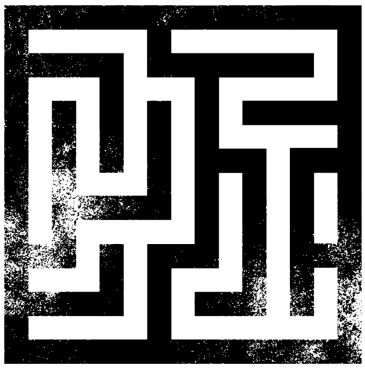

Moirai's Trial

User Feedback Report #2

Functional Prototypes

2nd Dev Cycle - May 2021

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1 Introduction

The aim of this report is to delve deep into the 4 different functional prototypes that the team built in order to bootstrap the development phase of the **Moirai's Trial** project. After having spent months deliberating and discussing ideas, mechanics and features, both between the team, and with a handpicked focus group for validation, the prototypes presented in this document serve to establish several core aspects about this game.

Specifically, **four prototypes** were built in order to ascertain the game's controls, **movement** and **shooting**, alongside core presentation aspects such as the player **HUD** and toggleable **map**. All of these prototypes were implemented into the same scene using the **Unity Engine** (in which **Moirai's Trial** is being built in) and it should be noted that they do not interfere or try to verify aspects that conflict with each other (i.e, they independently test a core part of the game without impacting the other prototypes).

The game's prototype can be downloaded at https://fenixds.itch.io/moirais-trial and the form used at https://forms.gle/X7mbv2V8Y9ZB8tgF7.

2 Proceedings & Testers

As aforementioned, all prototypes were implemented into the same scene and given specific keys in order to toggle between the different options of each prototype (these are further explained in each of the prototype's corresponding sections). From this, an executable build was created and posted into the game's **itch.io** page - https://fenixds.itch.io/moirais-trial .

Furthermore, an accompanying **Google Forms** - https://forms.gle/CduFPqKv7prDv8eV7 - was created which contains a section of questions for each of the prototypes as well as step-by-step instructions of how the testers should proceed.

Testing was done two-fold. Starting Saturday, 2nd of May, 2021, the team met with several elements from the game's focus group and accompanied them through the prototypes. Besides this, however, on Tuesday, 4th of May, 2021, an on-campus testing was also conducted where a majority of the team's members met in person with both the teacher and other developer teams in order to garner even more feedback.

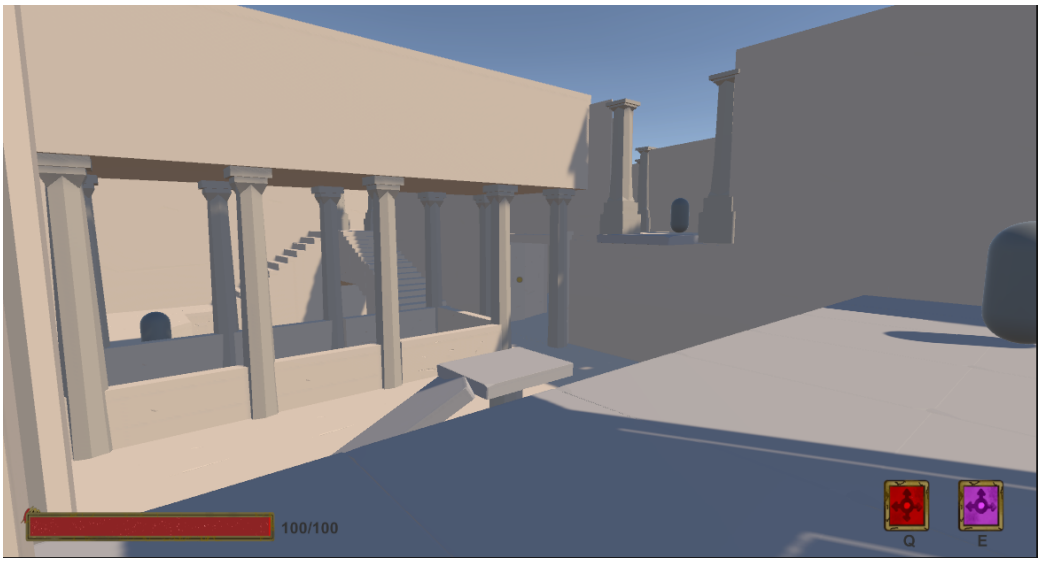
3 Movement & Control Prototype

3.1 Description

As an FPS game, **Moirai's Trial** is highly reliant on having responsive, intuitive and good-feeling controls. As such, this was one of the areas the team first spent their efforts on, creating a baseline *Keyboard and Mouse* control scheme based on the standard "WASD" movement style. This was implemented using **Unity 3D's CharacterController** which allows for the adjustment of several variables which drastically change the way movement feels (and which should be tested). Besides base movement, we also implemented a jump and a dash which accelerates the player forward rapidly for a short duration.

3.2 Goal

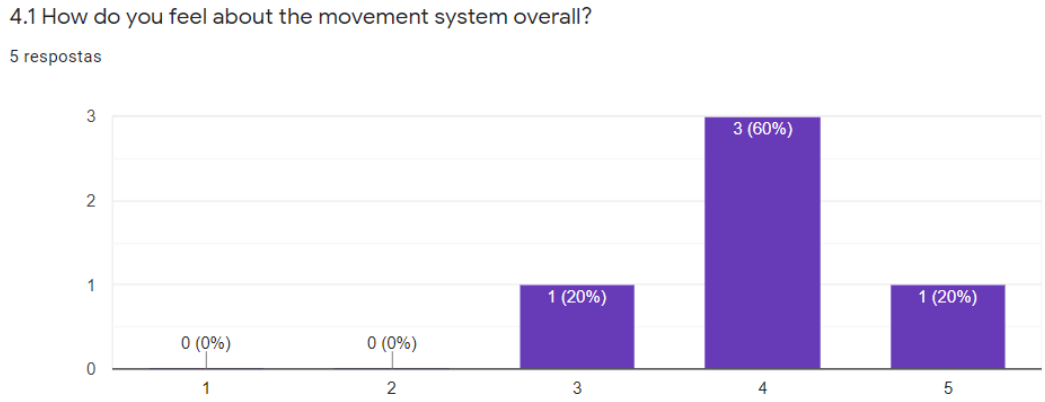
The goal for this prototype was to let players play around with our baseline movement implementation/settings. We wanted to test aspects like the player's acceleration, how fast they can move, how changing direction feels like, the height of their jump and what they thought of our dash. For these efforts we created a dedicated arena with corridors, stairs, jumps and gaps, dummy enemies, jump pads and so on. Players were allowed to freely move around the arena and were then asked to give their opinion on the form's corresponding section. To test we started with the basic running movement with the WASD keys, then added the jump and finally the dash. The goal of this was to test each movement option and assess how well they behave in terms of "game feel" and how many options they would give players regarding combat and environment traversal.



Img 3.2.1 - Part of the arena seen from the player's persepective

3.3 Player Feedback & Conclusions

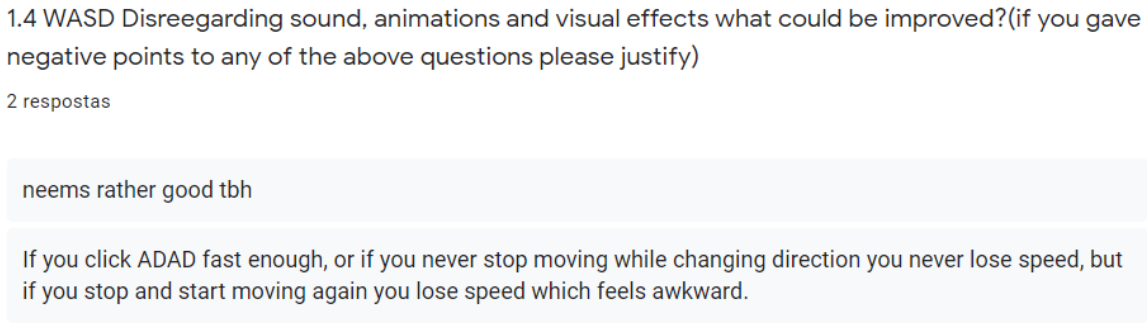
For feedback we asked each player to fill a Google Forms Questionnaire. When testing we gradually increased the movement options available to the players. The question's responses ranged from low (1) to perfect (5) and overall the feedback was positive but there are some minor things that could be changed to improve the movement system.



Img 3.3.1 - The player's opinions about the feel of the game

Before delving further into the specifics it's also important to note that the movement system was made and tweaked to work well for the testing arena, so the level design has a deep effect of how the movement system is used and perceived by players.

Starting with the base running (WASD keys) the response was mostly positive, there was only a minor problem that should be tackled, noted by one of the testers.



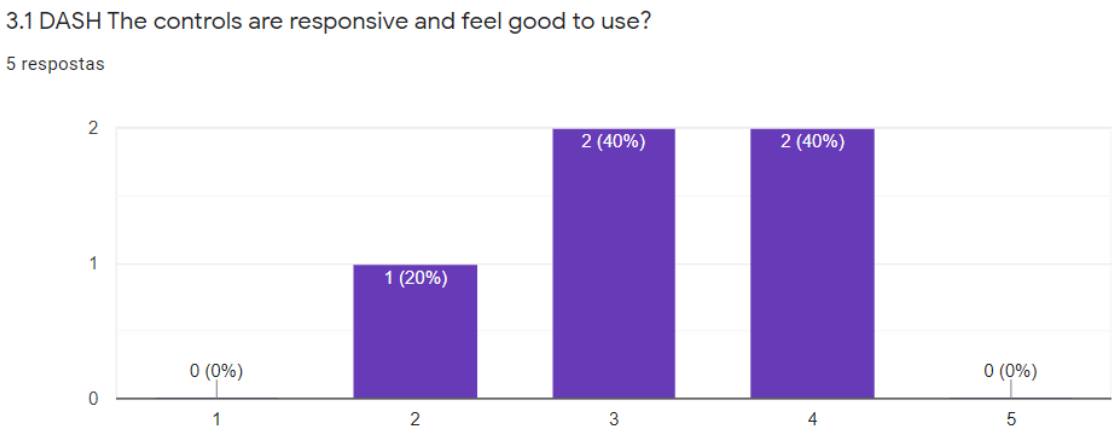
Img 3.3.2 - Some notes given by the players

As explained, by the tester, in the image above, there is no loss of speed when changing directions. When starting the movement there is an acceleration, so it takes time to go from a full stop to full speed (about 0.2 seconds). The tester complained that the lack of loss of speed when changing direction felt awkward. But, while that might be the case,

one could argue that the movement is better off like this because when in combat, or even traversing the environment, we don't want to penalize players for changing direction by breaking the flow of the action. It's a matter of testing if the loss in game feel is worse than the gain in responsiveness and control. For now we decided to maintain the responsiveness to keep the flow of the movement but this will have to be tested further.

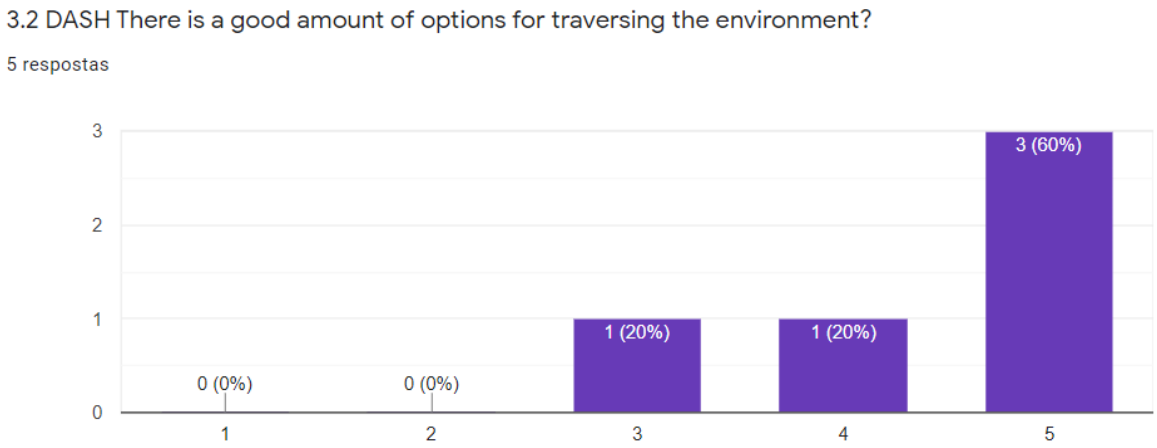
For jumping the responses kept equally positive. The only complaint was, again, the lack of a loss of speed when changing direction. This has the same response as the one above, we would rather have increased in-air movement control, to keep the movement flow, than a slightly better game feel. But, again, this will be further tested.

For the dash we got slightly different responses. Rather than scoring mostly 4 and 5 testers scored an average of 3.



Img 3.3.3 - The player's opinions about the dash regarding game-feel

As explained by the testers this is due to the fact that the player stops for a split second after the dash is finished and is unable to move the character for that amount of time. This problem was actually spotted earlier by the team and we are already trying to fix the bug in the code that stops the movement.
Besides that, the response was positive, especially regarding how free the players felt about traversing the environment, given that the dash highly increases the movement options.



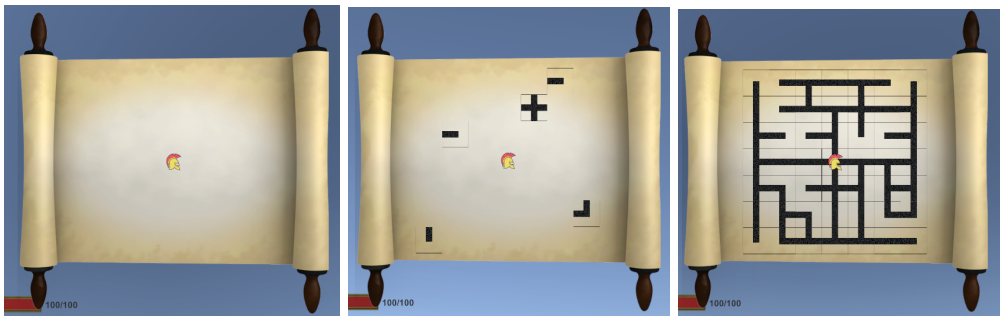
Img 3.3.4 - The player's opinions about the usage of the dash for traversal

To conclude, the overall reaction was positive and the team is sure that with some minor tweaks in the physics, some bug fixing, polish, as well as adding some visual effects, animation and sounds the game's movement system will be a great part of the game and, besides feeling good to use, will help generating interesting combat encounters as well as other forms of social interaction between the players which is one of our main design goals.

4 Map Presentation Prototype

4.1 Description

For this prototype, our aim was to make the players react to a map system that is not as the usual ones that we can find in most of the games that respect the same norms as ours does. In order to achieve this, a simple parchment in which the map should be drawn was put on the game, and able to be activated by pressing the 'M' key. The map always starts empty and receives a fixed number of "pieces" when a player solves a challenge room. This amount of pieces to be rewarded at a time is scaled so that only a player that completes all the challenge rooms available in the map can access the whole map. To test this feature, we simulate the rewarding action by pressing the 'P' key. The final test subject with this prototype was the navigation aid that the map provides when used. In order to provide some feedback to the player, an icon is put on the map and changes its position based on the room in which the player is inside.



Img 4.1.1 - Map empty (left), with a single challenge room solved(center) and Full (right)

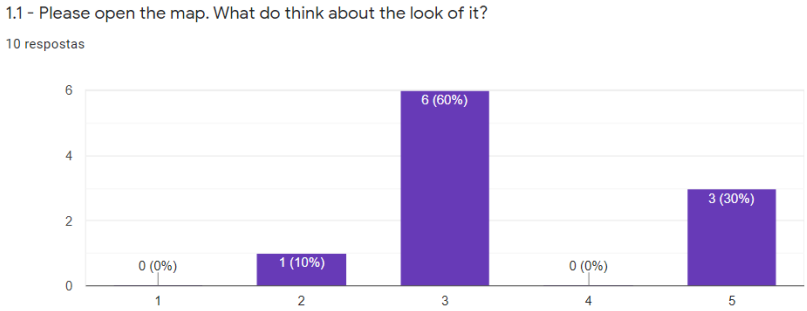
4.2 Goal

Our goal with this prototype can be divided in two main factors: Test the presentation of the map and all its components (position, scale, aspect, etc.), and test the usability and general experience. For our first objective we really intended to know how players think that a map, when connected to our game's theme, should look, and also how the players would deal with some visibility obstruction that the map creates and was intended, in order to balance the advantage of having a map for a maze, considering that these two concepts are almost always not related.

When speaking about the use of the map, our main intention was, of course, to test if a player can navigate the maze by using the map, but without having it destroying our game's main condition: It must be a maze.

4.3 Player Feedback & Conclusions

Starting with the map general look, here is the player's evaluation of it:

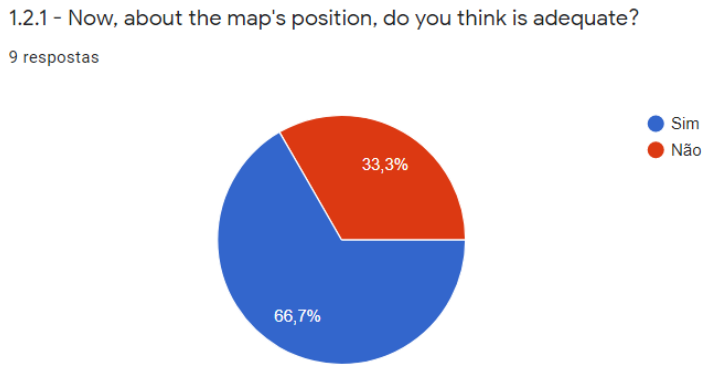


Img 4.3.1 - Players' answers when asked about the map's general look

Although these results do not provide clear information about if the map's look is generally good or bad, it seems to us safe to assume that it is actually not bad, considering that the average, when calculated, is 3.5, but it is also not good. The lack of higher or lower votes

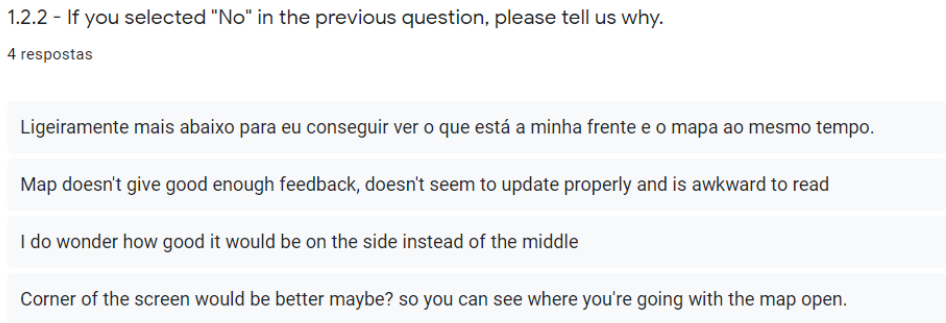
shows some indifference, so this will be the main focus when reshaping the map's presentation form.

Next, we take a look into the map's position, and here we seem to have better results.



Img 4.3.2 - Players' answers when asked about the map's position

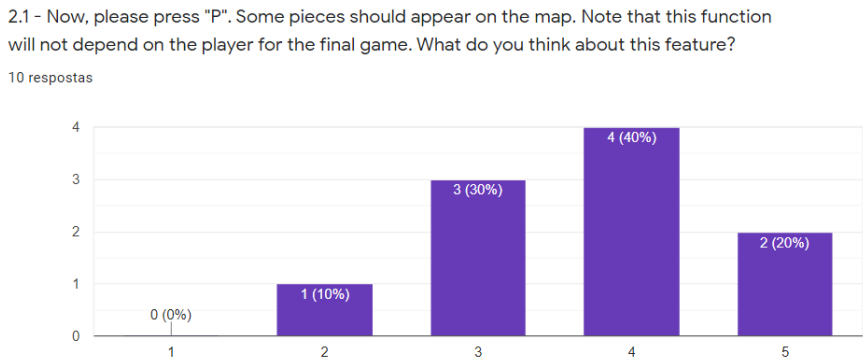
From this graph, we can take the conclusion that most players like the central position that the map is currently taking on the player's hud. For better feedback analysis, we also asked the players that answered 'No' in the previous question to tell us why.



Img 4.3.3 - Players' justifications/suggestions related to them disliking the current map's position

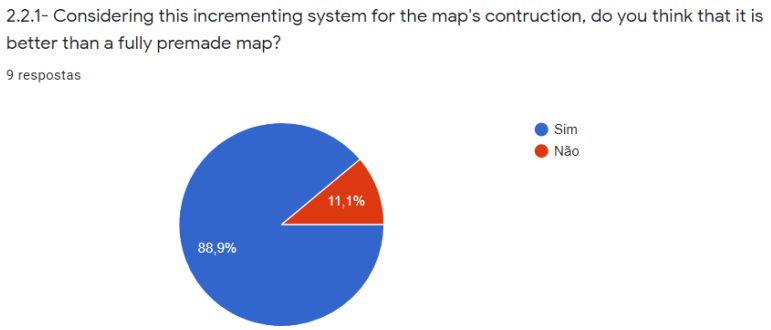
By analysing these results, there is a main point that immediately came to our attention: Some players seem to confuse 'Map' with 'Minimap', and this may be related with the first not being as used as the second, but this dilema definitely something to consider. Another important consideration is related to the confirmation that the map really obstructs the vision of the player as intended.

Jumping to the feature that makes adding pieces to the map possible, we got these results:



Img 4.3.4 - Players' evaluation to the incremental characteristic of the map

As can be seen in the histogram above, this feature seems to be appreciated by most of the players, but let's look into a more in-depth feedback.



Img 4.3.5 - Players' choice results between a 'traditional' map and an incremental one

2.2.2 - If you selected "No" in the previous question, please tell us why.

2 respostas

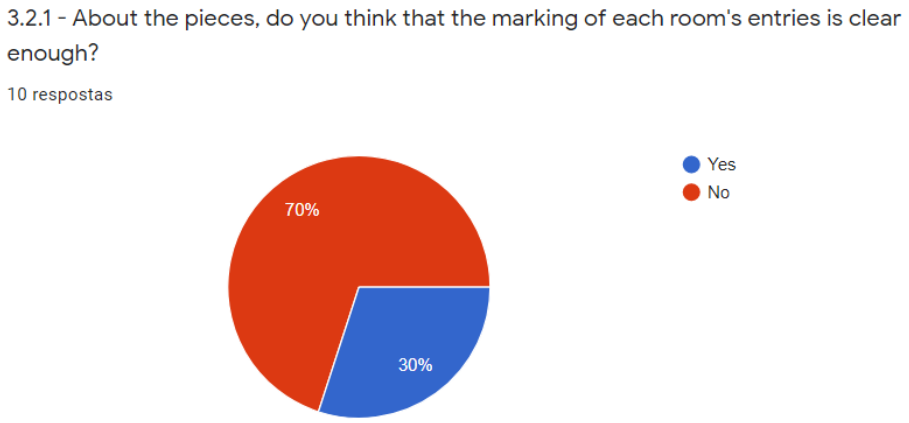
If the game is as played before, knowing the entire map is important

yes but not like this
It should give us the room we are in, and update as we move, not updating is kinda troll. I do like the idea of a challenge room giving more pieces

Img 4.3.6 - Players' justifications/suggestions related to them disliking the incremental characteristic of the map

Once again, the players seem to not react well to this different approach taken for the map, always bringing up other systems that are more common. This is a very important point because it makes us realize that coming up with different ideas can result in an

increasing amount of new problems as well, and the strangeness created in the player may not result in the way that we expected it to.



Img 4.3.7 - Players' reaction to the pieces' design

Now these are the results that really made us think. At first thought, we did not think that such a design would make such a bad impact on the players. With our maze being room-based, identifying each room's exits and connecting them seems like a good approach, but this player testing sessions really made us understand that the look of the pieces must be changed in order to make it clear for the players without loosing the 'getting lost' characteristic that we intend to maintain.

Finally, and about the player's icon moving on the map, the reaction was consensual: All of the players that tested this feature referred to it as important and well thought out, so it is definitely something that will be carried out to the final version of our game.

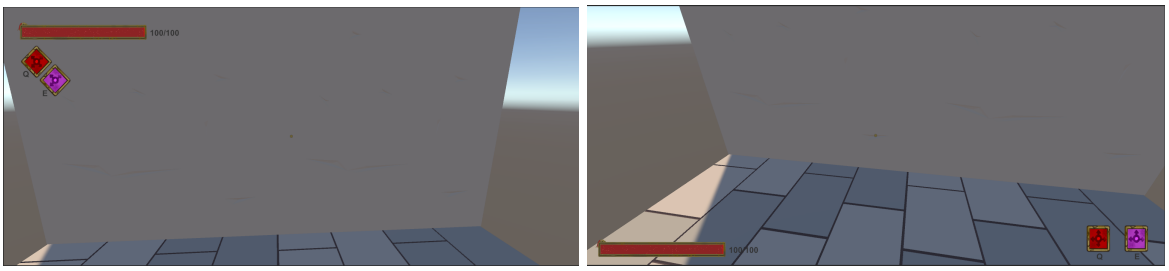
5 HUD Presentation Prototype

5.1 Description

As a multiplayer game with a decent focus in intra-player first-person combat, akin to other shooters, the team knew that the HUD will have to receive a decent amount of effort and work. Players should be able to quickly access vital information like their health and what powerups they've got available. Moreso, since powerups have different cooldown times between usage, it should also be made clear to the player when they can and cannot use their powers, alongside how much time it'll take until they're made available again.

With this in mind, the team crafted some provisory assets - which will be replaced by the team's artist's renditions for the game's final proof-of-concept prototype - and created

seven different HUD designs. Furthermore, alternative versions of each HUD were created, with different amounts of information displayed and cooldown recharge animations, and an option was added that would hide the HUD unless the player used a powerup or shot. Testers were asked to alternate between each of these HUDs and options in order (which could be easily done by pressing “U” + [Number key from 1 to 7 for different HUDs, 8 to toggle the “vanishing hud” and 9 to swap to the alternative version]).



Img 5.1.1 - Example of two of the seven (plus 7 alternatives and 1 extra option) HUDs we built for our prototype

5.2 Goal

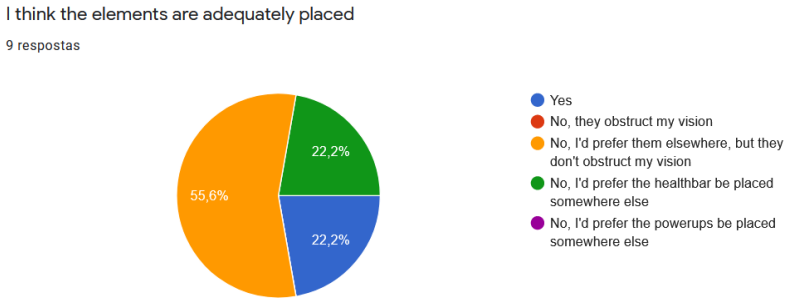
The goal for this prototype was to settle on a concrete design, placement and features that **Moirai’s Trial** should have so that this can then be conveyed to the team’s artist, for them to then start producing the final assets. Although, it should be noted that, even if HUD design lends itself highly to “personal preference”, this prototype helped, nevertheless in knowing what players are looking for in a HUD, and what they absolutely do not want to have in an FPS.

5.3 Player Feedback & Conclusions

The team asked each of our prototype’s participants to go over each of the HUDs individually and to answer the corresponding section as they went. For each HUD, the testers were asked if they thought the elements were **appropriately sized** and **placed**. For the vanishing HUD, testers were asked to swap over to their favourite HUD so far and they were then questioned whether they liked **the time the HUD stayed on screen**, and whether they liked the idea of **only being shown the HUD during combat**. In terms of the alternative version, testers were again asked to stick to their favourite HUD and were then asked if they preferred the **alternative cooldown animations** and whether **text** was **necessary or not**. In the end, players were asked to pick their favourite HUD and whether they preferred the alternative and/or the vanishing versions and explain why that was, alongside their least favourite (and why).

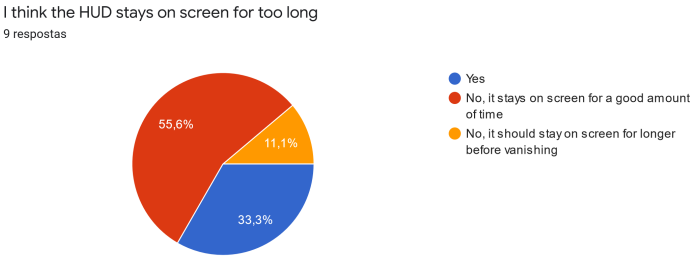
Starting off, it should be noted that the testers never complained about the HUD obstructing their vision for any of the available options, but there were a couple of them in which a majority of people stated that they’d change the placement of the elements. For

example, as can be seen in image 5.3.1, for HUD 6. the one with the health bar on top and powerups on the bottom right, a vast majority of players disliked the arrangement, and would prefer to either have both elements moved, or just the health bar replaced. Nevertheless, with these starting insights we managed to conclude that the **assets** we built for this prototype were of **adequate size and weren't visually taxing** on the players, who never complained about obstruction or obscurity of their vision.

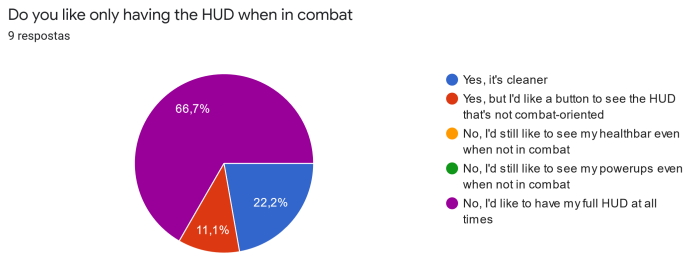


Img 5.3.1 - Opinions on the placement of the elements in HUD 6

Moving on to the **Vanishing HUD**, players were asked two questions: The first pertained to their opinion about the length of time the HUD stayed on screen for with this option enabled. As can be seen in image 5.3.2 most players liked the length of time for which the HUD was enabled, but, surprisingly enough, a third of our participants did say they'd like for the **HUD to disappear faster**. Only a single person said they would've liked for the HUD to stay on for a bit longer. The second question, and perhaps most important, was whether testers liked the idea of only having the HUD shown when in combat. Whilst the team thought this to be a good addition to the game, testers said otherwise, with a majority stating that they'd rather have the **HUD always on screen**. When asked about this further, most testers stated that the HUD wasn't intrusive enough to the point that it should be hidden, and that this is a feature that makes more sense in more cinematic games, rather than multiplayer battle-royales.

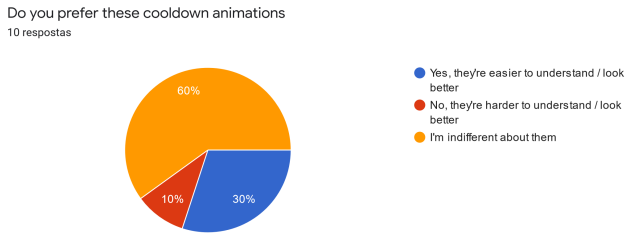


Img 5.3.2 - The first question pertaining to HUD 8 (The vanishing HUD)

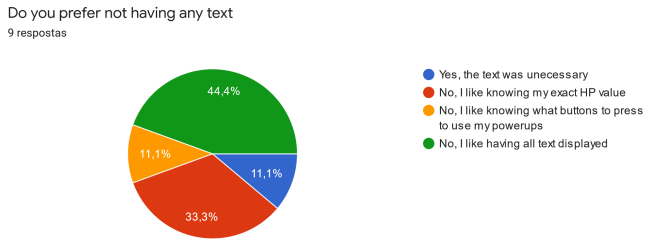


Img 5.3.3 - The second question pertaining to HUD 8 (The vanishing HUD)

In terms of the **alternative versions**, most players stated that they were pretty indifferent about the new cooldown animations (image being filled from bottom to up, rather than in a radial), not preferring one over the other. More notably, however, is the fact that 30% of testers did say they found the **new animations more intuitive** and easier to understand, whilst only one person disliked them, hence there being a good case for the alternative animations to be used over the default ones. The team also asked about what the players thought of the presence or lack of text in the HUD, and this question proved to be more divisive than initially thought. Only one person said that they liked having the text on at all times. All others liked the presence of text, with one person only wanting to have the HP value displayed, only one person wanting the buttons need to use the powerups displayed, and with 44.4% of people **wanting all text displayed**. When asked about it some more, players said that the HUD felt a bit empty without the text, and that having the exact HP values and key prompts **didn't clutter their vision** to the point that it should be removed.



Img 5.3.4 - The first question pertaining to HUD 9 (No text + Different Cooldown Animations)



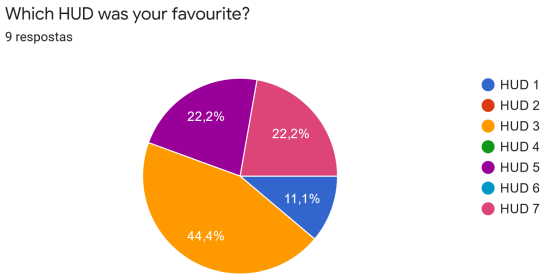
Img 5.3.5 - The second question pertaining to HUD 9 (No text + Different Cooldown Animations)

Finally, players were asked the main questions of this section. Starting with what their favourite HUD was. Initially, the team feared that this would come down too much to personal preference and that most HUD's would have a relatively similar pick rate. However, 3 HUDs in particular got a lot of votes. HUD 5 and 7 tied with 22.2% of votes. People who voted for **HUD 5** stated that *"the display of the health information and ability cooldown on this HUD reminds me of other action games, I also prefer having HUD on all the time since I prefer always having the information"*, whilst one of **HUD 4**'s voters said "*This way i know exactly my HP and PowerUps all the times in the perfect place.*" and "*I like how the health bar was brought closer to the powerups, plus its easier to reach since its right below the crosshair"*.

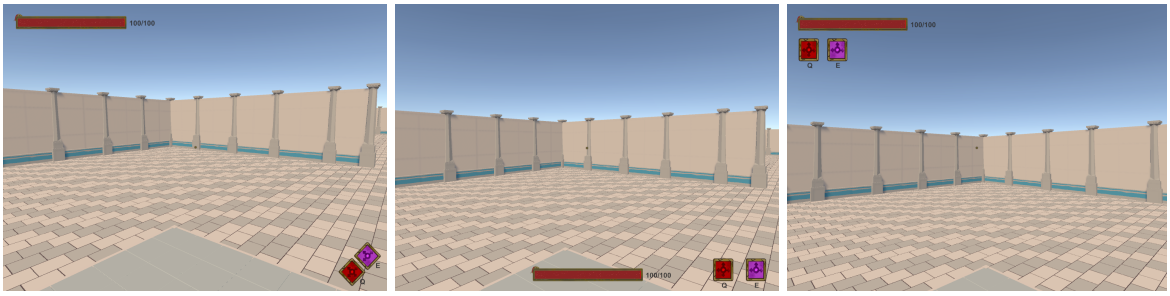
Even so, **HUD 3** was the one that came out in front, as can be seen in image 5.3.6. Some interesting comments were:

- *"I like that all the hud information is in one place, so my eyes don't have to jump too much around the screen. Since there aren't many abilities it is also unnecessary to have the button text."*
- *"Clean and good looking"*
- *"I like the healthbar to be near the powerups so you can look at everything in one glance"*

Additionally, players said that their preference was to have the **HUD always on**, and most stated that the only thing they liked about the alternative version was the **new cooldown animations**.

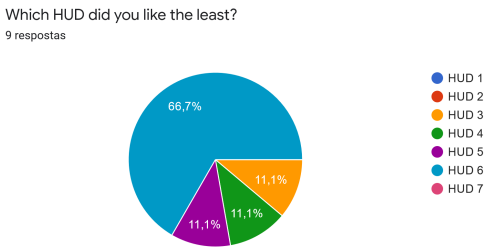


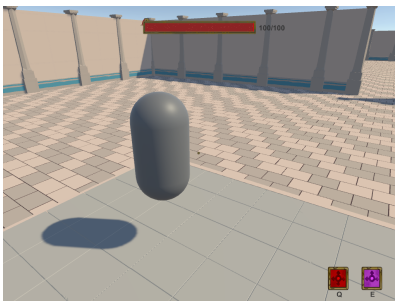
Img 5.3.6 - The tester's favourite HUDs



Img 5.3.7 - The three highest voted HUDs - HUD 5 (left), HUD 7 (center), HUD 3 (right)

Finally, we ended this section by asking players what their least favourite HUD was. HUD 6, the one with the health bar in the top center, was the highest voted one with players saying that they felt like they were looking at an enemies health bar, rather than their own, which the team found interesting, since the only difference between HUD 6 and 5 was the centering of that bar, so we didn't expect it to have that big of an impact.





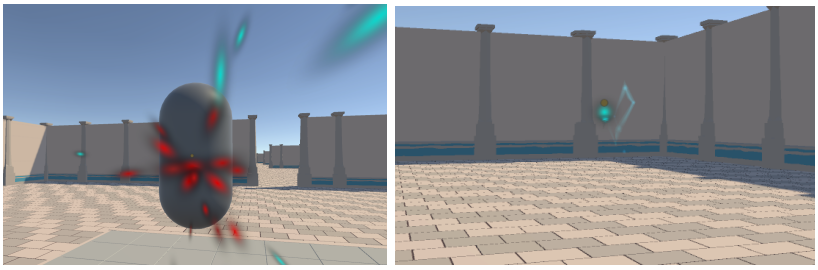
Img 5.3.8 - The tester's least favourite HUDs (left) and HUD 6 (right)

In the end, the team will settle on implementing HUD 3 (which can be seen in image 5.3.7) with cooldown animations going from the bottom up for clarity. As testers suggested, the team will also be foregoing the usage of a vanishing HUD, and both the precise HP value and key prompts for the powerups will be constantly on screen. All that's left now is to swap out these temporary assets for permanent ones elaborate by the team's artist.

6 Shooting and Impact Feedback Prototype

6.1 Description

This part of our prototype focused on the **shooting mechanics** and their **visual feedback**. The same character that the players were able to control to test the movement was also able to shoot a projectile by clicking the **left mouse button**. This projectile consisted of a blue beam of light that left a trail when travelling and exploded when hitting anything. The players could fire as many as they wanted with no cooldown. Another visual effect was also added to show an explosion of red (blood) particles whenever a projectile hit a dummy (placed in the map to represent other players).



Img 6.1.1 - The projectile hitting the dummy (left) and moving through the scene (right)

6.2 Goal

The goal for this part was to gather player's feedback before going deeper into the design of the projectiles and the whole battle system, we wanted to figure out first not only what they thought about their appearance and visual effects but also what kind of projectiles the players would expect from this sort of game and what they would see themselves using them for.

6.3 Player Feedback & Conclusions

By looking at the answer the players provided in the form we presented them, their opinions regarding the visual aspect were positive but some players didn't seem sure that the current style fit the aesthetics of the game.

Regarding the aiming system some felt it was "weird" and "awkward" because they **couldn't tell where the projectiles were coming from** but on a scale of 1 to 5 everyone picked either 4 or 5 when asked whether the **aiming felt accurate**. In the final implementation we'll have the actual characters already in the scene which will hopefully help fix this issue.

Most players agreed the **fire rate felt alright**, but the most common suggestion was **making it automatic** while the button was pressed instead of having to click multiple times, which is something we'll take into consideration moving forward. Some players asked for **more feedback** after hitting the enemy, namely a "floating health bar".

When asked what they would expect from this type of game most players seemed in favor of **fast projectiles** such as bullets but we're not quite sure that is the direction we'd like to go towards as it might feel even more out of place, we'll take that into consideration nonetheless. Regarding suggestions for uses for the projectiles, players seemed to like the idea of having them also **interact with the environment** by opening doors, interacting with traps or even hit targets integrated in Challenge Room puzzles.

We can conclude the player's feedback was generally positive but most importantly it was helpful. The visual appearance of the projectiles and the whole shooting system is something that concerns us, and we will make sure that in the final version it feels appropriate by tweaking its appearance, natural by including the needed visual effects and that the players get all the necessary information while firing them.

7 Conclusion

These sessions proved to be very fruitful in getting a lot of good info about what each of the prototypes aimed to test. The fact that we divided our prototypes into different and individual areas of focus, the team managed to gain a lot of insight about several cornerstones of the game. The team managed to settle on a concrete movement style (and which had to be implemented for the prototype and hence is already done and settled), workings of the map (which as a battle royale game set in a maze is a very important part of the game), HUD design (which we can now pass on to the team's artist to create the final art assets) and on the shooting and impact of the player's ranged attacks (which as an FPS is, again, an important factor of the game).

The team now feels highly capable of moving on to proper implementation and deep development of **Moirai's Trial**.