Game Design Document

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Game Analysis

What is *The Living Room*?

The Living Room is an action-strategy game developed in Unity as part of the Global Game Jam in 2019 (GGJ19). The theme for GGJ19 was "What Does Home Mean To You", so as a team we aimed to create a game with a humorous twist on the sentimentality many people feel towards their homes.

The game is about a ghost who has lived in its dilapidated mansion alongside its pet dog for many years. The mansion contains many treasures in the form of shiny objects the ghost treasures from its past life, dubbed "Mementos", that make the house feel like a home. The ghost measures this attachment as its "Feels". One fateful night however, movers appeared to remove the Mementos from the mansion, threatening these Feels. Protect your Mementos from all five waves of the Movers by scaring them away before they escape!

The Living Room is designed with a simplistic objective and mechanics in mind. As the game was developed as part of GGJ19 we had approximately 30 hours to finish development, so scope was kept to a minimum to make this goal realistic. It is also designed with accessibility in mind and utilises a single-button and joystick in its controls as part of the "Keep It Simple" diversifier for GGJ19. This diversifier aims to improve game accessibility by making the game compatible with devices such as the Xbox Adaptive Controller.

Mission Statement

The Living Room is an action-strategy game where you control a ghost and scare away movers to protect your treasured Mementos. Divide your time between scaring movers and resetting Memento positions to succeed in outlasting all five waves of movers.

Platforms

PC, Web Browser

Genre

Action-Strategy



No. of Players

Single-player

Game Engine

Unity (version 2018.3.4f1)

Target Audience

The Living Room utilises simplistic mechanics, controls and maintains a light-hearted aesthetic and sense of humour throughout its experience. The enemy waves was designed to have the same properties in each playthrough so play sessions are quick regardless of the player's result. As such, the game is catered more so towards players looking for a simple strategic experience with light-to-moderate difficulty as opposed to a longer, more serious game.

Development Team Members

Team DASJ

Dan Miller - Lead Programmer, SFX Artist

Anthony Iob - Lead Game Designer, Producer, 2D Artist/Animation

Simon Wall - 2D Artist/Animation

Jeremy Burns - Audio Designer, Game Designer



The Characters



The Ghost

This friendly ghost has lived for many years in peace in its dilapidated mansion surrounded by its precious Mementos. Though with the movers arriving to claim them, the ghost must spring into action! Thankfully for the movers the ghost is a pacifist at heart and only wishes to scare them away without causing any harm. Its other abilities, including travelling through walls and teleporting Mementos back to their original locations, will come in handy for this task.



The Movers

The movers can be summed up in one word: apathetic. They roam around with the sole purpose of removing treasures from the mansion, completely unaware of the ghost's presence. It is only once they have picked up a Memento that they become aware of their surroundings, and hence vulnerable to the ghost's scare tactics.



The Dog

The ghost's lazy, and seemingly undead, canine companion. She spends her days snoozing in her kennel outside, and is always the first to notice when the movers approach. She'll bark for a while to alert the ghost then go right back to sleep, being the lazy pooch she is.



The Mementos

The special treasures of the ghost, each one holding special memories from its former life. Each Memento is precious to the ghost and makes the old mansion feel like a home. There are gold, silver, and bronze variants of the Mementos each with varying levels of Feels attached to them, so prioritise saving the highest valued Mementos wherever possible!



Gameplay

Overview

The Living Room is developed in Unity for PC and web browsers, and its control options include keyboard, game controllers and specialised devices such as the Xbox Adaptive Controller. The game is a hybrid of single-button action games and the strategy genre, combining both for a light experience. It has a single-player mode in which the player must attempt to protect special objects (Mementos) from waves of movers.

Movers can enter via the front door or the back window of the mansion and will run for different Mementos upon entry. Once they pick up a Memento they will move towards one of the two entrances and will escape if they reach it. They also become vulnerable while carrying a Memento, and the ghost can scare them away and make them drop the Memento.

The ghost starts with a set value of health (Feels), and each Memento has a different Feels value that is deducted from the ghost every time a mover manages to escape with one. The game ends once the ghost runs out of Feels, or if it manages to outlast all five waves of Movers.



Player Experience



The Main Menu

The player's goal in *The Living Room* is to protect as many of their Mementos as possible while scaring away five waves of Movers. They will begin at the title screen which gives a light overview of the game's story as well as the controls. Upon pressing any button the game will load the main level and begin.



The ghost scaring a mover in the mansion

The ghost's abilities include scaring, phasing through walls and resetting Memento locations. This allows the player to freely roam through the level to get to the various Mementos quickly while the movers follow set paths as defined by the mansion's layout. Simply brushing over a dropped Memento will reset its location. Players must choose when to scare wisely. The ghost has a decent scare range but scaring leaves the ghost briefly immobile. The best tactic a player can use is to line up the ghost's scare with multiple movers to maximise efficiency.





The beginning of the fourth wave

Gameplay is divided into two phases: the mover waves and the breaks in between. During the mover waves, the movers will enter the mansion through the two entrances and head straight for the Mementos. At this point the player must decide their initial targets and be ready to scare them as soon as they begin carrying the Mementos. Time should be spent divided between scaring movers and resetting the locations of dropped Mementos, as movers will aim for forgotten Mementos dropped nearby exits. If a Memento is stolen the ghost icon in the top right corner will change colour and mood to signify the loss in Feels. Once the player scares all of the movers in a wave away, the break phase begins.

During the break phase, it is the player's best interest to relocate as many dropped Mementos as possible to their original locations in the limited time before the next wave begins. This will refresh the level's slate and remove any potential advantages for the movers.





The varying end screens depending on the player's progress

The ending of the game depends on whether or not the player was able to defend the Mementos from all five waves. If the player is successful the ghost's mansion will be protected and the ghost will be cheerful on the end screen. However if the player lost too many Feels the ghost will sadly move out of its mansion, feeling robbed of its home and memories. Regardless of the outcome pressing any key will return the player to the main menu where they can replay the game once again.

Gameplay Guidelines

As we were developing *The Living Room* with accessibility in mind it was crucial that we stuck to using only a joystick/control pad and a single button for controlling the ghost and its abilities. We had a single exception, using a second button to pause the game, but otherwise we made sure every ability was simple to execute and required minimal input to do so.

We also established early on that the ghost was to be friendly and non-malicious as we wanted the game to be light-hearted. As such, the scare animations of both the ghost and the movers were designed to look physically harmless. The movers were animated to visually run out of the mansion so players knew that, aside from being rather terrified, the movers were still alive and well.

Lastly, as this was designed as part of the GGJ19 we wanted to simplify our scope and prioritise only the most necessary tasks. As a result we decided we wanted the game to utilise a fixed camera perspective so we could avoid programming a camera, as well as to design a fixed experience with a defined end and minimal randomisation so we could more easily balance the game within the timeframe we had to complete it.



Game Objectives & Rewards



The varying states of the ghost's Feels as represented in the HUD

The player's progress throughout the game is measured by Feels, which is a term used to define the attachment the ghost has towards its mansion. The ghost starts with a defined number of Feels and every Memento stolen will deduct from this, with every Memento having a different Feels value based on its colour (Gold, Silver and Bronze). Running out of Feels at any point will automatically end the game. The player's current Feels are indicated by the ghost's mood and colour in the top-right HUD, as well as the background music which becomes frantic and disjointed to reflect the stress of losing Feels. Additionally, as mentioned in the previous section the end screen will be different depending on if the player was able to protect the ghost's Mementos from the movers.



Game Difficulty & Balance

The game is balanced around the mover waves in which movers spawn into the mansion, as well as the ghost's abilities in relation to the movers.

Ghost Attributes		Mover Attributes	
Movement Speed	3	Movement Speed	2.8
Scare Range	1.75	Carrying Speed	1.3
Scare Cooldown (secs)	1	Scared Speed	10
Scare Immobility (secs)	0.75	Time To Pickup Memento (secs)	2

The ghost and the movers' properties as defined in Unity

The ghost is designed to be faster than the movers to compensate for having to move to multiple points in the map to protect all of the Mementos. It is also able to float through the mansion's walls to hasten up its journey. Its scare range is almost two times the width of its body to enable the ghost to scare multiple movers at once. To avoid the ghost being too overpowered however, it becomes immobile for a second after using the scare ability. This prevents players from spamming the ability and creating a chokehold in which movers never have a chance of escaping with a Memento.

The movers on the other hand enter the mansion very quickly to indicate to the player which Memento they are targeting. They cannot be scared during this time, or while they are in the process of picking up an item. Once a mover has started carrying a Memento their movement speed gets slashed roughly in half, they become vulnerable to being scared, and they will move to one of two entrances to the mansion. The slower speed gives the ghost a realistic chance to stop multiple movers, particularly when there are groups headed in different directions across the mansion. Once scared the movers drop their Mementos and bolt out of the mansion at a high speed to ensure they don't remain a distraction to the player.



Wave No.	No. of Movers	Mover Spawn Rate (per second)	Spawn Rate Variance (+/- per second)
1	3	3	0
2	5	2	0
3	5	2	0.5
4	6	2	0.5
5	8	1.5	0.5

The properties of each wave

Each wave is defined by the properties above and scale in difficulty in relation to the number of wave. The first wave starts simple, with minimal enemies and a slow spawn rate so the player can learn how the game works. There is only a single entrance accessible to the movers so the player learns how the movers will try to escape. The second wave introduces the window as an alternative entrance and speeds up the spawn rate, and the third wave introduces variance per mover spawn so the timing of each mover's appearance is somewhat randomised. The last two waves increase the number of enemies and how fast they spawn in, decreasing the time the player has to formulate a strategy on how they will protect each Memento.



Gameplay Mechanics

The gameplay of *The Living Room* revolves around the ghost's three core abilities as detailed below:



Scaring

The only action within the game that requires a button press. The ghost will let out a beam of scary particles that, upon contact with any mover carrying a Memento, will scare movers away and cause them to drop what they were carrying. The ghost will become briefly immobile while performing this move so use it wisely.



Phasing Through Walls

The ghost is completely intangible to walls, being undead and all. Simply moving through a wall with the joystick will cause the ghost to automatically pass through it with no additional buttons required. The movers cannot do this, so use this ability to your advantage and cut them off.



Resetting Mementos

Mementos remain in the position movers drop them in when scared off, and can be grabbed once again by any other Movers. To prevent this, simply move over dropped Mementos with the ghost and they will move back to their original positions further away from the mansion entrances.



Scoring Mechanics (Feels)

As previously mentioned *The Living Room's* win/loss condition is based on the number of Feels the ghost has, Feels being a term to dictate the quantification of the ghost's attachment towards its mansion. If the player ever runs out of Feels, the game is over. The game starts with the ghost's Feels set at 100, and can be reduced based on the Feels value of Mementos stolen by movers as illustrated below:

Image	Colour	Feels Value
	Gold	50
	Silver	30
	Bronze	15



The player's current level of Feels is indicated on the HUD on the top-right of the screen. It is conveyed via imagery, colour and background music to mimimise clutter in the HUD. The outright value of Feels is hidden from the player to simplify the game, and is alluded to via the status of the HUD as indicated below:

Image	Feels Range
	100%
90	51% - 99%
900	26% - 50%
38	0% - 25%



Level Design



The ghost's mansion

The Living Room has a single level in the form of the ghost's mansion. Aesthetically the mansion is designed to look old, dreary and dilapidated. The colours are dull and the locale is dusty, with cobwebs adorning almost every corner and dust particles slowly floating through the air. Breaking this monotony are the Mementos which shine amongst the pale colour scheme, along with the bright vests of the movers once they arrive.

The level layout consists of a main room and a smaller room in each corner. This design includes enough walls to facilitate multiple paths that movers can take to each Memento while not cluttering the paths. The focal point is the gold Memento in the center of the main room, which if stolen removes half of the ghost's initial Feels so protecting it is generally the player's number one priority. In the corners of each mansion are the lesser valued Mementos, with silver items generally taking the longest to get to.





The two states of the back window

Initially the only entrance to the mansion is the front door. This is done so the player learns about the movers' functionality early and gets a sense of what the game is about before increasing the difficulty. At the beginning of the second wave the window shatters and becomes a second entrance for the movers. Each mover's entrance, exit and target Memento is randomised. No mover will ever target the same Memento as another, though once a Memento is dropped it can be picked up by another. This adds a layer of unpredictability to what paths each mover will take, so the player must be sure to keep an eye on every aspect of the level.



Control Scheme



The pause menu, displaying the controls for both keyboard and controller

In regards to the control scheme we chose to keep the required inputs simple to make *The Living Room* simple to learn and to improve its accessibility. Additionally, as part of the "Keep It Simple" diversifier for GGJ19 we chose to restrict controls to just a single button and the control pad for general gameplay so the game would be compatible for devices such as the Xbox Adaptive Controller.

On the keyboard the default controls are the WASD keys for movement and the spacebar for scaring movers, though players can also use the arrow keys to move the ghost if they wish. The escape key is used to both pause and unpause the game, and will display the controls in case players forget them at any point.

On game controllers the controls are the joystick for movement and the action button for scaring movers. The control pad can also be used for movement instead of the joy stick, and the start button brings up the pause menu. The pause menu displays icons evocative of the Xbox controllers as that is what we used while testing the controls of the game.



Game Aesthetics & User Interface



A general screenshot of The Living Room

The Living Room's aesthetic is designed to convey a humorous theme with a mild touch of dark humour. The characters and world use miniature proportions to create an abstract representation of the mansion similar to a dollhouse. This allows players room for their own interpretation of the game's world. Additionally the enlarged heads of the characters allows them to be more visually expressive and plays further into the game's intended comedic overtones.

The colour scheme is dull to convey the sort of state the ghost prefers to live in. The only exceptions to this are the movers who are designed to contrast with the environment with their bright vests, as well as the sparkling Mementos and the ghost's glow effect. This is so all of the important elements of the scene stand out and are easily visible no matter where they are in the level. This is reinforced in the outline style, in which every important element uses black outlines while the non-interactable objects use coloured outlines to indicate their lesser importance in the scene.

Additionally, the fixed camera perspective used is evocative of the interiors in Pokémon games in which only the back walls are rendered and every else is represented as a black rectangle. This plays into the dollhouse elements of the mansion's design and de-clutters the scene to further communicate what aspects of the scene are important to the gameplay.





The HUD conveys all the information the player needs to know and is responsive to the gameplay.

We wanted to try something different regarding the HUD than simply putting it at the top like in most games, so instead we placed it on the right-hand side and integrated elements of the story into it. The background represents the exterior of the mansion, and the dog is placed just outside the front door. In-story this is to represent the dog seeing and alerting the ghost that movers are coming, while as a gameplay function the dog's barking indicates the beginning of a wave.

The dog's face in the top-right corner is used to represent the player's current Feels. The ghost levitates happily and emits a great number of particles while it has higher Feels. However, as Mementos get stolen and the ghost's Feels reduce it becomes sadder and there are multiple changes in its animation to reflect this. The ghost's sprite changes to become sad, the colour of the ghost and the particles gradually changes to a dark blue and its levitation becomes much slower. We chose to represent Feels visually in the HUD as opposed to numerically as we wanted to only provide information pertinent to the experience. Through emotive visuals we could give a greater indication of progress as opposed to simply displaying a number and expecting the player to understand.



Schedule & Tasks

When creating a schedule of tasks to be completed throughout the duration of GGJ19 and a short polish phase afterwards, we took into account what work was mandatory towards the completion of the project and divided the work into phases accordingly.

Tasks	Task Members	Task Duration	
Conceptualisation/Project Set-Up Phase (Day 1 GGJ19)			
Design			
Decide upon a game concept/specifications	All	7:00pm - 8:00pm	
Create a master list of features/mechanics to discuss with team	Anthony	8:00pm - 9:00pm	
Discuss with programmer what features should be included in the prototype	Anthony, Jeremy	9:00pm - 9:30pm	
Art			
Design concept art for characters and objects	Simon	8:30pm - 9:30pm	
Create a master list of art assets/animations to discuss with the team	Simon	8:00pm - 8:30pm	
Programming			
Create the Unity project	Dan	8:00pm - 8:30pm	
Set-up a repository for the project	Dan	8:30pm - 9:00pm	
Discuss with designers what parameters should be accessible in the inspector	Dan	9:00pm - 9:30pm	
Audio			
Create a master list of sounds/music	Jeremy	8:00pm - 8:30pm	
Experiment with sounds to create a style	Jeremy	8:30pm - 9:30pm	
Production			
Register the team for GGJ19	Anthony	7:00pm - 7:15pm	
Develop a schedule for the next two days	Anthony	8:00pm - 9:00pm	
Check-in with team members to discuss master lists	All	9:00pm - 9:30pm	
Phase Milestone: Develop a solid game concept and begin initialisation of the project		To be complete by end of Day 1 GGJ19	



Task Members	Task Duration				
Prototype Development Phase (Day 2 GGJ19) Design					
Anthony	9:00am - 10:00am				
Anthony, Jeremy	10:00am - 11:00am				
Anthony	11:00am - 11:30am				
Anthony	2:00pm - 2:30pm				
Anthony	2:30pm - 3:30pm				
Anthony	3:30pm - 4:30pm				
Simon	9:00am - 11:00am,				
	2:00pm - 9:00pm				
Simon	11:00am - 2:00pm				
Anthony	4:30pm - 6:00pm				
Dan	9:00am - 1:00pm				
Dan	1:00pm - 1:30pm				
Dan	1:30pm - 2:30pm				
Dan	2:30pm - 4:00pm				
Dan	4:00pm - 9:00pm				
·	9:00am - 11:30am				
	11:30am - 3:30pm				
Jeremy	3:30pm - 5:30pm				
Jeremy, Dan	5:30pm - 8:30pm				
for switching audio tracks Production					
All	8:30am - 9:00am				
All	12:30pm - 1:00pm				
Anthony	1:00pm - 2:00pm				
Anthony	6:30pm - 7:00pm				
All	8:00pm - 8:30pm				
	To be complete by end of Day 2 GGJ19				
	Anthony Anthony, Jeremy Anthony Anthony Anthony Anthony Simon Simon Anthony Dan Dan Dan Dan Dan Dan Dan Dan Anthony Jeremy Jeremy Jeremy Jeremy Jeremy Anthony All All Anthony Anthony				



Tasks		Task Members	Task Duration	
Refiner	Refinement Phase (Early Day 3 GGJ19)			
Design				
	Import all relevant art assets into the game	Anthony	9:00am - 9:30am	
	Finalise the ghost and mover attributes for the GGJ19 build	Anthony	9:30am - 11:00am	
	Design and implement the mover waves, tweaking attributes for game balance as needed	Anthony, Jeremy	11:00am - 12:00pm	
	Build the prototype and constantly test it for any bugs	Anthony, Jeremy	12:00pm - 3:00pm	
	Create a dummy submission for the GGJ website to ensure submission works as intended	Anthony	12:00pm - 12:30pm	
Art				
	Design additional furniture for the mansion	Simon	9:00am - 12:00pm	
	Design assets for the menu and end screen	Simon	12:00pm - 1:30pm	
	Refine existing assets and animations	Simon	1:30pm - 3:00pm	
	Design the game's logo	Simon	2:00pm - 3:00pm	
	Implement assets and animations into the menus and end screen	Anthony	1:30pm - 2:00pm	
Progran	mming			
	Test build and playtest the game	Dan	9:00am - 12:00pm	
	Fix any bugs discovered upon playtesting	Dan	9:00am - 3:00pm	
	Implement particles into animations and scaring	Dan	12:00pm - 2:00pm	
Audio				
	Create background ambience noises	Jeremy	9:00am - 11:00am	
	Create menu and end screen flourishes	Jeremy	11:00am - 12:00pm	
	Implement all remaining music and sound effects	Jeremy	12:00pm - 3:00pm	
Produc	tion			
	Morning check-in to assess progress	All	8:30am - 9:00am	
	Afternoon check-in to assess progress	All	12:30pm - 1:00pm	
	Milestone: The game is polished, bug-free ady for submission on the GGJ website		To be complete by 3pm Day 3 GGJ19	



	Tasks	Task Members	Task Duration	
Global (Global Game Jam Deployment Phase (Late Day 3 GGJ19)			
Design				
	Write up descriptions and instructions for the game's page on the GGJ website	Anthony, Jeremy, Simon	3:00pm - 4:30pm	
Art				
	Design assets for the project submission page	Simon	3:00pm - 4:30pm	
Progran	nming			
	Submit the game on the GGJ website with all relevant documentation	Dan	3:00pm - 5:00pm	
Product	ion			
	Prepare a list of features that didn't make the GGJ build that we could add later for the Global Game Jam Play Party build	All	4:00pm - 5:00pm	
	Milestone: The game is submitted on the GGJ deadline		To be complete by end of Day 3 GGJ19	



	Tasks	Task Members	Task Duration	
Global	Game Jam Play Party Refinement Phase (4th I	February 2019 - 12th F	ebruary 2019)	
Produc	Production			
	Discuss as a team what features and refinements to include and delegate tasks accordingly	All	4th February	
Design				
	Improve the ghost and mover speeds based on player feedback	Anthony	4th February	
Art				
	Design directional animation sprites for the ghost	Simon	4th February - 5th February	
	Improved UI assets and animations	Anthony	6th February	
	Create window shattering animation with particles	Anthony	6th February - 8th February	
	Add a glow effect, transparency and particles to the ghost and tweak its animations	Anthony	6th February - 8th February	
	Design and implement more furniture for the mansion and tweak the colour scheme	Simon, Anthony	9th February - 11th February	
	Recolour the mover sprites	Anthony	9th February	
	Add ghost colour tinting for when the ghost has lower Feels	Anthony	9th February	
	Add controls to the title screen	Anthony	10th February	
	Add art and animations to the title screen and end screen	Anthony	10th February	
	Implement wave indicator and win/loss messages within the main game	Anthony	10th February	
	Add a light dust particle effect to the mansion	Anthony	11th February	
Progran	nming			
	Implement pause functionality into the game complete with a controls screen	Dan	7th February	
	Implement support for the window shattering animation	Dan, Jeremy	9th February to 11th February	
	Implement support for a wave indicator message and a win/loss message	Dan	9th February to 10th February	
	Create a build of the game for web-based browsers	Dan	12th February	
Audio				
	Refine existing sound effects to be higher quality	Jeremy	9th February - 11th February	
	Add sound for broken window animation	Jeremy	9th February	
	Milestone: The game is improved, polished ady for presentation at the Global Game Jam rty		To be complete by start of day 12th February 2019	



Glossary

Diversifier - Voluntary design constraints used to add challenge to the Global Game Jam

Dog - The ghost's canine companion who alerts players of incoming movers

Feels - The quantification of the ghost's attachment to its mansion used for win/loss conditions

GGJ19 - Global Game Jam 2019, the event where this was developed

Ghost - The playable protagonist of The Living Room

Team DASJ - The development team of The Living Room (Dan, Anthony, Simon, Jeremy)

Mansion - The ghost's home and the setting of The Living Room

Memento - Objects special to the ghost worth a set amount of Feels

Mover - Antagonists to the ghost trying to steal its Mementos

Mover Wave - A set of movers who arrive together with pre-defined spawn properties

Phasing - The ghost's ability to move through walls

Resetting - The ghost's ability to move a Memento back to its original location

Scare - The ghost's signature ability used to clear the mansion of movers

Unity - The game engine in which The Living Room was developed

Wave Indicator - A pop-up appearing to signify the beginning of a mover wave



