

Book of Specifications

Falling asleep studios



Luminosité Éternelle

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Contents

1	Introduction	3
1.1	Team presentation	3
1.2	Project presentation	3
1.3	Graphic chart	3
1.3.1	Logo	3
1.3.2	Art direction	4
2	Origin and type of project	5
2.1	Origin	5
2.2	Type of project	5
3	Object of study	6
3.1	Interest for the player	6
3.2	Interest for the group	6
4	State of the art	7
4.1	Main source of inspiration	7
4.2	Other sources of inspiration	7
5	Parts of the project	10
5.1	Main tasks	10
5.1.1	Multiplayer	10
5.1.2	Gameplay	10
5.1.3	A.I.	10
5.1.4	Story and Art Direction	10
5.1.5	3D modeling (characters)	10
5.1.6	3D modeling (objects)	10
5.1.7	Level design	11
5.1.8	Puzzle design	11
5.1.9	HUD and UI	11
5.1.10	Website	11
5.1.11	3D animations	11
5.1.12	Music composition	11
5.1.13	Cinematics (optional)	11
5.2	Tasks distribution	11
5.3	Software used	12
5.4	Budget	12
5.5	Task distribution throughout time	13
6	Conclusion	14

1 Introduction

1.1 Team presentation

Our team is composed of four first-year students from the A2 class. We decided to join force together in this project to experience an adventure we will remember, forever. Therefore, this team is composed of:

Matthieu Porte (*Project leader*)

I discovered programming as a kid through front-end web taught on khanacademy at the time, then I started learning C# as well to program games on Unity. I've done some game jams since, started some projects alone but never ended up with something I was completely satisfied. I hope for this project to be the one, but taking a look at my sidekicks I see no doubt about that!

Luca Sarubbi

Hi! I'm Luca Sarubbi. An aspirant low-level software engineer; although it all started from enjoying minecraft's game engine through custom Java plugins, I then got introduced to lower level languages such as C or Rust. I discovered epita thanks to a friend's recommandations and I am ready to give this projet my all. My contribution to the project will mostly be on gameplay and multiplayer in order to gain some experience to someday create my own game-engine.

Ilan Mayeux

I am wandering as Ilan Mayeux. A first-year Epita student from the A2 class. Previously from Le Bon Sauveur highschool, I learned precious knowledge during my scholarship and built a passion in computer science as a result. My goal is to renew this tradition and make this second-semester project a warm memory, something that we can be proud. Sincerely, your typical Linux enjoyer.

Johan Emmanuelli

Hello, my name is Johan. To this day, I really enjoy my education at Epita. I started programming in highschool and I immediately really liked it, to the point that I want to make it my profession. For this project, I am planning to learn and develop many skills. I am also really excited to work with this team, and I am sure that we will all be proud of this project !

1.2 Project presentation

1.3 Graphic chart

1.3.1 Logo

Our game project is called *Luminosité Éternelle*.

Its logo represent mountains, the players final destination and its shining top, the light that will guide them. A journey awaits them, and many perils with it.

In a world mixed with darkness, one of the reason it has not fallen down is this temple at the top of everything. The temple of light. Its light as



Luminosité Eternelle

1.3.2 Art direction

The game wants to convey an important message. Thus the art and the global ambiance of the game will play an important part of it. While the gameplay is essential, it can't survive without art.

The art direction for the game will be based on a mountain landscape, with a shining temple of light at the top. The mountain itself will be rendered in low-poly style, with simple geometric shapes and bold, vibrant colors that give the environment a fantastical feel.

The temple of light will be a towering, radiant structure that stands out against the dark and rugged mountainside. The game's creatures will also be fantastical and low-poly, with exaggerated features and striking visual designs that make them stand out from the game's environment.

Overall, the art direction for the game will aim to create a surreal and imaginative world that is both visually striking and true to the game's low-poly aesthetic.

2 Origin and type of project

2.1 Origin

We first thought about doing an horror game, with a low luminosity set up because it would be easier for us to make assets and create a great horror immersion. And the genre is already pretty established so we would not struggle figuring that out.

Then we thought more about what we really wanted and realised that we wanted to share more than a few scars with this project. So we opted for a more story-oriented kind of game. Thus, we talked during many hours, made votes, merged ideas until reaching a common goal. And so, this project idea is the result of all our expectations, our passions, our stories, our souls.

2.2 Type of project

Our S2 project will be a co-op puzzle-adventure game. We want to make a project that would bring people together by having them work in cooperation so that they can feel the accomplishment as one.

Thus is born *Luminosité Éternelle*. A game where two players evolve together, build a friendship and travel in order to bring back what is lost. We want to build a world that everyone will remember. An adventure that you can enjoy with your best friend. Where you can overcome hardship and where you need each other to progress.

Therefore, the mechanics of two players in the same world yet different is the main mechanics of our game. Each can see and interact with elements that the other cannot. For example, the ghost can get through transparent materials (such as glass) while it is a wall for the other one. However, the alive player can pull a lever while it is impossible for the ghost.

The second main mechanic is the map. We want a map that reveals the complexity of this adventure. That evolves as the adventure progress. Sometimes advantaging one player, who must lead the other one before it is too late...

3 Object of study

3.1 Interest for the player

We gave ourselves the ambition of creating an adventure game that would last at least an hour, that could be replayable. We want the player to live and adventure full of experience and to enjoy nature and friendship. Traveling, meeting people, ascending a valley, resolving puzzles, face danger. An epic journey to forge deeper bonds with your friend.

On top of that we are willing to implement a new and ingenious mechanic to it.

We also want to let our game be accessible cross-platforms.

Indeed, while the market is mostly centered around Windows, other platforms such as Linux are often abandoned. To survive, most of Linux players are surviving using Proton from Valve and Wine. Fully compatible Linux games are rare. And since some of us are Linux enjoyer, their pride is not to deceive other Linux users.

We also want to implement VR (Virtual Reality) as it is a new way to get immersed in games.

3.2 Interest for the group

We are all fairly new to this industry so it is a challenge to learn how to use all the software properly. Thus, we will unlock new skills and a better understanding of nowadays entertainment. Furthermore, we will learn how to work in a group, share ideas, delegate tasks and accept different points of view.

Oriented Object Programming (OOP) is used a lot in Unity. While we are all discovering its usage through practicals, this project will unleash all the potential we have in this domain and force us to improve.

Making a game is also a kind of dream for all of us. We all have played many games during our childhood and still now. Making our imagination into something playable is somehow an accomplishment for the kind of person we all became.

4 State of the art

4.1 Main source of inspiration

Our goal is to bring an original aspect to the game by mixing mechanics of different games to create a unique gameplay. The first major puzzle game that inspired us in the concept would be *Myst*, released in 1993.

4.2 Other sources of inspiration

Concerning the adventure, the famous *The Legend of Zelda*, released in 1986, is obviously a large inspiration.

Indeed, the saga is well-known for its mix of puzzles in various environments, its battles against different enemies and bosses, each having unique weaknesses, is also offering the player limitless combat possibilities. Its dungeons which are a mix of battles and puzzles, with linked rooms leading to a boss.

And of course, its map. A vast one, rich in mysteries and adventures. Villages, mountains, deserts, lakes, forests, castles, volcanos and other fantastic places, ideal to unleash the full immersion in an epic adventure. Many of these are a great inspiration for many new games, and now us!

We can also quote *Journey*, a beautiful and meaningful story where the player tries to understand his goal and travel to reach his destination. This game is mainly playing on the strengths of its map and music to convey its own message.

More recently we can mention “We were here” for the co-op mechanics.

It is our main source of inspiration for the puzzles and gameplay. It really relies on cooperation since you can do stuff that your partner can't and have access to information that your partner doesn't. Although the puzzles are sometimes more enigmas on paper we are more headed to gameplay puzzle just like in *portal*.

Finally the zombie gamemode of *Call of Duty* to image the puzzle/survival ambiance.

This gamemode of the franchise is definitely one of our favourites since it mixes everything we like in it. You get to solve small puzzles while surviving a horde of zombies, and making strategic choices about what kind of weapon to buy. There won't be many strategies involved in *Luminosité Eternelle* but we liked the idea that the player has to solve problems while being under constant stress.



Figure 1: *The Legend of Zelda: The Wind Waker* (2002)
A beautiful low-poly world where multiple islands can be discovered



Figure 2: *We Were Here* (2017)



Figure 3: *Journey (2020) : A beautiful adventure.*

5 Parts of the project

5.1 Main tasks

Here are the different tasks to do in our game, somewhat ranked in order of importance.

5.1.1 Multiplayer

Will allow the players to be on the same map and interact with each others. This includes all the code related to the living/dead mechanic (some things will only be visible/interactable per one player). This is one of the most important parts of the game if not The most since the whole mechanic relies on it.

Thus, two players should be able to play together on different computers and networks without any issues. Interacting together and communicating together are also part of the process.

5.1.2 Gameplay

The core gameplay of the game, moving around, interacting with npcs and the environment.

For example allowing one player to go through glass material, activating systems. This is one of the most important aspect of the game since it is how the player will use and feel the game. We want to let the game be playable in Virtual Reality and making it cross-platforms.

5.1.3 A.I.

The A.I. will be all the programming related to N.P.C. and enemies. This will also include a Boss fight at the end of the game.

5.1.4 Story and Art Direction

The story and art direction will encompass different other parts as this will be about the coherence between assets.

It will be about the feel of the game, how enjoyable and credible it is. It will be among other things about joining the Level and Puzzle design together.

5.1.5 3D modeling (characters)

The modeling and texturing of the characters of the game in 3D

This mean creating our characters and their friends/enemies in a low-poly style. This is what will define our game style.

5.1.6 3D modeling (objects)

The modeling and texturing of the decor/scenery of the game in 3D. It will encompass the terrains, the wild, the buildings in a somewhat fantasy ambiance.

5.1.7 Level design

The level design task will be about taking the different assets and putting them together to form a coherent and pretty map.

It also the part where everything is coming to live. Merging all our work into a playable game: gameplay, multiplayer, assets and how they should behave together.

5.1.8 Puzzle design

The puzzle design will be about engineering the problems without thinking about the design, purely in a logical sense.

5.1.9 HUD and UI

The HUD meaning “Heads Up Display” is all the in game information you can get such as a minimap or even the health bar.

UI means User Interface and will be about designing all the menus and loading screens.

5.1.10 Website

Carry out the website of the game, presenting the story, the gameplay, some screenshots and the group who made it (us). It will be done in React.

5.1.11 3D animations

All the characters animations and the puzzles animation (when triggering objects)

5.1.12 Music composition

Composing an Eerie music for the game. The music can be found online Open source if we lack of time but we have this will to do as much as possible ourselves

5.1.13 Cinematics (optional)

Creating cinematics that would put more emotions in the game, thus giving more interest for the player.

5.2 Tasks distribution

We distributed the tasks so that everyone could shine through what they knew the best, while learning things along the way

	Matthieu	Ilan	Luca	Johan
Multiplayer		+	++	
Gameplay	+		++	
A.I.		++		+
Story / A.D.	++	+		
3D (characters)	++			
3D (environment)			+	++
Level design	+	++		
Puzzle design	+			++
HUD and UI		++	+	
Website	++		+	
Animations		+		++
Music composition	+			++
Cinematics	+	++		

++ : **Task leader**

+ : **Task second**

5.3 Software used

Unity: Unity is a cross-platform game engine developed by Unity Technologies.

Git & Github: Git is a free and open source distributed version control system designed to handle everything with speed and efficiency. Github is a code hosting platform for version control and collaboration.

Krita: Krita is a professional FREE and open source painting program. It is notably used for the HUD & 2D sprites of the game.

Blender: Blender is a free and open-source 3D computer graphics software tool set for creating visual effects, art, virtual reality, etc.

Discord: Discord is an instant messaging social platform.

Rider: JetBrains' C software to manipulate .NET applications.

5.4 Budget

Making a project is never free. Licenses and rights have to be bought, same way for software and so on. This project is no exception, even though, we can always find some ways cheaper than others.

Indeed, to avoid spending our budget too fast, there are various ways. We can first, instead of using closed source and expensive software, find some free and open source alternatives.

We can use Krita, a free & powerful design program that can easily replace expensive software like Photoshop. Same for 3d design software, blender is free and powerful. We are using Rider and Github PRO for free using the student pack. Yet it would not be free in real conditions, so it have to be included in the total cost. We could have used Visual Studio or other software. And Github standard could be enough.

We can also diminish the cost by creating our own assets and musics instead of purchasing it.

If we want to publish the game at the end, Steam is the most popular choice. Yet, popular doesn't mean cheap. It is \$100 to submit a game on Steam.

	Estimated Cost (€)	Current Cost (€)
Game development	0	0
Assets	0	0
Rider	$(15 * 6 * 4)$	0
Github Pro	$(4 * 6 * 4)$	0
Steam License	100	100
Free & OSS	0	0
Total	556	100

Thus, our students starter pack allow us to avoid using 456€ in this project, and even more if we were not using OSS and OS Assets / Home made assets.:q :q :q :q!

5.5 Task distribution throughout time

This is how we're planning the task throughout the semester:

	1st	2nd	3rd
Multiplayer	60%	90%	100%
Gameplay	60%	80%	100%
A.I.	40%	75%	100%
3D (characters)	50%	80%	100%
3D (environment)	50%	80%	100%
Level design	50%	80%	100%
Puzzle design	45%	65%	100%
HUD and UI	50%	100%	100%
Website	30%	70%	100%
Animations	30%	60%	100%
Music composition	50%	75%	100%
Cinematics	0%	50%	100%

6 Conclusion

Luminosité Éternelle is a game about friendship, about relying on our teammate to achieve our goal. The context and art direction is fantastical, so that anyone would be willing to play the game even though we think it's going to be hard for children.

The game mostly count on the gameplay mechanic such that one player is alive while the other is dead. Thus each will have access to different conversations, different clues and different interactions with the environment in general. Their goal is to find their way up the mountain where they hope to find help for resurrecting the dead player.

We make it a point to ensure that the experience given while playing the game is moving, therefore we will pay a particular attention to the details like the color palette of the game, the music and the cinematics.

We are ready to bring this project to life.

Sincerely,
Falling Asleep Studio's team.