

GORILLAS HAVE TIME

Don't complain about the team, you are the team !



GAME DESIGN DOCUMENT

Version 1.0

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Table of content:

1. Title page	2
2. Executive summary	2
3. Overview.....	3
4. Related games.....	4
5. Market	6
6. World.....	7
7. Characters.....	8
8. Progression graph.....	8
9. Art direction.....	10
10. Technology plan.....	14
11. Controls.....	15
12. Level design.....	15
13. Mechanics analysis.....	17
14. Schedule.....	19
15. Developers	21
16. Status & Defect Tracking.....	21

1.Title Page

Title : Gorillas Have the Time

Catch line : Don't complain about the team, you are the team.

Team : Team 17 : Sana Jallouli, Amine Bechrifa

Genre : Turn based strategy FPS

Platform : Oculus Quest, Oculus Quest 2

Plays like : “*Super hot*” meets “*Gorilla Tag*” meets “*Lemnis Gate*”.



2.Executive Summary :

“*Gorillas have time*” is à turn-based strategy FPS played in VR. In a joyful jungle, the player endorses the role of a Gorilla that can control time. Stuck in à time loop, he has to bring the bananas to his zone before his opponent. Each of the five rounds, he has a chance to alter the timeline as past, present, and future converge.

3. Overview :

Goal:

Earn victory by bringing the bananas from the middle of the map into your zone before your opponents. This requires you and your opponent to take turns during 5 timed rounds, while stuck into à time loop. The time loop revives you in each round, and recreates your and your opponents previous moves. This offers you the possibility to place à strategy to team up with yourself from the previous rounds. For example, if one of your operatives is killed in combat, you can eliminate the enemy before it happens. This will change the timeline and keep your previous self alive. To place à good strategy for the next round, it is key to follow the current state of the loop when it is your opponent's turn: watch what you just did in the previous rounds, played by bots and what your opponent is doing to stop your bots from getting to the objective. Each of the five rounds is your chance to alter the timeline as past, present, and future converge.

Settings :

The game is set in an alternate universe where à group of scientifics are trying to make human control time. They tried the experiment on Gorillas that now have superpowers : they can control time. The power being not perfect, they can only rewind to à certain moment and slow time according to the rapidity of their movements. Gorillas escaped the laboratory and are in the jungle fighting over bananas ; because Gorillas are monkeying. The environment of the game is à realistic yet cartoonish joyful jungle inspired from the universe of Donkey Kong. The player is immersed in the environment endorsing the role of à Gorilla.

4.Related Games

4.1.Lemnis Gate :

Genre: Action, Strategy

Developer: Ratloop Games Canada

Publisher: Frontier Foundry

Platform : PC

Release date : 28 September, 2021

Lemnis Gate is also à turn-based combat strategy FPS taking place in a time loop. Many of its mechanics are also similar to our game. This game have à more rapid pace of game and adds pressure on the player. It is offered on PC and Next Gen consoles which provides à very different experience, far from having the same immersion as the VR and removing the kinesthetic aesthetic . Lemnis gate is also more realistic compared to our game: shooters are humanoid landing on different planets. The difference of the platform and the change of environment create different mechanics governing the way the player moves in the map as well as how he shoots. Movement does not control the time progression. This also changes the aesthetics by adding fantasy and more stressful realism. This game also adds a 2v2 mode with different objectives depending on the mode the player chooses while our game focuses on one main objective.

4.2.Quantum League :

Genre :Action, Sports, Strategy

Developer: Nimble Giant Entertainment

Publisher:Nimble Giant Entertainment

Platform : PC

Release date : 15 April, 2021

Quantum League shares the same genre as our game and has many similar mechanics. The platform of the game is PC and PS4, offering much less immersive experience compared to our game. The environment of the game is very different which affects the mechanics of movement and the story behind the game : the game takes place in à realistic arena and the players are sport athletes aiming to dominate the sport's rankings. The game adds fantasy to the aesthetic and adds pressure by à faster pace of game without the correlation between movement and time. It also adds 2v2 mode.

4.3.Gorilla Tag :

Genre : Action, Casual, Social

Developer : Another Axiom

Publisher : Another Axiom

Platform : Oculus, Oculus 2

Initial release date: February 12, 2021

This game differs in the genre by being a “racing game”. Gorilla Tag uses VR and aims for the same immersive experience. The game does not have à time loop concept as well as the correlation between time and movement. It is similar to our game in its character and environment: it illustrates Gorillas in à Jungle but with a much less realistic design. The main focus of the game is the mechanics of movement based on the real movement of à gorilla. This is the common mechanic with our game. The goal of the game is however very different, as it is à multiplayer tag game. Yet it provides common aesthetics : competition and kinesthetics.

4.4.Super Hot :

Genre: Action, Puzzle, Shooter

Developer: Superhot

Publisher: Superhot team

Platform : Quest, Quest 2

Release date : March 12, 2021

This game has a similar VR FPS genre. The main concept of the game is making the time progress only when the player moves. Similarly to our game, this offers the player the opportunity to assess his situation in slow motion, offering à different shooting experience and anchoring the game in the strategy genre. It adds different mechanics to offer the player several possible strategies to kill his enemies and escape their shots using objects surrounding him. Because Super hot is à single player game, the time dilation does not have à limit unlike our game. The game has à different goal : passing from one level to the other, by killing all the enemies. The design of the game is also different by being very minimalistic with humanoid characters and an environment made out of glass. This adds à new mechanics of interaction with the environment. The environment and

characters are similar in taking out the hostile attackers. This was achieved in our game by the choice of the characters.

5. Market :



Teen ESRB. 13+ VR restriction. Immersive experience fans. Players with different skill levels; who want to have a good moment, playing à casual yet strategic and competitive game while acting like à gorilla.

Player composite :

- Mark Johnson, 22, student in computer science. In a couple. Plays games everyday after school to chill and during breaks when doing homeworks. Plays on his computer online timed games and time his breaks according to the rounds length. Focuses on competitive games like League of Legends. Watch Netflix series in parallel with everything. He likes playing board games with his girlfriend.
- Simon Brooks, 15, student in high school. Plays coop games like “À Way Out” with his older brother twice à week on à next generation console, and online competitive games like “fortnite” with his friends everyday on his computer. His brother introduced him to gaming and offers him most of the games. Spends hours watching youtube videos, and chatting on social media everyday. ”
- Amelia Vald, 24, accountant. Single. Plays fun games like “Mario Party” in her next gen console about once à week with her friends when they gather, and everyday on her mobile phone when commuting. Focuses on puzzles and strategy games like chess. Very passionate about painting and learning computer design on her own. She is also very curious about new technology and always very excited to try new things.

- Xavier Dumoulin, Intern in medicine, 27, engaged. Plays games every sunday night online with his friends on his next gen console. Focuses on competitive games like “Call of duty”. It is very important to him to be at the cutting edge of technology. Curious by nature, he is fond of travelling and do whenever he has time.

6. World:

“*Gorillas have time*” is set in an alternate universe, where à group of scientifics are trying to control human time. They had to test their experiment and gorillas were the perfect choice for them. The experiment succeeded in the sense that gorillas now have superpowers : they can control time. However, the power was not perfect, they could only rewind to à certain moment and slow time according to the rapidity of their movements. Worse, the experiment empowered the gorillas that were able to escape the laboratory. They are now in the jungle fighting over bananas ; because Gorillas are monkeying.

The jungle is joyful, very colorful and pleasant to be immersed in. This is to achieve à chill atmosphere and contrast with the usual dark rural environment of FPS. This jungle represents the natural environment of the escaped gorillas and its joyfulness accompanies well the funny locomotion movements that the player will have to make. Gorillas indeed gained many humanoid aspects but kept their natural locomotion that the player will have to reproduce.

The jungle however seems to lack bananas as the gorillas have to fight over them. It is also organized into zones as each gorilla has its own zone to which he has to bring the bananas.

7. Characters

Main character:

Player endorse the role of “Super Gorilla”. This Gorilla has been experimented on and gained humanoid aspects and super powers. It is able to rewind to à certain moment and slow time proportionally to the rapidity of player’s movements. It can also shoot with guns and make strategic decisions. This Super Gorilla escaped from the laboratory to the Jungle where it has to fight over bananas to survive. Despite this love for bananas, it also kept the typical gorillas locomotion movements. Luckily, the gorilla has guns and power ups to activate when it is its turn. Will it be able to make good use of its powers, gently alter the timeline in its favor and bring the bananas in its zone?

Allies :

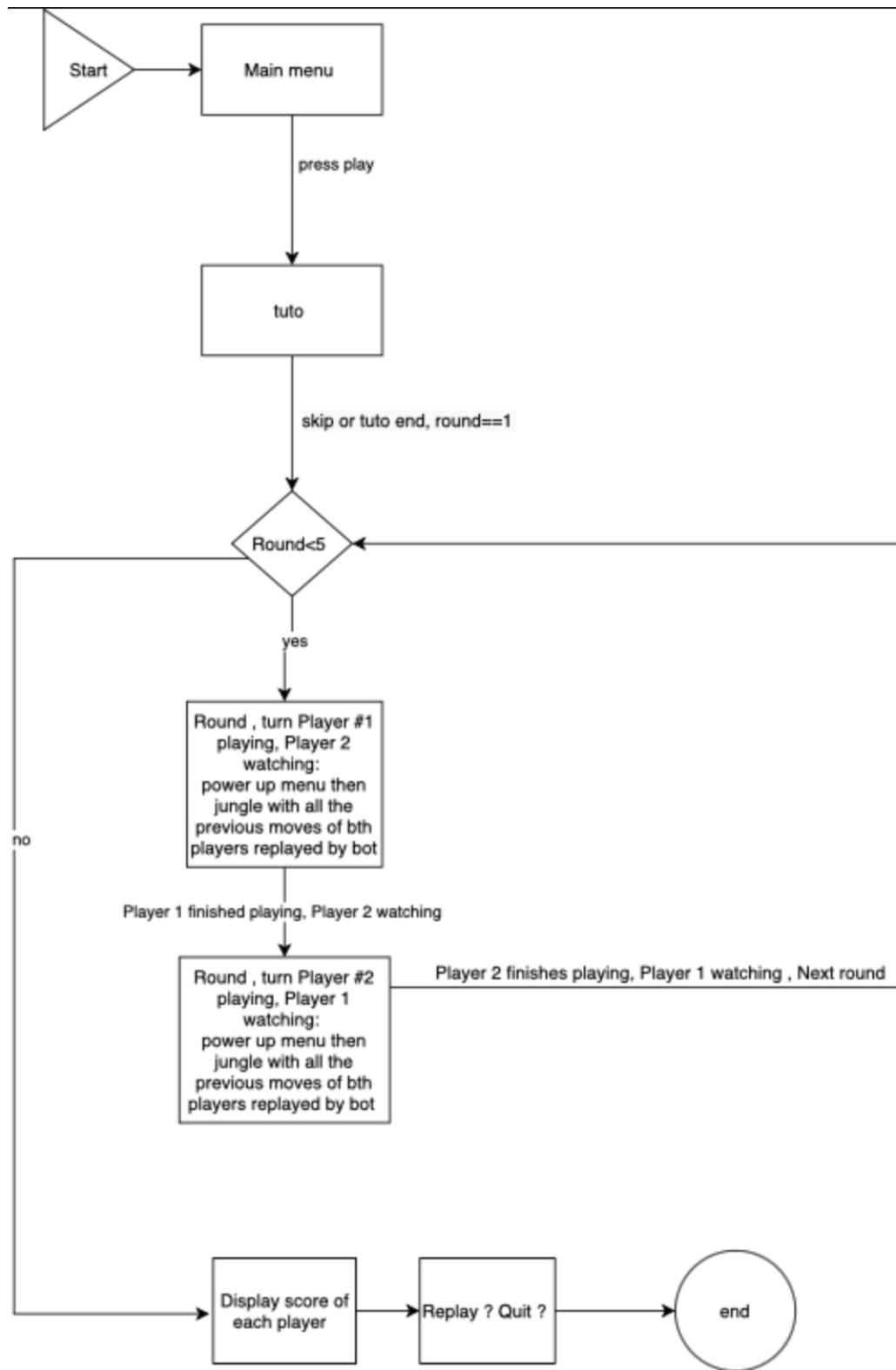
The Super Gorilla’s allies are itself from previous rounds. Indeed, the time loop revives the main character in each round, and recreates his and his opponents previous moves. This offers him the possibility to place à strategy to team up with himself. For example, if one of his operatives is killed in combat, he can eliminate the enemy before it happens and save him.

Enemies :

The main character's opponent is also à super gorilla of the same kind and the same powers. In reality the super gorilla and all its previous moves all together represent the opponents trying to bring the bananas in their zone while stopping you from achieving this objective.

8. Progression Graph

The game is not composed of different levels. It is, however, organised in 5 different rounds.



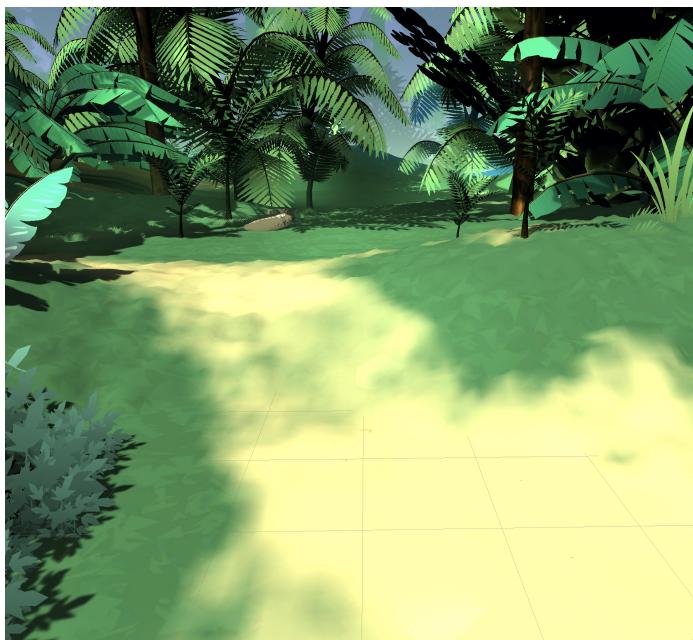
9.Art Direction:

9.1 The Environment :

The environment and characters of Donkey Kong Country return (Nintendo Wii) inspired our design. The movement of the gorilla also inspired the potential movement of our Gorillas.

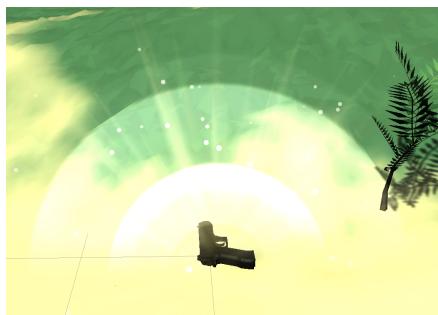


A first draft of the scene is designed and gives à feeling of how the actual scene will look like.



Elements in the map:

Guns in the map should be visible. Animations are used for that.



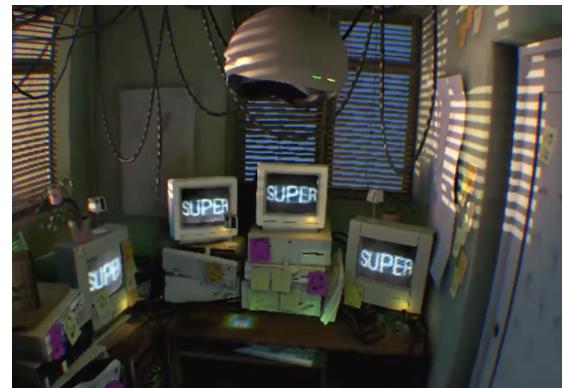
9.2 UI

The different UI menus needed for the game are :

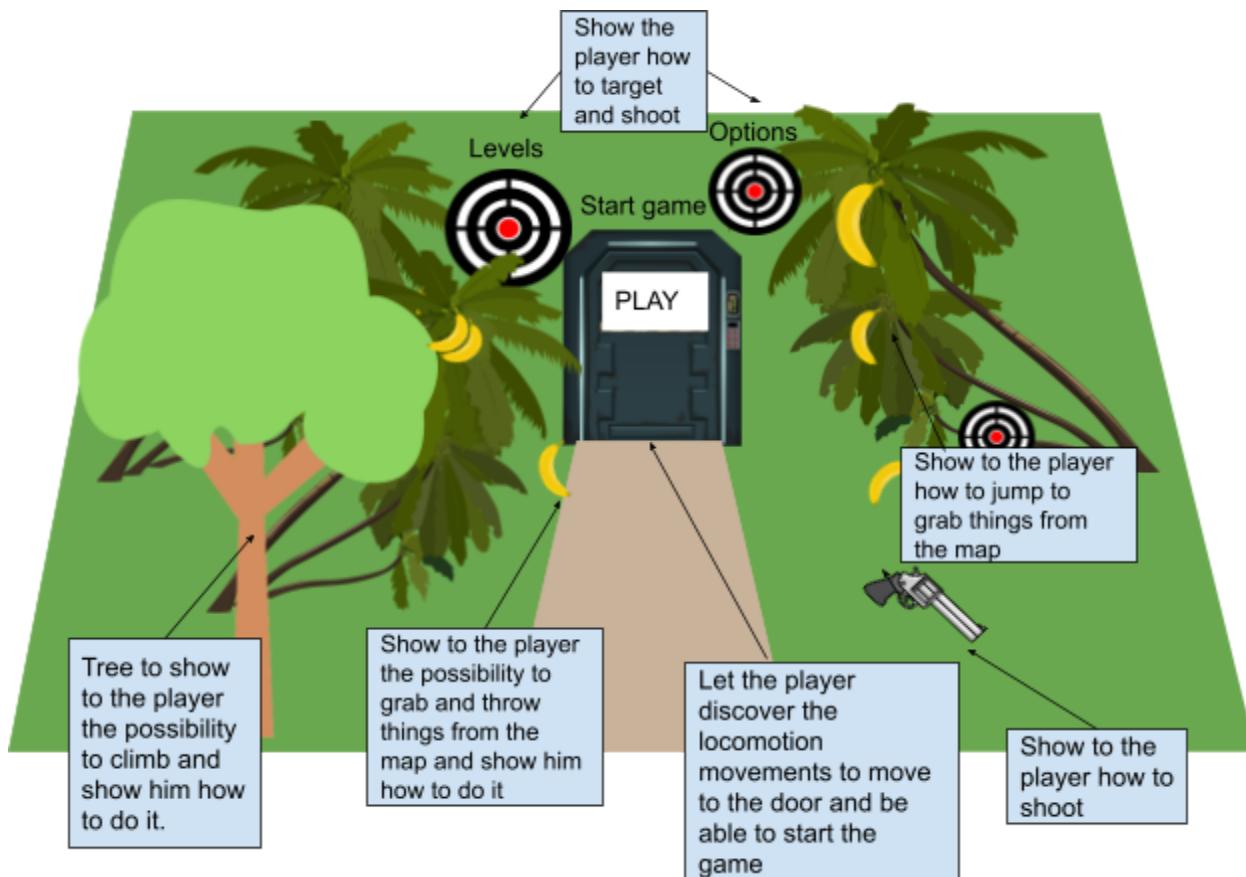
- Main menu
- UI in the game : Timer, score , indication on the round and turn, indication on time slowing.
- Menu for the power ups : power up choice , number of power up available.
- Victory/ defeat screens : play again, exit buttons

à.The main menu UI :

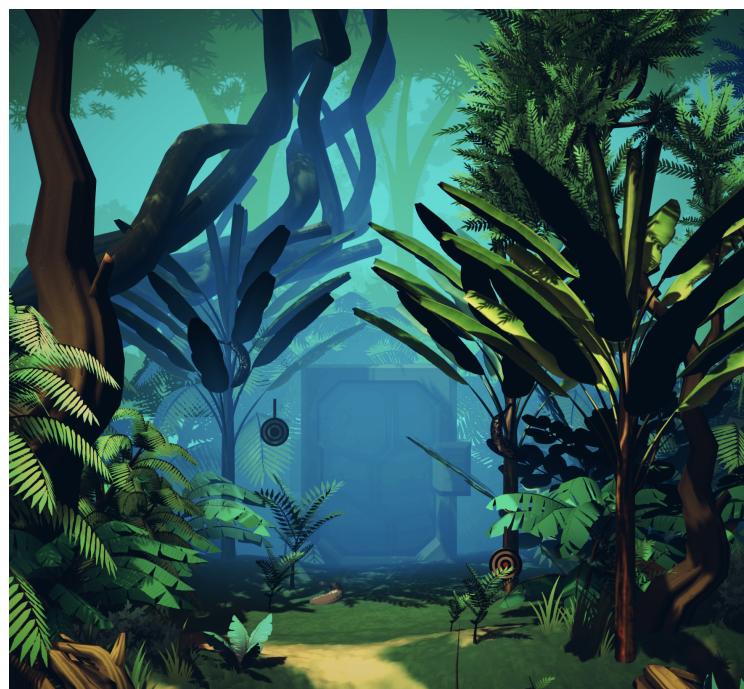
The UI we are planning to design is inspired by the menu of “Super Hot” VR game: to play the game, the player has to insert à floppy disk into the computer then wear the VR headset that becomes available in the scene.



In this spirit, we intend to have the main menu as an interactable scene that also serves as à demo for the mechanics.



À first draft of this scene is designed.



b. Power Ups Menu:

The power ups offered are : dash, speed, shield, trap.

The power up icons will be inside such capsules. The player will have to grab the capsule he wants to use.



c. UI in the Game :

Power ups selected by the player and not used yet are carried out with him. They will be floating near him, whenever he decides to use them, he has just to grab them and activate them.

Score and timer will be objects in the scene like in the Beat Saber game. However, these objects will be in part of the scene that will not move to ensure the player always sees them.



10. Software & Technologies:

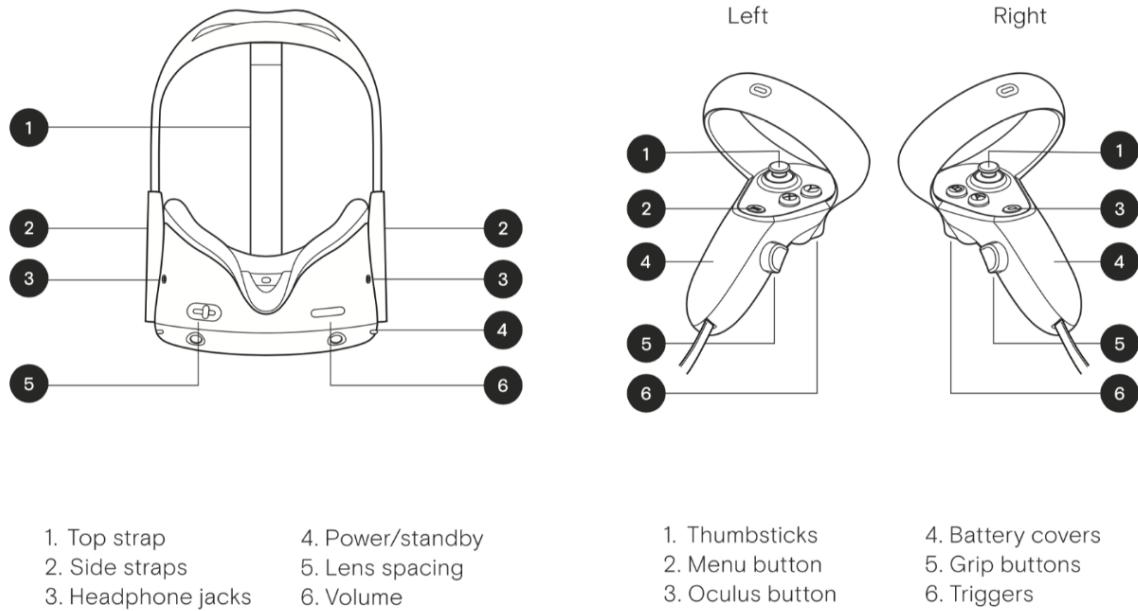
10.1 Technology

- Unity - Cross-platform game engine.
- Visual Studio - IDE developed by Microsoft, used to edit cs and shader files
- GitHub - Internet hosting for software development and version control using Git. Needed to manage repositories, and issue-tracking.
- C# - General-purpose, multi-paradigm programming language. Needed to write the scripts.
- GoogleDrive - Cloud hosted storage. Needed to store all the files related to the project except the code.
- GoogleDocs - Online word processor included as part of the free, web-based Google Docs Editors suite offered by Google. Needed to maintain the GDD.
- Blender - open-source 3D computer graphics software toolset. Used for editing and animating the 3d assets.
- Paint 3d - raster graphics and 3D modeling application. Used to edit/design the UI elements.

10.2 Assets & Packages:

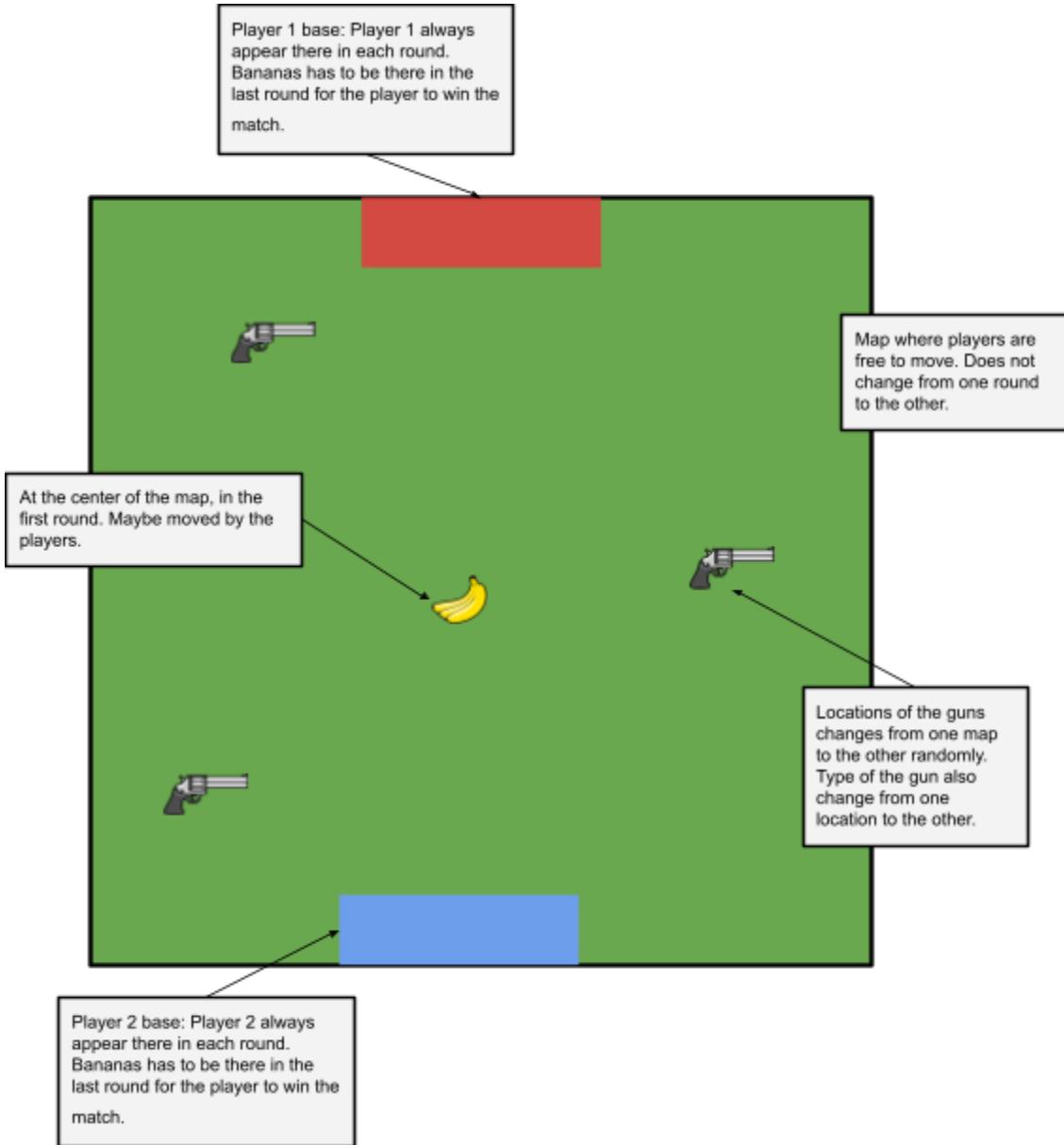
The asset packages that are to be used are not decided yet.

11.Controls :



12.Level design :

The game is divided into 5 rounds, each on the same map. The players always pop at the same location, in their base, and can freely move in the static map. What changes however, is the location of the guns. Also, the movement of the player in the map will depend on their previous moves, their opponents moves and the strategy they are trying to execute. The following is a schema showing how the map is divided.



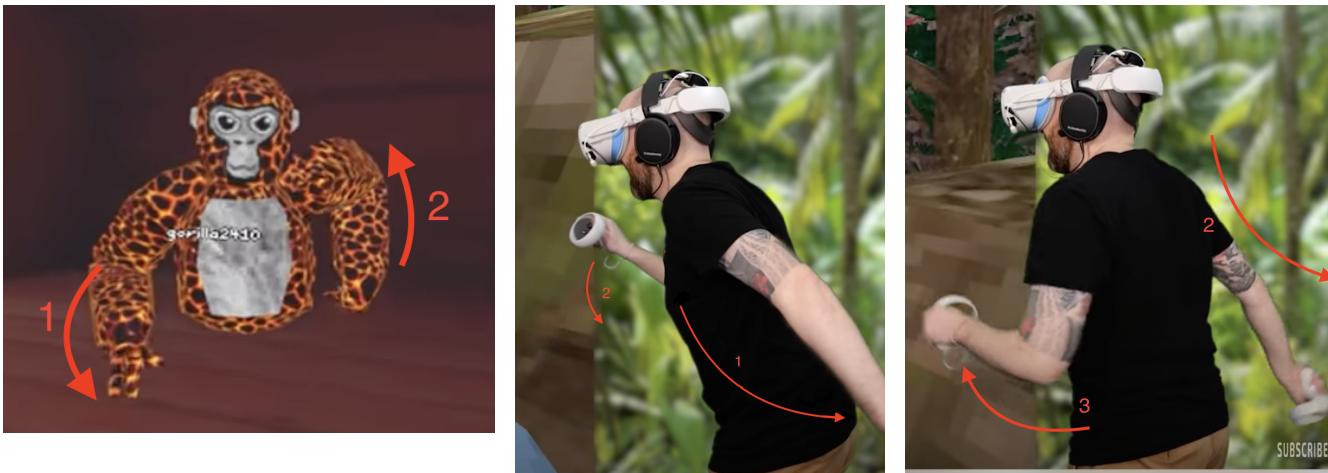
13. Mechanic Analysis :

Turn : Each turn lasts 25 seconds. The game is composed of 5 rounds. When it is not the player' turn, he is able to follow what his opponent is doing to better plan his next round moves

Time Travel : Time loop that recreates the player's previous moves in previous rounds. The player is stuck within à time loop for the 5 rounds of the game. The loop revives the player in the same place of the map and recreates the moves he did in the previous turns by bots. The player can alter the past : if one of his previous selfs is killed in combat, he can eliminate the enemy that did that before it happens. This will change the timeline and keep that bot alive. The player can also alter the future: for exemple shooting in the air to prevent his enemies from going into à certain direction when it is their turn. In the last round of the game, the player and his 4 previous selfs performing the previous rounds will all be present in the map. They will be playing against the 5 enemies : each of the 5 bots of the 5 previous rounds.

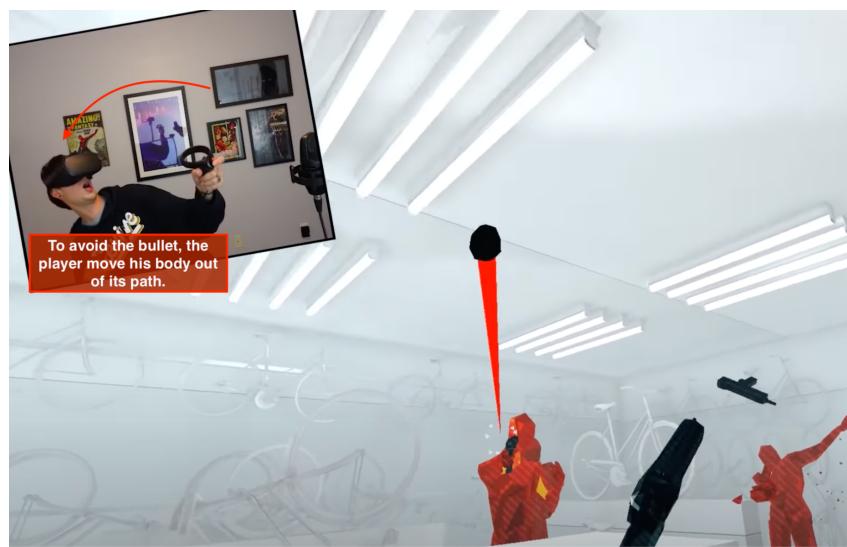
Time progression depends on the player's movement but is not unlimited: the game progresses at normal speed only when the player moves or shoots. This slows down the gameplay, offering the possibility to the player to analyse the scene in slow motion, before deciding what to do. This allows the player to rely on strategy instead of his reflex. This changes the mental map of the player : He does not have to dive for the nearest cover when he sees a bullet coming : he can stop moving and see the bullet frozen in mid-air and simply sidestep out of its way. At the same time, the player has only 25 real seconds per round : he is able to dilate the time and action but at the end of the 25 real seconds he will disappear from the map.

Locomotion : hand motion and collision with the ground controls the "Ground Pound" move. The player's avatar reacts to his hand movements to allow the player to move the gorilla on the map. This locomotion mechanic is used in "Gorilla Tag" VR video games.



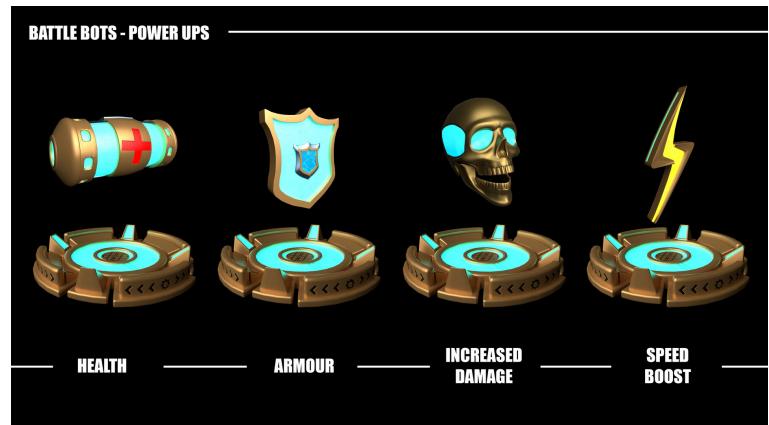
Shooting : Different weapons with different characteristics are available on the map. In order to shoot, the player has first to find the weapon on the map, grab it and then use it. All the weapons have limited munitions but differ in the damage they are able to do. The weapons and their characteristics are inspired from Overwatch: shotgun, rocket launcher, simple gun.

Avoidance and physical movement: Any shot taken by the player avatar in any part of his body will make him lose health points . Because the player's avatar reacts to the player's body, head, and hand movements, avoiding à shot will require the player to physically move all the parts of his body that may be in the path of the bullet. In keeping with "the time progression depends on player movement", the player has the opportunity to avoid à bullet path by performing very slow movements.



Power Up Selection and activation: Before starting his turn, the player will be able to choose one power that he can activate later. Once a power is used in à round, it will not remain in the selection set. Thus, it can not be deselected in next rounds. If the player selects à power and does not use it in the round, he is still able to use it in next rounds. . The activation of the power is done by having the player do the necessary movements as if the gorilla he is controlling pounds its chest. There is a set of power to select from , each with different characteris : dash, speed, shield, trap. This increases the immersion and diversifies the strategies possibilities. This will avoid the linearity of the game

Death is not final: if the player is killed in one of the rounds, his ghost will still play in the current and next turns. As a ghost, the player still has the same abilities but is no more able to provoke damage. However, if the player saves his previous self from death in future rounds, the actions they performed as ghosts will become real.



Grabbing and throwing : Player is able to interact with the elements available in the map. This will add realism to the immersion and should be done in à very natural manner. Also, It would have been frustrating if the player see elements in the map that he would be able to interact with in the reality but cannot interact with them in the game. This mechanic will also make other mechanics possible, such as shooting as the player will have to grab à gun , shoot and then throw the gun. This mechanic is also essential to bring the bananas to the base which is the goal of the game.

14. Schedule

Progress Presentation : November, 4th

Playable prototype :

- Setting up the VR headset
- Create a prototype for the player body and handles.
- Implement the locomotion mechanic: players should be able to run by hitting the ground with more power, climb trees (dummy longitudinal cylinder), wall jumps and jump over objects.
- Implement the grabbing and throwing mechanic: the player should be able to interact with dummy elements in the scene.
- Implement the shooting mechanic : Players should be able to grab a dummy gun, shoot with some input. This should fire bullets. Make bullets disappear after à certain amount of time. For testing and debugging, make the guns appear always in the same place: whenever the player grab à gun, replace it with another that appears in the same place.
- Implement the time slowing mechanic: for testing and debugging, the mechanic is activated by an input. When activated, the time progression is proportional to the player's movements.
- Implement the time loop:For testing and debugging, an input is set to start recording and stop recording. For testing, the player should be able to pop in the map, start recording, perform the movements he wants, stop recording. The player can then see himself performing the series of actions while free to perform the movements he wants. The recorded player should be able to grab à gun, shoot and throw objects. The player should be able to interact with the bot performing his previous actions.
- Test with assets : à gun and a bullet
- Adding animation of explosion when à bot is killed, animation for the bullet
- Decide on the main menu setting
- Searching for assets
- Designing à first draft scene
- Create a dummy scene with elements relevant to show the mechanics.

Final Presentation

Remaining tasks:

- Edit the assets for gorilla body and arms.
- Create the actual scene and main menu scene with the necessary assets
- Add the animations : animation for the guns to be seen in the map, animation to the bananas, animation when use à power up.
- Create 3 other different types of gun with different specificities :
- Add the power ups:
- Add the mechanic to activate à power up
- Create the UI in the game : timer, round and turn indication, temporary score, power up menu in each turn, victory, defeat scene
- Add sounds : background sound, power up use, shooting, victory, defeat
- Set up the gameplay

15.Key Developers :

The team is composed by two members. Each are 4th year software engineering student. Both have computer graphics and UX/UI experience gained from their courses but no previous experience with Unity and VR.

16. Status & Defect Tracking :

Most of the planned tasks were done on time. Some difficulties were encountered regarding spending many hours testing and debugging using the headset.

Issues are maintained through github in the project repository.

