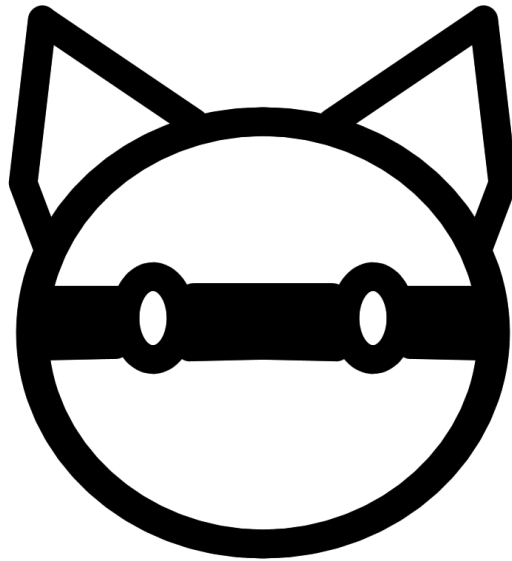


Alpha Release

DupliCat



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Overview

Even though this iteration was the shortest sprint our group had so far, since it was right over everybody's holiday season, our group was quite productive. We finished all our missing steps to integrate all the already prepared parts into a fully working alpha. This includes our main menu for entering and leaving the game loop, the behaviour for our guards, some experimental prototyping towards sculpturing as well as converting our canvas drawing into a picture file so that our algorithm can work with it.

Next up, we need to work on randomising the "original" picture, i.e. the picture that we are copying, so that we have some variation and replayability, as well as getting some playtesting to see if we missed some important problems that should be considered before moving on to polishing our game.

Task Progress

We are mostly still on track when it comes to our planned schedule. All of the open low targets have been finished. We are currently well within the desired target and partially into the high target. Most of our desired targets are well on their way to being finished or have otherwise been shifted around to accommodate the alpha release and some of our changes that came up along the way. The story has been shifted to a high target and the 3D sculpting is currently being evaluated for its feasibility.

Functional Minimum

- VR setup (Done)
- Basic drawing mechanic (Done)

Low Target

- Picture similarity detection (Done)
- Basic art and assets (Done)
- Simple 3D environment (Done)

Desired Target

- User Interface (menus and interface) (Work in progress)
- Audio (music and sound effects) (Work in progress)
- Story (Work in progress)
- Game modifiers and conditions (Done)

High Target

- 3D sculptures as art objects (Pending evaluation)
- Sculpting mechanic (Evaluating prototype)
- Object similarity detection (Evaluating prototype)
- Stealth mechanics (Work in progress)

Canvas to .png

The main missing part for our last presentation was the implementation of the feedback on the drawing in our actual game. While we already made a similarity algorithm, we didn't have it integrated in our game. We faced some difficulties, since we used a vector based approach for drawing, which was hard to convert to a pixel based picture for our algorithm. We now added a camera with a view field that exactly matches the canvas. When triggering the "end-of-the-game", a spotlight will light up the canvas and the new camera will take a screenshot. This is then saved as png and we convert our vector based canvas to a pixel based file which is ready for comparison using our already written similarity algorithm!

Stealth Mechanics

The stealth mechanics are part of our high target and thus still at a rough and limited state compared to some of our other features. They are mostly made up by the guard and flashlight mechanics at this point. The player has to hide from the guards by turning off their flashlight before the guard enters the room to avoid a game over.

The stealth mechanics will be further elevated by adding audio cues to the guards to better warn the players of their approach as they currently have to rely on sight. This aspect of our game might remain in a comparatively limited capacity in case we have to focus on other aspects of the game before the final release and will potentially just serve as a polish for our existing game conditions that contribute to the stealth parts of our game.

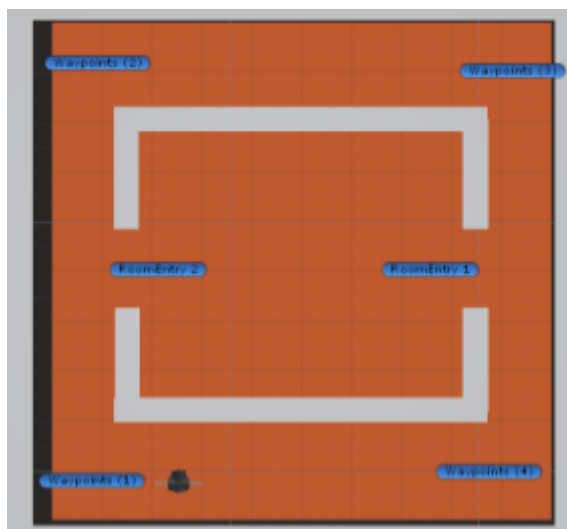
Guards

The guards, one of our two game conditions, have received a finished model and additional functions that build upon the initial base created during the phase leading up to the interim report.



The Miauseum's security guard

The Miauseum's security guards are inspired by French bulldogs to keep the theme of the fictional city of Pawris going while using the classic trope of cat versus dog.



Basic patrol layout

In addition to their initial behaviour of walking along waypoints in a room, to simulate a patrol, they now partially enter the exhibition room along their patrol. The guards follow a path created based on the waypoints. Special waypoints were added that serve as the entry points to the exhibition room. All waypoints are added to an array that determines the patrol path but only the room entry points serve as spots at which the guard will change their behaviour.

They stay close to the entrances to leave enough space for the player without coming too close. After entering the room the guard will then look around from a central position, turning to the left and then to the right before turning back around to their initial rotation before leaving the room again to continue the patrol. The guard then receives a cooldown to avoid frequent checks on the room before eventually returning.

In the current state of the game the guards are the only cause for a game over state. While the guard is looking around it tries to detect two things. The player and the player's flashlight. Only if the guard spots the player and a turned on flashlight will game over trigger, returning the player back to the main menu.

The guards still use similar indicators as before to project their field of view to the player by having a light attached to them akin to the player's flashlight. They are at this point of time still lacking proper animations that could help with visual clarity and additional immersion, these will be added before the final release. We are currently experimenting with different ways to visualise this more fittingly and clearer, this is something we also potentially want to explore during the upcoming playtesting period.

Story

The story of our game was initially planned as a desired target but we decided to push it back a bit further into the high target or extra levels of our layered tasks as we deemed as less necessary for our alpha release. We are not planning to abandon our story and the introductory cutscene that was meant to serve the role of a primer to the atmosphere of our game but simply intend to prepare it for the final release.

We intend to have a small tutorial in place for the upcoming playtesting period that will include small pieces of the story and general atmosphere to set the scene.

Main Menu & UI

To round-off the gameplay experience and allow for a proper looped play-cycle, we added a Main Menu to the game.

On first startup the player is placed in the main menu, as he would be in any other level in the game. In the small constricted environment they can use buttons and dials on a desk to configure the settings and set different modifiers for their playthrough.

Afterwards they can start the level properly using a big red button, upon which they are teleported in said level.

Should they want to return at any point during play, they can do so by pressing another button within the level.

The Main Menu room is also used to display the score of the previously completed level using a display on the virtual desk.

Finally a practice canvas is present in the room to allow for limitless training with the base game-mechanics.

Currently not all the mentioned functionality is fully implemented and connected to the other systems, but the level was designed in such a way that it can be easily joined with other gameplay scripts and even extended for further ideas (i.e a trophy showcase or highscore board). So far many settings are not yet properly implemented due to the alpha state of the game, resulting in them not being manipulatable in the Main Menu.

We elected to use a diegetic UI instead of a traditional, window-based, solution, due to their immersion and ease of use in VR. Pointing on buttons and sliders using a ray, cast from the players hand, felt cumbersome and tiring, whereas "physical" interactables (they exist only in the game world, not the real world, but look and behave similar to real physical objects) like buttons and levers lend themselves naturally to the hand-tracked playstyle of VR.

Storywise, the Main Menu serves as the lair of our feline gentleman thief. In this rundown apartment they feel safe and protected from evil guards, allowing them to relax and hone their craftsmanship. Any spoils not sold off to the highest bidder are also displayed in this space and so are any specialised tools required for a swift night out.