

FPSheesh

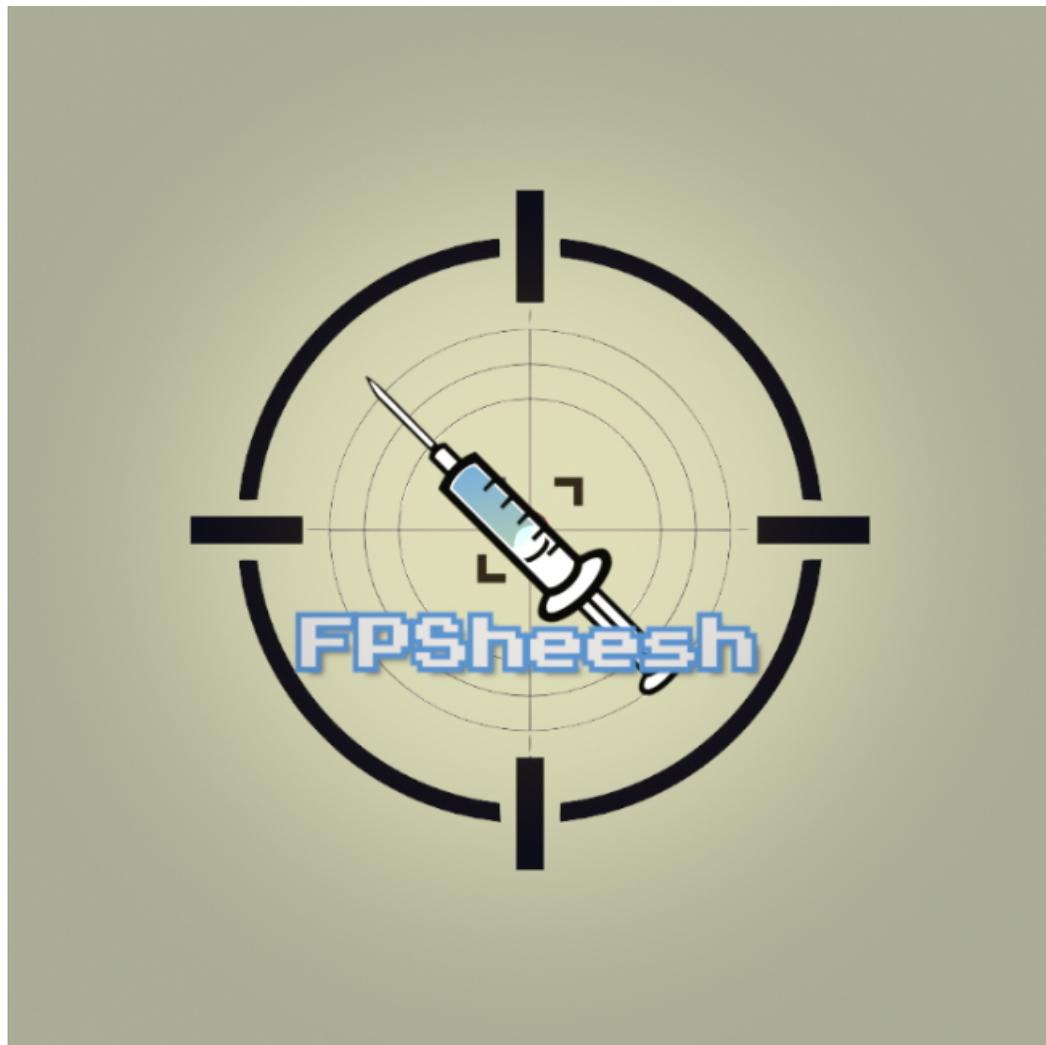
Book of specifications

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Introduction

This book of specifications is made to give an overview of the game *FPSheesh* created by the SheeshTeam. It will be coded in Csharp with the help of tools such as Unity and Rider.

As the name gives away, *FPSheesh* is a First Person Shooter game in which players will use weapons to fight other players in different environments. The idea for this game came from the team's experience playing this type of game but with the desire to create a personalized version, with new mechanics and ways to play.

Many steps are needed as the team will offer a multiplayer game which implies server management to allow multiple connections among other tasks that will be detailed in this book of specifications. Each of those tasks is assigned to two group members : the one in charge along with a substitute.

Everyone in the team will code on Unity and learn about designing maps, characters and guns as well as building a unique experience for players while managing a schedule to remain on time along the way.

Finally, this book of specifications will provide a presentation of FPSs, detailed descriptions and a schedule for each task.

Why the name FPSheesh ? ‘Sheesh’ is actually a normal word in the dictionary, and it means “to express disbelief or exasperation”. So a FPS based on sheesh, surprising its players, gives FPSheesh

1 The team

- SheeshTeam

This group is composed of 4 S2 students and the name *SheeshTeam* is clearly a reference to the game but it also highlights the bond between all the member who will work together, as a team to make the best game possible.

- Tom Forgeas

Throughout my highschool years, by taking the NSI class I was able to participate in a multitude of projects such as for example a battleship game. I've also been playing videogames my whole life and in particular FPS games. So being given the opportunity to create our own FPS game is really fascinating to me, the creation of it, how the game works, etc.

- Charlotte Marret

I don't play a lot of video games but I have always been interested in digital design and have already used softwares like Blender so I am excited to learn how to put that knowledge into creating a game and the world around it. Besides, I have never worked on a multiplayer game so this project will allow me to learn more about it. Finally, I look forward to working with the team and to see how well we can gather our experiences and knowledge to create FPSheesh.

- Valentin Best

Since I was young, I have always been interested in IT and science in general thanks to my father. I have been playing various video games for quite a long time and despite my lack of experience in FPS, I think I can contribute to the project in many other fields. I also particularly appreciate group work and I have already participated in several computer-related projects throughout my schooling, especially in my NSI class. So I am highly motivated to participate in the creation of this project.

- Bede Walthew

Having a strong interest in video games and FPS's in particular the idea of creating one instantly appealed to me and especially the creating of a 3D environment. This is a skill I truly want to master and this project will contribute towards it greatly. Having only worked in groups of two before in big projects, I look forward to working as a group and combining efforts to create something fun !

2 The game

2.1 Object of study

This long-term project will allow us to discover group projects in development around a playful and enterprising subject.

It will give everyone an insight into group work and the organization needed to carry it out.

2.2 State of the art

2.2.1 FPSs

First-person shooter (FPS) is a subgenre of shooter video games centered on gun and other weapon-based combat in a first-person perspective, with the player experiencing the action through the eyes of the protagonist and controlling the player character in a three-dimensional space.

2.2.2 The first FPS

The first appearance of such a game was in 1992 with Wolfenstein, a critical and commercial success that went on to be considered one of the greatest video games ever made, selling over 250,000 copies 3 years after release which for the time was a big success.

2.2.3 Famous FPSs

The next big title was Doom that created a huge amount of hype around FPS's and for some time after its release, any games of the genre to come after were called Doom Clones.

Whilst these games were gaining in popularity, at the time all FPS games that were coming out were single player, a user usually followed a story line shooting his way through levels. But in our case we want to take a more modern approach, multiplayer FPS's. This genre really affirmed itself when Epic dropped Unreal Tournament in 1999, one of the first purely

multiplayer-focused FPS titles. From there on a whole new category appeared, player against player titles. The game from which we draw our main source of inspiration would be the Call of Duty franchise. With a fast-paced gameplay based around rounds.

3 Structure of the game

3.1 Functional

- When the player wants to play he chooses on what map he wants to fight and in what game-mode (Free-for-all, Team deathmatch, Capture the Flag).
- He loads into a game with x players. The player then plays differently according to the game mode. The player earns points by killing other players or fulfilling objectives.
- At the start of each round or when he dies, the player chooses a kit that comes with a weapon and an “abilisheesh” .
- FPSheesh’s own mechanic comes with the ability to use a special “abilisheesh” that gives many different bonuses such as movement speed, more control over guns etc. These stims can be obtained when the player earns x points.
- We plan to build as many kits, maps and game modes as possible to keep the gameplay fun and fresh.

3.2 Technological and methodological

To achieve all the tasks, the SheeshTeam will use :

- Unity 3d
- Rider
- Photon Pun 2
- Blender
- Final Cut Pro
- Audacity
- Trello
- Discord
- GitLab
- LateX

3.3 Operational

For now the only cost is time and work. We only need small servers for small lobbies that can be obtained for free, but if we wish to host more people in the future, we may have to upgrade to better servers that will have to be paid for.

4 Tasks

4.1 Task distribution

TASK	IN CHARGE	SUBSTITUTE
UI graphics / implementation	Charlotte	Valentin
Player behaviour	Valentin	Tom
Gunfire	Valentin	Bede
Gameplay / Abilities	Tom	Bede
Multiplayer	Charlotte	Tom
AI	Valentin	Bede
3D modeling	Tom	Valentin
3D animation	Tom	Bede
Map design	Bede	Charlotte
Tutorial	Bede	Tom
Music / SFX	Charlotte	Tom
Website	Valentin/Tom	Charlotte
LateX	Charlotte	Valentin

4.2 Task progression

TASK	FIRST DEFENSE	SECOND DEFENSE
UI graphics / implementation	0%	50%
Player behaviour	90%	90%
Gunfire	70%	90%
Gameplay / Abilities	50%	85%
Multiplayer	50%	90%
AI	0%	50%
3D modeling	10%	50%
3D animation	0%	50%
Map design	25%	75%
Tutorial	0%	70%
Music / SFX	0%	50%
Website	25%	100%
LateX	100%	100%

4.3 Task description

- UI graphics / implementation

The UI is what the player interacts with, whenever the player opens FPSheesh, he will be greeted with the UI, through that interface he will be able to choose the gamemode he wants to play in, his stats or other features of the game.

- Player behaviour

We want the player to be drawn to the movement of the game. It will be fast moving, and as smooth as possible avoiding collisions and making every surface usable. To move we will apply force to the players so that we avoid buggy collisions.

- Gunfire

Whilst keeping it reasonably simple we will try to implement a recoil system (the gun moves around when shooting, making it harder to aim). The longer a player shoots the more the gun's barrel will change coordinates.

- Gameplay / Abilities

We wanted our game to have a special mechanic, such that our players could enjoy a new FPS as there are many already available. So we came up with the idea to implement the "sheesh" mimic in our game.

To do that we came up with several "abilities" that the player will encounter all throughout the game that he can use on himself using the sheesh mimic. Some of the boosts that will be granted by these abilities are for example :

- JumpBoost which is the ability to make your character jump higher,
- Speed which makes your character go at a higher velocity
- Berserk is the ability to make your bullets do more damage to the enemy but also take more damage
- Transcendence which gives you information on the enemy's movements
- Invisibility which makes your character invisible
- FastReload which makes the reload times much faster
- Revive which makes your redeployment to the battle faster if used before your death
- Troll boy which creates clone of yourself to confuse your enemy
- Tanky which creates a shield around you that blocks an amount of damage.

- Multiplayer

We need to create lobbies : a place where users connect to different rooms to join others. A server will need to be hosted by a Master Client for clients to receive information from the Master Client through the server. Each player will need a nickname for others to see.

To set up our servers we will be using a unity asset : Photon Pun 2 which is a free asset to have multiplayer servers.

- AI

We plan to implement several AIs in the game. First of all, in the training

ground, players will be able to run a training program against armed bots in order to train their aim and movement. Then, the mobile drones in a game will be equipped with an AI allowing them to appear more or less numerous on the side of the team leading the score or not.

- 3D modeling

We plan to design the characters, weapons and objects in general in cartoon style. This style best fits the atmosphere we want the player to be immersed in.

- 3D animation

The animations will allow us to make the transitions more fluid for all types of interactions in the game (reloading weapons, changing weapons, sliding, stabbing, injection of abilisheeshs, ...)

- Map design

The map design is an important part of any FPS as the player will have to use his surroundings to hide from the enemies or to target who he wants to shoot. The map can help a player devise a strategy using what is around him, it can give one player the advantage over others if he knows how to use it. It will be designed in a simple, cartoon-like style.

- Tutorial

The tutorial will be the first place a new player will be introduced to, it is the place where he will learn the basics of the game, how to shoot, how to move to reload, how to use abilisheeshs so that he wouldn't be lost in the first real game he plays.

- Training camp

This will be an area in which the player will be able to train whenever he is out of a lobby. There will be targets and obstacle courses that will need to be designed. Mostly 3D work to be done here.

- Music / SFX

The sound is essential as it intensifies the experience for the player. We want to synchronize the music with the map the player is currently in, to make a nice ambiance for the player without the music overwhelming him.

We also want to implement player noise, if an enemy walks in the vicinity of the player, the player will hear him walking and will hear the noise coming from the enemy's direction.

Conclusion

To conclude, the goal with this game is to create an innovative view of the First Person Shooter games that will still entertain the players. It is an opportunity for the Sheesh Team to work as a group on a long term project. FPSheesh is an ambitious project as it requires many skills in several areas but the whole group is passionate and ready to work hard to make this game a reality.

Besides, every team member has a different experience with this type of game and can add their own perspective to the project.