/ CIM330 / PROJECT 1/AUDIENCE TESTING

WILDSMITE

TEST PLAN

Compiled by:
Christiaan De Wet van Wyk
Farhan Ul Haque
Bibi Fatima
Anmar Abdullah Alahmad Alyosif
Sami Ventura Dummar

TABLE OF CONTENTS

INTRODUCTION/RESEARCH

Game testing and playtesting are both crucial processes for ensuring the quality and success of a video game.

Game testing involves various types of testing, such as functional, compatibility, performance, and usability testing, to identify issues that could negatively impact player experience. The process includes test planning, test case creation, test execution, and bug reporting, and should be based on the game's specific requirements and goals, involve the target audience, and be done across multiple devices and platforms to ensure compatibility. Usability testing ensures user-friendliness, and performance testing ensures smooth gameplay without lag or issues (*Learn About the Concepts of Testing Gaming Apps*, 2023).

Playtesting, on the other hand, involves recruiting individuals who match the game's target audience, recording their behaviour and reactions during the playtest, analysing the data, and presenting trends and patterns to the developers for further improvement. It can identify issues with game mechanics, aesthetics, and more, and should be conducted throughout the development lifespan to meet user expectations and requirements. Both game testing and playtesting are important to ensure that the game is enjoyable, engaging, and meets the target audience's expectations (Davis J., Steury K. & Pagulayan R., 2005).

There are generally two types of playtesting: internal, within the development team, and external, with players outside the team. External playtesting is vital as it provides a broader range of feedback. Playtesting also identifies successful areas of the game and can be conducted in different formats such as in-person, remote, and survey-based testing (*Everything You Need to Know About Playtesting - All in! Games*, 2022).

Some notable aspects of our game that need to be tested include:

- **UI, UX & GX:-**
  The UI, UX, and GX are three interconnected aspects of a game that significantly affect a player's enjoyment. The UI refers to the visual and interactive elements, the UX refers to the overall experience, and the GX refers to the emotional and psychological experience. Designing a good UI, UX, and GX requires a proper understanding of the target audience and their expectations, and incorporating feedback can help refine these aspects. Developers need to prioritise testing and iterating on their game's UI, UX, and GX to ensure maximum player enjoyment (Kristiadi D. P., Udjaja Y., Supangat B., Prameswara R. Y., Warnars H. L. H. S., Heryadi Y. & Kusakunniran W., 2017).

- **Enemy AI:-**
  Testing a game's AI is important for ensuring a consistent player experience and balancing gameplay. Developers test AI to adjust its difficulty level, avoiding frustration for players while also keeping them engaged. Testing also helps identify bugs that may have gone unnoticed. Overall, testing the AI and difficulty is crucial for ensuring the quality of a game and enhancing player engagement and enjoyment (*Role of Artificial Intelligence in Gaming - Pianalytix - Machine Learning*, 2020).

We would also like to put some more focus on the concept of Usability Testing, as it is not only relevant to the game side of our project, but our graphic design side as well.

According to (Ross, 2018) Usability testing involves seeing and listening to participants as they utilize a user interface to achieve tasks. The main benefit is in watching the participants' behaviours. To better comprehend what participants are thinking and doing, you might ask questions and encourage participants to think aloud. Because we can better comprehend the participant's decisions and thought processes from the way their cursor

hovers and moves as well as how frequently they engage with the onboarding sheet, seeing the user enables for the recording of additional information. It aids in our understanding of the users' natural motions and provides more details about their preferred route.

A survey is then approved immediately after to help you confirm your observations even further. Using surveys, you may improve the design by better understanding the viewpoint of the product's end users. (*User testing surveys*, n.d.). Observation data can be biassed with only what the tester is able to observe and the mere presence of the tester can also alter the results of the test.

Following up the test session, with a survey that can be completed individually allows for more concrete results to be recorded. Compiling questions with a combination of open-ended and close-ended questions creates a variety of observation data to analyse.

/ TESTING MATERIAL

GAME	GDrive - Alpha Build Playtest Recordings Alpha Build - Survey Form
GRAPHIC DESIGN	Google Drive (User Test Recordings) Onboarding document Survey Form

USER INTERFACE (UI)

Sami Ventura Dummar

OVERVIEW

This section will focus on the necessary aspects of user interfaces presented in the game. Based on player feedback, the essential playtest data will help establish a more user-friendly experience in an organised game environment.

I. NAVIGATION

/ DESCRIPTION

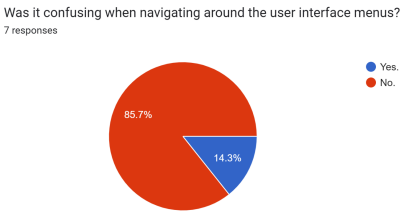
With various user interface structures, players should be able to understand how to navigate around different menus consisting of buttons with specific functionalities. This area focuses on observing:

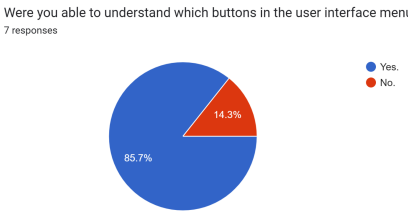
- The player's understanding of navigating to and from different user interfaces.

/ METHODS OF OBSERVATION

1. **Gameplay Session Recording** : Playtesters will be operating an experimental build in a short period of time. The playtest will be recorded to observe and analyse how much they've understood when navigating in different user interfaces. After the playtest is over, the recorded session will serve as feedback to be analysed for further improvements on gameplay experience.
2. **Survey**: Playtesters will be filling up a survey asking about their experience in navigating around user interfaces. Was it confusing? Was it comprehensible? They will provide data based on their experience from playtesting an experimental build. The survey results will serve as feedback to be analysed for further improvements on gameplay experience. (Davis, Steury, & Pagulayan, 2005)

/ OBSERVATION RAW DATA





/ OBSERVATION ANALYSIS

- Majority of the players were able to understand how and where to navigate to their desired area within the user interface menus, while the minority of the players found it confusing to find their way around the user interface menus.
- Majority of the players were able to understand which buttons in the user interface menus lead to, while the minority of the players struggled to understand the context of buttons in the user interface menus.

II. RESPONSE INPUT

/ DESCRIPTION

Clarification is essential towards player intake when operating a game. Players should be able to comprehend an effective and responsive outcome when interacting with a mechanic in user interfaces.

This area focuses on observing:

- Player reaction towards interacting with a mechanic and witnessing its outcome in user interfaces. Is the audio output good? Are the buttons sensationally bad?
- The player being able to perceptively identify a user interface mechanic.

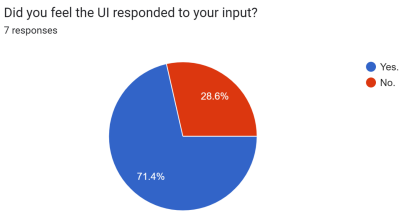
/ METHODS OF OBSERVATION

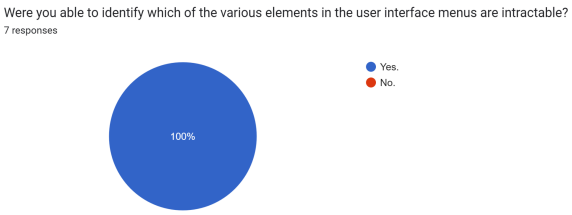
1. **Gameplay Session Recording** : Playtesters will be operating an experimental build in a short period of time. The playtest will be recorded to analyse player

comprehension and reaction when they interact with the user interface. After the playtest is over, the recorded session will serve as feedback to be analysed for further improvements on gameplay experience.

2. **Survey**: Playtesters will be filling up a survey asking about their experience interacting with the user interface. Was the interaction clarifying? Were they able to identify which elements in user interfaces are interactable? They will provide data based on their experience from playtesting an experimental build. The survey results will serve as feedback to be analysed for further improvements on gameplay experience. (Davis, Steury, & Pagulayan, 2005)

/ OBSERVATION RAW DATA





/ OBSERVATION ANALYSIS

- Majority of the players felt that the user interface has responded to their input interaction, while the minority of the players felt that the user interface has not responded well to their input interaction.
- All players were able to identify which of the various elements in the user interface menus are intractable.

III. VISUAL RECEPTION

/ DESCRIPTION

Representation in user interfaces is also essential in contributing towards the aesthetic atmosphere. The player should be able to acknowledge and perceive a sense of aesthetic

mood (science-fiction in this case) when in the menus and uniquely intake a certain style of gameflow when witnessing the user interfaces during core gameplay.

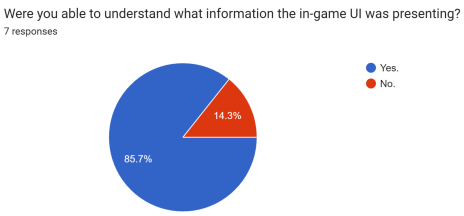
This area focuses on observing:

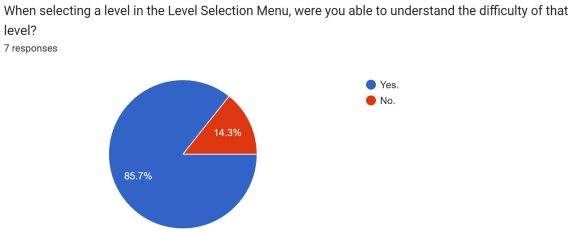
- The player's comprehension on the indicators during gameplay. These include the minimap, damage output (fading particle effects), and their health and stamina.
- The player's comprehension of their stat results after completing a level. Essentially being able to understand how the character ranking and building system works.
- The player's comprehension of differentiating between level difficulties in the level selection user interface area and understanding what they will be going through (at least in the slightest sense) when selecting to engage the level in core gameplay.

/ METHODS OF OBSERVATION

1. **Gameplay Session Recording** : Playtesters will be operating an experimental build in a short period of time. The playtest will be recorded to observe and analyse their comprehension on the user interface during gameplay and during menu navigation. After the playtest is over, the recorded session will serve as feedback to be analysed for further improvements on gameplay experience.
2. **Survey**: Playtesters will be filling up a survey asking about their comprehension on the user interface in visual aspects. Were they able to understand what the game indicators meant? Were they able to understand how the ranking system works? Were they able to understand the difficulty potential of starting a level? They will provide data based on their experience from playtesting an experimental build. The survey results will serve as feedback to be analysed for further improvements on gameplay experience. (Davis, Steury, & Pagulayan, 2005)

/ OBSERVATION RAW DATA





/ OBSERVATION ANALYSIS

- Majority of the players were able to understand what information the in-game UI was presenting, while the minority of the players were not able to understand what information the in-game UI was presenting.
- Majority of the players were able to understand the difficulty potential of a level when selecting a level in the Level Selection Menu, while the minority of the players were not able to understand the difficulty potential of a level when selecting a level in the Level Selection Menu.

IV. LAYOUT

/ DESCRIPTION

Player perspective should be a bearable experience upon looking at the various placements of the user interface. The user interface should not conflict with the gameplay experience but rather inform the player of their other purposes in the game.

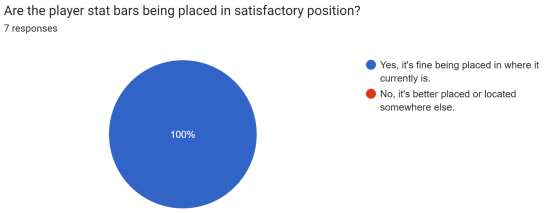
This area focuses on observing:

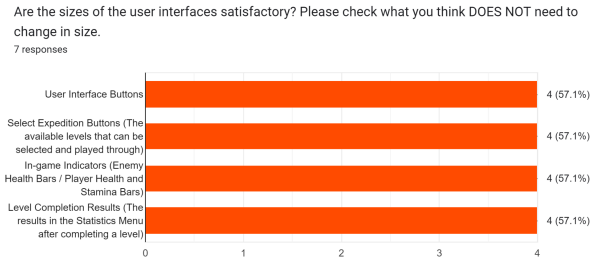
- The player's opinion on the placements of the various user interfaces.
- The player's opinion on the sizes of the various user interfaces.

/ METHODS OF OBSERVATION

1. **Gameplay Session Recording** : Playtesters will be operating an experimental build in a short period of time. The playtest will be recorded to observe and analyse player reaction towards the placements and sizes of the various user interfaces. After the playtest is over, the recorded session will serve as feedback to be analysed for further improvements on gameplay experience.
2. **Survey**: Playtesters will be filling up a survey asking about their opinion on the placements and sizes of the user interface. Are the player stat bars being placed in the corner satisfactory? Are the user interfaces too large? They will provide data based on their experience from playtesting an experimental build. The survey results will serve as feedback to be analysed for further improvements on gameplay experience. (Davis, Steury, & Pagulayan, 2005)

/ OBSERVATION RAW DATA





/ OBSERVATION ANALYSIS

- All of the players find the player stat bars placed in a satisfactory position.
- Majority of the players find the sizes of the user interfaces satisfactory and perceive that they do not need to change in size, while the minority of the players find that the user interface sizes need to be adjusted as they find them dissatisfactory.

REITERATIONS

/ Mouse Cursor in User Interface

Players originally could only navigate through the user interface menus by operating their keyboards or controller buttons. Prior to feedback, a cursor has been implemented which can be manoeuvred around by operating their mouse or controller joysticks. This implementation allows the user to navigate through the user interface menus more efficiently without struggling much in getting to their designated area.

/ Player Health and Stamina Visibility in User Interface

The initial iteration for the in-game user interface of health and stamina were implemented in a small sized font with no border frames at the corner of the user's perspective during gameplay. The visibility of the health and stamina user interface were poor due to their small size and lack of border frames. It has then been decided to improve the health and stamina user interface by increasing their size and covering them with border frames, making them easier to see in contrast with the gameplay visuals.

PLAYER MECHANICS

Farhan Ul Haque

OVERVIEW

This section will focus on all the aspects pertaining to the player. As such, we will be looking at the ease-of-use and responsiveness of player inputs, as well as the overall feel of the game's combat and progression systems. User-feedback will enable further polishing in order to create a truly responsive player character that is easy and satisfying to control.

I. INPUT & RESPONSE

/ DESCRIPTION

As the primary medium via which players can interact with the world, they should feel that their character is responsive to the commands given. This section will cover the following:

- Is the character quick and responsive to player input, or does it feel sluggish or outright unresponsive?
- Does the character respond appropriately and consistently to any given input?
- Are most of the inputs easy to understand? Can the player pick up on what they can and cannot do intuitively or is the learning curve a bit too steep?

Due to the game centering largely around fast-paced combat, we would ideally like the player character to feel fluid and responsive in its actions. Playtest data will help us identify any underlying issues that may be hindering the player character from meeting our desired criteria and attempt to solve them.

/ METHODS OF OBSERVATION

Iterative Testing : During development, we will be running internal tests that require the player character to navigate through a variety of different scenarios that may pop-up in the game, in order to examine the player character's responsiveness, manoeuvrability, etc., and determine if the system still contains flaws, or if it needs additional polish.

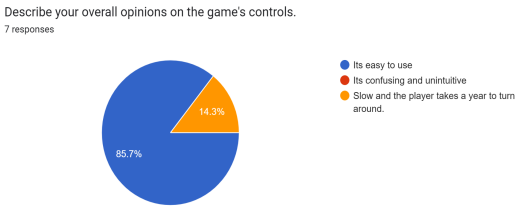
Gameplay Session Recording : QA Testers will have their playtest sessions recorded, which will serve as the foundation for any changes we would need to make. The overall structure of these tests will be similar in nature to the internal tests conducted by us during development. Some of the things we will focus on include things like:

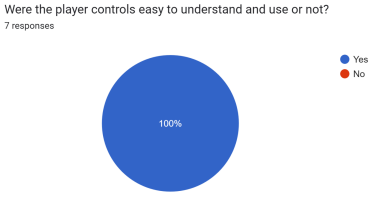
- Are the inputs working correctly? Are they working at all?
- Is there any significant delay between a given input and the player character's response?
- The player character's overall response time relative to other elements in the game.
- Can the player character easily move around the map or does exploration feel time consuming?
- Does the sprint function make traversal tedious?

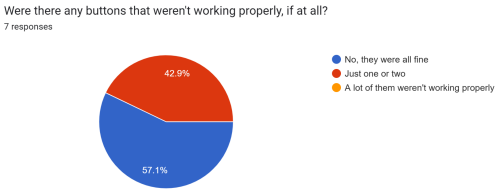
Survey : We will also have a section in the survey Playtesters can fill out after testing our game, allowing them to offer their own opinions regarding the input system and its responsiveness. This includes things like:

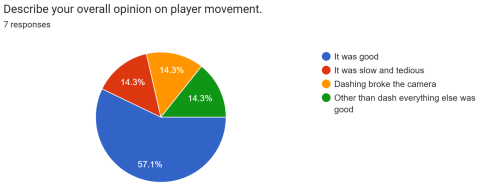
- How did the controls feel? Were they responsive or sluggish?
- Did the player character respond correctly and consistently whenever you entered a specific input? Was there any input that didn't work as intended or at all?
- Were the controls easy to understand? Did your prior experience with Input Systems from other games help you get the hang of the input system in our game?
- How was the player character's movement? Did it feel quick? Or slow?

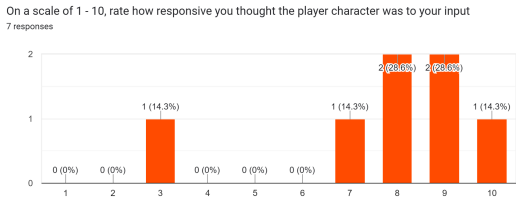
/ OBSERVATION RAW DATA

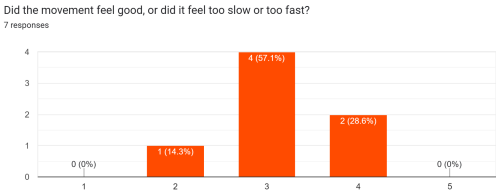












/ OBSERVATION ANALYSIS

- Most players found the controls easy to understand and use.
- Some players reported that one or two buttons weren't working properly, but a majority found them to be fine.
- One player reported that after trying both keyboard & controller, the keyboard felt better to play with.
- While more than half of the players said that the movement was fine, others reported that dashing broke the game's splitscreen, or that the player movement was slow and tedious.
- A majority of the players reported that they felt the player was responsive to their inputs.
- A majority of the players agreed that the movement wasn't too fast nor was it too slow.

II. COMBAT EXPERIENCE

/ DESCRIPTION

This section focuses on the largest aspect of our primary gameplay loop, combat. This section will cover the following:

- Do the hits feel like they're actually having an effect, or do they feel lacklustre and weak?
- Is a combat encounter usually exciting or tedious? Is it repetitive?
- Does it feel rewarding when all the enemies are defeated or not?

Players should feel that attacking and defeating their enemies is a worthwhile endeavour. Furthermore, enemies during combat should prove a challenge, and it should not be possible to wipe the floor with them. Lastly, we want each combat encounter to have some kind of value to the player, where defeating all the enemies doesn't simply make players stronger via levelling up, but also in terms of skill.

/ METHODS OF OBSERVATION

Iterative Testing : During development, we will be running internal tests that require the player character to navigate through a variety of different scenarios that may pop-up in the game, in order to examine the flow of combat, character animations, damage dealt, etc.

Gameplay Session Recording : QA Testers will have their playtest sessions recorded, which will serve as the foundation for any changes we would need to make. Players will be required to test combat either solo or in a co-op game with a second player, where we hope to examine how players will respond to the challenges presented to them and the strategies they use to overcome them. Our primary focus will be on the following things:

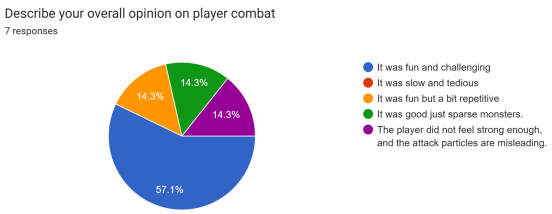
- How do players approach combat encounters?
- Do they prefer getting up close and personal with their enemies? Or attack from a distance? Or did they use a mix of both or more strategies?

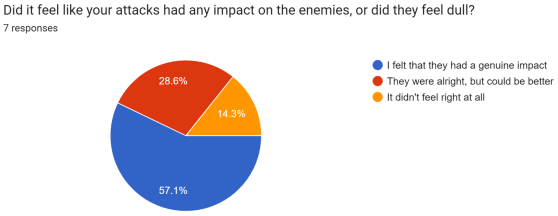
- How often did they die during combat? Which enemy type killed them most often

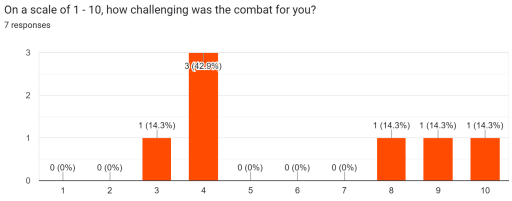
Survey : We will also have a section in the survey Playtesters can fill out after testing our game, allowing them to offer their own opinions regarding the game's combat.This will include questions about the following things:

- Was combat challenging?
- Was it enjoyable?
- Were the enemies smart enough to pose a challenge?
- Did player attacks feel like they had an impact when hitting enemies?
- Which type of attacks did they prefer to use the most? Why?
- Did the combat get repetitive over time or did it always feel fresh?

/ OBSERVATION RAW DATA







/ OBSERVATION ANALYSIS

- While a majority of the players reported that the combat was good, some reported that it felt slow, repetitive and that there weren't enough enemies to fight.

- More than half the players said they felt their attacks had an impact on the enemies, however, some claimed that it needed improvement and others stated that it didn't feel like it had any impact at all.
- Most players agreed that combat was not very challenging.

III. PROGRESSION SYSTEM

/ DESCRIPTION

The levelling system should provide players with an incentive to continue fighting enemies, with each level rewarding players with an increase in their base stats, as well as additional stat points that they can spend to further customise their stat distribution to suit their individual playstyle.

This section focuses on the game's progression system and will focus on the following:

- Is the system easy to understand or is it too confusing for new players?
- Do players feel that the amount of xp they gain from defeating enemies and clearing a level/expedition is adequate? Is it too much or too little?
- Does it take too long for players to level up? Or are they levelling up too quickly?
- When a player's base stats are increased upon levelling up, is the increase noticeable, or insignificant?
- Is investing stat points into specific stats worth the effort? Does it have any noticeable impact? Is it better to invest multiple points into one or two stats, or is it better to spread them out amongst all available stats?
- When players spend stat points on either melee or range stats, does it have an impact on combat? Does it affect the player's playstyle? Is the change significant enough to differentiate it from a second player's playstyle?

/ METHODS OF OBSERVATION

Iterative Testing : **Iterative Testing** : Once we have developed a functional gameplay loop for our mvp, we will begin playtests where we try to go through multiple levels and

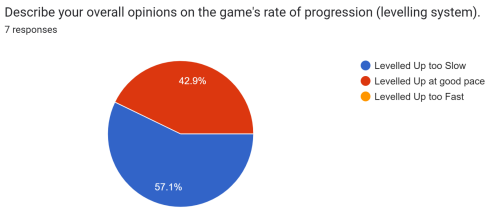
keep track of how the progression responds to the player's progress. We will focus on things like time taken to level up, increase in base stats and their impact on gameplay, as well as how investing all stat points into a single stat or distributing it amongst all stats can affect gameplay, if at all.

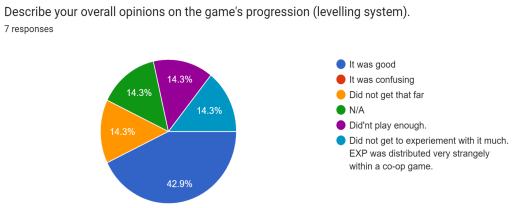
Gameplay Session Recording : While the process of testing remains mostly the same when testing with external playtesters, such as looking at the time it takes for them to level up, how they distribute stats, etc., we will also ask playtesters to occasionally distribute stat points based on our instructions, instead of doing as they please. This will allow us to see if suddenly changing the distribution strategy halfway through the game can have any impact, or can it hinder a player's playstyle.

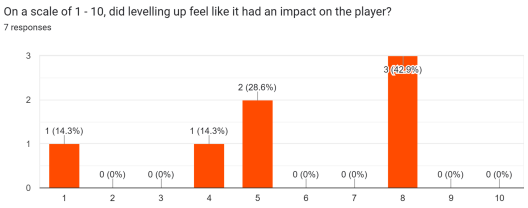
Survey : We will also have a section in the survey Playtesters can fill out after testing our game, allowing them to offer their own opinions regarding the game's progression. This will include questions about the following things:

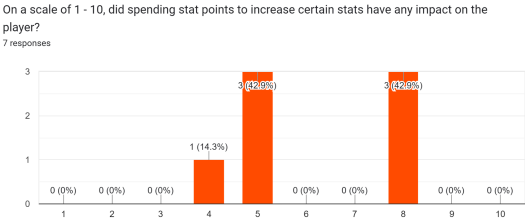
- Was the system easy to understand? Or was it too complicated?
- Did the system feel organic, like it was a vital part of the game? Or did it feel tacked on?
- Was the time taken to level up good enough? Or was it too long or too short?
- Is the XP they gained after defeating enemies and finishing a level sufficient for the effort put into obtaining them?
- Did investing stat points have an impact on your playstyle? Did you invest in one or two specific stats or spread it out? Why?
- Was the minor stat increase upon levelling up worthwhile? If one of your stats only increased as a result of levelling up and did not have any stat points invested in it, did that hinder your game in any way?

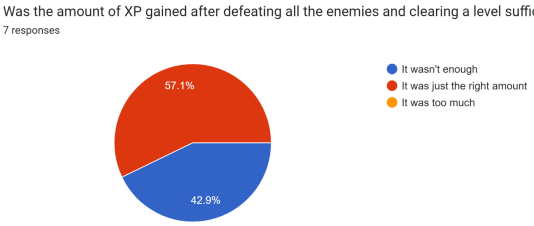
/ OBSERVATION RAW DATA











/ OBSERVATION ANALYSIS

- Players were somewhat split on opinions, with some believing that they levelled up too slowly, while others believed that the rate of progression was fine.
- Some players stated that they found the progression system to be good, while others didn't get far enough into the game to properly experience it.
- Some players believed that levelling up did in fact have a noticeable impact on the player.
- Some players believed that spending stat points to improve player stats had an impact on the player, while others had a neutral opinion.
- A majority of players agreed that the XP gained after defeating enemies and finishing a level was a satisfactory amount.

REITERATIONS

/ Camera Repositioning

The camera was originally positioned at an angle slightly above and behind the player. This caused players only being able to view their surroundings within a very small radius, making things feel somewhat confined. To counter this, the camera has been repositioned, and is now much higher than the player, giving the game a bit of a top-down perspective.

/ Modifying Player VFX

The original VFX for the player felt very dull, and at times felt out of place as well. As a result, some of the VFX was improved while others were recreated to be more dynamic, such as the sprinting trail, which used to just flow in a straight line behind the player. But now it actually trails the player's movement and looks much better.

/ Player Looks In The Direction Of The Mouse When Attacking

During our playtest, we noticed that players found it difficult to aim their melee attacks, as a result of the player's direction-based movement system. Due to this, we adjusted the player to control where their character faces, when performing a melee or ranged attack to make things easier for players.

ENEMIES

Anmar Abdullah Alahmad Alyousef

OVERVIEW

The main opposition of the game, the player's will go through a variety of enemy types, and we need to make sure that they all function the way they are supposed to according to their type, their behavioural states, their movement, and their combat related functionalities, and see if the players actually feel like they are in a battlefield environment.

I. ENEMY MOVEMENT

/ DESCRIPTION

The enemy movement behaviour must be realistic and according to how an enemy should be chasing a player and locating the player positions at all times when the player is detected.

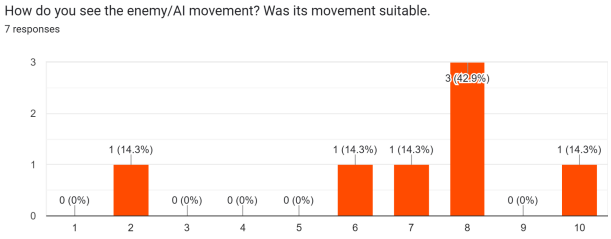
- Ai pathfinding, we will need to see if the Ai is taking the shortest path to its intended destination.
- Position movement, looking at enemy movement, is the enemy moving in a natural way or do they think the movement is at least suitable

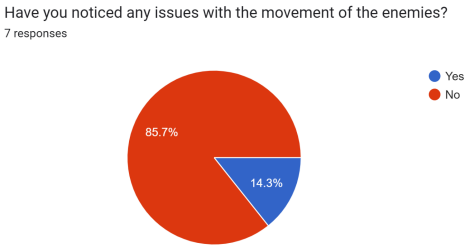
We want to see if the AI is able to move between positions without colliding with any obstacles, when it's either wandering or chasing the player. We also want the Ai to move in different ways depending on its current situation, and do so naturally, in a way that there won't be any unrealistic or weird movements.

/ METHODS OF OBSERVATION

1. **Iterative Testing** : In development, we will have all the enemy types being tested both one by one and altogether to see if their movement is realistic and according to how it should be, and if they're behavioural states are changing accordingly.
2. **Gameplay Recording Session** : We want to see if the tester has encountered any abnormal movements from the enemy, and the scenario surrounding that movement, to try and figure out the cause of the issue, or if it happened in any of the behavioural movements, and see if the enemy's pathfinding is correctly functional
3. **Survey** : The survey will include a section for play testers to mention what they have seen from the AI movement, was the AI's movement correctly responsive, and look for where they noticed that the enemy was moving where they thought was unnatural.

/ OBSERVATION RAW DATA





/ OBSERVATION ANALYSIS

- It seems like the majority of the player testers did not notice any issues regarding the enemy AIs movements.
- Some players thought that they're movement isn't really making them look alive, and is a bit unrealistic.
- Some players have noticed issues with the ranged enemy movement, and that he doesn't chase or run away from the player when he's supposed to at all.

II. ENEMY ATTACKS & DIFFICULTY

/ DESCRIPTION

The enemy will have different attacks according to their type. They are expected to activate at random, and they each have their damaging functionality, and we also want to make sure that the enemies along with their attack types are balanced according to the chosen difficulty.

- All attack types,, we want to make sure that all attacks hit where they should and where they shouldn't consistently.
- Enemy Attacks, we want to make sure each enemy uses its variety of attack's equally, observing how many times they use it, to make sure it's spread out and balanced.
- Enemy Difficulty, We want to make sure that the enemies difficulties match with the selected level.

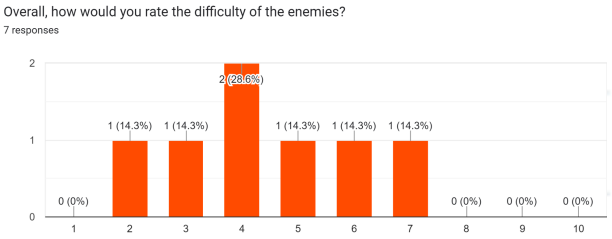
The enemy has a variety of different attacks, not only we want to see if the hit detection happens, but also their functionality, some of them fire a lot of bullets in different directions and/or positions, some of them have longer melee attacks and should knock back the player. Finally we want to make sure whatever difficulty the player chooses, the game should still be winnable.

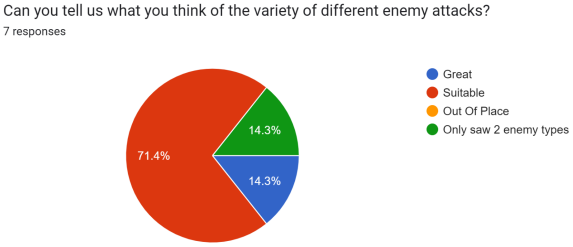
/ METHODS OF OBSERVATION

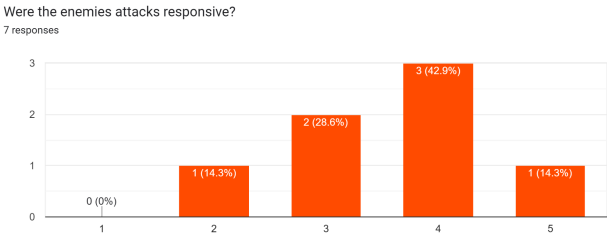
4. **Iterative Testing** : Throughout development we will be running the game multiple times to see if the enemies' different attacks are functioning, we also need to make sure the game is completely balanced and always winnable in every difficulty.
5. **Gameplay Recording Session** : We want to see if the playtesters are having trouble completing the game, and how long it is taking them to finish the combat scenario, is it too fast or too slow. We also want to check if the different enemy attacks are overpowered or maybe unnecessary. We also want to see if the hit detection is functioning correctly for each ability and if the player damaging is responsive.

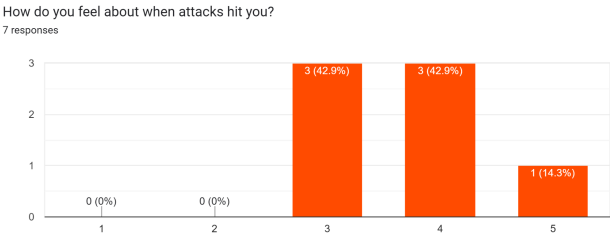
6. **Survey** : We will be asking the playtesters in the survey, we will ask about every enemy and see how they felt. We also want to see if they think some of the enemies could be too easy or too hard to defeat, and also their opinions on how the different attack types are working.

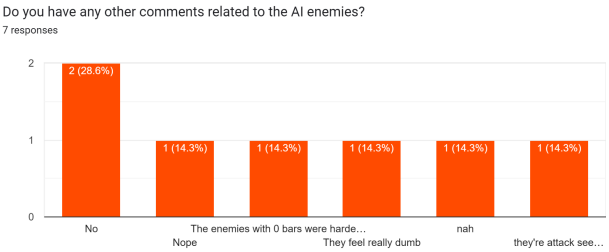
/ OBSERVATION RAW DATA











/ OBSERVATION ANALYSIS

- Almost all playtesters had a different opinion on the difficulty of the game, and were almost around the middle from 2 to 7, but nowhere near 9 or 10.
- Also the majority of the players thought the different enemy attacks were suitable but there were still some of them that hadn't noticed them all.

- Some Playtesters thought that the attacks were good and responsive but some are stating that they either can't tell when the enemy is gonna attack and it feels automatic.
- Most players had no other issues with the enemies attacks or difficulty but just like the issue with their movement, they seem dumb and their attacks happen too quickly.

REITERATIONS

/ Reworked Enemy AI System & Movement

- For enemy AI movement, behaviours, we have completely removed the Ultimate AI unity package that we were using, and we have then made our own state scripts that will manage the AI's behavioural states, we also made the range enemy more smarter in their movements.
- We have made 5 new behavioural states for the AI, which include a wandering behaviour, chase, orbit, attack, and retreat, like that the enemies movement seem more realistic and the AI seems more smarter, and since it is our own system, it is much easier for us to make adjustments.

/ Enemy Attacks & Difficulty

- As for the enemy attacks, they will still have a different variety of attacks, but they have been nerfed a little bit in terms of stats since we realised some of the we're a little too strong for the player, we might also make a change for both enemies to have only one or two of the three different attacks rather than having the ability to do all of them.
- We also made tiny adjustments to the ranged enemy attacks, the homing bullet will be destroyed much sooner and will start to notice the player less when it is shot. The enemies will also have their stats balanced according to the player's level and we will have the enemies either not too hard or too easy.

LEVELS

Christiaan De Wet Van Wyk

OVERVIEW

Due to levels in the game being created procedurally, we need to make sure that our levels will maintain a consistent theme and structure to them, while also showing the player glimpses into their progression in the game with the development of the story. We will observe the aspects in terms of generation, consistency as well as the overall reception that players get from the levels throughout the game.

I. LEVEL LAYOUTS

/ DESCRIPTION

With the procedural creation of our levels, we need to observe the general trend in terms of the layout of the level to make sure that it is done consistently.

This area focuses on observing:

- The consistency in the generation of levels, looking out for any anomalies or issues in any generated levels.
- The ease/difficulty of navigation through the generated levels.

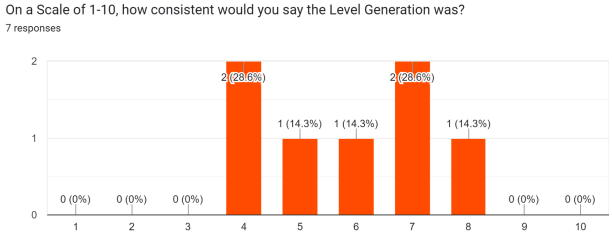
We want to observe whether there are any instances where a level has an issue in the way that it was created so that we can attempt to replicate and improve on the values used for generation.

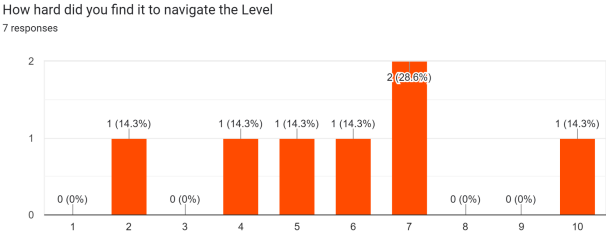
Another point of observation is how players felt regarding the layouts of the levels, whether they were fine with the layout, if they found it difficult to navigate or any other notes that they may have regarding the layout.

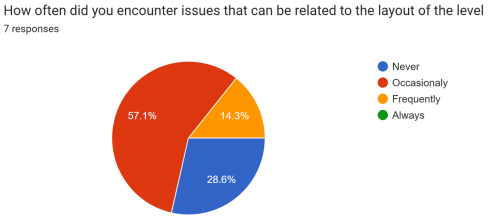
/ METHODS OF OBSERVATION

1. **Iterative Testing** : During development, we will constantly run our generation settings through tests, seeing the results produced and looking at what changing the values used for generation results in.
2. **Gameplay Session Recording** : We plan to run our generation method through multiple clarity checks both through dev testing and audience testing, making sure that we collect instances where anomalies or inconsistencies were noticed by the tester. Making sure that the generation seed is visible to later replicate the layout that they obtained should it be needed.
3. **Survey** : We will have a section within our testing forms for players to fill out covering how they would rate the layout as well as how difficult they found it to navigate, along with any other comments that they might have regarding the layout.

/ OBSERVATION RAW DATA







/ OBSERVATION ANALYSIS

- Players felt that the level felt consistent and that there weren't any objects or areas that seemed out of place.

- Navigation received mixed results, although it should be noted that almost all testers had times when they were lost in terms of where to go.
- Although the layout felt consistent, the scale of the level in practice was too large due to the size of a room being larger in comparison to player

II. LEVEL GAMEPLAY

/ DESCRIPTION

With levels being the main area that players will spend a majority of their time in, we need to make sure that it is enjoyable for players as our main area in the game loop. This area focuses on observing:

- The playtime to complete a level
- The encounters with enemies in a level
- Player reception in terms of enjoyment

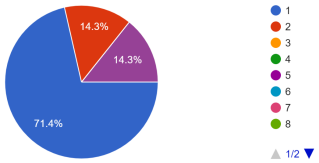
It is important that players do not feel that the levels feel too short or stretched out, as well as that encounters with enemies are not too close together or too far apart. We need to balance these aspects of the level so that the gameplay of a level feels enjoyable to a player.

/ METHODS OF OBSERVATION

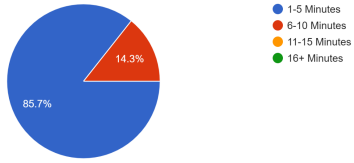
1. **Gameplay Session Recording** : Used to keep track of various aspects like how long it took to complete a level, how many levels they played, how many enemy encounters they went through as well as how many enemies they had to fight in each encounter. We will take all this information and then compile it to see if we can notice any trends in order to judge which aspects might be too much or too little.
2. **Survey** : This will consist of having a section in our forms for players to say what they felt about the duration of a level, as well as their opinions about the combat encounters that they came across during their session.

/ OBSERVATION RAW DATA

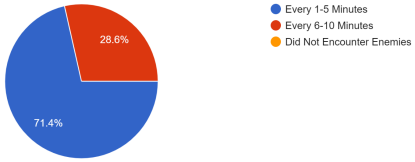
How many Levels did you Complete during your Session
7 responses



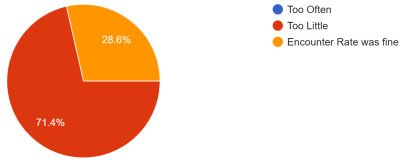
On average, how long did it take you to complete a level
7 responses



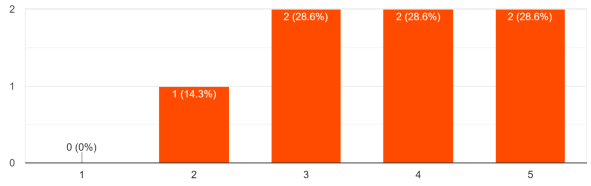
How often did you encounter enemies in the Level
7 responses



What do you feel about the encounter rate for enemies
7 responses



How would you rate your overall Gameplay experience while playing in levels
7 responses



/ OBSERVATION ANALYSIS

- Due to the size of levels being too large, most ended up not completing a level and those that did only manage 1 or 2 within a 15-minute timeframe.
- After having made last minute adjustments to the amount of rooms to compensate for their size, on average a level was completed within 1–5 minutes without issue.
- The encounter rate for enemies was very sparse, with players only encountering 1 or 2 batches of enemies during a level due to them populating a small area of the level.
- Most players felt that they encountered too few enemies or that most of the level felt empty due to the sparse spread of enemies.
- Overall experience of a level was positively rated by those who played.

REITERATIONS

/ Addition Of Minimap

Due to navigation of the level giving mixed results, we implemented a minimap in order to show players in which room they are currently in, as well as the possible directions that they can go. This should make it easier for players to find their way around a level when searching for the Exit.

/ Decrease Of Scale Of Room

While testing, the scale of the rooms was a prominent issue, causing players to lose interest over time due to the size of the rooms, meaning that there is a long travel time when looking for enemies as well as the exit. With this, we decreased the size of rooms to around 30% of what they were previously.

/ Applying Dithering To Buildings

While testing, due to the fixed nature of our camera and players having no control over it, there are frequent instances where buildings block the view of the players characters making it difficult to find where they are going or if they get stuck. To prevent this, we applied Dithering to the buildings so that should the camera get too close to a building, the building will become transparent so that it is no longer obstructing the view of the player.

/ Adjusting Enemy Spawning

Based on players' feedback on enemies being spread too sparsely causing a rarity in encounters, we adjusted the way we spawned enemies in the level from being completely random to guaranteeing that a certain percentage of the rooms will have enemies and having those enemy filled rooms evenly spread out.

/ Addition Of Items

To give players more incentive to explore the rooms as well as to give players an edge, we implemented items to be spread throughout the level just like enemies. These items can either heal the player of health lost or be temporary buffs in the various aspects of their character (e.g. Speed, Melee, Ranged).

WEBSITE

Bibi Fatima

OVERVIEW

The function of the game website is mainly for promotion and information. The content of the website focuses on the parts of the game such as game narrative, character design and skill, enemy design and skill & level design. The website is information heavy and it is communicated to the user in order to increase their interest in the game. The user will also be able to download the game through the website and will be directed towards the platform in various promotional efforts. Additionally, the platform will serve as a source of communication to the audience on game updates and developments and will also build to become an e-commerce platform for game merch.

This testing paradigm ensures:

- That the user is able to absorb the information in a concise manner making sure not to overload and ensure an easy experience.
- The tests look at the touch points of their user and if it aligns with the initial goal of the designer.
- That the user experience is analysed throughout the test when carrying out the task making sure any mishaps are taken note of and solved immediately.
- Makes sure that the user is able to navigate through the website and complete the task that is given by the test administrator

Lastly, the test will end by taking some recommendations and suggestions from the users, giving them the control to decide the direction they would like to take which would be considered accordingly.

I. ACCOUNT REGISTRATION JOURNEY

/ DESCRIPTION

This area will help test the user journey experience when signing up to create an account for the website. The task performed by the user will be to simply create a login account and navigate to the landing pages.

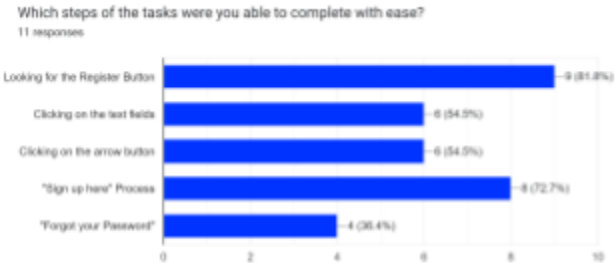
The user testing journey will include:

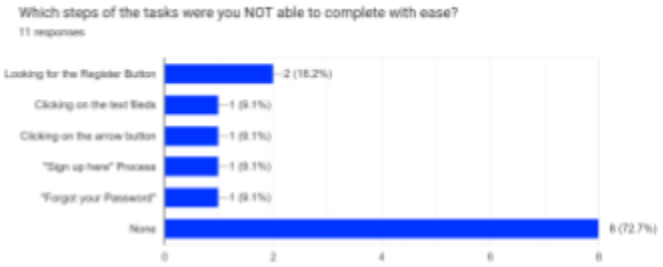
- Navigating to the Register button
- Choosing the method by which the account will be set up
- Clicking on the text fields
- Clicking on the arrow button
- "Sign up here" Process

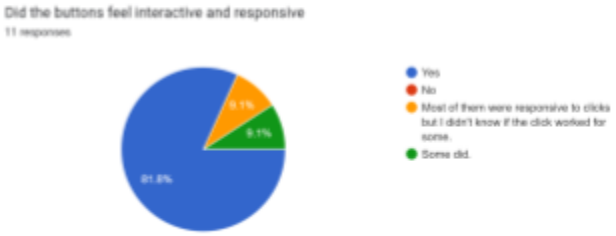
/ METHODS OF OBSERVATION

1. **Recording Session Testing:** The user will be recorded during the testing session and results will be analysed further. They will be observed on their ability to navigate through the website without any hiccups or confusion and if they were able to make it to the landing page at the end of their journey.
2. **Survey:** The user will be asked to fill out the questionnaire based on their experience which will delve into questions such as: Were the pages easy to navigate, Were the buttons working, Where the button linked to the right page, Rate the ease of use of the process, Provide recommendations on improving the experience.

/ OBSERVATION RAW DATA







/ OBSERVATION ANALYSIS

- 81.8% of the users were able to find the first step of the Registration.
- “Sign Up Here” method of registration is the most preferred method closely followed by directly signing in.
- 100% percent of the users felt the text fields were interactive and easy to read
- Buttons would need interactions for hover and click as 18.2% were apprehensive of their actions.

II. LANDING PAGE JOURNEY

/ DESCRIPTION

This area will help test the user journey experience when scrolling through the landing page for the website. The task performed by the user will be to simply scroll through the landing page and explore the information provided by the page. The user should be able to find appropriate information in all sections and jump through them and should be able to navigate to the top of the page at any point in their journey.

The user testing journey will include:

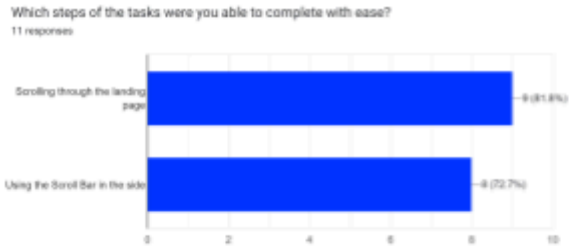
- Understanding of content related to the game narrative, level design, character design and enemy design
- Navigating through the content related to the game narrative, level design, character design and enemy design

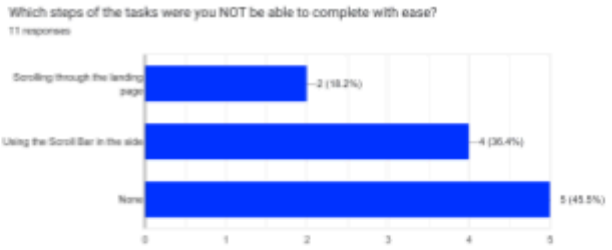
/ METHODS OF OBSERVATION

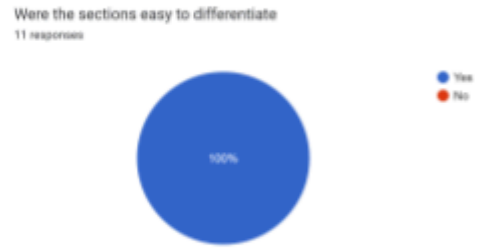
1. **Recording Session Testing:** The user will be recorded during the testing session and results will be analysed further. The user will be observed on the basis of how well they were able to understand and navigate through the information. I will observe them to know how long they spend on each section of the page, what section retains the most users and what sections the user skips over. This would help me make a more informed decision when arranging the sections of the landing page.

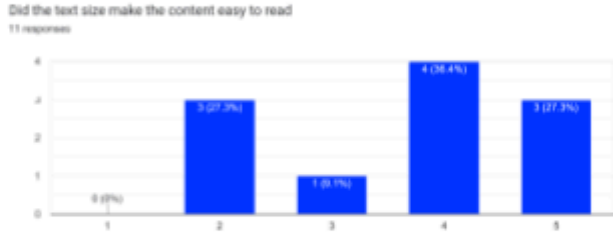
2. **Survey:** The user will be asked to fill out the questionnaire based on their experience which will delve into questions such as: Rate the ease of the task, Rate the hierarchy of information, Was the information easy to understand, Were you able to navigate through the sections easily, Provide recommendations on improving the experience.

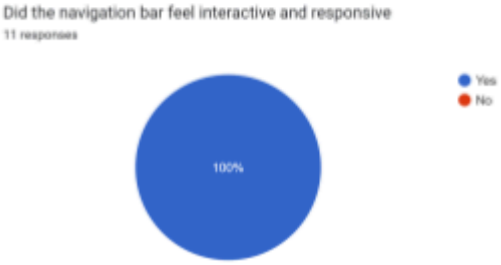
/ OBSERVATION RAW DATA











/ OBSERVATION ANALYSIS

- 6 out of 11 of the respondents were able to complete the task in its entirety
- Visibility of the scroll bar and its according function were the reasons that the scroll bar was either ignored or later used
- Most respondents comments were on improving the visuals of the game that were not available due to the project being in a production stage, which is why those comments will be considered later
- Text size required consistency and to be made more visible.
- The journey achieved the main goal which is to ensure all the sections are easy to differentiate as 100% of the respondents agreed on the same.

III. E-COMMERCE JOURNEY

/ DESCRIPTION

This area will test the user journey when purchasing an item in the store. The task performed by the user will be to look for a particular item and confirm the order. The user should be able to filter the store to look for the item and complete the purchase process. They should be able to fill in their information and receive confirmations.

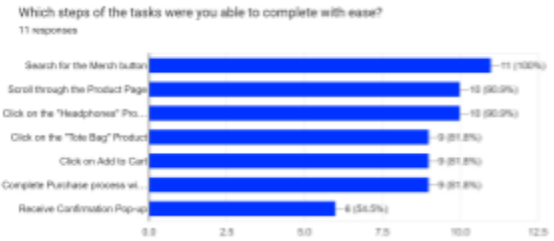
The user testing journey will include:

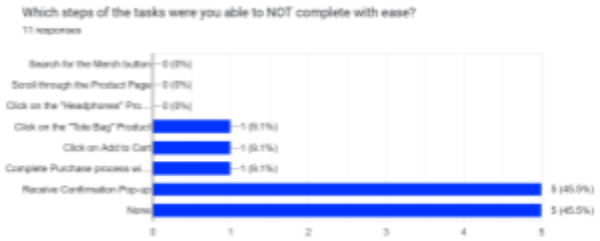
- Search for the Merch button
- Scroll through the Product Page
- Click on the "Headphones" Product
- Click on the "Tote Bag" Product
- Click on Add to Cart
- Complete Purchase process with payment and delivery
- Receive Confirmation Pop-up
- Navigate back to the landing page

/ METHODS OF OBSERVATION

1. **Recording Session Testing:** The user will be recorded during the testing session and results will be analysed further. The user will be observed on their response of locating a specified item in the store and their use of filling in information and confirming their order. The user should be able to understand all text fields and carry out the journey without any confusion.
2. **Survey:** The user will be asked to fill out the questionnaire based on their experience which will delve into questions such as: Were the pages easy to navigate, Were the buttons working, Were the items easy to find, Was the journey well informed. Rate How would you rate the time it took to complete the task, Rate the ease of use of the journey, Provide recommendations on improving the experience.

/ OBSERVATION RAW DATA





/ OBSERVATION ANALYSIS

- An average of 90% of respondents were able to complete the checkout process and access the pages with ease
- 54.5% of the respondents were not able to receive the confirmation order pop-up
- The ease of navigation leaned towards easier to navigate.
- Finding the check out cart was the main step where most users would stumble on to complete their progress
- Better information could be added to the buttons with more industry accurate wording to increase familiarity with the users, as the wording using such as “confirm order” in the onboarding document conflicted with the “Pay here” text button.

IV. AESTHETIC EXPERIENCE

/ DESCRIPTION

This area will focus on the aesthetic of the website. The test will focus on parameters such as use of colours, visibility of text and provision of visuals.

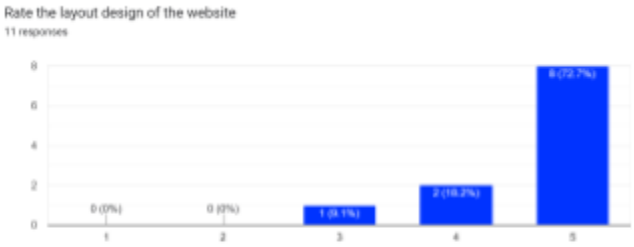
This area focuses on observing:

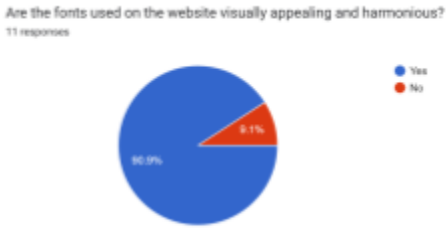
- Distinguish between the sections of the page
- Being able to navigate to them accordingly.
- Making sure the experience of the brand should remain consistent and the visuals should help support the content.

/ METHODS OF OBSERVATION

1. **Survey:** The user will be asked to fill out the questionnaire based on their experience which will delve into questions such as: Were the pages easy to read, Were the images, Provide recommendations on improving the experience.

/ OBSERVATION RAW DATA





/ OBSERVATION ANALYSIS

- The results for this section proved negative as the comments did not apply as the project was still in its development phase.
- 90% of the respondents felt that the design of the button made it easy to locate.
- Overall, this area helped provide a lot of useful information to keep in mind when finalising the project.

V. OVERALL EXPERIENCE

/ DESCRIPTION

This area will test general parameters after completing the above mentioned journey tasks. The parameters covered from the user will include: functionality, usability & ease of navigation.

This area focuses on observing:

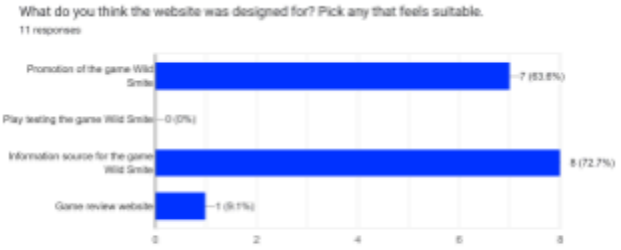
- Ease of understanding and observing the information
- Ease of navigation through the website pages
- Interaction with the components of the brand

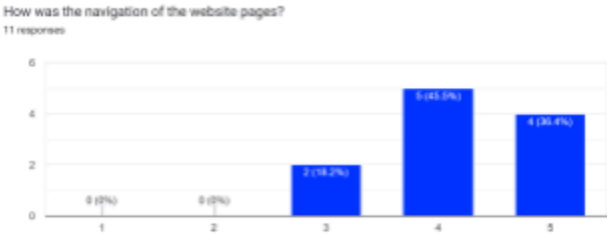
The users will have to conclude their entire experience so that more information apart from the task performed can be observed.

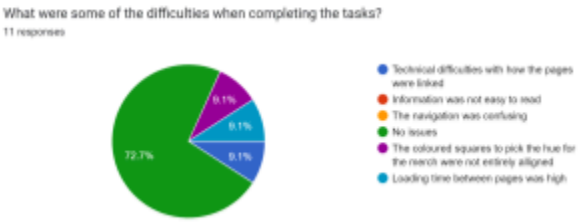
/ METHODS OF OBSERVATION

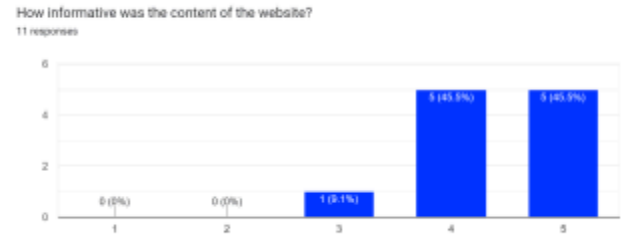
1. **Survey:** The user will be asked to fill out the questionnaire based on their experience which will delve into questions such as: Were the pages easy to navigate, Rate the ease of use, Provide recommendations on improving the experience.

/ OBSERVATION RAW DATA









/ OBSERVATION ANALYSIS

- 10 out of 11 respondents were able to accurately determine the purpose of the website ensuring that the website has been able to complete its goal
- The major evaluations of the website i.e navigation and content has been received positively from the respondents.
- The major drawbacks of the current version is the heavy loading time of the website and improving the execution of the scroll bar.

REITERATIONS

/ SCROLLING BAR IN THE LANDING PAGE

The scrolling bar in the landing page was not visible to most users and would often confuse the users of its purpose. To improve the work, the design will be altered to be more noticeable and the arrow hover effect will be replaced with the text to make its functionality more clear.

/ TEXT FIELDS IN THE ACCOUNT REGISTRATIONS JOURNEY

The text fields in this journey in particular are small for the viewing eye which will be increased and will have a better hierarchy to aid the user better.

/ BUTTON STATES IN E-COMMERCE

The button states were confusing as the user was unsure of their actions and the wording was confusing to them. The wording is going to be made more consistent and the buttons will have more states such as idle, hover and click to inform the user better.

/ TEXT SIZE AND CONSISTENCY

The text size across the whole website will have much better consistency and be made bigger to increase the hierarchy of the title, subtitle and body copy texts. This will also help ensure better visibility to the users.

/ DARK MODE

As the current version of the website has a stark colour contrast. The visuals implemented in the website will ensure more visual weight. The website will also introduce a dark mode so that the colours can be better adjusted to different users.

REFERENCES

Davis, J., Steury, K., & Pagulayan, R. (2005). A survey method for assessing perceptions of a game: The consumer playtest in game design. Game Studies, 5. Retrieved from - https://www.researchgate.net/profile/Randy-Pagulayan/publication/220200730_A_survey_method_for_assessing_perceptions_of_a_game_The_consumer_playtest_in_game_design/links/5527e63c0cf2779ab78af18d/A-survey-method-for-assessing-perceptions-of-a-game-The-consumer-playtest-in-game-design.pdf

Everything You Need to Know About Playtesting - All in! Games. (2022). Allingames. Retrieved from - https://www.allingames.com/everything-you-need-to-know-about-playtesting/

Kristiadi, D. P., Udjaja, Y., Supangat, B., Prameswara, R. Y., Warnars, H. L. H. S., Heryadi, Y., & Kusakunniran, W. (2017). *The effect of UI, UX and GX on video games*. 2017 IEEE International Conference on Cybernetics and Computational Intelligence (CyberneticsCom), 158–163. https://doi.org/10.1109/CYBERNETICSCOM.2017.8311702

Learn about the concepts of testing gaming apps. (2023). Learn About the Concepts of Testing Gaming Apps. Retrieved from - https://www.headspin.io/blog/game-testing-a-complete-guide-to-its-types-and-processes#:~:text=Game%20testing%2C%20a%20crucial%20subset,interference%20with%20the%20gaming%20experience

Role of Artificial Intelligence in Gaming - Pianalytix - Machine Learning. (2020). Pianalytix - Machine Learning. Retrieved from - https://pianalytix.com/role-of-artificial-intelligence-in-gaming/

Ross, J. (2018). *The Role of Observation in User Research :: UXmatters*. Uxmatters.com. Retrieved from -

https://www.uxmatters.com/mt/archives/2018/09/the-role-of-observation-in-user-research.php

User testing surveys. (n.d.). Learn.trymata.com. Retrieved from - https://learn.trymata.com/user-testing-surveys