTIVES

I implemented the objectives mechanic for the beta submission. I decided to use the data tree Lochlainn had made for the dialogue. I added a new data type and implemented the objectives I had designed previously.

I then created the UI for the objectives using a hint icon made by Charlotte and some text. Finally I linked the text to the data tree and added a blueprint that would automatically update the hint text to the current objective.



*Data tree and blueprint*



*Objective UI in final prototype*

# IMPLEMENTATION – MECHANICS

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## CHARACTER INTERACTIONS

Whilst implementing the new character animations, I realised the interactions no longer worked due to them being made using Static Meshes rather than the Skeletal Meshes that animated characters use. To fix this I created a Skeletal Mesh interaction based off the existing character interaction made by Alessandro and Lochlainn.

## HIDE/SHOW OUTLINES

To make the interactions more dynamic, I worked with Alessandro and Lochlainn to create toggleable outlines and visibility of interactions relative to the story. This was used to indicate when interactions were available, and also for moving characters around for various parts of the story.

## END SCREEN FUNCTIONALITY

Before the beta version, once the game reached an ending in the game, there was a sudden jump back to the main menu. To make this less jarring and explain the sudden jump, I created functionality for an end screen that appears instead.

It started out with just text, however I asked Charlotte to create a more fitting end of demo screen which we used to the final build.



*Demo complete screen in final prototype*

# LEVEL DESIGN

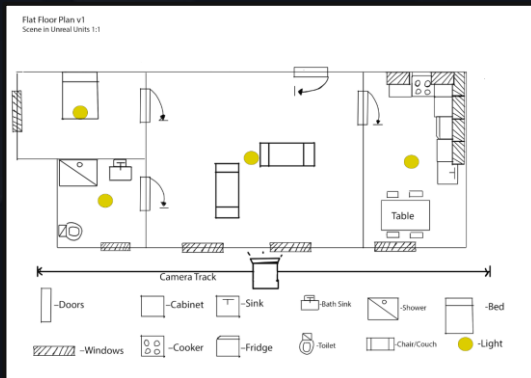
Whilst implementing the levels earlier, it was clear there were issues with the majority so I decided to spend some time redesigning the levels to better suit our mechanics and available assets.

## ANDRZEJ'S APARTMENT

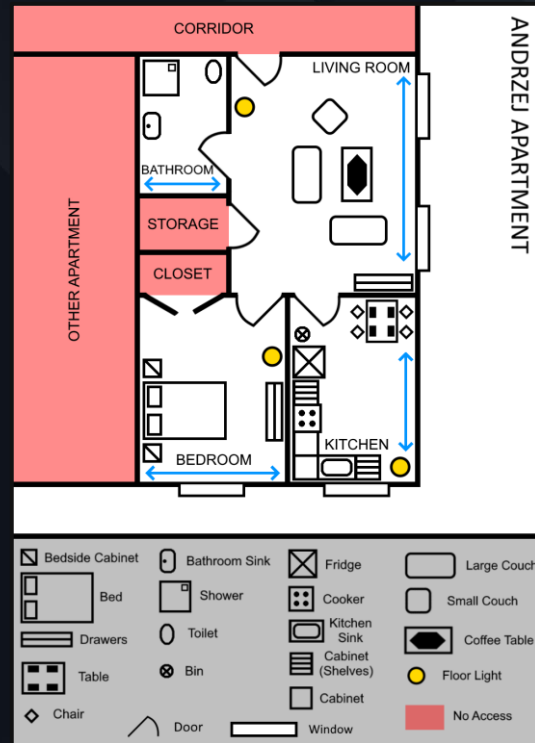
The main problem with the original design for Andrzej's apartment was that the available space felt unused and empty. There were not enough assets to fill the environment.

I focused on creating a more apartment-like layout, I analysed single bed apartments online through websites such as [Zoopla](https://www.zoopla.co.uk) and came up with an updated layout.

I ensured that the new layout would work well with the side scrolling camera by implementing it first and building the furniture around it. This will give the player adequate room to move without getting stuck on furniture. This is indicated by the blue arrows in each room.



*Original level design from Robyn*



*My updated level design*

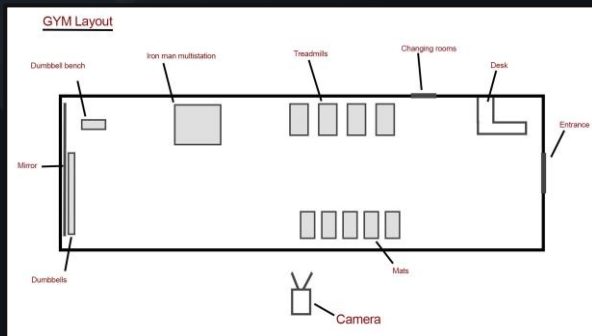
# LEVEL DESIGN

## GYM & CHANGING ROOMS

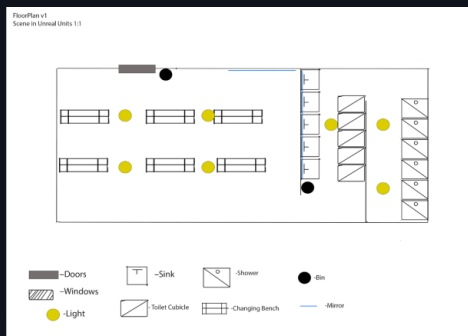
The biggest change to the gym and changing room levels, is that I decided to combine the two levels together as they are connected in the story and this would ensure they are of realistic proportions to each other.

To design the gym I researched different gym layouts online and decided on a smaller more local gym as this would be easier to create in a shorter timescale and make adequate usage of the available assets. The changing rooms did not require much modification as the original design worked well.

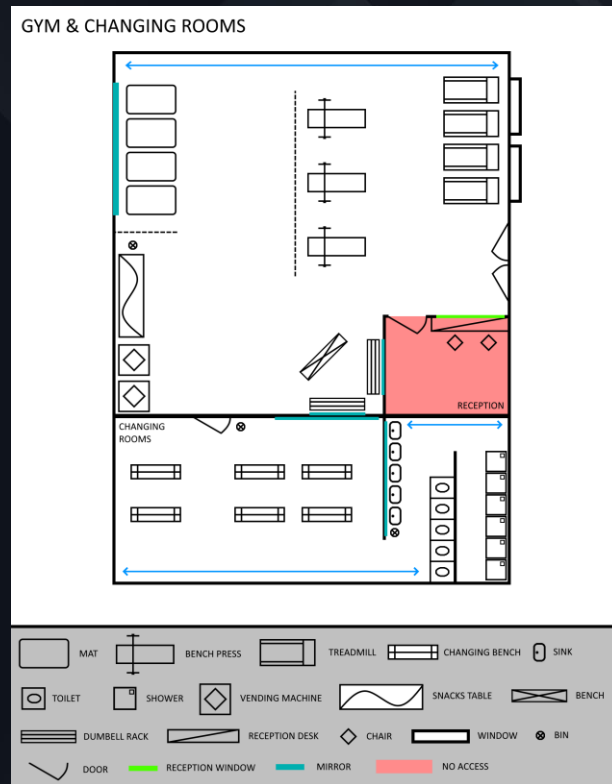
As with Andrzej's apartment, I kept camera and movement placement in mind whilst designing the level to ensure it had minimal issues with assets.



Original gym level design from Jake



Original changing rooms level design from Robyn



My updated level design

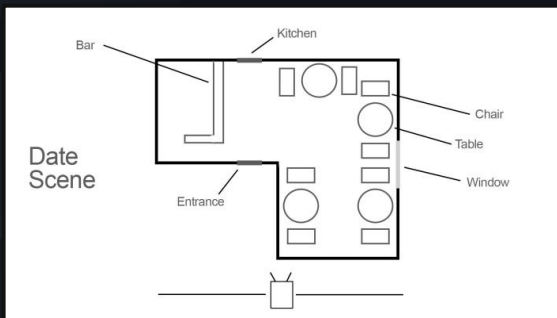
# LEVEL DESIGN

## RESTAURANT

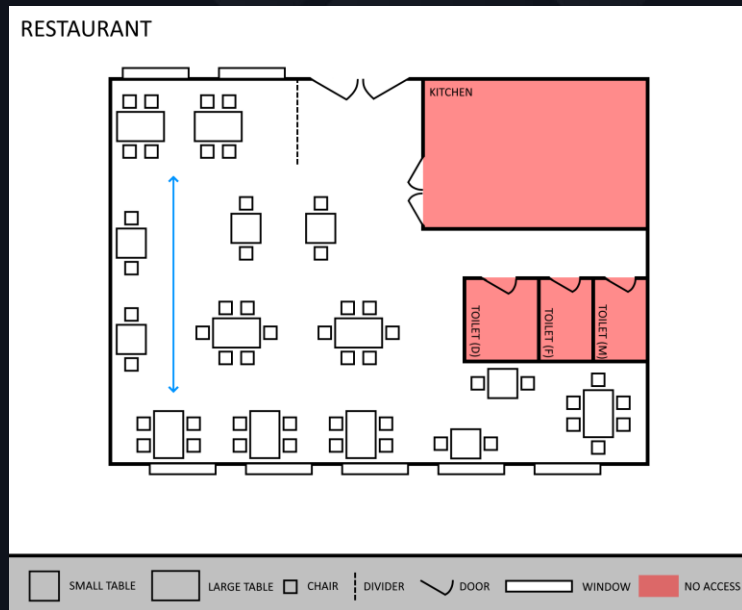
The restaurant required the largest changes as the original design did not work well in engine with the original assets. The original layout felt more like a small bar rather than a restaurant which was the desired effect. I also struggled to find a place for the camera and side scrolling movement to be placed that didn't interact badly with the environment whilst showing off as much as possible.

I researched some restaurant layouts online and created a medium sized restaurant layout. I decided to create new table sizes which wouldn't require any additional asset creation as I could just scale up the small table instead.

I did not add any other new assets to the level design as we were nearing the alpha submission and I did not want to add extra workload for our environment artists.



*Original restaurant design from Jake*



*Updated restaurant level design*

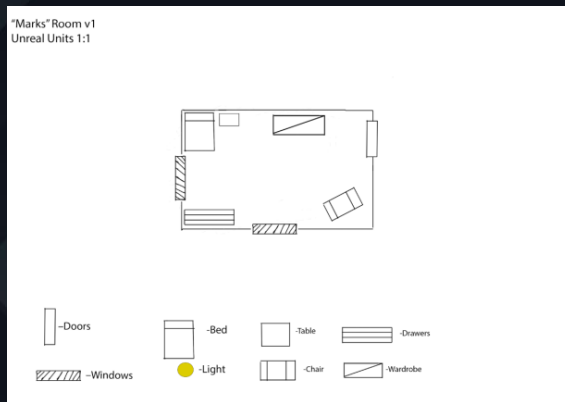


# LEVEL DESIGN

## MARK'S APARTMENT

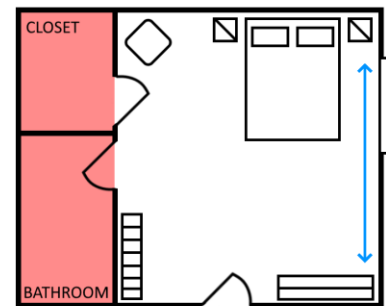
I restructured Mark's apartment design to be more compact and feel more homely. I designed the layout around the side scrolling movement as with the previous levels and also added an ensuite bathroom and closet to add more detail to the walls.

This would continue to use assets from Andrzej's apartment as a time saving measure to ensure there is no additional workload for the environment artists.



Mark's original level design by Robyn

## PLAYER APARTMENT



Updated restaurant level design

# TESTING & FEEDBACK

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## PRE-PRODUCTION

In the pre-production stage I did not conduct any formal testing of my mechanics or prototypes as there was minimal need at this stage. I did gather feedback every week from my team members, tutor, client and other classmates to see how my work was perceived by others.

My team was particularly helpful at giving feedback as they were readily available via our Discord server and gave valuable feedback. As the only designer left this was especially useful in getting feedback on mechanics as I had no other designer to prototype ideas with.

## DEVELOPMENT AND ITERATION

Whilst developing, implementing and iterating on the mechanics and levels I gathered feedback at every stage as in pre-production, to ensure I was making good use of my time and implementing features as desired.

After each section of implementation I made sure to run through the new implementation trying to find any bugs that may have appeared. We also did this as a team for any major milestones such as alpha and beta stages.

Alongside our own testing we had first year QA testers providing valuable feedback, primarily through bug reports which helped us discover and squash any bugs we had missed while testing ourselves.

# ITERATION - LEVELS

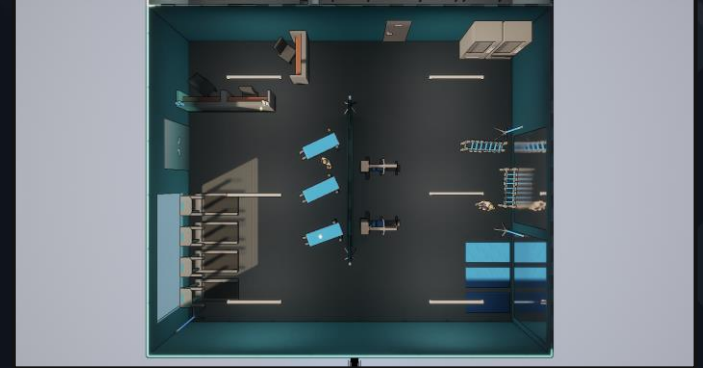
## GYM & CHANGING ROOMS

I started by creating some wall and floor meshes using Unreal Engine's built in tools and created the layout from my level design.

This was mostly successful but I made some adjustments to help assets fit the space better. The reception area has been changed to desks instead of a walled off area. This made the weights bench area feel out of place so I moved them to another location.

I also adjusted the door for the changing room to accommodate the vending machine and snacks area in the corner.

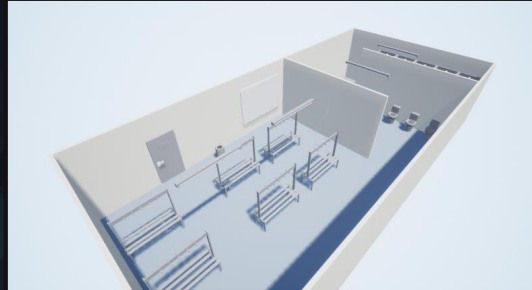
The changing rooms required minimal changes, however the updated cubicle and locker assets were added to complete the environment



*Gym level design in final prototype*



*Previous gym layout*



*Previous changing rooms layout*



*Changing rooms level design in final prototype*

# ITERATION - LEVELS

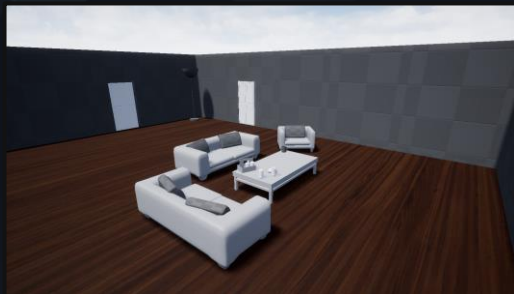
## ANDRZEJ'S APARTMENT - LIVING ROOM

The living room had some slight adjustments from my reworked level design as I had to work with the wall models provided by Robyn. The updated layout received positive feedback, however I did move the exit door to a more accessible location as previously it on the right edge.

## ANDRZEJ'S APARTMENT - KITCHEN

The kitchen mostly matched the level design I created after implementation, however featured a few more cabinets to fill the space as they were not to scale in the level design.

This version now also features the kitchen table and a more appropriate position for the side-scrolling movement.



*Previous living room layout*



*Previous kitchen layout*



*Living room level design in final prototype*



*Kitchen level design in final prototype*

# ITERATION - LEVELS

## ANDRZEJ'S APARTMENT - BEDROOM

Unfortunately I was unable to add a closet to the bedroom like originally planned as we would not have the assets ready for the final prototype.

I also had to move the bed further away from the window as it was hard to see from the camera's perspective.

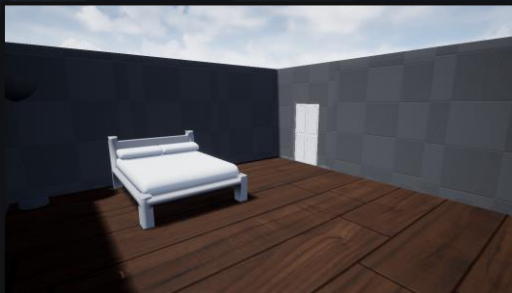
## ANDRZEJ'S APARTMENT - BATHROOM

The bathroom remained similar to my intended design but was slightly longer due to the wall assets size.

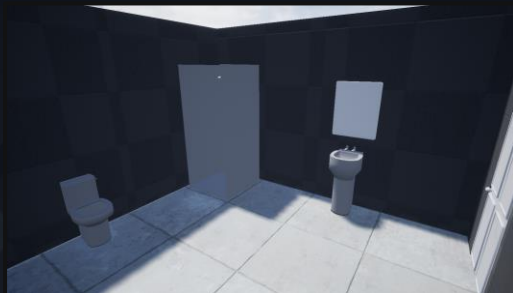
This is not an issue in gameplay as the camera position hides the larger size from the player.



*Bedroom room level design in final prototype*



*Previous bedroom layout*



*Previous bathroom layout*



*Bathroom level design in final prototype*

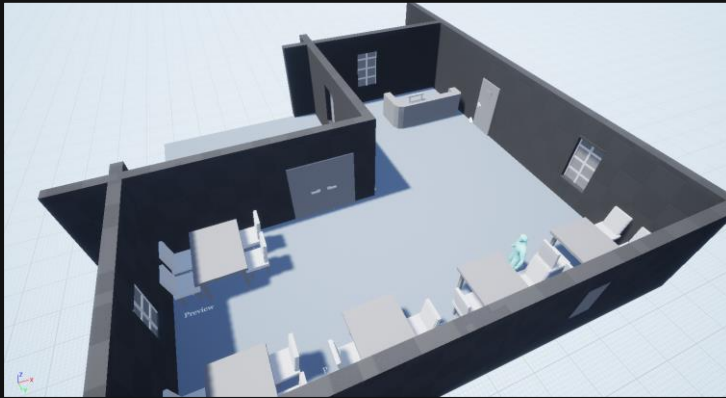
# ITERATION - LEVELS

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## RESTAURANT

The restaurant had the largest change so I created a fresh level and blocked out the level using a similar method to the gym. I reused assets from the gym level such as doors, and light shades from Andrzej's apartment. This sped up production as I did not have to request additional assets from the artists.

The new layout is much larger and feels more like a restaurant than the previous design which felt more like a bar or pub.



*Previous restaurant layout*



*Restaurant level design in final prototype*

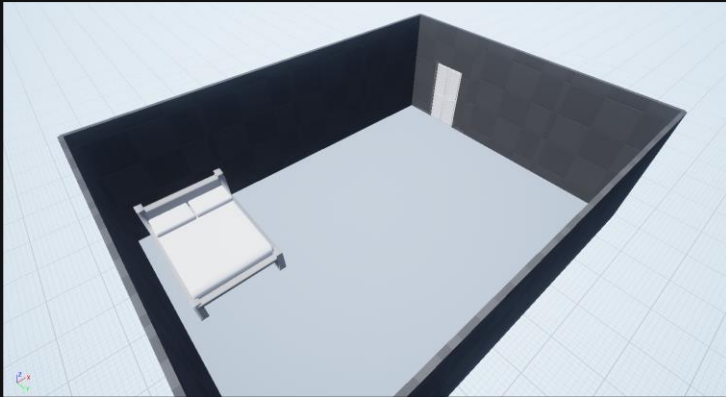
# ITERATION - LEVELS

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## MARK'S APARTMENT

Finally, Mark's apartment was updated to match my new level designs, the original was missing most of the assets which were added to the new updated version, which improved the environment greatly.

While I added the physical space of the ensuite bathroom and closet, I did not decorate these with assets as they would not be accessible in the game. That functionality may be added if the game is developed further so I still included them to save time later.



*Mark's apartments previous layout*



*Mark's apartment level design in final prototype*

# LIGHTING

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## OVERVIEW

For lighting, I researched various methods of lighting scenes in Unreal Engine as its not an area I've focused on much before outside of one lighting task last year.

I started out using HDRIs, however this looked too realistic for our game's visual style so I instead looked into using the sky sphere blueprint provided by Unreal Engine. This was easier to learn and adapt to the setting I was aiming to achieve for each level.

## MARK'S APARTMENT

I started small with Mark's apartment, firstly by adding the natural lighting from the windows.

Mark's apartment will be used in the evening/night so there is minimal natural lighting coming in the windows. Instead the scene is lit through two lights, the ceiling light and a floor light.

I chose warmer tones to create a more inviting and homely feeling environment.



*Mark's Apartment lighting*



# LIGHTING

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## ANDRZEJ'S APARTMENT

Andrzej's apartment uses almost identical lighting to Mark's apartment, apart from the bathroom which has a slightly cooler tone.

Andrzej's apartment also has minimal natural light due to the environment being used primarily at night.

There is a section of the story that may have benefitted from morning lighting. I explored the idea of a day/night cycle, however I wanted to limit any dynamic lighting so decided against it as this could cause performance issues on mobile.



*Living room lighting*



*Bedroom lighting*



*Bathroom lighting*



*Kitchen lighting*

# LIGHTING

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## GYM AND CHANGING ROOMS

The gym and changing rooms are set in the daytime so natural lighting should be used where possible. There is a large window which I ensured the sun was facing to show off as much natural lighting as possible.

A large amount of cool artificial lighting was also used as this is common in gyms to ensure everything is sufficiently lit. I tried to replicate this theme with the ceiling and standing floor lights.



*Changing rooms lighting*



*Gym natural lighting*



*Gym artificial lighting*

# LIGHTING

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## RESTAURANT

The restaurant level takes place in the early evening/sunset. I started with the natural lighting which created long shadows due to the sun being low in the sky.

I then added the artificial lighting via ceiling lamps. I was aiming for a warming environment so chose orange tones to try replicate this effect.

I did not quite manage to get the effect I was aiming for however the final result does work well for a restaurant setting.



*Restaurant Lighting (1)*



*Restaurant Lighting (2)*

# DEVELOPMENT DIARY

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## WEEK #1 (31/01/22)

- Reviewed client brief
- Brainstormed ideas for client pitch with team
- Prepared initial mechanic designs
- Worked on initial UX designs
- Created Jira board for production

## WEEK #2 (07/02/22)

- Continued initial UX designs
- Continued initial mechanic designs
- Created and presented client pitch

## WEEK #3 (14/02/22)

- Reworked narrative using Miro

## WEEK #4 (21/02/22)

- Started Game Design Document (GDD)
- Started designing mechanics
- Added level designs from Robyn and Jake to the GDD
- Added UX designs to the GDD
- Created an asset list for 3D art

## WEEK #5 (28/02/22)

- Outlined characters, story and gameplay designs in GDD
- Added unique selling points and core game loop to GDD
- Completed attributes, dialogue, interactions, narrative and objective mechanics

## WEEK #6 (07/03/22)

- Completed red flag design

# DEVELOPMENT DIARY

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## WEEK #7 (14/03/22)

- Designed history tree, save points, objectives and feedback video mechanics
- Restructured Miro board to include interactions, save points, objectives, attributes, feedback and red flags

## WEEK #8 (21/03/22)

- Implemented the gym level
- Implemented Andrzej's apartment level

## WEEK #9 (28/03/22)

- Implemented changing rooms, restaurant and player's apartment levels.
- Improved level designs after feedback to make better use of space and assets

## EASTER WEEK #1 (04/04/22)

- Implemented the improved level designs
- First pass of lighting

## EASTER WEEK #2 (11/04/22)

- Imported Andrzej and Tom models
- Created materials for both characters
- Placed interactables into the levels

## WEEK #10 (04/04/22)

- Implemented complete narrative into the data tree in engine
- Configured interactable objects and characters to work with code

# DEVELOPMENT DIARY

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## WEEK #11 (25/04/22)

- Updated quicktime mechanics UI and code
- Implemented Tom's character textures
- Improved camera angles when interacting with objects
- Implemented textures and materials for gym and restaurant levels
- Implemented toon shader to all levels
- Fixed camera issue where player would back out to wrong rotation
- Created functionality for a game end screen.

## WEEK #12 (02/05/22)

- Added materials to changing room and apartments
- Updated lighting with new setup
- Set up highlighted and hide/show interactables
- Added character animations
- Built Beta build for Windows

## WEEK #13 (09/05/22)

- Imported standing idle animation
- Added extra locations for Andrzej and Tom dependent on the story
- Completed and merged GDD into wiki
- Final improvements on prototype

## WEEK #14 (16/05/22)

- Added lighting section to Visual Style Guide
- Moved Technical Design Document to OneNote wiki
- Reformatted Visual Style Guide on Google Drive and OneNote wiki to match other documentation
- Worked on final portfolio

## WEEK #15 (23/05/22)

- Completed final portfolio

# REFLECTIVE ESSAY

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Overall, I believe we had a very successful project as we were able to deliver a final prototype to our client. They were very pleased with the outcome of the project and has been looking into hiring the team for further development of the project. While I faced challenges both individually and as a team while developing the prototype, I was able to work around these and create the final prototype. I have had to step outside of my comfort zones multiple times which has been a challenging but rewarding experience that has improved my skills as a whole.

## **NEGOTIATING WITH CLIENT**

The client's original brief requested a 2D visual style which we had concerns about as we had three artists who specialised in 3D art. Personally, I had no preference for designing 2D or 3D, but we decided to pitch an alternate version of the brief at our first meeting with the client. This would move to a 3D version whilst including as many ideas as possible from the original brief. I outlined some concept mechanics for this pitch to help make the game more dynamic and engage the player more.

After the pitch our client was very enthusiastic about the changes and greenlit the majority of our requests. This was a huge step for the team, and we felt much happier with the planned project.

# REFLECTIVE ESSAY

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## PRODUCER LEAVING

Early on in the project, unfortunately our producer had to leave the team for personal reasons. This caused some structural and management issues for the team which we had to deal with. I thought about offering to take over producer as I have had experience in this area before, but I was now the only designer left which would impact my workload as I had a lot of pre-production work to complete which would affect my ability as producer.

Thankfully, Robyn elected to take on the producer role, and while we were originally going to swap where I would take over producer after pre-production, this never happened, and Robyn stayed producer for the whole project. This was very beneficial for myself as I was also heavily involved in implementing the story and levels with the programmers and may have struggled with the producer role alongside this.

## SOLE DESIGNER

As our producer and secondary designer had left the team, this left me as the sole designer. This was my biggest challenge as I had many elements to design for the project including narrative, UX, level, and gameplay design. Fortunately, Charlotte took over the UX design after my initial concepts which allowed me to focus on other areas. Despite this I do believe the quality of my work was impacted by the quantity of work I had assigned for the pre-production stage.

For example, when it came to designing the mechanics for the game, I was unable to do much iteration or testing in pre-production as I had to complete the designs quickly so the programmers could work on implementation. Luckily most mechanics were not too complex, however they would likely have been improved with more testing, feedback, and iteration.



# REFLECTIVE ESSAY

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## **NARRATIVE DESIGN**

As the game is heavily narrative driven and I was the only designer, I was given the task of rewriting the narrative provided by the client to better fit our mechanics and intended gameplay. Narrative design is an area I have not focused on before, so this was a challenging experience for me. The client's original narrative was a good starting point and I continued using Miro for the narrative as it allowed me to get feedback by sharing a link. I was able to work directly with the client which was useful in iterating on the narrative. Once complete I received high praise from my team for the improved design saying it was much easier to understand and follow.

## **LEVEL DESIGN**

Levels were originally designed by the environment artists for their respective environments. I believe these level designs should have been tested more before implementation to see how they would function with our intended mechanics. When I began implementing their level designs in week 9 it quickly became clear that the original designs did not make good use of assets and felt levels felt empty. A big issue was that these not all designs had thought about the side-scrolling movement which made positioning the camera rather awkward.

After further feedback from mentors and classmates, I redesigned the levels myself, conducting research to create more realistic environments. I then implemented these in-engine using the available assets. After some iteration the implemented levels were greatly improved from the previous designs and received positive feedback from others.

# REFLECTIVE ESSAY

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## MOBILE DESIGN

Designing for mobile games was another challenge for me as I have not considered the limitations of mobile before. The biggest issue we came across was the shaders and post-processing on Android which meant we had to use a toned-down version of our original shader which did not look as good as planned. I believe we should have done more research into mobile limitations for Unreal Engine but also Unity before choosing an engine as this may have helped avoid some issues with development.

## TESTING & FEEDBACK

I would have liked to complete more formal testing throughout the project as I know about the benefits due to a project last semester. Unfortunately, as the only designer I was limited for time and had to cut back on this. Instead, I relied primarily on feedback from my team, mentors, classmates, and the client to improve my designs and implementations.

## FINAL THOUGHTS

Overall, I believe I performed well under the circumstances as we were able to create the final prototype which our client was very pleased with, even looking to take it further in development. I have improved my skills in many areas I hadn't thought about such as narrative design and learnt a lot about designing and implementing games for mobile. I did feel I wasn't able to use my design skills as much as I wanted partly due to the brief and partly due to being the only designer. I also believe improving my communication skills further would have helped with some challenges I faced such as being the only designer, however I think I worked around these well overall leading to a successful project.

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