

Game Design Document

Università degli studi di Milano
Dipartimento di Informatica



Francesco Pineschi 969658
Margherita Orlando 970894
Marco Alberti 982644



Contents

1.	Design History	4
2.	Vision Statement	5
2.1.	Game logline	5
2.2.	Gameplay Synopsis	5
3.	Audience, Platform, and Marketing	7
3.1.	Target Audience	7
3.2.	Personas	8
3.3.	Demographic classification	10
3.4.	Platform	11
3.5.	System requirements	11
3.6.	Top performers	12
3.7.	Feature comparison	14
4.	Legal Analysis	15
4.1.	Hardware and Software	15
4.2.	Resources and digital contents	15
4.3.	Pan European Game Information (PEGI)	15
5.	Gameplay	16
5.1.	Overview	16
5.2.	Gameplay description	16
5.3.	Maps overview	17
5.4.	Game objectives	21
5.5.	Movement system	22
5.6.	Aim system	23
5.7.	Basic attacks, skills and passive ability	25
5.8.	Lightsources control	27
5.9.	Controls	29
5.10.	Leveling System	30
5.11.	Ranking System	31
5.12.	Leaderboards	33
6.	Interfaces	34
6.1.	Flowcharts	34
6.2.	Interfaces	36
7.	Modes and other features	45
7.1.	Game mode	45
8.	Game Characters	47
8.1.	Lightbringer	47
8.2.	Lightbringer classes	48
8.3.	NPCs	57
9.	Story	59
9.1.	Story introduction	59
9.2.	Backstory	59

9.3. Gameworld	62
9.4. Narrative devices	67
10. Media List	68
10.1. Character generic assets	68
10.2. Character specific assets	69
Environment	69
10.3. UI - Gameplay interface assets	70
10.4. UI - Main Menu assets	70
10.5. UI - Rank System	71
10.6. UI - Publishing / Marketing / Others	71
11. Prototype	72
11.1. Prototype Flowchart and Interfaces	73

1. Design History

Design History		
When	Who	What
05/04/2022	Francesco Pineschi	Vision Statement
08/04/2022	Margherita Orlando	Audience, Platform and Marketing
09/04/2022	Margherita Orlando	Legal Analysis
09/04/2022	Francesco Pineschi	Story
10/04/2022	Francesco Pineschi	Gameplay overview and description
10/04/2022	Margherita Orlando	TDD Project Goal and Provided Services
11/04/2022	Francesco Pineschi	Game objectives
12/04/2022	Francesco Pineschi	Movement System
13/04/2022	Francesco Pineschi	Aim System
14/04/2022	Francesco Pineschi	Basic attacks, skills and passive ability
14/04/2022	Marco Alberti	TDD Client Side
15/04/2022	Margherita Orlando	Maps overview and description
16/04/2022	Marco Alberti	TDD General Structure
17/04/2022	Margherita Orlando	TDD External Services
18/04/2022	Marco Alberti	TDD Connection
19/04/2022	Marco Alberti	TDD Delivery
20/04/2022	Francesco Pineschi	Lightsource control
20/04/2022	Margherita Orlando	TDD Workload Estimation
21/04/2022	Francesco Pineschi	Controls
22/04/2022	Francesco Pineschi	Game Characters
23/04/2022	Francesco Pineschi	NPCs
24/04/2022	Margherita Orlando	TDD Cost Estimation
26/04/2022	Margherita Orlando	Leveling System
27/04/2022	Margherita Orlando	Ranking System
28/04/2022	Margherita Orlando	Leaderboards
02/05/2022	Marco Alberti	Interfaces flowcharts
04/05/2022	Marco Alberti	Interfaces description
10/05/2022	Marco Alberti	Main Menu Panels
13/05/2022	Margherita Orlando	Modes and other features
15/05/2022	Marco Alberti	Media List
17/05/2022	Marco Alberti	Prototype

2. Vision Statement

Reya's Light is a free-to-play shooter, platform and 2D side scroller game. Within a dark fantasy universe, choose between several heroes, Lightbringers, each one with their own skills and personality. Build up your team and fight to enforce the White Light. The objective of each game is to dominate the map through area objectives, the Lightsources, until the end of the match. The game offers several gameplay styles according to Lightbringer choices and team compositions. Aggressive, defensive, dynamic, solitary, cooperative, those are all valid ways to win a game. The match is composed by 3 teams. Regardless of the playstyle adopted by a team, a good player should adapt to the game status situation. You should be flexible and change strategy according to the playstyle of other 2 teams. The game is set in a 2D platform map, the palace of Queen Reya, the Lady of the White Light. There are several types of locations in the map. There are palace interiors, outer moats, dungeons and tunnels connecting them. Regardless of the Lightbringer movement's skills and the diversity of the areas, fluidity in map navigation is a key component of the game. Reya's Light offers a new gaming experience using well-known and successful game features.

2.1. Game logline

Choose your Lightbringer, team up with friends and conquer Light Sources to enforce your light and to prevail over your opponents.

2.2. Gameplay Synopsis

Reya's Light takes the strengths of different game types. It provides teamwork strategy, dynamic and fluid gameplay and diversity in game characters. The goal of the game is to dominate the map. Lightsources are the objective of the game. In each match players have to conquer of Lightsources and control them until the end of the game.

Shooter

Like any shooter game, the focus is almost entirely on the defeat of the character's enemies using the weapons different for each playable character. These weapons are long-range weapons or abilities used in combination with other tools such as grenades for indirect offence, armour for additional defence, or accessories such as telescopic sights to modify the behaviour of the weapons.

Platform 2D

2D Platformers are known for the fluidity of the movements, regardless of the genre. Jump on platform is the main element of the game. Character's movement control is a key feature in the Reya's Light gameplay experience. Map navigability is very important in any situation within the game. Platforms are the arenas and the trenches of the battlefields. They should not be an obstacle for the player. They are a chance to turn the tables in the game status situation.

Hero shooter

Like any other shooter game, you shoot. The actual action of the game is to fight against enemies. Each character has a custom and unique set of weapons. Reya's Light brings shooter gameplay to a fantasy world. Bullets are magic shots, grenades are explosive potions, shotguns are fire shots. Magic is unique in each character. Players choose the Lightbringer who fits them better from a huge pool of characters. They should choose also according to the synergies with their teammates. Lightbringers with already defined kits was a fundamental choice of game design. While hardcore killer players are the main target of the game, choosing Lightbringers and creation of the team give a little bit of RPG mood and a strong emphasis on the strategic component (team creation). Another huge advantage of hero-shooter is that the gameplay is modular. Each character gives a unique gameplay, unique game style, team composition strategy, interaction with other characters and diversity in each game. Releasing new characters during, the game is playable, funny and gives to the players new game elements.

3 vs 3 vs 3

The particular choice of including 3 teams it's key for distinguish Reya's Light from all the most popular team games. It creates new dynamics and particular situations. Matches are not simply resolved by one team dominating the other. Strategic gameplay and decision making choices often lead a team to unexpectedly win. These dynamics are typical of board games. The actions of one team affect another. If one team loses the game, that leaves the other two teams contending for victory. The presence of 3 teams totally upsets the style of play. Frontal attacks are used to take Lightsources by force.

Stealth infiltrations are used to conquer undefended Lightsources.

Area Control

Reya's Light PvP style is conquer and defend the bases. This is to highlight the shooter component without trivializing the strategic component. This mode has been present in many 3D shooters for years now but is less used in 2D shooters. Each team can decide whether to move together or separately to take advantage of each situation. Each situation offers countless strategies and each lightbringer has its own kit which makes it more inclined to a certain playstyle. For a clearer idea, the game we have adopted as a reference point as a pvp is "Star Wars: Battlefront". Each base is a team spawning point and conquests work on a timer. The timer is suspended during a contest and restarts when the players of a team are no longer present in the conquest area.

Look and Feel

Reya's light takes players to a dark fantasy universe where light and shadow are the protagonists. Light is the source of the game's power and each player plays as a Lightbringer capable of manipulating light to generate its own magic. The aesthetic of the game is characterized by a handmade graphic style that moves away from the classic pixel art. It approaches a softer style that goes perfectly with the lore of the game. The fall of Reya's kingdom is the central element of the game, a contrast between glory and ruin. The White Light is like a divine source and stands above each Lightbringer. Before, it represented a submission, now an object of contention. The map where the matches take place is Reya's palace. This includes part of the interior and exterior areas (for more details see the "Maps overview" section). The Lightsources are the fundamental elements for the gameplay and the look and feel of the game. They are small faeries born from the essence of Reya's light. The Lightbringer takes control of this light and colours it (according to the team colour). It is also important to specify that the game story is voluntarily omitted. The player is given the essential information to understand the setting and contextualization of each Lightbringer in this atypical world. All this generates an atmosphere of mystery around the figure of Reya. Who is Reya? What does White Light represent? At the end of the document the history of the game world is described in detail in the "Story" section, while in the "Narrative devices" section the way in which it is communicated to the players is described.

3. Audience, Platform, and Marketing

3.1. Target Audience

Psychographic classification

Reya's Light is a game aimed primarily at the target of gamers who fall into the category of Killers according to Bartle's taxonomy of player types. Despite this, the game contains elements that may appeal to other categories of players.

Elements that attract different types of players:

Killer: this category lives in competition with other players and has fun in comparing their skills with those of others. Reya's Light is the game suitable for this type of player as the combat component against other users is predominant. In addition, to further attract the attention of the Killers, at the end of each game we decided to insert a leaderboard that shows the statistics of the individual players, in order to stimulate the player to rise in the rankings, outclass the opponents and even teammates through the acquisition of a better score (number of kills, bases conquered, etc....).

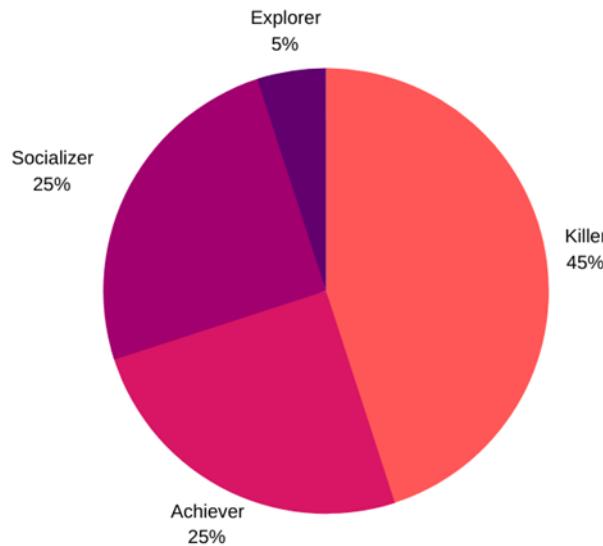
Socializer: are those players who get the most fun from interacting with other players. Thanks to the team combat system in Reya's Light, it is possible to play together with friends in the same team in order to collaborate for the conquest of victory and at the same time, thanks to the online matchmaking system it is possible to meet new people to play with.

Achiever: players who prefer to earn points and who love the opportunity to show off their skills in online games. The leaderboard at the end of each match is also used to attract this category of players who will try to conquer more bases and get the best score.

Explorer: This category of players loves to explore and discover play areas. Reya's Light is not the game that is very suitable for this type of player as there is only one game map inside. In the future, however, the inclusion of additional maps could be considered in order to attract the attention of the Explorer too.

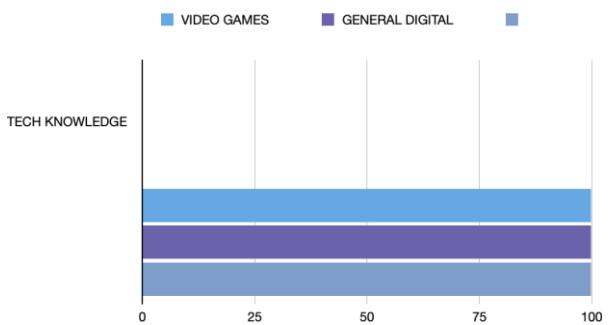
So we can represent the different categories suitable for Reya's Light using the graph below:

Bartle taxonomy of player types

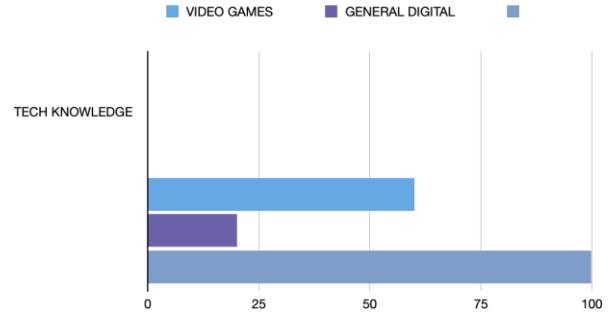


The aspect that attracts the Socializers, that is the possibility of playing together with friends, is not to be underestimated as it allows a growth in the level of sales of the game giving rise to what is called "game sharing": many gamers are inclined to create game groups to buy the same product together in order to share the fun by playing together.

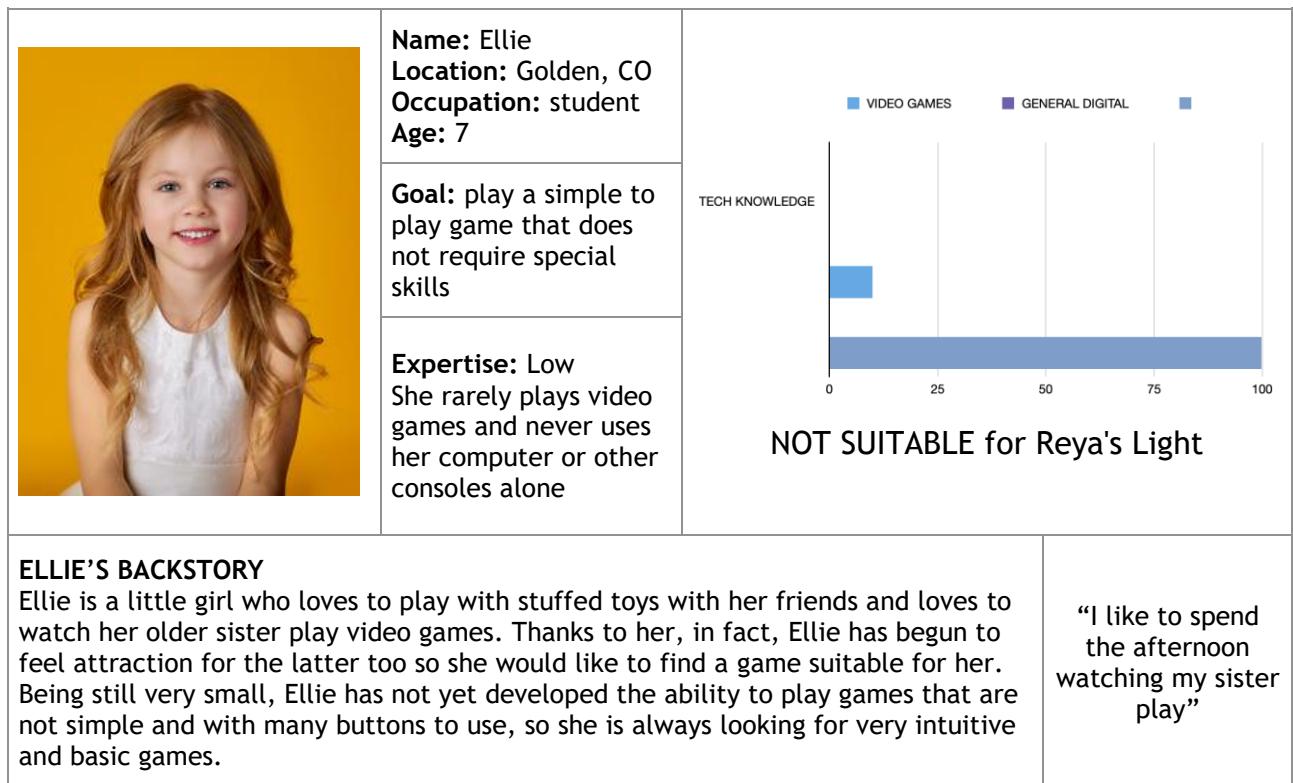
3.2. Personas

	Name: Marta Location: Rende, IT Occupation: student Age: 21	 <p>TECH KNOWLEDGE</p> <p>VIDEO GAMES GENERAL DIGITAL</p> <table border="1"> <thead> <tr> <th>Category</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>VIDEO GAMES</td> <td>~95</td> </tr> <tr> <td>GENERAL DIGITAL</td> <td>~98</td> </tr> </tbody> </table>	Category	Value	VIDEO GAMES	~95	GENERAL DIGITAL	~98	Goal: play an online game that is fun and competitive with her friends Expertise: High She plays video games and studies computer science every day	SUITABLE for Reya's Light
Category	Value									
VIDEO GAMES	~95									
GENERAL DIGITAL	~98									

MARTA'S BACKSTORY <p>Marta is a computer science student who likes to spend her free time on Discord talking to her friends. She and her friends love to play online multiplayer games and often gather at Marta's house to host a LAN party and play competitive team-based games like League Of Legends. Being a computer science student, Marta knows how to use her PC to improve the quality and performance of the game and often also resorts to the use of macros.</p>	<p>“I love to compete online and show my friends what I'm made of!”</p>
--	---

	Name: Kevin Location: London, UK Occupation: student Age: 14	 <p>TECH KNOWLEDGE</p> <p>VIDEO GAMES GENERAL DIGITAL</p> <table border="1"> <thead> <tr> <th>Category</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>VIDEO GAMES</td> <td>~65</td> </tr> <tr> <td>GENERAL DIGITAL</td> <td>~20</td> </tr> </tbody> </table>	Category	Value	VIDEO GAMES	~65	GENERAL DIGITAL	~20	Goal: find a stimulating game, through which he can meet new friends Expertise: Medium He plays video games only on weekends and uses his computer exclusively for playing	SUITABLE for Reya's Light
Category	Value									
VIDEO GAMES	~65									
GENERAL DIGITAL	~20									

KEVIN'S BACKSTORY <p>Kevin is a first year high school student. He is a very introverted person who in his spare time plays the video games that his older brother installed on his PC. Kevin likes to play online games because he often knows people with whom he plays as a team. Although he doesn't know how to use the PC, Kevin is very skilled at using mouse and keyboard when it comes to video games, many times in fact he has given his brother a hard time.</p>	<p>“I met many friends online, one day I hope to meet them in person!”</p>
---	--



3.3. Demographic classification

Geographical Areas

As Reya's Light is a game with cartoony graphics, devoid of bad language, violence and sexual references, its geographical spread does not lead to being censored in any country, thus promoting the sale of the product all over the world.

Age and Gender

Reya's Light aims to attract as much public as possible without distinction of age (except the age group under 7 for legal reasons described in the Legal Analysis section) but above all of sex: the game itself in fact has both female and male characters in order to attract both genders.

3.4. Platform

From a survey carried out towards the end of 2021, it has been revealed that PC is the most played gaming platform of the year, with PlayStation 4, Nintendo Switch, PlayStation 5, and Xbox One coming in second, third, fourth, and fifth respectively. Interestingly PlayStation 3 is higher up the list than Xbox Series, which came in at a surprising seventh. From the analysis of this survey it was decided to develop Reya's Light as a computer game also following some evaluations: the gameplay of the game fits better on a computer screen rather than a mobile phone, because it allows a wider view of the map and PC controls (mouse and keyboard) provide a better user experience for a competitive shooter game, where players have to aim and shoot faster and more precisely than opponents.

3.5. System requirements

	Minimum requirements	Recommended requirements
Memory	At least 1 GB di RAM 2 GB of available space	2 GB di RAM 2 GB of available space
Network	Discreet connection	Broadband internet connection
Graphics card	NVIDIA GeForce 9500 GS or AMD Radeon HD 6450A	NVIDIA GeForce GTX 760A or AMD Radeon HD 7560D + HD 7600 Dual
CPU	Windows: Intel Core 2 Duo E8400 MacOS: Apple M1	Windows: Intel Core 2 Duo E8400 MacOS: Apple M1
Audio Card	Yes	Yes

	Minimum requirements	Recommended requirements
System version	Windows: 8, 32-bit MacOS: 12.0.1 SteamOS: 3.0	Windows: 10, 64-bit MacOS: 12.0.1 SteamOS: 3.0
Other	Steam Client	Steam Client

System requirements have been specified by analyzing competitors on the market with similar graphics and play styles.

3.6. Top performers

There are currently several games on the market that possess some of the characteristics of Reya's Light. In order to create a product that appeals to the public, we have taken into consideration the most similar competing games by analyzing them.

Brawl Stars	
	Developer(s): Supercell
	Platform(s): iOS, Android
	Release: December 12, 2018
	Genre(s): MOBA, Hero shooter
	Description: players battle against other players or AI opponents in multiple game modes, each one having a different objective. Players can choose between characters called Brawlers that they have unlocked through Boxes, the Brawl Pass, the Trophy Road, or purchased through the Shop to use in battles. Players can invite friends to play with them and it is possible to purchase skins.

Brawlhalla	
	Developer(s): Blue Mammoth Games
	Platform(s): macOS, Microsoft Windows, PlayStation 4, Nintendo Switch, Xbox One, Android, iOS
	Release: <u>macOS, Microsoft Windows, PlayStation 4</u> October 17, 2017 <u>Nintendo Switch, Xbox One</u> 6 November 2018 <u>Android, iOS</u> 6 August 2020
	Genre(s): Action
	Description: It is a free-to-play 2D fighting game with several game modes. In most of <i>Brawlhalla</i> 's game modes, the goal is to knock one's opponent off the stage. This can be done by damaging them repeatedly. The game supports both local and online play. During a match, gadgets and weapon drops fall from the sky semi-randomly and can be picked up by the players.

Worms Rumble	
	Developer(s): Team17
	Platform(s): Microsoft Windows, PlayStation 4, PlayStation 5, Nintendo Switch, Xbox One, Xbox Series X/S
	Release: <u>Windows, PS4, PS5</u> December 1, 2020 <u>Switch, Xbox One, Series X/S</u> June 23, 2021
	Genre(s): Action, battle royale
	Description: It is a 2.5D real-time action game in which players assume control of an anthropomorphic worm and compete against other players in modes including Death Match, Last Worm Standing and Last Squad Standing. The game features a variety of weapons which can be used to defeat enemies. Players can also acquire jet packs and grappling hooks to navigate the environment. As players progress in the game, they can also gain experience points which can be used to unlock cosmetic items and customize the appearance of their playable avatars.

3.7. Feature comparison

Below are the competing games compared with our project in such a way as to bring out the aspects that make it unique.

Title	Worms Rumble	Brawlhalla	Brawl Stars	Reya's Light
Genre	Action, battle royale	Fighting, free-to-play	MOBA, Hero shooter	Hero shooter, platform, free-to-play
Graphics	2.5D	2D	3D	2D
Camera	Side scrolling	Side scrolling	Top-Down	Side scrolling
Team asymmetry	Solo 1v31 3-player Squads Battle Royale	Solo 1 vs 1 2 vs 2 all against all (4 players)	Solo 3v3 1v5	3 teams composed by 3 players
Playable characters	Custom avatar	55 legends	55 brawlers	9 lightbringer*
Character progression and skill system	Skills only	Skills only	Skills only	Skills only
In match power ups	Yes	No	No	No
Timed match	Yes	Yes	Yes	Yes
Ranking system	Yes	Yes	Yes	Yes
Leaderboard	Yes (Global)	Yes (Global)	Yes (Global)	Yes (Local, Global)
Shop/Purchases	Yes	Yes	Yes	Yes

*See the “Modes and other features” section for more details.

4. Legal Analysis

4.1. Hardware and Software

All software and hardware used for the development of Reya's Light have been legally purchased and are described in detail in the Technical Design Document.

4.2. Resources and digital contents

All the resources and content in Reya's Light, such as sprites and audio files, were created by the development team or purchased/downloaded for free from the Unity Assets Store and from the Freepik and FreeSound websites.

4.3. Pan European Game Information (PEGI)

According to the PEGI classification which examines the suitability of a game on the basis of age, Reya's Light, being a Shooter game with cartoon graphics, falls into the PEGI 7 category, that is the category of games that contain scenes or noises that could scare and in which very mild forms of violence (implied, not detailed or unrealistic) are acceptable. These considerations were made on the analysis of competing products and on the observation of the statistics of PEGI classifications that were formulated using the traditional PEGI evaluation procedure before commercialization, applicable to all video games on discs or cartridges for Microsoft, Nintendo and Sony consoles, and on PC:

PEGI rating	3	7	12	16	18	Total
Violence	-	327	260	235	278	1100
Bad Language	-	-	196	105	238	539
Fear/Horror	-	117	42	-	-	159
Sex	-	-	62	19	13	94
Drugs/Alcohol	-	-	-	35	5	40
Gambling	-	-	14	4	72	90
Discrimination	-	-	-	-	-	0
In Game Purchases*	109	34	64	40	115	362

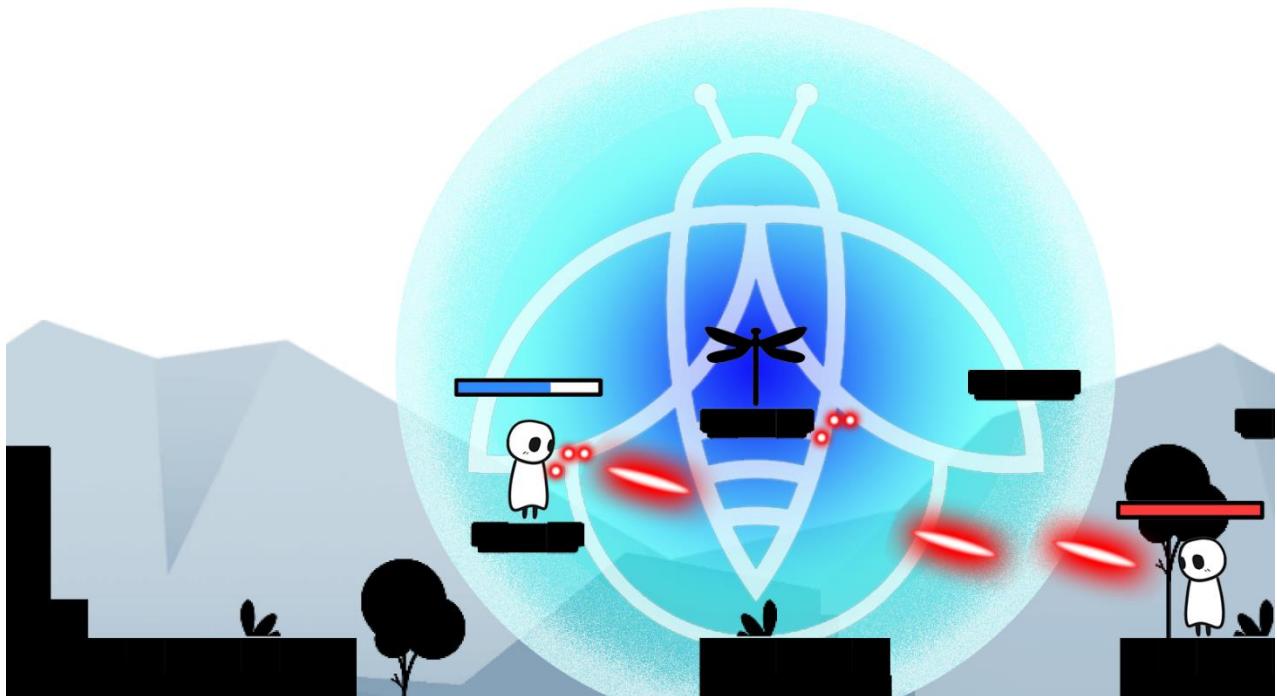
5. Gameplay

5.1. Overview

In Reya's Light, the player teams up with 2 other Lightbringers to dominate the map in order to win the game. There are 3 teams, each one starting from a Lightsource (base). These three teams are called Ruby, Larimar and Emerald and are represented respectively by the colors red, blue and green. The game is 10 min long. At the end of the timer, the winner is the team with more Lightsources in their own possession. Each match is set in a 2D platform map. The player navigates in the map as a classical jump platformer and fights the other players.

5.2. Gameplay description

This section shows in detail each of the main contents of the gameplay, design mechanics and gameplay systems. As a basic gameplay experience, Reya's Light can be classified as a shooter. Players need to fight the opponent in order to conquer the Light Sources. To achieve that, the game offers a general **aim system** for the basic attacks and the skills of Light Bringers and a **movement system** as fluid as possible.



5.3. Maps overview

Structure

The main map has a pyramid structure (figure A). Inside there are the lightsource (circles in figure A and B), which must be conquered in order to win the game, and the initial spawn points of the 3 teams marked with the colors blue, red and green as the colors of the teams, as shown in figure B. When a team takes possession of a lightsource (neutral or enemy) it becomes an additional spawn point for the team, in fact at each respawn, the player will be allowed to choose the point in which to respawn. When a team no longer has lightsource, it loses the game by entering spectator mode, giving the possibility to any player of the losing team to leave the game at any time.

Figure A: General structure of the map

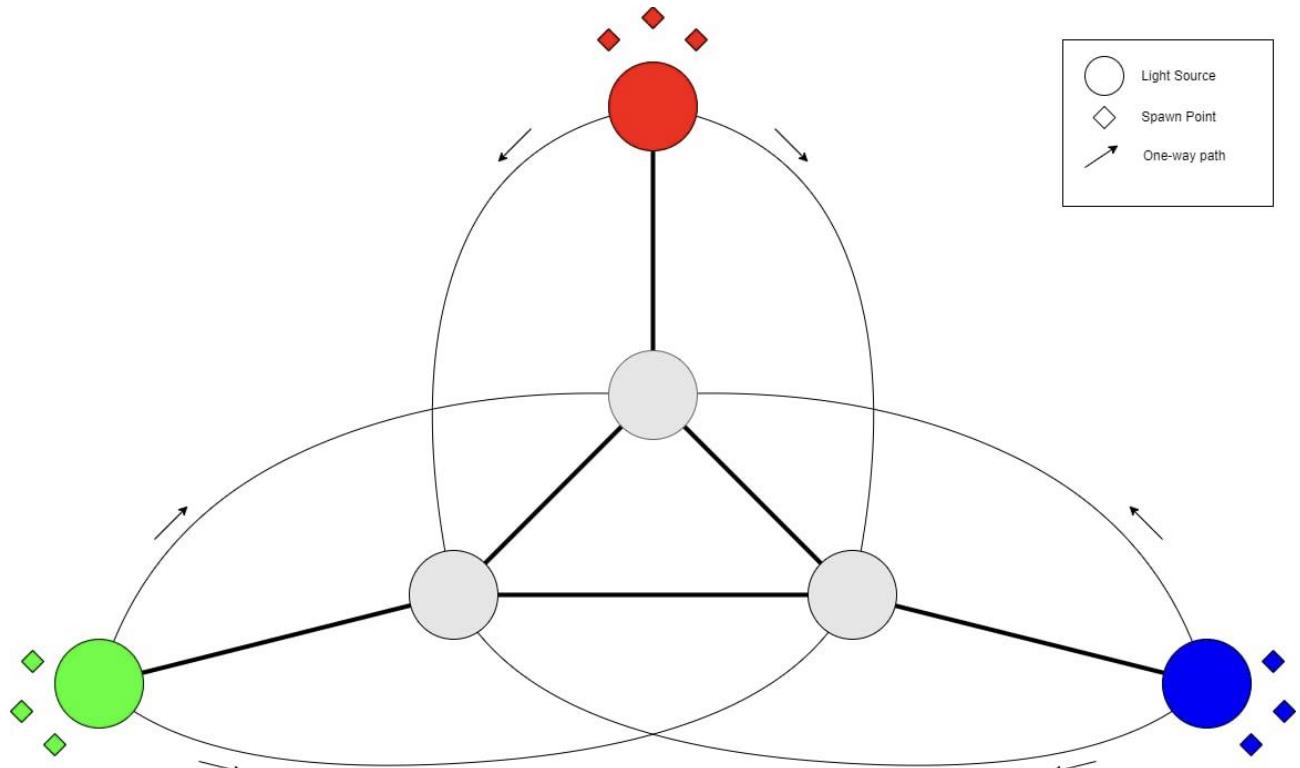
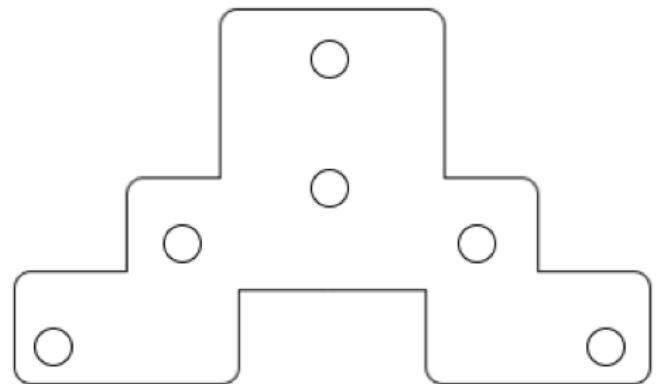
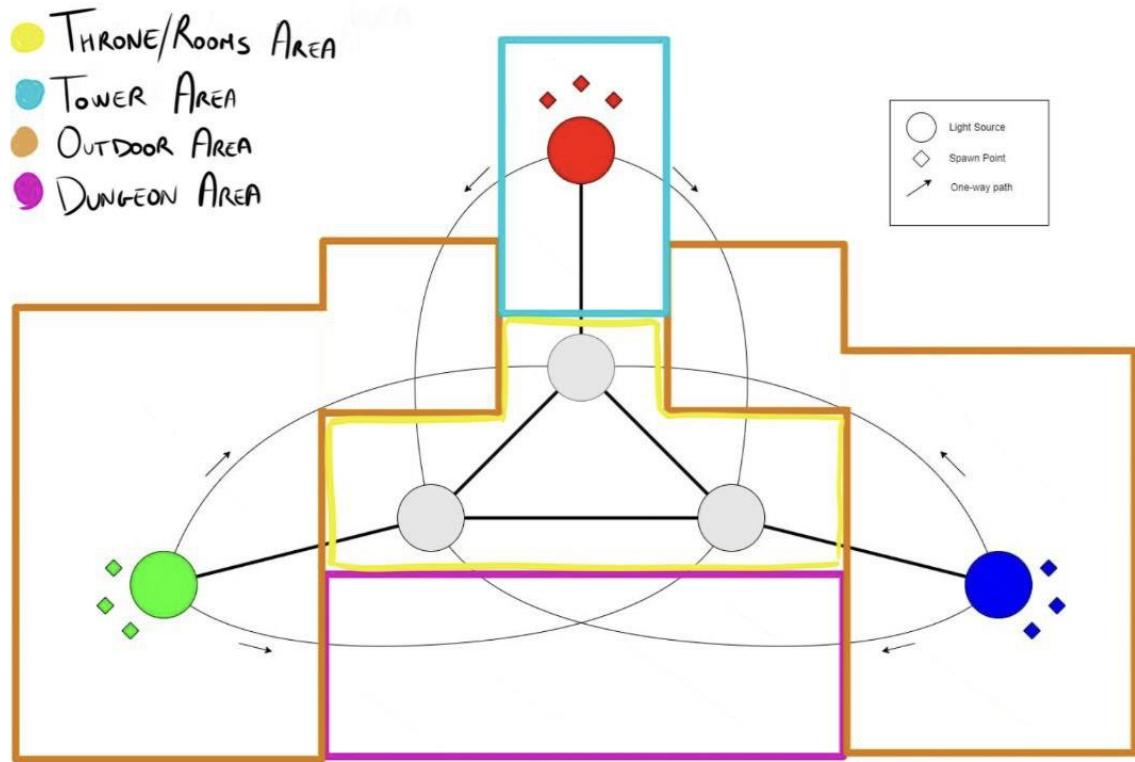


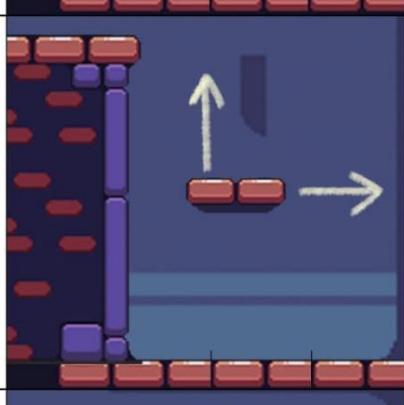
Figure B: Connections between the various areas of the map

Settings

In this map, players find themselves inside the walls of a medieval-style castle, seat of the throne of the queen Reya, settled in Nest (for more information about Nest's story see the "Gameworld" section, for more information about Reya see the "NPC" section), made up of different areas: the **tower area**, the **throne/rooms area**, the **dungeon area** and the **outdoor areas**. Inside the tower is Reya's statue, which seems to observe the lightbringers fighting to take possession of the light from above, so her functionality is purely aesthetic. The breakdown of the various areas within the map is shown below:



Objects and Obstacles

Map Objects/Obstacles	Effect	Reference
Doors	One way doors, used to prevent players from crossing certain paths in reverse. The viable side is indicated by an arrow while the non-viable side is indicated by a cross.	
Spikes	They cause damage to players and can be placed on the ground or walls. They are used to hinder players and push them to implement strategies to reach certain points on the map.	
Unclimbable walls	Walls identified by a different color (purple) than the others, indicate to the player that it is impossible to climb on them. They are used to delimit the map and some game areas.	
Moving platforms	Horizontal: used to reach certain points on the map Verticals: used to reach high points on the map	
Dark flames	They are used to hinder the player: every 3 seconds they are activated causing damage to the players who come into contact with it. They symbolize darkness.	

Mini-map

Inside the game there is a mini-map depicting a draft of the map structure, similar to as shown in Figure A so that he has a view of what is happening on the map. It has been inserted in such a way that the player always has an eye on the current situation of the lightsource, i.e. which are owned by his team, which are owned by the opponents and which are neutral, and also his current position and that of his allies.

Other maps

Initially the game will be released with only one map, the main map, but later we expect to release more maps with different environments in order to attract our players with new content released periodically (see the section "Release of new content" for more details).

5.4. Game objectives

The goal of the game is to win the match. In order to win the match at the end of the timer (10 minutes) your team has to control more Lightsources of other teams. That leads to different scenarios according to the playstyle of each team.

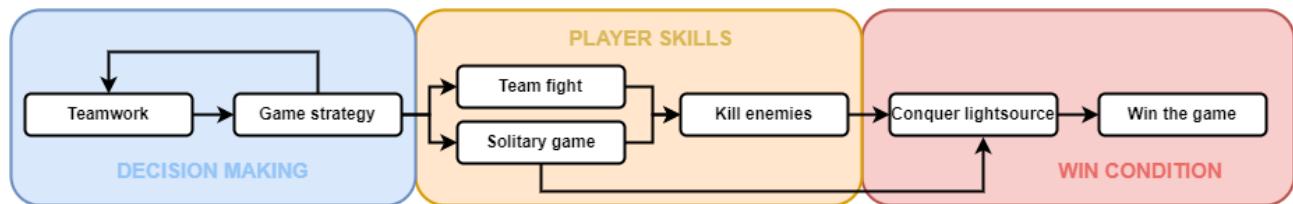
As a shooter competitive game, the game is fight-oriented. Regardless of the game strategy adopted to players/teams, fight is always the key feature. In most cases, fighting and killing the opponent is required to conquer the Lightsource.

Lightsources (LS) are the physical objectives in the game. At the end of the 10 minutes timer the team leaderboard tells who is the winning team and the position of each player based on his score.

Examples of winning conditions:

- if Larimar team has 3 LS, Ruby team 2 LS and Emerald team has 1 LS, the winner is Larimar team;
- if there is a draw at the end of the timer, the game goes on until there will be a playoff;
- if both Larimar and Ruby teams have 3 LS and Emerald team has 1 LS, the match will not end until one of the teams will have more LS than others (3,2,1)(4,2,0)(4,1,1)(1,0,0)...).

The diagram below summarises the objectives and the game dynamics.

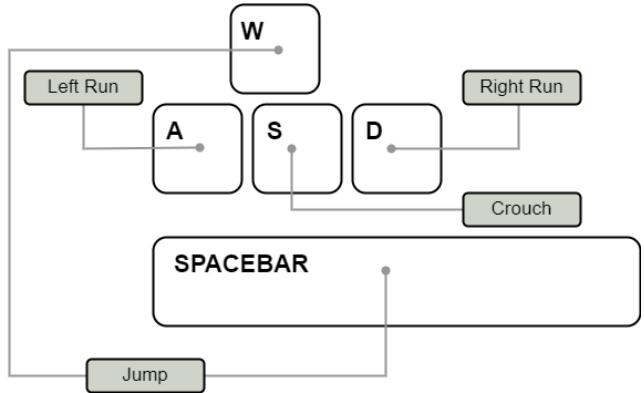


The main goal of the game is to **win the match**. To achieve a victory, teams should **conquer Lightsource** and control them until the end of the match. To conquer the Lightsource, players should **kill the opponents** with the same objective. To kill the opponents, players have to organize the best **strategy** possible according to each situation. That leads to an important element of **decision making** that is effective just if each player of the team works with the team mates. The key element for achieving the goal of the game is **teamwork**.

5.5. Movement system

The movement system of the game aims to provide the easiest map navigability possible. The map of the game is a 2D side scrolling map. Platforms are both the only way to navigate through the map both the covers players hide during teamfight. The movement system is **platform** oriented.

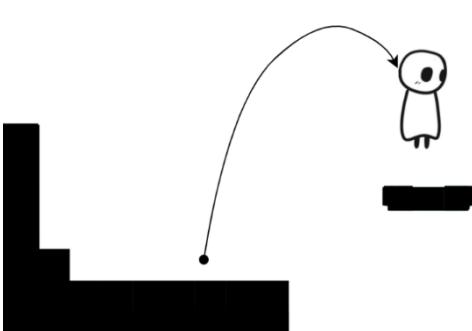
Each Lightbringer has its own base **movement speed** that is calculated in m/s (10 is the average among all the Lightbringer pools). There is no acceleration and the movement speed is applied instantly on the press of A or D.



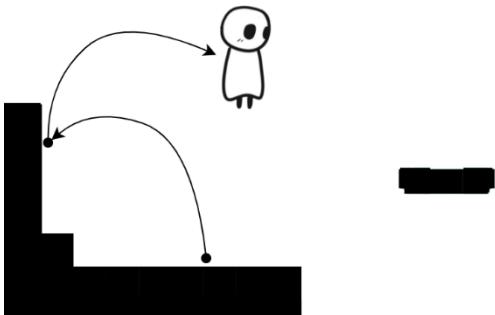
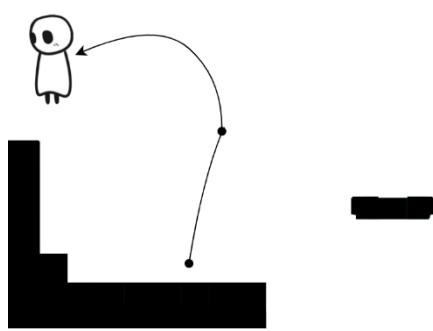
The **crouch** is useful to pass through some tight passages under platforms. It is also used as a better way to hide yourself during fights using platforms as cover.

Jump is a key element of the game because the map is extended vertically and should be easy to move from a downward position to a higher one. Unlike the horizontal movement, the jump has an acceleration. This acceleration has a limit for not giving too much advantage to the players that move from the top of the map to down. The player can move horizontally in mid-air (with a slower speed). There is no fall damage. To make vertical movement even easier, the game provides double jump and wall jump. **Double jump** is managed as a second chance to jump in mid-air and reposition vertically. It is useful for not excessively punishing players who have miscalculated the trajectory of the jump. **Wall jump** is the best way to climb vertical. Technically, each time the player hits a wall in mid-air he can jump again (double jump included). In this way the vertical platforms are managed exactly as horizontal platforms.

Jump



Double jump



5.6. Aim system

The aim system of the game is controlled by the mouse pointer. Basic attacks and most of Lightbringer's skills are projectiles. The projectile starts running from the "fire point" just ahead of the Lightbringer and follows the mouse pointer trajectory at the moment of the fire. This way the aim system and the movement system are managed from two separate controllers (keyboard and mouse) but are strictly related.

Each Lightbringer has his own signature basic attack and skills. To provide diversity, there are several parameters that define a single projectile. In a general way, the parameters are the following:

Range: defines the length traveled by the bullet. According to the mouse pointer position and the range, the projectile may stop or go beyond the clicked point.

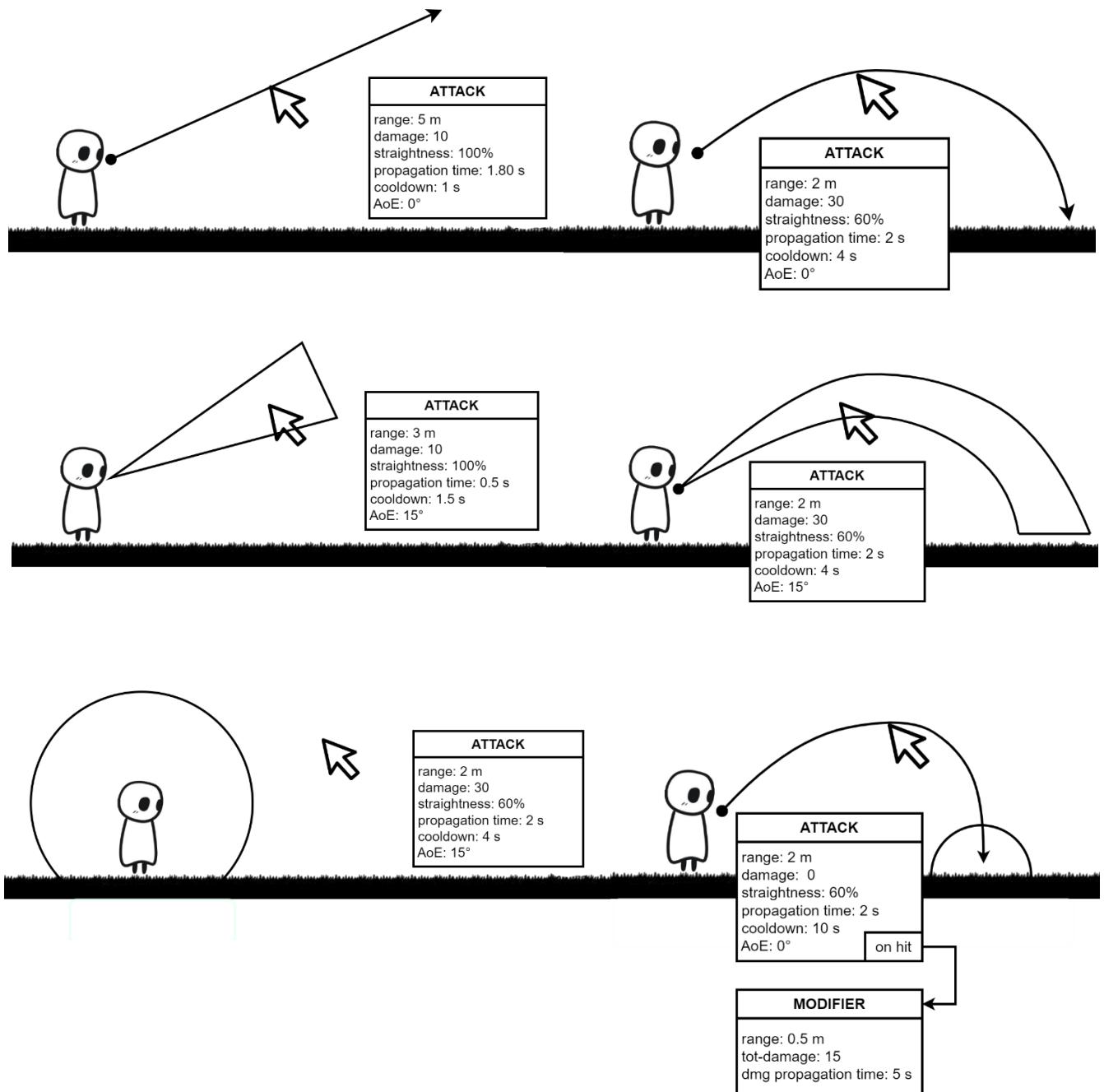
Damage: is the amount of health points it afflicts when the enemy hits.

Straightness: defines if the projectile does not have ant gravity deviation and in which this modifies the trajectory.

Propagation time: defines the amount of time the projectile reaches the max range.

Cooldown: is the rate of fire. It manages the amount of time the player has to wait before shooting again. It could be less than one sec for basic attack or higher for skills.

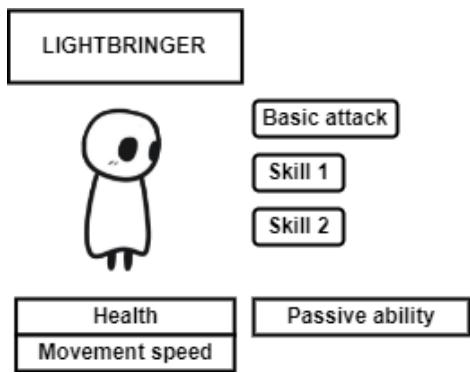
Area of Effect: defines the size of the area the projectile affects. It is managed as an angle. The projectile will travel through the area covering the cone shape defined by the angle and the max range.



Some kind of skills and projectiles could apply some AoE to the hit point. Examples could be: grenades which explode in the hit moment dealing AoE damage in circle, fire bombs which explodes in the hit moment letting a fire area on the hit point for an amount of time, grenades which explode after some seconds after reaching the hit point.

In order to simulate these behaviours, skills and basic attacks could have a “**on hit**” effect. On hit effects can be described as a second projectile starting from the end of the first one. The parameters are the same with some extra ones according to the designed skills. Propagation time and AoE are important for simulating the fire bombs and the grenade described before.

5.7. Basic attacks, skills and passive ability

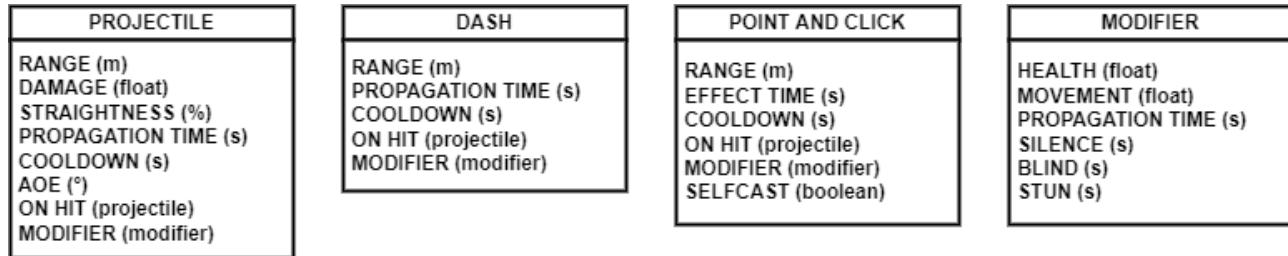


This section describes in a general way the classification of the ability of Lightbringers.

Each Lightbringer is defined by a set of parameters which are the health, movement speed, passive ability and the combination of one basic attack and two skills.

While health and movement speed can be defined easily as float numbers, basic attacks, skills and passive ability are much more complex and require some extra data structure for generalising and managing them. **Basic attacks** are in most cases projectiles (as described in the section before). This design choice provides each Lightbringer a shooter component.

Skills can be generalized in 3 categories: projectiles, dashes and point and click abilities. That is not a straight limit. Some Lightbringers could have unique skills that do not belong in these categories. For this the game needs a modular and scalable structure to create new Lightbringers and new abilities that are all different and original.



Projectiles are the main way to fight against opponents. As already said, it is defined by several parameters. The combination of range, damage, aoe, cooldown, etc. designs the uniqueness of the attack. “On hit” parameter is an event that occurs while the projectile reaches max range or hits something. In most of the cases it spawns other projectiles with their own parameters. “Modifier” is a special parameter that applies some changes to the statistics of the Lightbringer hit. These changes could have a slow effect, heal regeneration buffs, poison, etc.

Dash is a special kind of skill that translates the current position of the Lightbringer into another one. It has similar parameters of projectiles. There are no parameters regarding damages. Dashes can have on hit effects and modifiers too. Examples could be a little explosion in the final position of the dash, a poisoning of each target in the trajectory of the dash, or a self-buff after the dash.

Point and click abilities are special skills that don’t need to hit the target. They are applied in the position of the mouse and there is no trajectory (if not as a graphic effect). These abilities are several and most of the time they apply a modifier on the target. The self-cast is a parameter defined if the ability is automatically cast on the player.

Modifier is a set of effects applied on the Lightbringer hit. They affect the current status of a player. The parameters that are modified are health, movement and output controls in general. Health and movement modifiers can be a buff or debuff of current statistics of the player. They are applied on a propagation time. A debuff of health in 3 seconds is essentially a poison, while a buff of health in 0 seconds is essentially an instant healing. A debuff of movement speed in 2 seconds is a slowdown, a buff of movement speed in 5

seconds is a speed up. A disabler of output controls represents other kinds of debuffs as the deactivation of basic attacks (blind) or skills (silence), the deactivation of movement system (immobile) or both (stun).

Passive ability is the last element that composes the design of a Lightbringer. It is the most heterogeneous element and it is hard to classify. It can be just a bigger basic health bar or a faster basic movement speed. Can be an increase of basic health regeneration. Can be a buff on each third basic attack or each third skill casted. The passive ability is the last and, probably, most important element of balancing a single character. In the Lightbringer section several passive abilities are shown.

MODIFIER
HEALTH (float)
MOVEMENT (float)
PROPAGATION TIME (s)
SILENCE (s)
BLIND (s)
STUN (s)

5.8. Lightsources control

The Lightsources (LS) are the points of interest of the map. They represent the winning condition of each match. Teams fight in order to conquer and defend LS. This section shows all the features of LS and how players interact with them.

There are 6 LS in the game map. Each LS can be **White** (no one team controls it) or **Coloured** (one team controls it). At the beginning of each match, 3 LS are Coloured and 3 are White. Among them, one is Red, one is Blue and one is Green.

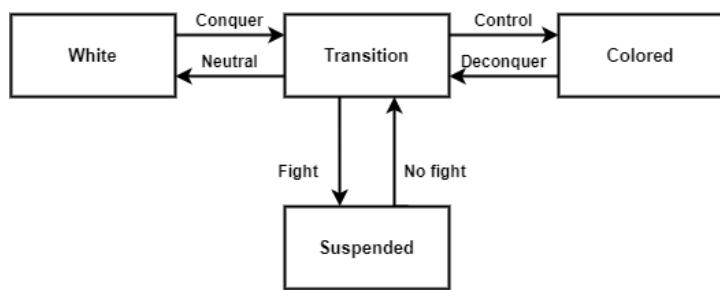
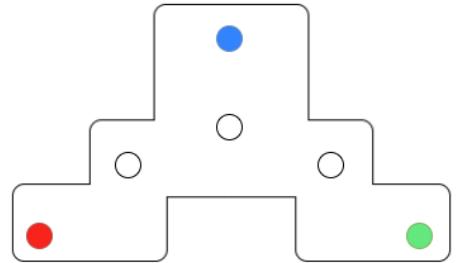
Players can conquer the LS just by standing nearby. If players of different teams stand close to the same LS, the process of conquest is suspended until one of the players retreats. There are 3 statuses that define the Finite State Machine of the LS.

White: the LS is neutral. No one of the teams controls it. It can be conquered. If a player is nearby the LS, the conquer process starts and it goes in the Transition status.

Coloured: the LS is under the control of a team. It gets the colour of the team. If a player of another team is nearby, it goes into Transition status.

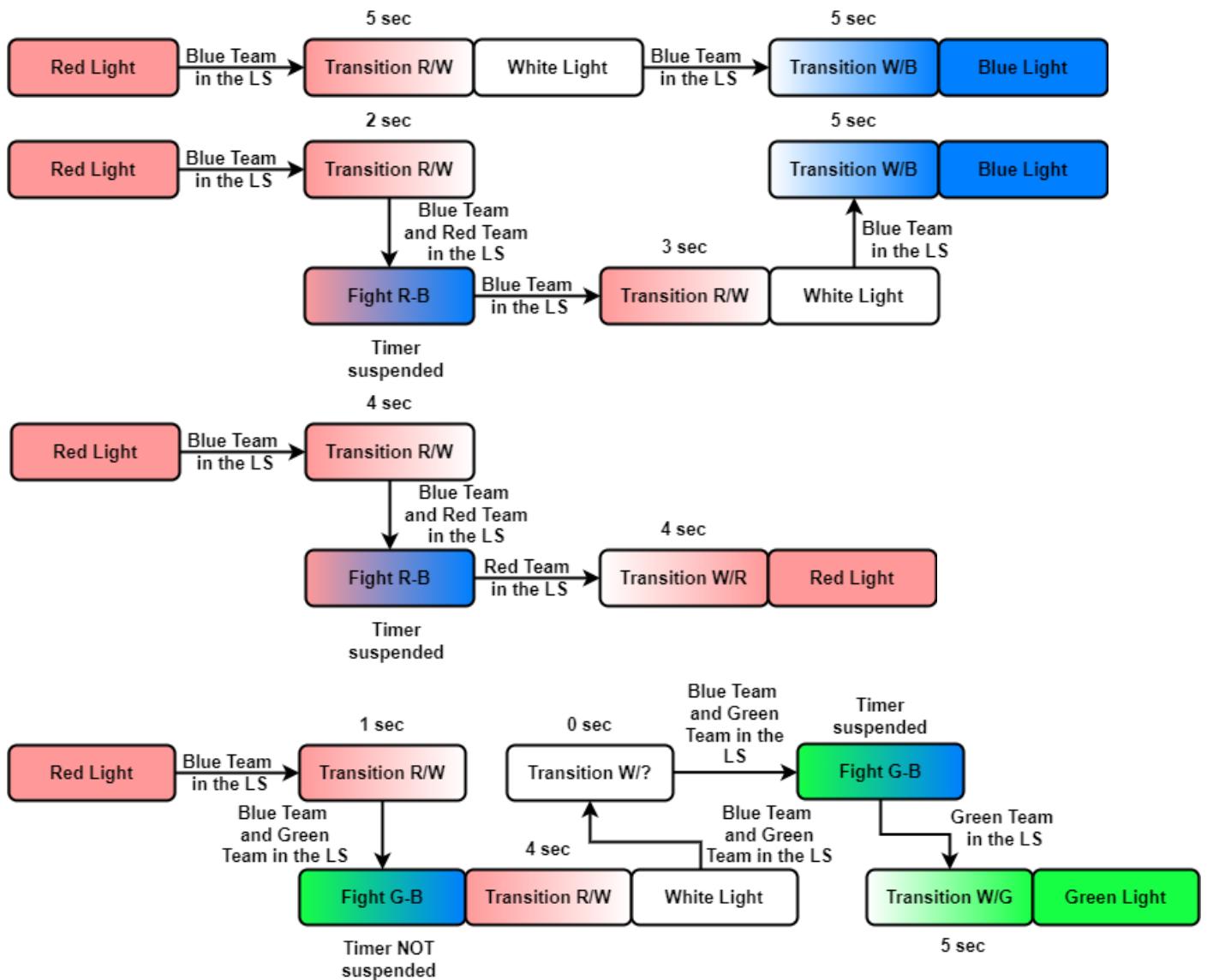
Transition: only players of the same team are nearby a LS (white or controlled by another team). The transition is 5 seconds long. It leads the LS from White to Coloured or vice versa. It can't lead a LS from one colour to another. During a Transition, if the team that is conquering or deconquering leaves the area, the timer stops and goes back to 0. This regression leads the LS to the previous colour (or white). The time of regression is doubled (example: Blue team is near a white LS for 3 seconds then leaves the area. The LS needs 6 seconds to return white). During a Transition, if players of another team are nearby, the timer is suspended and the LS goes into suspended status.

Suspended: there are more than one team nearby the LS during a transition. The LS stops the counter and memorizes it. When one of the 2 teams leaves the area, the timer restarts. If the conquering team leaves the area, the timer goes back to 0. If the other team leaves the area, the timer restarts from the suspended point.



The LS have another key element in the game. They are the **spawning points** of the players. At the start of the game and each time a player dies in the game, after 10 seconds they can respawn nearby one of the LS their team controls. If a team loses all the LS in its control, the respawn is negated until one player is able to conquer a LS so their teammates can respawn. That is a key mechanic in the game. It can be used to eliminate a team from the game before the timer is out. In this way the match becomes a 3 v 3 with just 2 teams.

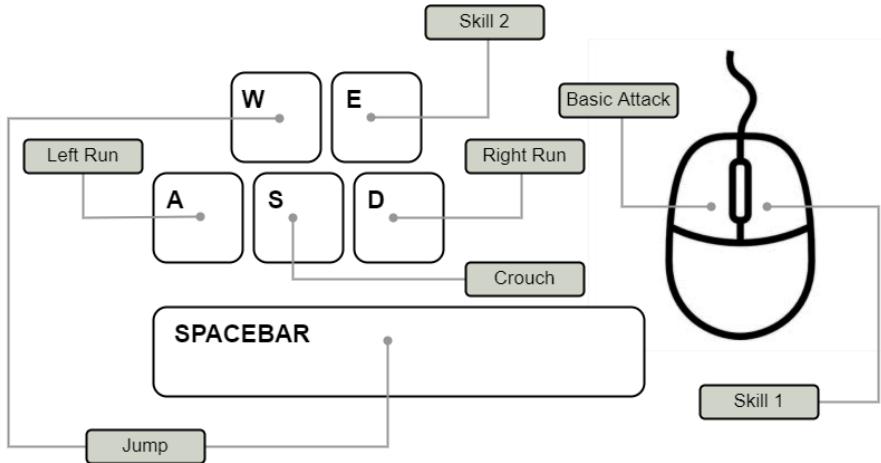
Below are examples of 4 possible scenarios of Lightsources control.



LS: Lightsource R: Red Team B: Blue Team G: Green Team X/Y: transition from Team X to Team Y X-Y: fight between Team X and Team Y n sec: transition timer ?: unspecified Team
--

5.9. Controls

The map of Reya's Light is a 2D map with a horizontal view as a traditional 2D game. The movement system is based on the classical WASD configuration. The aim system is controlled by mouse pointing and shooting with the left click. Abilities of the character are activated on right click and button E. Spacebar is equivalent to W button to jump. This configuration is decided in order to offer the most comfortable controls of a pc shooter. Commands could be changed in the menu according to the preferences of each player. The game provides also double jump and wall jump to guarantee map movement fluidity.



Run/Jump/Crouch

For more information about the run, the jump and the crouch, see the “Movement System” section.

Basic Attack

The projectile travels through the current position of the player and the position of the mouse. The event is triggered on the press of the mouse. Some basic attacks can be managed on hold or on release of the mouse button. The range of attack determines where the projectile stops. So the position of the mouse gives the actual trajectory and not the real hit point.

Skills

Skills are managed as basic attacks. For the projectiles and dashes skills it is exactly the same. The trajectory is given by the connection of the mouse pointer (on the press of the skill button). For the point and click skills, the target is the player or the point in the map where the mouse sits on during the press of the skill button. On self-cast ability the mouse pointer is ignored and the target is always the player

5.10. Leveling System

Inside the game there is a leveling system with no level cap. Each game the player gains experience in relation to different factors as shown in the tables below. When new playable characters are released, the player, in addition to the experience, will begin to earn **Spheres of Light** that are points through which he can purchase new Lightbringers in the store of the game. Experience gain can be calculated based on the total number of seconds played during a given game, whether or not the game is won. The formula is the following:

General formula:							
$EXPERIENCE = (TIME \times (XP/s) + Base\ XP)$ (rounded to nearest integer)							
If the game is won:							
$EXPERIENCE = (TIME \times 0.11 + 6.6)$							
If the game is lost:							
$EXPERIENCE = (TIME \times 0.09 + 5.4)$							
Game result	XP/s	Base XP					
Win	0.11	6.6					
Loss	0.09	5.4					

Experience Required																					
Level 1 to 20		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
Current Level	1	144	144	192	240	336	432	528	624	720	816	912	984	1056	1128	1344	1440	1536	1680	1824	
XP for next level	144	144	192	240	336	432	528	624	720	816	912	984	1056	1128	1344	1440	1536	1680	1824		
Total XP required	0	144	288	480	720	1056	1488	2016	3360	4176	5088	6072	7128	8256	9600	11040	12576	14256	16080		
Level 20 to 40		20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
Current Level	20	1824	1824	1824	1920	1920	1920	2016	2016	2208	2208	2304	2304	2400	2400	2496	2496	2592	2592	2592	
XP for next level	1824	1824	1824	1920	1920	1920	2016	2016	2208	2208	2304	2304	2400	2400	2496	2496	2592	2592	2592		
Every 20 levels thereafter																					
Current Level	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	
XP for next level	1563	1659	1659	1659	1659	1851	1851	1851	2043	2043	2043	2235	2235	2235	2331	2331	2331	2427	2427	2427	

5.11. Ranking System

Once reached level 20, the player will be able to play ranked games (for more information see the "Ranked mode" section). Each ranked match provides the player with a score (**Light Points**) that will allow them to advance through the league within the game. Light Points can be either positive or negative: positive if the player wins the game, negative if he loses it. Each league to be overcome provides a gain of 100 points. When a player has 0 points in the league he is in, the loss of two consecutive games will lead to the player falling into the league that is immediately below the one he was in. The difficulty of each league is given by the type of players that are in each ranked game, who will have more or less skills based on the league they belong to. The various leagues are described in the following table. Light Points are earned also in relation to the position occupied in the standings at the end of the match. The next section shows the formulas for calculating the Light Points.

Rank
Iron I
Iron II
Iron III
Bronze I
Bronze II
Bronze III
Silver I
Silver II
Silver III
Gold I
Gold II
Gold III
Platinum I
Platinum II
Platinum III
Diamond I
Diamond II
Diamond III
Master of Light
Lord of Light

Calculation of Light Points

Leaderboard position	Positioning points (PP)
1st place	+90
2st place	+80
3st place	+70
4st place	+60
5st place	+50
6st place	+40
7st place	+30
8st place	+20
9st place	+10

Game result	Formula
Win	$(10 + PP)/4 \rightarrow \text{Rounded up}$
Loss	$-(11 - PP/10) * 2 \rightarrow \text{Rounded down}$

Possible cases		
Leaderboard position	Win	Loss
1st place	+25	-4
2st place	+23	-6
3st place	+20	-8
4st place	+18	-10
5st place	+15	-12
6st place	+13	-14
7st place	+10	-16
8st place	+8	-18
9st place	+5	-20

The leaderboard position is calculated through the number of kills (**K**), the number of assists (**A**), the number of bases conquered (not as a team but as a single player) (**B**) and the number of deaths in the game (**D**), using the following formula: $(K + A + B) / D$

5.12. Leaderboards

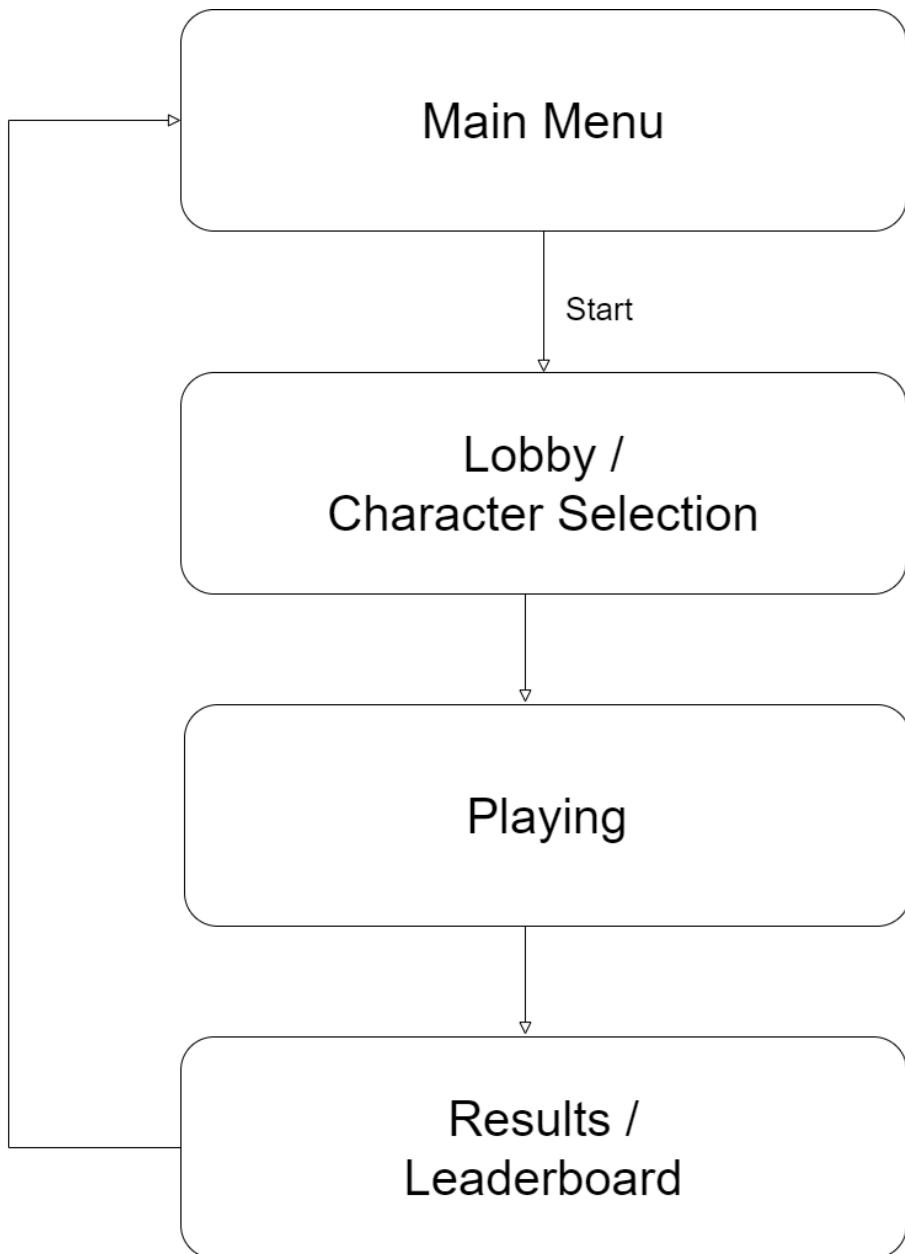
There are both local and global leaderboards in the game. The local leaderboards show the scores obtained by the player during the game, it is displayed in game via the TAB key and at the end of each game. In the user profile, on the other hand, it is possible to view the scores obtained in the last 10 games in the Career window (for more information see the "Leaderboard (Career) section). For more details on the structure of local leaderboards, consult the "Interfaces" section.

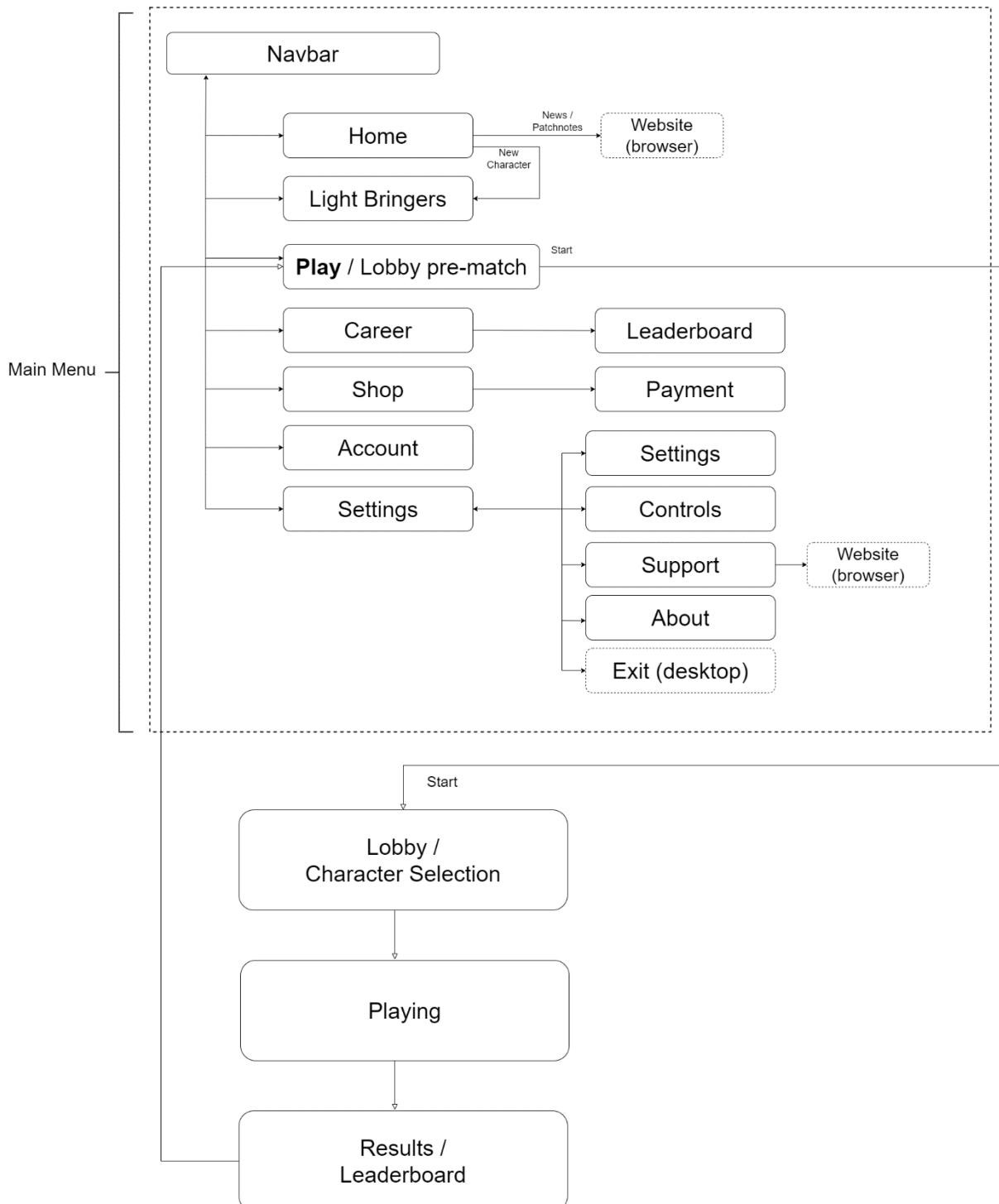
The global leaderboard, on the other hand, is located on the Steam Community website and shows the ranking of players ordered according to the rank to which they belong. For more information on implementing the global leaderboard, see the Technical Design Document.

6. Interfaces

6.1. Flowcharts

Flowchart (simplified version)



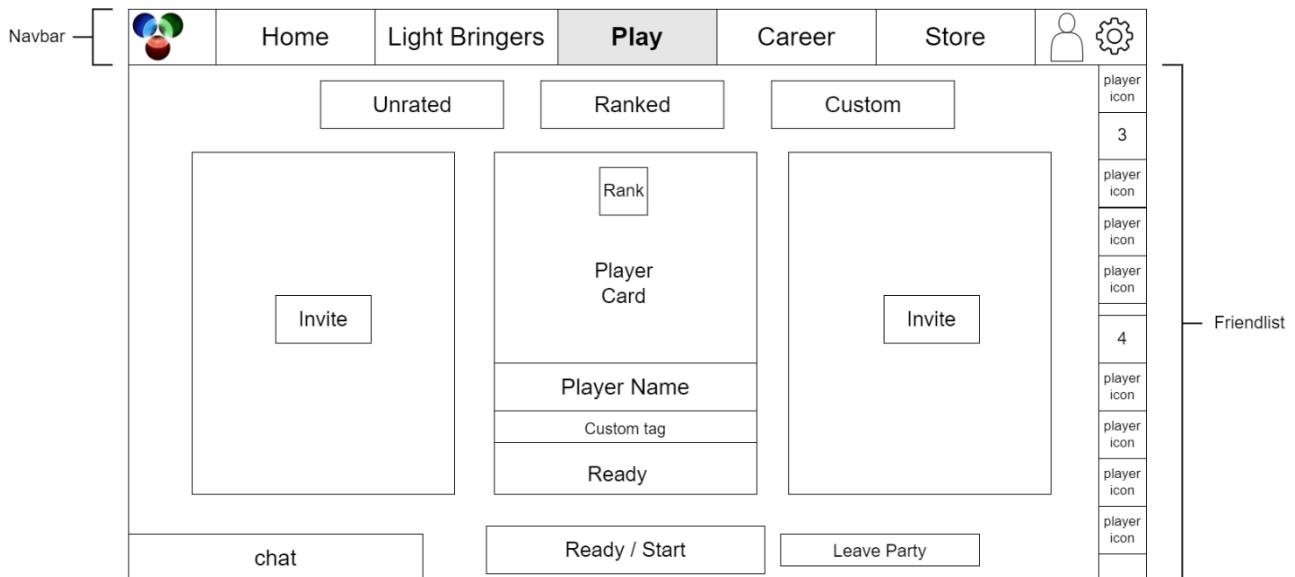
Flowchart (including Main Menu)


6.2. Interfaces

Play

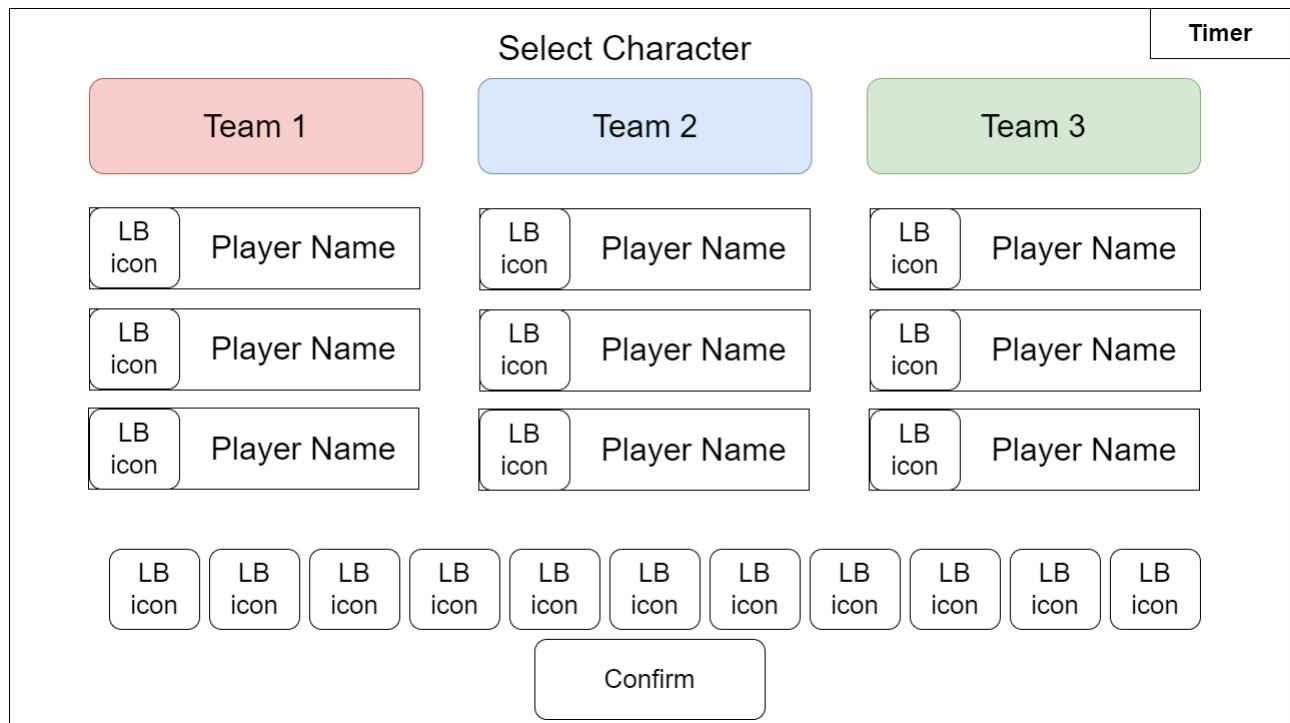
In this panel, users can choose which game mode to play (unrated or ranked) and then can search for a match, pressing the “Start” button.

Also, users can invite friends to join their party. If a user is playing with friends, each user should press “ready” before the party leader can start a match.



Pre-match Lobby (Character Selection)

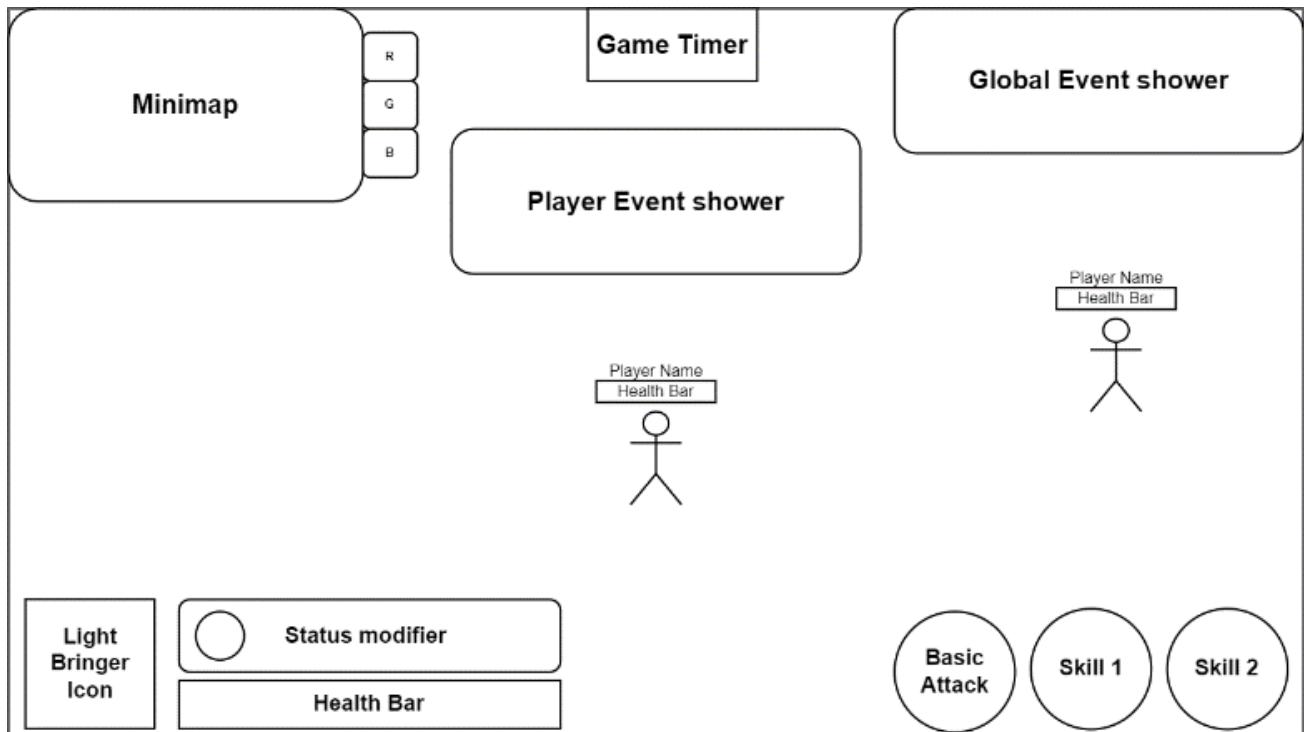
When a match is found, users will have 60 seconds to choose their Light Bringer.



Gameplay Interface

This is the in-game user interface, displayed in matches. It contains several elements to improve the user experience.

It is the in-game user interface with which the player can control his lightbringer. It contains several elements for balancing and helping the gameplay experience.



Minimap

In the minimap will be shown a miniature of the global map, with indicators of the position of the player, the position of the teammates (coloured according to the team they belong to) and the Light Sources' positions (displayed in the colour of the team that controls it). For more information see the "Minimap" section.

Current teams scores (number of controlled Light Sources)

Near the minimap, for each team will be displayed the number of controlled Light Sources.

Game Timer

Here will be shown the remaining timer of the match. Since each game is 10 min long, the timer starts from 10:00 and ends when it reaches 0:00 or when a team controls all Light Sources.

Light Bringer status

In the bottom-left section of the screen will be displayed the information about player's character:

- On the left, the **Light Bringer icon** will indicate which heroes the player is using.
- **Health bar** will show the current health of the player.
- Above the health bar, some **status modifiers** could be shown, indicating for example that the character is currently poisoned.
- Each status modifier shows a buff or a debuff that currently affects the character. Status modifiers have a timer and a bar that will be emptied over time (full when the buff is applied, empty when the buff is finished). More buffs or debuffs can be applied together. Each buff is represented by a bar that will appear in the stack above the previous one.

Skills

In the bottom-right corner will be displayed the skills of character, including the basic attack. Each one will be shown in a circle with an inner icon representing the skill. Also, a cooldown timer will be displayed if the skill has been used.

- **Basic** Attack
Represents the time to wait between each basic attack. Each Lightbringer has a unique basic attack. It has several aspects such as range, rate of fire, area of effect and trajectory. This panel shows the current cooldown timer. After one left-click of the mouse the player should wait some time for the next.
- **Skills** 1/2
The Basic CD, CD1 and CD2 shows the cooldown of the skills. Unlike basic attacks, skills could have very long cooldowns, so it is very important to show it on the interface.

Global event shower

This is where global match events will be shown. For example, each time a player kills another player, or a team conquers a Light Source, a line of text will be displayed. All users in the match will be able to see these events, allowing them to know which event has just occurred. After a short amount of time, the line of text will disappear. Multiple global events could be displayed with multiple lines of text, one above the other.

Player event shower

This is a panel used for communicating to the player the events that interest his character. For example, it could show to the player if a status modifier has just been applied to his own character, or if the character is conquering a Light Source, or the respawning's cooldown timer.

LeaderBoard (Post-match)

At the end of the match, the leaderboard will be shown to users. Users will be displayed sorted by their score, and stats like kills, deaths, assists, and the number of conquered Light Sources will be shown. The leaderboard can be sorted by each parameter pressing on the corresponding column heading. The score is given by the formula:

$$(K + A + B) / D$$

K = number of kills

A = number of assists

B = number of Conquered LS (as single player)

D = number of deaths

Victory / Defeat 3 2 1						
LB	Rank	Player name	Score	KDA	Conquered LS	MVP
					Conquered LS	
					Conquered LS	
					Conquered LS	
					Conquered LS	
					Conquered LS	
					Conquered LS	
					Conquered LS	
					Conquered LS	

Main Menu Panels

Home

This panel will display information like new available characters, patch notes and latest news. On the background will be displayed some game art images.



Light Bringers (Characters list)

In this panel users can find information about all current available heroes (Light Bringers). Users can choose a character to view its stats, a short description of the character and its lore, as well as the description of its skills explaining how they work and some stats like how much damage the skills deal.

Locked heroes will be displayed with a lock icon. In this panel the user can choose which Light Bringers he wants to unlock.

	Home	Light Bringers	Play	Career	Store	 				
					<div style="border: 1px solid black; padding: 5px; text-align: center;">Alkem</div>					
				<div style="border: 1px solid black; padding: 5px; text-align: center;">Info</div>	<div style="border: 1px solid black; padding: 5px; text-align: center;">Basic Attack</div>	<div style="border: 1px solid black; padding: 5px; text-align: center;">Skill 1</div>	<div style="border: 1px solid black; padding: 5px; text-align: center;">Skill 2</div>			
					<div style="border: 1px solid black; padding: 5px; text-align: center;">Info Stats Lore</div>					
	<div style="border: 1px solid black; padding: 5px; text-align: center;">Light Bringer Icon</div>	<div style="border: 1px solid black; padding: 5px; text-align: center;">Light Bringer Icon</div>	<div style="border: 1px solid black; padding: 5px; text-align: center;">Light Bringer Icon</div>	<div style="border: 1px solid black; padding: 5px; text-align: center;">Light Bringer Icon</div>	<div style="border: 1px solid black; padding: 5px; text-align: center;">Light Bringer Icon</div>	<div style="border: 1px solid black; padding: 5px; text-align: center;">Light Bringer Icon</div>	<div style="border: 1px solid black; padding: 5px; text-align: center;">Light Bringer Icon</div>	<div style="border: 1px solid black; padding: 5px; text-align: center;">Light Bringer Icon</div>		
	<div style="border: 1px solid black; padding: 5px; text-align: center;">chat</div>									
									player icon	
									3	
									player icon	
									player icon	
									player icon	
									4	
									player icon	
									player icon	
									player icon	

Career

In this section, players can see its rank and results of the last 10 matches. For each match result it's possible to view its leaderboard.

The screenshot shows a user interface for a game career page. At the top, there are navigation tabs: Home, Light Bringers, Play, Career (which is selected), and Store. There are also icons for a player profile (a green and red circular icon) and settings (a gear icon). Below the tabs, the player's rank is displayed as "Silver 2" with a progress bar showing "34 / 100". A vertical sidebar on the right lists the last 10 matches, each with a small player icon and a numerical value (3, 4, etc.). The main area contains a table with columns for LB icon, Rank, KDA, Score, and Result (Victory or Defeat). The rows alternate in color (green, red, green, red, green, red). The last row shows a "chat" button.

LB icon	Rank	KDA	Score	Result
LB icon	Rank	KDA	Score	Victory
LB icon	Rank	KDA	Score	Victory
LB icon	Rank	KDA	Score	Defeat
LB icon	Rank	KDA	Score	Defeat
LB icon	Rank	KDA	Score	Victory
LB icon	Rank	KDA	Score	Defeat

chat

Leaderboard (Career)

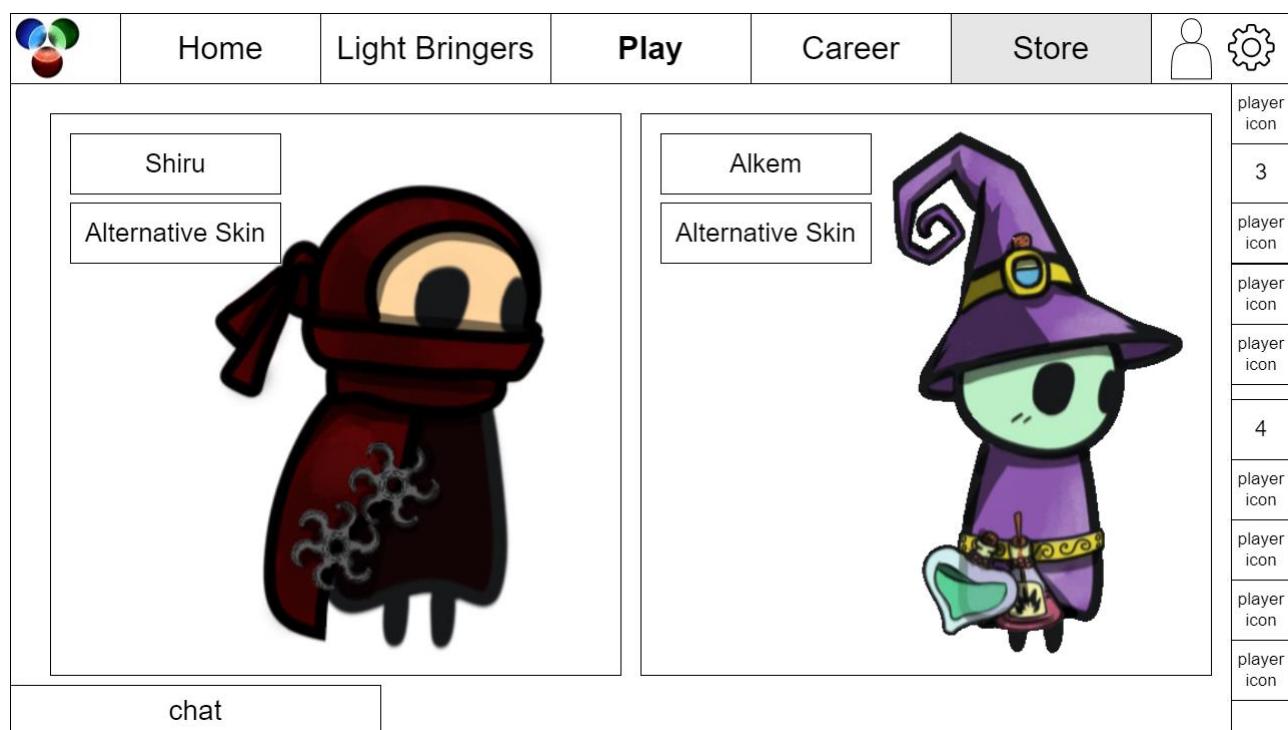
This section allows the user to view the leaderboard of a selected past match.

The screenshot shows a leaderboards section for a specific match. At the top, there are buttons for "Back" and "Victory / Defeat" followed by the score "3 2 1". Below is a table with columns for LB, Rank, Player name, Score, KDA, and Conquered LS. The rows alternate in color (red, blue, red, blue, red, green, red, blue, red, green). The last row shows a "MVP" badge. The last three rows are highlighted in green.

LB	Rank	Player name	Score	KDA	Conquered LS
LB	Rank	Player name	Score	KDA	Conquered LS
LB	Rank	Player name	Score	KDA	Conquered LS
LB	Rank	Player name	Score	KDA	Conquered LS
LB	Rank	Player name	Score	KDA	Conquered LS
LB	Rank	Player name	Score	KDA	Conquered LS
LB	Rank	Player name	Score	KDA	Conquered LS
LB	Rank	Player name	Score	KDA	Conquered LS
LB	Rank	Player name	Score	KDA	Conquered LS
LB	Rank	Player name	Score	KDA	Conquered LS

Store (shop)

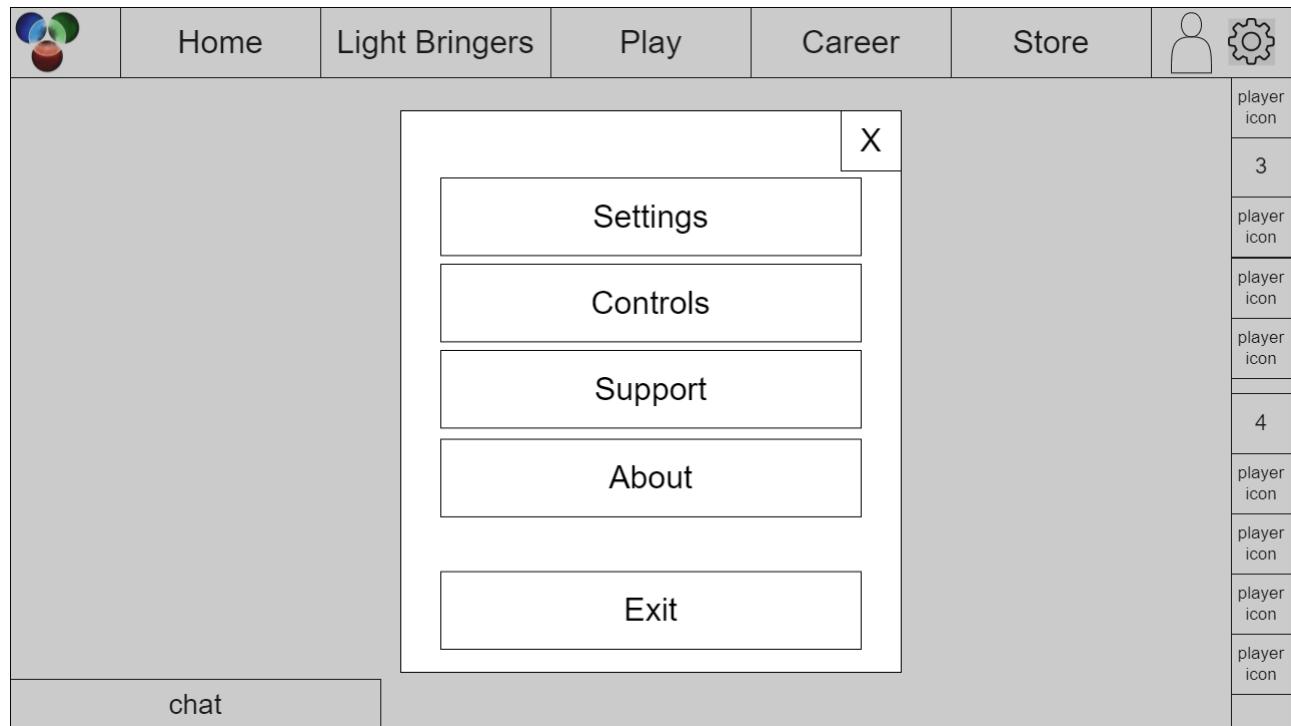
In the store it's possible to buy cosmetics items like alternative character skins.



Settings

The settings wheel on the top-right corner will open a panel that will show the users several options:

- **Settings:** allow the user to change settings like music and audio effects volume.
- **Controls:** show current input mapping and allow to customize input keys.
- **Support:** redirects the user to the official site (through the web browser) to open a ticket and receive customer support.
- **About:** shows info like current game version and documents like end user agreements.
- **Exit:** allows the user to quit the application.



7. Modes and other features

7.1. Game mode

Reya's Light is a **multiplayer** game that involves the participation of 9 players who will face each other in groups of 3, in a challenge of conquering the bases (lightsources). Each game has a duration of 10 minutes but can end earlier if a team takes possession of all enemy bases or can end later if, at the end of 10 minutes, there are teams with the same number of bases. In the latter case, the game will end only when one of the teams first conquers another base.

A player can participate in a game alone or together with a group of friends. In the event that the player participates alone, during the search for the match he will be placed within a team (Ruby, Larimar or Emerald) with 2 other players and then the game will start when all 3 teams are formed. In the event that the player participates with a group of friends previously invited to their lobby, two cases can occur:

- if the **player invites a number of friends less than or equal to 2**, then they can choose whether to play a ranked match or not and, when searching for the match, they will be assigned to the same team;
- if the **player invites more than 2 friends**, then the only available game mode will be the custom one (see description below).

Before the start of a match, the player can choose whether to play an unrated or ranked match. Each ranked and unranked match provides the player with experience to level up their account and points called "Spheres of Light" that can be used to purchase new characters. The amount of experience and points obtained is proportional to the player's progress within the game.

Unrated mode

An unranked game is a game that does not have any prerequisites for being able to play. Each unranked match does not provide league scores.

Ranked mode

In order to start playing ranked games, the player must have reached level 20 on their account, in order to ensure that the player is familiar with the game mechanics to play games with other experienced players. Ranked matches provide points for league advancement in the ranking system(for more information on the leagues see the "Ranking System" section). While searching for the match, players will be matched with players from the same league or from one higher or lower league.

Custom mode

Custom games are games in which the player can invite their friends to play together. Each player, in addition to choosing the character, can choose the team in which to play. In the event that the number of players is less than 9, the vacancies will be filled by bots that will emulate the behaviour of classic players with the possibility of entering their skill level (low, medium, high). Custom games can also be used by players to train their gaming skills against bots.

Release of new content

In order to attract audiences we have thought about the release of new content over time: new playable characters, new maps, character skins and new game modes.

New playable characters

We currently have designed 9 playable characters with abilities and stats but we expect to introduce more playable characters once the game is released. At the release of the game, players of different teams will be given the opportunity to choose the same lightbringer, except for players from the same team who will have to choose 3 different lightbringers in order to create variety in the game. We expect new characters to be released every 3 months in order to have the time to make sprites, skills and do initial tests for the balance of the characters, so we will release 4 new characters per year. The balance of the characters will also be evaluated later on the basis of player feedback. After a year and a half from the release of the game, upon reaching 15 lightbringers, players will be deprived of the ability to choose multiple identical lightbringers even in different teams.

New maps

We expect to make and share a new map with our audience every 6 months. Each map will feature different objects and obstacles as well as evocative settings such as that of the castle shown in the main map.

Character skins

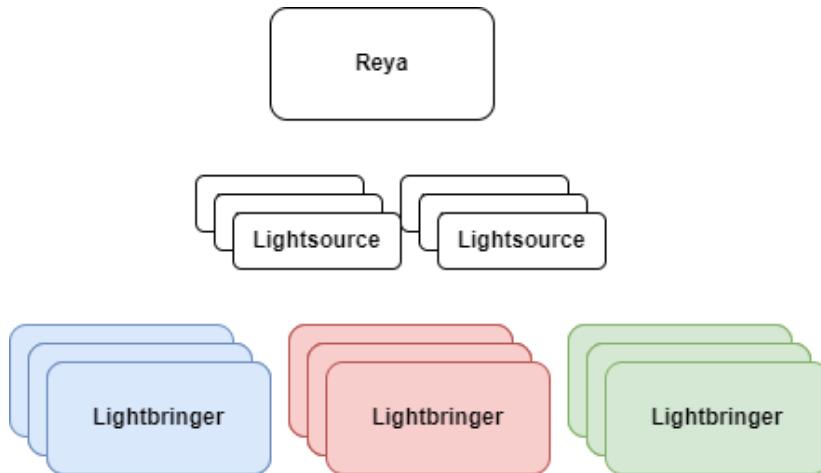
In addition, to further attract players, lightbringer skins will be published in the game store, which can be purchased through the Steam wallet (for further details see the Technical Design Document in the “Payment System” section). Each skin will be released close to common international holidays and events such as New Year, Carnival, Easter, Summer Solstice, Halloween, Winter Solstice, Christmas and other important or special events that do not occur annually (e.g. football championship , Olympics etc.).

New game modes

In the future we will evaluate the addition of new game modes such as the free-for-all mode, or other modes with the addition of objectives other than the conquest of the bases, such as the team deathmatch mode.

8. Game Characters

There are several characters, each one with a background, personality and objective in the story. They are the **Lightbringers** and before each match the player chooses one of them. As the name suggests, **Reya** is the only character that stands out in the game. She is a lore character, not present physically in the game. The importance of the Reya concerns the story and the setting of each match. On the other hand, from a gameplay perspective, Reya's Light doesn't have main characters. Each Lightbringers is unique and it's on the same level of strength as all the others. The only left npc characters in the game are the **Lightsources**. They are the small essence of Reya, remnants of her power. Through these, Lightbringers can obtain the lost power of Reya. They are the subject of contention. In each game, the teams have to control them to win the game.



8.1. Lightbringer

After the fall of Reya, the light lost her vessel. The light sources started to wander around the land of Yule. When the inhabitants of the kingdom came into contact with the Lightsources, they gained a portion of Reya's power. So Lightbringers came to life.

A Lightbringer is someone capable of manipulating light with his magic. The result of this manipulation is unique. Someone can use the light as a destruction weapon, someone else can use it as a healing power. There is no limit to this manipulation and the power of a Lightbringer increases according to the quantity of light he or she controls.

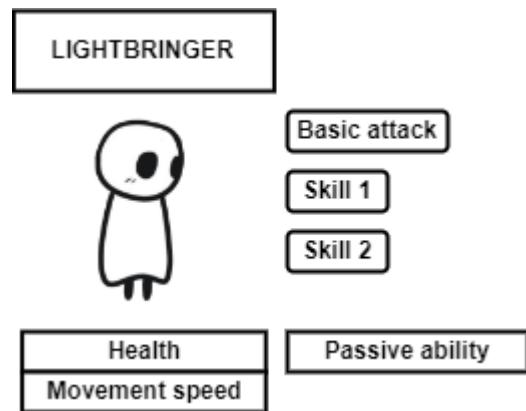
Each Lightbringer (LB) in the game has a unique kit of parameters that defines the design of the character. Setting these parameters in a group is necessary for balancing the game status and to provide fairness in the game experience.

Health defines the number of health points (HP) the LB has. It is used for balancing the ‘tankiness’ of the LB. The health decreases while taking any kind of damage and after some time of no damage it starts to regenerate slowly.

Movement speed defines the basic movement speed of the LB. In most cases it's the same for every LB. It can be used for giving some extra mobility to some LBs designed as scouts.

Basic attack is the main attack of the LB. Usually it has a short cooldown (< of 1 second most of the time) so the player can spam it. Regardless of the ‘class’ type of the LB, each one of them should be self-sufficient to the bare minimum. The Basic attack is a projectile most of the time.

Skills are 2 different abilities castable. The set of basic attacks, skills and passive determines the core of the Lightbringer design. Skills are similar to basic attacks but with a bigger cooldown and a huge diversity. They could be projectiles, dash, point and click abilities, self modifiers or other kinds of skills.



Passive ability is one or more rules that complete the core design of the character. It is used to balance each special effect of the LB that is not included in any skill. Examples could be faster health regeneration, higher jumps, triple jumps, buffs on the third basic attack, busted skills after a certain amount of time..

8.2. Lightbringer classes

In Reya's Light there is a classification of Lightbringer's types. LBs can be divided in 4 classes: Damage per second (Dps), Healer, Tank, Scout. The classification is not straight. Is important that each LB is self-sufficient. That means that a Healer should have the chance to beat 1v1 a Tank or a Dps. Each class is a hybrid fighter class. This design choice occurs because in different scenarios just one LB has to defend a Lightsource, or to conquer one. So players should be able to succeed regardless of the class type of the Lightbringer.

Dps

They are pure dps. A dps LB shows his full potential during fights. It has a boost in combat skills such as high damage, low projectile cooldown, and AoE damage effects. He leaks in utility. All the kit is damage oriented and can't be much useful for helping his team.

Djara

	<table border="1"> <tr> <td>Basic attack</td><td></td></tr> <tr> <td>Frenzy Spike</td><td></td></tr> <tr> <td>Skill 1</td><td></td></tr> <tr> <td>Arid Shield</td><td></td></tr> <tr> <td>Skill 2</td><td></td></tr> <tr> <td>Switcheroo</td><td></td></tr> <tr> <td>HP: 100</td><td>Passive ability</td></tr> <tr> <td>Ms: 10 m/s</td><td>Last Light Frenzy</td></tr> <tr> <td colspan="2">DJARA</td></tr> </table>	Basic attack		Frenzy Spike		Skill 1		Arid Shield		Skill 2		Switcheroo		HP: 100	Passive ability	Ms: 10 m/s	Last Light Frenzy	DJARA	
Basic attack																			
Frenzy Spike																			
Skill 1																			
Arid Shield																			
Skill 2																			
Switcheroo																			
HP: 100	Passive ability																		
Ms: 10 m/s	Last Light Frenzy																		
DJARA																			

Background story

Djara is a relentless warrior in search of his own pace. He travelled through the desert for years living in loneliness. Their kind, the Wobles, were nomads. Reaching the mountains that separate Waza from Tsura, they were divided. Some placed themselves in Tsura, others decided to keep traveling through the desert of Waza. Not long after, the desert drove them mad. They started to be hostile to one another. The only ones that had a remain of sanity were forced to travel alone. In the middle of the desert Djara found a Lightsource. He turned his madness into a destructive power of frenzy magic. His only purpose is to find a way to heal the madness and finally rest with their kind.

Frenzy Spike: shoots a burst of projectiles in a straight line

Arid Shield: casts a self-shield for some seconds

Switcheroo: switches basic attacks with an AoE attack with short range

Last Light Frenzy: while under 50% of health all the damages are increased by 20%

Sigg**Background story**

Sigg is a master archer and user of soul-spirit magic. He is able to manipulate the light to spawn spirits representing an image of his soul. Time after the creation of the first cities in Yule, Sigg and his sister Janei felt the calling of Navi. Navi is an island where the creatures live in communion with their wild nature soul. Lightbringers from all Yule felt the call of Navi. The siblings arrived on the island and they found the way to enter in communion with their soul. Unlike Sigg, Janei was not a Lightbringer. Communion ended up consuming it. Sigg, desperate, dedicated his life to the magic of the soul to save his sister. He managed to unite his soul with that of his sister. Janei now helps him in each fight. They became inseparable.

Spirit arrow: throws a long range arrow in a straight line dealing damages

Spirit holder: throws a long range arrow in a straight line stunning the first opponent hit

Rain of arrows: designs an area where arrows will fall down from the sky, dealing small damages and slowing all enemies hit for some seconds.

Future sight: Sigg can see nearby enemies outside of the game screen. The position of the enemies is shown at the border of the map

Healer

They have at least one healing skill. A healer LB shows his full potential in a cooperative playstyle. They can fight opponents while buffing allies. The high utility of an healer is balanced by a low average damage output.

Alkem

	Basic attack Poisonous Water
	Skill 1 Healthy Water
	Skill 2 Toxic Explosion
HP: 100	Passive ability
Ms: 10 m/s	Addiction
ALKEM	

Background story

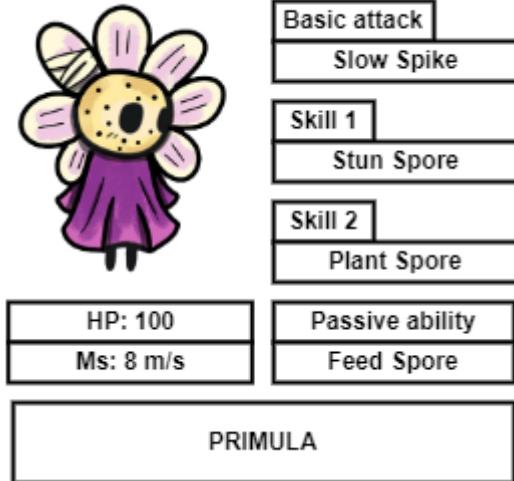
Alkem is a solitary Lightbringer. No one knows where he comes from. He travelled all over Yule, collecting information about Lightsources and the real nature of Reya. Although Alkem is not a warrior, his search for the Lightsource has created lethal weapons. During the time he spent in Cavejard, he manipulated the light to create a deadly poison. In his studies he found out that other creatures like Reya have been seen in the sky before she came to the continent. He aims to control the White Light to show Yule the mystery beyond the sky, the place where Reya came from.

Poisonous Water: throws (parabola) an acid bottle that let acid on the ground for some seconds on a small area. Acid deals damage to opponents

Healthy Water: throws (parabola) a health potion that instantly heals all the allies on an AoE.

Toxic Explosion: throws (parabola) an explosive potion that instantly deals damage to all the enemies on an AoE.

Addiction: each enemy hit by poisonous water reduces the cooldown of toxic explosions by one second.

Primula**Background story**

Primula is a flower-shaped Lightbringer. She uses her earth power to spread spores across Yule. When the tribe of the Wobles reached the mountain of Tsura, she joined the side that decided to end their travel there. During the year of travels Primula never finds the opportunity to be in touch with a Lightsource. In Tsura she discovered her huge power. She is capable of getting connected to the earth and using its natural power to spread life spores. Her spores have an incredible healing power. Tsura used her power to heal any kind of disease. But not much after the healing became a curse and part of the people from Tsura became infected by a deadly poison that drove them crazy. Primula is now wandering through Yule to find a cure for all the people she has infected.

Slow Spike: projects a slow spike that deals massive damages to the first enemy hit

Stun Spore: cover a big area in front of her with spores than stun all enemy hit

Plant Spore: throws (parabola) a plant in a position that can both heal allies both damage enemies according to who steps on it

Feed Spore: combining Plant Spore and Stun Spore the plants gain massive healing

Ktuels

	<table border="1"><tr><td>Basic attack</td><td></td></tr><tr><td colspan="2">Void Attack</td></tr><tr><td>Skill 1</td><td></td></tr><tr><td colspan="2">Void Trap</td></tr><tr><td>Skill 2</td><td></td></tr><tr><td colspan="2">Blaze</td></tr><tr><td>HP: 100</td><td>Passive ability</td></tr><tr><td>Ms: 10 m/s</td><td>Healing Blaze</td></tr><tr><td colspan="2">KTUALS</td></tr></table>	Basic attack		Void Attack		Skill 1		Void Trap		Skill 2		Blaze		HP: 100	Passive ability	Ms: 10 m/s	Healing Blaze	KTUALS	
Basic attack																			
Void Attack																			
Skill 1																			
Void Trap																			
Skill 2																			
Blaze																			
HP: 100	Passive ability																		
Ms: 10 m/s	Healing Blaze																		
KTUALS																			

Background story

Ktuels is a sea monster based Lightbringer. She has a unique dream magic that is able to project illusions in the mind of people. Before Reya arrived, the sea monster lived in endless sleep. Then they started to group up in Crysta, the only city they could live in contact with the abyss. When ktuels woke up, she had an insatiable hunger for dreams. In Crysta she found her first Lighsource with which she gained incredible power. She used her magic to create a shared dream for other people. For each person who enters in this dream, she fills her hunger. But the hunger grew more and more. She realized that the only way to fix her hunger is to gain the power of the white light and to create a perfect dream world.

Void Attack: shoots a low damage projectile on a straight line

Void Trap: throws (parabola) a trap that generates on hit point an area that suns each enemy inside

Blaze: stops in the current position for generating a large area laser ray (redirectable) dealing damage in time

Healing Blaze: after he casts 3 Void Traps, the next Blaze will also heal allies

Tank

They are characterized by a high base health. Tanks are useful in many situations. Their main utility is to absorb the most of enemy damage in order to defend their team. Usually, the kit of the tank is versatile. The boost of basic health could be balanced by a slow movement speed or by a short range in skills and basic attacks.

Cynderwest



Background story

Cynderwest is known as the Shadow of Vulcano. He is obsessed with the darkness that covered up Yule. Cynderwest was never afraid of darkness and he tried to control it, before with Vulcano flames, then with light. When he found his first Lightsource, something incredible happened. Thanks to his excitement, he was able to mix the power of the light with the hole and the shadow. People from Vulcano started to be afraid of him. He was exiled. Conquering more Lightsource, he realized that light can coexist with shadow. Thus he created the magic of the black flame and his ultimate purpose is to transform darkness into black flame.

Black Flame: shoots a short range AoE attack (shotgun) dealing more damages to enemies closer

Flame Dash: dashes in a short range, dealing damage to all enemies he passes through

Flame Shield: gain a permanent shield, not cumulable

Shield of Chains: while the shield is active, each enemy in a close area is slowed

Moerb



Basic attack
Syringe
Skill 1
Grab
Skill 2
Lifesteal
Passive ability
Drain

HP: 120
Ms: 8 m/s

MOERB

Background story

Moerb is a deadly Lightbringer that uses a vampiric magic to drain life essence from his victims. It is said that after the war between Eastward and Waza, the prisoners were abandoned in the desert. At the time, Moerb was just a child from Eastward and he was taken prisoner by Waza. He was separated by his family and was left in the desert. With his last dying breath he found a Lightsource. In that moment he instantly absorbed all the life power of the other prisoners. He naturally created a vampiric magic able to drain life essence from people. He managed to escape from the desert and started his travels. His final purpose is to obtain his vengeance against Waza.

Syringe: throws a syringe that afflicts poison to the hit enemy (dealing damage over time)

Grab: pulls an enemy afflicted by poison in the direction of Moerb

Lifesteal: deals instant damages to a poison enemy and he gains the half of the damages as health

Drain: When Moerb kills an enemy, he gains a basic health regeneration boost for some seconds

Scout

They are characterized by a high base movement speed. The main utility of scouts is to roam through the map as fast as they can in order to rush Lightsource control or to surprise opponents with unexpected attacks. The boost of basic movement speed could be balanced by a low basic health.

Shiru

	Basic attack Light Shuriken
	Skill 1 Speed of Tsura
	Skill 2 Light Dash
HP: 80	Passive ability
Ms: 10 m/s	Firelight Shuriken
Shiru	

Background story

Shiru is a cold blood Lightbringer. He is an invisible assassin that uses his magic for lightning speed mobility. He is one of the best warriors of Tsura. He worked as a spy across Yule for several years. When he travelled in Ijeld he was charmed by the vision of Reya walking through the Lightbridge. He tried to follow her, but getting closer to Nest he couldn't stand the burning power of the white light. He fell down injured. Then he met his saver. Alkem, a wise traveller mage, found him and healed him. Losing information about him, Tsura banished him and cancelled each sign of his existence (that's what happened to the spy that failed). Not having a purpose, Shiru decided to help Alkem with his resources to find the real nature of Reya.

Light shuriken: high damage projectile on a straight trajectory and slow speed.

Speed of Tsura: increase movement speed and decrease the cooldown of the basic attack.

Light Dash: small dash in a direction and becomes invulnerable for a few seconds

Firelight Shuriken: each 4th shuriken is boosted and deals more damages

Aerodactyle

	Basic attack Wind blade
	Skill 1 Free Fly
	Skill 2 Wind Tornado
HP: 80 Ms: 10 m/s	Passive ability Soft fall
AERODACTYLE	

Background story

Aerodactyle is the strongest warrior of the Avio kind. He is a bird-shaped Lightbringer capable of using wind magic. The Avios are one of the most important creatures in Eastward. They were the former leaders of the city during the war against Waza. During the war, he was the only warrior able to face the gravity magic just with the power of his wind magic. Now he has the important role of scout of Eastward. He flies across the skies of Yule to prevent each kind of war or natural calamity.

Wind blade: shoots 3 projectiles of wind in a straight line

Free Fly: gains a burst of movement speed and the jump is switched by a vertical movement, during this time he is not subject to gravity

Wind Tornado: project an AoE attack in one direction that slows all the opponent hit and push them back of few metres

Soft fall: while pressing the jump button, Aerodactyle will fall slowly

8.3. NPCs

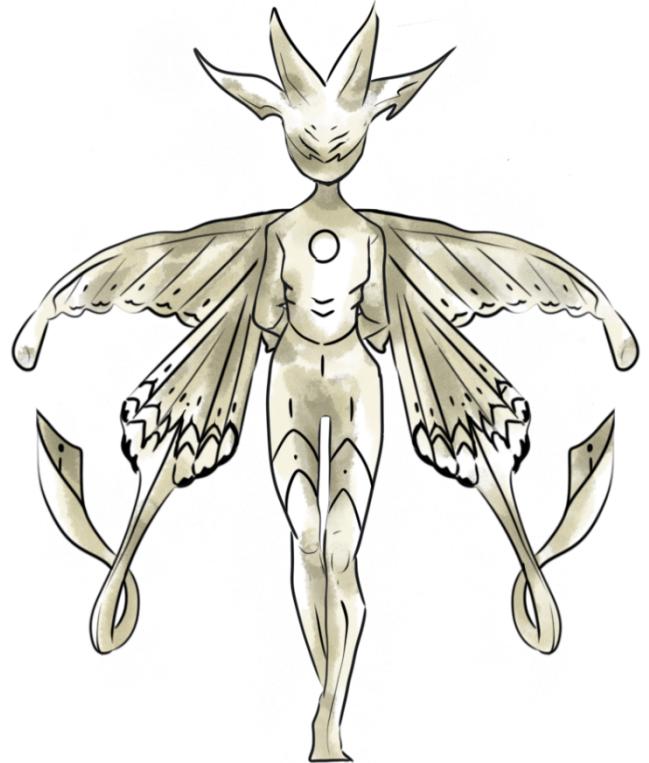
Reya

The game doesn't have a real protagonist, but Reya is definitely the most important character. In addition to giving the game its name, Reya is the queen, goddess and central element of the game. The game is set when Reya disappears, her castle. This event destabilized the world and left the queen's enormous power, the white light, unguarded. It is therefore up to the player to master this power. Regardless Reya is the character that the whole game world story revolves around, she is not present in the game. The game is set in Reya's palace. In the centre of the map is his statue, for aesthetic purposes only.

Reya is a mysterious character. The player has no information other than introductory ones. This introductory information is primarily provided by the game trailer.

Reya's particular appearance is in stark contrast to the other characters in the game. In fact, despite appearing in the eyes of all similar to a fairy, in reality Reya is a being from another planet and she has brought the power of white light. She has given the inhabitants of this world fragments of her power. She introduced magic in Yule.

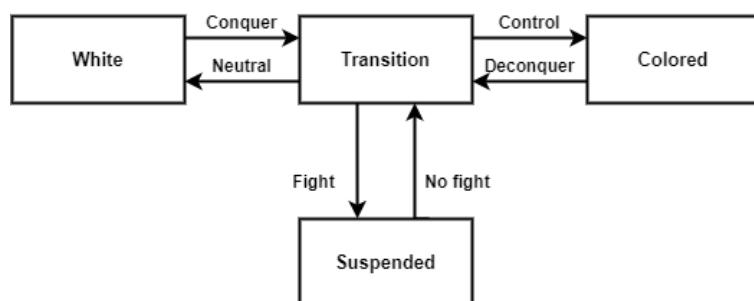
After her disappearance, Lightbringers, the protagonists of the game, began to clash to obtain her power. Some details of the full story of Reya are still hidden. In the "Story" section it is specified all the timelines of events that occurred in the realm of Yule.

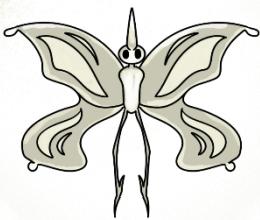


Lightsources

Lightsources are fragments of Reya's power, similar to fairies. Their appearance recalls the queen's insect shape. Reya donated Lightsource to the world to share her power. A Lightsource is white initially. When a Lightbringer manages to control it and manipulate its light, Lightsource gets a color between Emerald (green), Larimar (blue) and Ruby (red). Initially, Lightsource resided in the city of Yule. After Reya's fall, these spread to the most hidden places on the continent. For this, the Lightbringers travel through Yule.

Unlike Reya, Lightsources are featured in the game and play an important role in the gameplay. They are the player's goal and the team's win condition. All the behaviour of the Lightsource is described in the gameplay section.





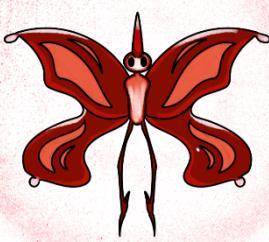
White Lightsource



Emerald (Green) Lightsource



Larimar (Blue) Lightsource



Ruby (Red) Lightsource

9. Story

In Reya's Light, it is important to distinguish the game story from the game lore. The game is strictly competitive and the target audience is hardcore killer gamers. The game experience gives to the player just a minimal part of the game story. This omission of story contents has several utilities:

- To let the player focus on the gameplay experience without too much information useless for a single match.
- To give to the player a contextualization of what his team is aiming to.
- To give the player a mysterious atmosphere that leads him (maybe after some time playing the game) to search for information about the game world.
- To give the possibility to add pieces of story content on Lightbringer release. This way the game is totally scalable as the gameplay and narrative of the story. This is the main narrative device of the game.
- To make the player become attached to singles Lightbringer. Background story of Lightbringer is the main narrative device of the game. Reading and connecting each story create a huge puzzle that shows the actual main story of the game. In this way players can see the game world from the perspective of each single Lightbringer. There is no evil or good characters. It's up to the player choosing who is the game character he likes the most. This kind of link between player and character is a key element of hero-shooter.
- Have the possibility to reveal the story line through several narrative devices. Beyond Reya's Light there is a huge game world, full of different background stories. This narrative universe opens the possibility for the game to grow in different media types, such as tv shows, different game genres, novels..

In the next paragraph it is described the story introduction and the explicit backstory.

9.1. Story introduction

Reya, the Lady of Light, fell. The White Light which once shone over the Yule realm faded, leaving the world in a dark era. The reason for her disappearance, if ever known, is now a lost knowledge, of which no one retains memory. But the Light did not completely vanish! Years later, contenders rose from the darkness, the "Lightbringers", eager to enforce their own light over the Yule realm. Bringers of the Emerald, Larimar and Ruby lights, but only could prevail over the others, obtaining... the White Light!

9.2. Backstory

The world of this game is unlike any other: it is shrouded in complete darkness. This total absence of light has prevented its inhabitants from living in civilised communities. Chaos reigns in this kingdom, as everyone lives in the shadows.

Darkness was all this world knew, until one event that changed the course of its history. Lightning struck the centre of the continent, tearing it apart and leaving behind a remnant of light. For the first time in its existence the world was illuminated. The darkness was removed and with it so too was the old system of chaos. The inhabitants were left bewildered by this event, their minds shook by this unthinkable luminosity. Something new was thus reborn. A natural desire for discovery. Before long, the light began to reveal its true powerful nature. Huge bridges of golden light began to stretch across the continent.

A fairy-like figure arose from the crater where the lightning had struck. This mystical and enchanting figure revealed herself to be Reya, a powerful being unlike anything this world had ever seen before. Reya, an extraterrestrial, had powers beyond compare. Shrouded in mystery, Reya's immeasurable power is something that will never be revealed. Reya bends the white light, and with it under her control she is capable of creating or destroying anything imaginable.

Reya's heart did not allow her to choose destruction.

The creatures of this world attracted by this light accumulated at the bridges. It is here at these bridges where they met their future queen. Thanks to the power of light, Reya created cities with power and technology. The likes of which the world had never seen before, and with her creations a new world was born, that which she named Yule.

She left in each city a fragment of her essence, a source of light, which generated the energy the city lived off of.

Some of the inhabitants, drawn to the sources of light, began to study their essence. Eventually some began to use its power. These individuals became known as the Lightbringers. Yule quickly transformed from a wild chaos driven land to a kingdom organized in civilized regions. Thus began the era of white light.

Thanks to the guidance of Reya, Yules advancement was exponential. It seemed like nothing could stop this trajectory. But everything has an end. One day, Reya vanished. The circumstance was just as mysterious as the day she arrived, and with her she took the power of the white light with her. The mystery of her disappearance lies in her nature. Even before the kingdom could understand what had happened, darkness returned to envelop the world, sowing the seeds of chaos once more. The era if darkness had become a distant memory, a myth of origin to the natives, leaving them unprepared for its return. However, whilst Reya's main white light disappeared, her true essence did not fully vanish. Inexplicably the light sources she had left in each city continued to shine even after her disappearance. Reya could use the light to do anything, Lightbringers, on the other hand could only materialize a limited, unique, and intuitive kind of magic. For the Lightbringers the light sources was a catalyst, one which sparked a curiosity for magic and a deep seated hunger for power.

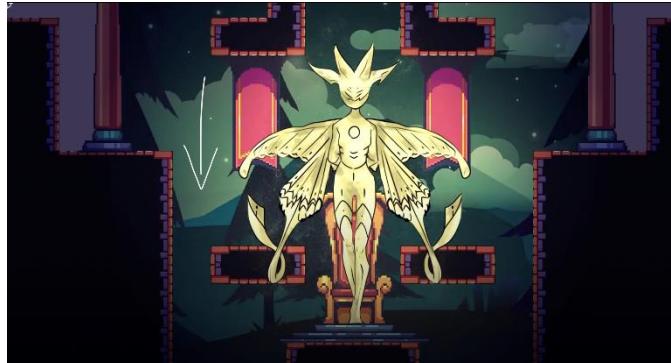
This is the moment in time where we begin the game. A world once thriving in chaos, then civilised by the power of the light has once again been thrust back into anarchy. The Lightbringers, must navigate this dark realm, one dominated driven by the lust for power. Begin the game and travel to Yule in search of the Lightsources. As a Lightbringer, the amount of light one is able to control determines its actual strength. The search for this power, is the driving factor of the game. Compete and race to find the untapped resource of the white light, Reya's true light. Thus begins the era of conquest, the search for Reya's light.

One may wonder, what in fact happens when a Lightbringer becomes the owner of the white light? The answer of which lies in the mysterious nature of the queen. Reya is a being from another world and she carries this divine power with her. If a Lightbringer is able to contain this power they will be destined to face the same fate as Reya.

The light has a will of its own, it needs a vessel to control it. The light is symbiotic, it lives as a parasite, existing through the body of the being who agrees to contain it. However, any being that chooses this path is bound to be left with a desire to control such power for their own will. This arousal can be alluring, yet it is still mystifying. They don't know that the light actually controls them. Reya is nothing more than a creature who, bewitched by the power of white light, has become its slave. She was once a simple traveller, bewitched by the light source, eventually consumed by its power. The Lightbringers that chose this path are destined to do the same. Slaves to the lights power, they will eventually become consumed and brought to another world.

9.3. Storyboard

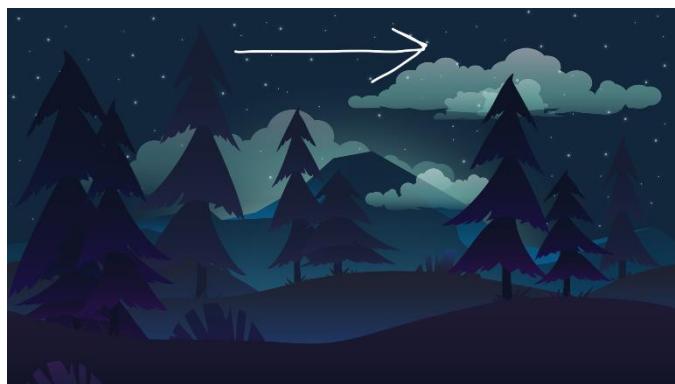
The backstory is narrated by an unkown narrator, which introduces the player to the context in which the game takes place and is represented with a cinematic at the beginning, when player open the game. This storyboard represents the cinematic, which will be composed by a set of still images with slow camera movements. The arrows drawn on the images represent the movement of the camera.



1° image, camera movement top-down

Content: View of Reya's statue.

Narrator: "Reya, the Lady of Light, fell. The White Light which once shone over the Yule realm faded, leaving the world in a dark era."



2° image, camera movement left-right

Content: View of the world.

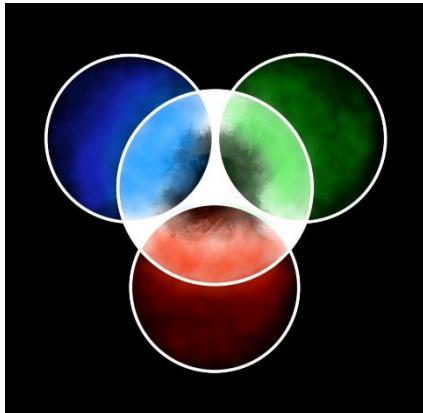
Narrator: "The reason for her disappearance, if ever known, is now a lost knowledge, of which no one retains memory."



3° image, camera movement right-left

Content: View of lightbringers.

Narrator: "But the Light did not completely vanish! Years later, contenders rose from the darkness, the "Lightbringers", eager to enforce their own light over the Yule realm."



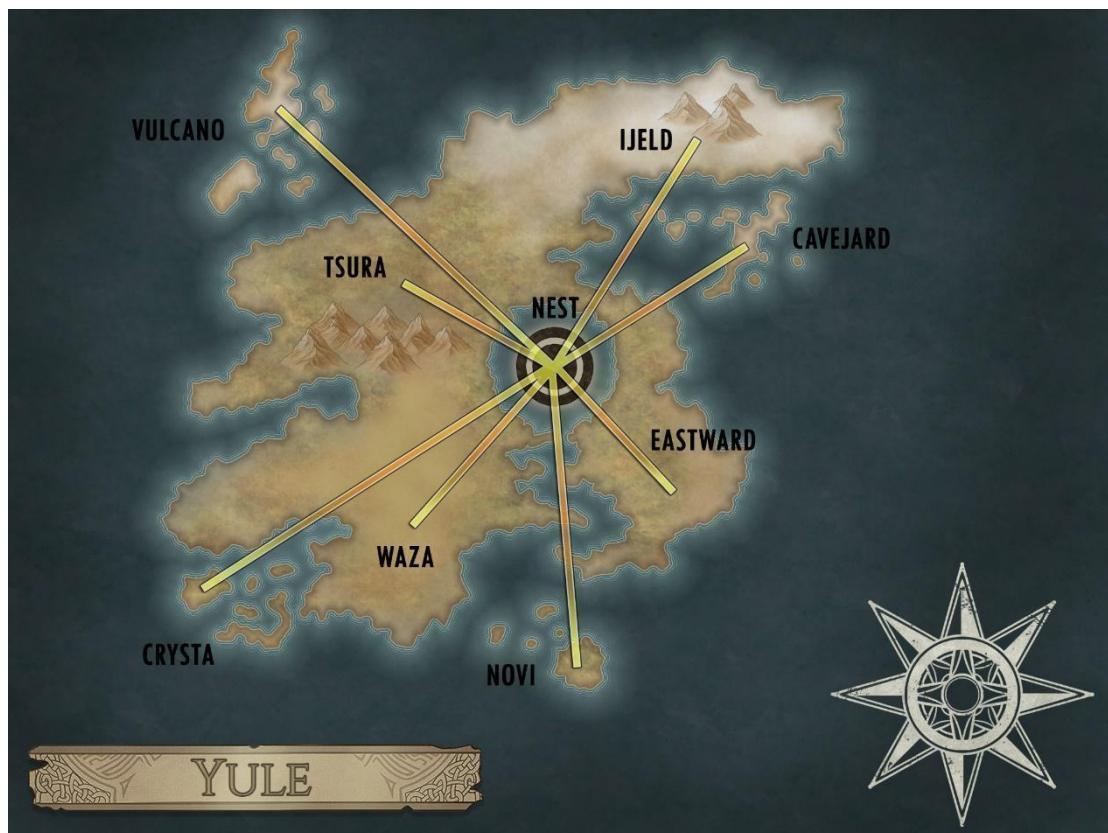
4° image, no camera movement but fade-in of the image

Content: View of Reya's Light symbol.

Narrator: "Bringers of the Emerald, Larimar and Ruby lights, but only could prevail over the others, obtaining... the White Light!"

9.4. Gameworld

This section focuses on Yule, the world the story is set in. It will show each main location where the characters of the game come from.



Yule

Yule is the continent of the game world. There are several areas, each one with a specific geographical characteristic. The whole game world has its own physical rules. The main element of the world is that there is no sun. The world is enlightened by the light coming from the castle of Reya and the lightsources across the whole continent. Another key element in the game world is the presence of darkness. Physically the darkness is represented as a black mist that, in absence of light, comes out from the sea and surrounds everything. In the gameworld darkness represents chaos. The castle of Reya, the Nest of Yule, is connected to each city by light bridges. The combination of the light bridges composes something similar to a spider web of light.



Nest



The Nest of Yule is the palace of Reya. It is placed in the middle of the continent and it is surrounded by sea. It is possible to reach it only through the light bridges that connect it to each city in Yule. Nest is the place where the game is set. It is the place where the white light keeps living. The visual design of the place is totally opposite to the rest of the world. It is surrounded by a divine aura that highlights its alien origin. It is the centre of the light spider web that connects Yule. The palace is at the centre of the Nest. During each game players can fight through the inner side of the palace, the external grounded areas and the roof.

Eastward

Eastward is a tropical city located in the middle of a forest. It is on the east of the continent. The power of the light bridges gave to all the creatures of the wide forest a place to regroup and start a social community. The buildings of Eastward are stone made and they recall the Maya ruins. Water channels are the veins of the city. All the technology of the area is based on hydraulic systems and water magic. The Lightbringers of Eastward can manipulate the light mostly for water magic. Some of the magic of the area is based on the huge diversity of the creatures that live in the forest. They use their wild and primal nature to create their own magic.



Novi



Novi is an island in the south of the continent. It's isolated from most of the cities in Yule, with the exception of Eastward. After the Lightbridge landed, tribes from the sea and wild creatures living in the south of Yule moved to Novi. The enlightenment of the island created a strange "call" for the wild creatures. Seems that Novi shows the Lightbringers attached to their natural spirit their true nature. The magic of the island is based on the wild power of the Lightbringers. Some of the researchers of the island share information with the eastward city to be able to manipulate the light for water magic.

Waza

Waza is a city located in one of the most arid places on the continent. It is probably the most hostile place in Yule. People that lived in that city are used to an unbreathable air for most of the continent's inhabitants. When the Lightbridge landed, some rocks and mountains of the area started to levitate. In this way the gravity magic came to life. The Lightbringers of the area can use several kinds of magic, such as gravity, sand, rock and wind light manipulation. Most of the citizens are not friendly with strangers. Long time in the desert could damage the brain of some Lightbringer changing his magic. That is the origin of the fenzy magic.



Crysta



Crysta is an underwater city. It is positioned in a peculiar area where the darkness can't come in the city. The surface of the water channels the light of the nest and projects it in the middle of the city. The lightbridge landed exactly on the surface of the water, generating a bubble of air where creatures of the sea started to group in. The city recalls the aesthetic of atlantis. The Lightbringers of Crysta use their power to create water and sound magic mostly.

Tsura

Tsura is a city on the west of the continent. It is close to the highest mountains that separates it from the desert. Tsura is the first city that started the research of the Lightsources. The people of the city are the ones most devoted to Reya. Thanks to her power they managed to create an articulated culture based on tradition and respect of nature. The merging between natural and artificial power is the characteristic of Tsura. Visually the city recalls the feudal Japanese fantasy-based. Lightbringer from Tsura uses several kinds of magic, such as speed, wind, fire, flower and sound.



Vulcano



Vulcano is a group of islands in the north of the continent. The name comes from the volcano in the middle of the archipelago. The volcano was an important resource for the people of the islands also before the coming of Reya on the continent. Magma was one of the first sources of light in the whole continent. The lightbringer of the cities use fire, ice, magma, and darkness magic. Some people of Vulcano have always been hostile to Reya. They never accepted the gift of the light.

Ijeld

It is the group of mountains on the northern part of the continent. The light bridge was placed on the top of the mountain. The inhabitants of the area started to climb the mountains and then created the city in the highest part. People from Ijeld were devoted to Reya. The light gave the inhabitants of the area the fire that made life possible on the snow-covered mountains. The Lightbringers of the area use frost, ice, wind and fire magic.



Cavejard



Cavejard is a group of ice caves and tunnels under the surface of the sea. The top of ice amplifies the light of the nest and reflects it under the ground. People from Cavejard lived for years in total darkness. Some of them were friendly to darkness, others hostile. When the Lightbridge came into the area the life of these creatures was totally twisted. Some creatures were totally blind and could feel the power of the light in a totally different way from the rest of Yule. Lightbringers of the area use ice, water and poison magic.

9.5. Narrative devices

As said, the game is set in a huge narrative universe that is not completely shown to the player. Each narrative device gives a little piece of the puzzle of the global main story of the game. The pieces of the puzzle are released during the evolution of the game.

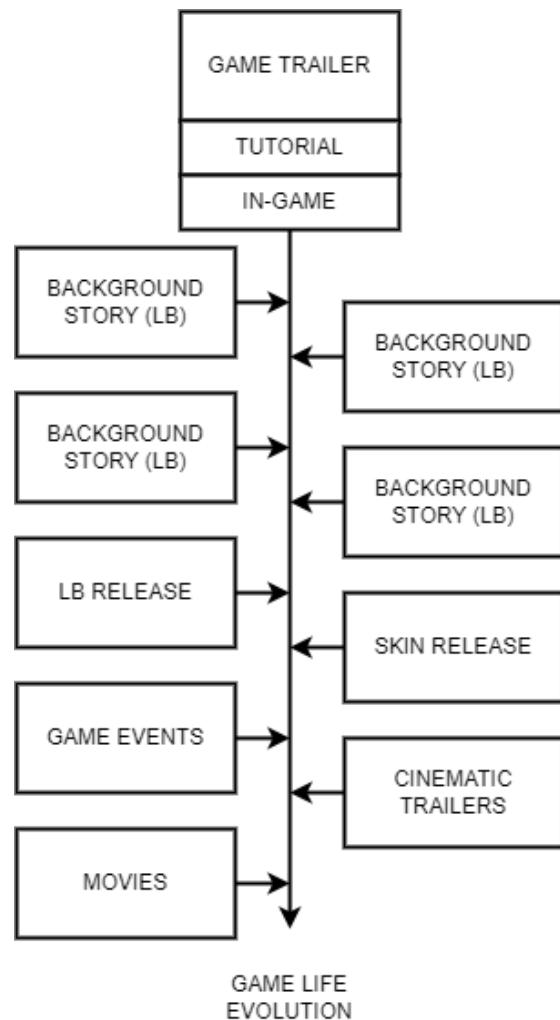
The game itself gives through **story trailers** and gameplay trailers the introduction of the game story. In this way each player that starts playing Reya's Light knows the contextualization of the characters, what is the light and the objective of the game. Game **tutorials** should be story oriented too. As the game teaches the player the gameplay mechanics, it should also focus on the game objectives. This way the game has a chance to focus more on the main elements of the story. Each match is set in the palace of Reya. This way the player physically sees the important game elements, as Lightsources, the Nest of Yule and the raffiguration of Reya.

Background story of each Lightbringer is the main narrative device of the game. Each Lightbringer in the game has his own section which describes him. It showcases the gameplay kit and the background story of him. This narrative device is key for the whole game design. It is useful to make the player see the game world through the Lightbringer perspective. It makes the game storytelling totally modular and scalable according to the game's life evolution.

According to the game's life evolution, there could be several other narrative devices. "**Skins**" are additional game content regarding the cosmetic section. Skins should be the most effective way to sell game contents to the players. Skins can represent different versions of the same Lightbringer, in different time periods, different locations, or different scenarios. Skin's descriptions are a narrative device.

In order to make the state of the game fresh and engaging for players, **events** are useful for adding challenges and contents to the game experience. In a general way, each time some changes are applied to the game, an event occurs. During events some rewards are given to the most active players. This is another good chance to give to the player pieces of the main story. This is both effective for the "explorer" players that search directly for this kind of game content but also for "killers" because, in order to achieve rewards, they have to pass through the narrative.

This scalable structure could include several other narrative devices like movies, tv shows, gadgets, even other games based on the same narrative universe.



10. Media List

List of all the media that need to be created: interface assets, environments, characters, animation, music and sound effects.

10.1. Character generic assets

Some of these assets will be shared among different characters (like jump sounds and vfx), while others will be used as placeholders for future characters.

All characters' animations require only one direction (character facing right) and should be reversable for when the character is facing towards left.

Character generic assets			Description
Animations			all characters animation requires only one direction (character facing right) and should be reversable for when the character is facing towards left
Animations	Idle	4 sprites	default animation played when character isn't moving
	Walk	4 sprites	animation played when character is moving left or right
	Crouch_Idle	4 sprites	played when: crouch && not_moving
	Crouch_Walking	4 sprites	played when: crouch && moving
	Jump	4 sprites	played when character start jumping
	IdleToCrouch	4 sprites	played when character start crouching
	CrouchToldle	-	reverse of IdleToCrouch
Skills Icons			-
Skills Icons	Skill_0 (basic attack)	1 sprite	-
	Skill_1	1 sprite	-
	Skill_2	1 sprite	-
Skills sprites			each skill has custom sprites requirements. A new list will be created and updated for each new scheduled character
Skills sprites	bullet	1 sprite	-
	bullet_OnShot/Appearing	vfx or sprites	-
	bullet_OnHit/Disappearing	vfx or sprites	-
Face icon			displayed when selecting characters and when playing (near HP bar) and in leaderboards
Sound effects			-
Sound effects	Character_OnLand	-	-
	Character_OnJump	-	-
	Character_OnDamaged	-	-
	Character_OnDeath	-	-
	Character_OnHealed	-	-
	Bullet_OnShot/Appearing	-	-
	Bullet_OnHit/Disappearing	-	-
vfx / particles / shaders / effects			-
vfx / particles / shaders / effects	Character_OnLand	vfx	-
	Character_OnJumpGround	vfx	-
	Character_OnJumpAir	vfx	-
	Character_OnJumpWall	vfx	-
	Character_OnDamaged_whiteSprite	vfx/shader/white_sprite	character become white when damaged
	Character_OnDamaged_blood	vfx	blood effect when character damaged
	Character_OnDeath	vfx	-
	Character_OnRespawn/Spawn	vfx/shader	vfx when character spawn or respawn
	Character_OnHealed	vfx	-

10.2. Character specific assets

For each character some custom assets will be required. Some characters may require more assets than others, depending on their skills behaviour (e.g., a character skill may require extra vfx or sprites for a poison cloud). Here are listed the general assets that are expected to be required for most character.

Character specific/custom assets			Description
Animations			all characters animation requires only one direction (character facing right) and should be reversable for when the character is facing towards left
Animations	Idle	4 sprites	default animation played when character isn't moving
	Walk	4 sprites	animation played when character is moving left or right
	Crouch_Idle	4 sprites	played when: crouch && not_moving
	Crouch_Walking	4 sprites	played when: crouch && moving
	Jump	4 sprites	played when character start jumping
	IdleToCrouch	4 sprites	played when character start crouching
	CrouchToIdle	-	reverse of IdleToCrouch
Skills Icons			-
	Skill_0 (basic attack)	1 sprite	-
	Skill_1	1 sprite	-
	Skill_2	1 sprite	-
Skills sprites			each skill has custom sprites requirements. A new list will be created and updated for each new scheduled character
Skills sprites	bullet	1 sprite	-
	bullet_OnShot/Appearing	vfx or sprites	-
	bullet_OnHit/Disappearing	vfx or sprites	-
	effect_AfterBulletHit	vfx or sprites	custom effect when skill hit (i.e. poison cloud after bottle hit ground/characters)
	status_modifier_icon		if effect is unique, it requires a custom status modifier icon
Face icon		1 sprite	displayed when selecting characters and when playing (near HP bar) and in leaderboards
Sound effects			-
	bullet_OnShot/Appearing		-
	bullet_OnHit/Disappearing		-
	effect_AfterBulletHit		-

Environment

Environment elements	Description
Environment	
Tileset_Medieval_Castle	ground, walls, platforms, background walls
Tileset_External	ground, walls, platforms
Background_External	parallax images
Tileset_Medieval_Decorations	background decorations (i.e. skeletons, torches, windows, throne, etc)
Light Sources' Fairies	
Red	-
Green	-
Blue	-
Neutral	-
Environment objects	
spikes (on ground)	-
spikes (on wall) / rotating blades	-
not climbable wall (for map edges)	-
one-way doors	-
black flame	-

10.3. UI - Gameplay interface assets

Gameplay interface assets		Description
Font (gameplay)		-
font_gameplay_UI		-
HP_bar (above characters)		hp bar displayed on character visible on the screen (while playing)
HP_bar_background		-
HP_bar_Filled		-
HP_bar (player's UI)		hp bar displayed on player's UI
HP_bar_background		-
HP_bar_Filled		-
status modifier icons above hp bar		-
cursor_crosshair(playing)		-
Skill_UI		-
Skill_Button_Background		-
Skill_InCooldown_Foreground		-
Skill_NotUsable		-
Skill_Icon_Generic		-
Map		-
Map_stylized		displayed when respawning and in playing's menu
Minimap_stylized		displayed in minimap
Squad's icons		displayed in leaderboard, ui before match, ui playing (near score)
Red Squad icon		-
Green Squad icon		-
Blue Squad icon		-
clock/timer icon		-
Conquering bar (Light Source)		displayed when player is conquering a light source
conquered light source icon/effects		shortly displayed in player's UI after a Light Source has been conquered
medieval fantasy UI for menus		medieval fantasy buttons, panels, etc.

10.4. UI - Main Menu assets

Main Menu assets		Description
Sound effects		-
UI_pressed_button		-
UI_released_button		-
UI_submenu_open		-
UI_submenu_close		-
splashscreen		-
match_found_effect		-
Music		-
main_menu_music		-
Fonts		-
font_main_menu_UI		Font (main menu & other menus)
Sprites		-
cursor_main_menu		-
Background_main_menu		-
game_title_main_menu		game title for main menu
game_icon		game icon (for windows app)
splash_screen_logo_team		splash screen logo team
splash_screen_logo_game		splash screen logo game

10.5. UI - Rank System

For each rank, a custom icon is required.

Rank System	
Icons rank	
iron I, II, III	3 sprites
bronze I, II, III	3 sprites
silver I, II, III	3 sprites
gold I, II, III	3 sprites
platinum I, II, III	3 sprites
diamond I, II, III	3 sprites
master of light	1 sprite
lord of light	1 sprite

10.6. UI - Publishing / Marketing / Others

publishing / marketing / others	
teaser	
trailer	
trailer gameplay	
screenshots	
icon for steam	
icon for windows	

11. Prototype

Prototype will be a simpler version of the final game.

An online database won't be implemented, players' accounts and past matches won't be saved, and the ranking system won't be provided. Therefore, the main menu will be much simpler, and all the panels related to user accounts will be cut. Store panel and payment system will not be implemented. Steam API is not required since the prototype won't be published.

Prototype will focus on the implementation of the gameplay and a limited number of characters.

The character's moving system is a fundamental feature that must be implemented in prototype. This includes horizontal movement as well as vertical movement with different kinds of jumps (ground jump, air jump, wall jump). Crouching must also be implemented.

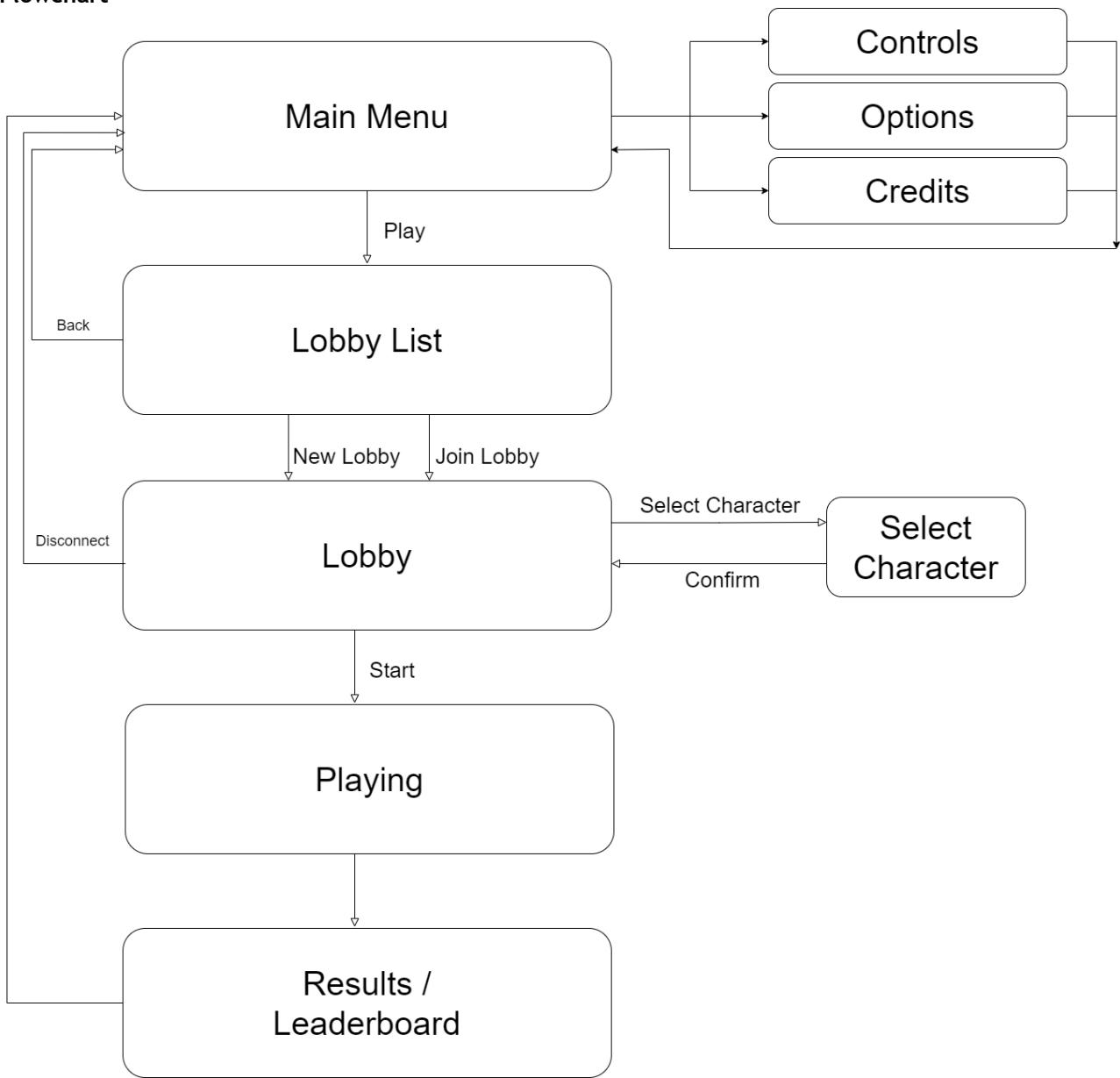
We expect to implement at least one fully working Light Bringer with his skills. Other Light Bringers might be partially implemented with some simpler version of their skills.

Matchmaking system will be simpler than the final game and will be implemented using a system of lobbies created by users, which are then selected by other players to join the match. Automatic matchmaking will not be part of the prototype.

UI interfaces planned for the prototype release are shown in the following section.

11.1. Prototype Flowchart and Interfaces

Flowchart

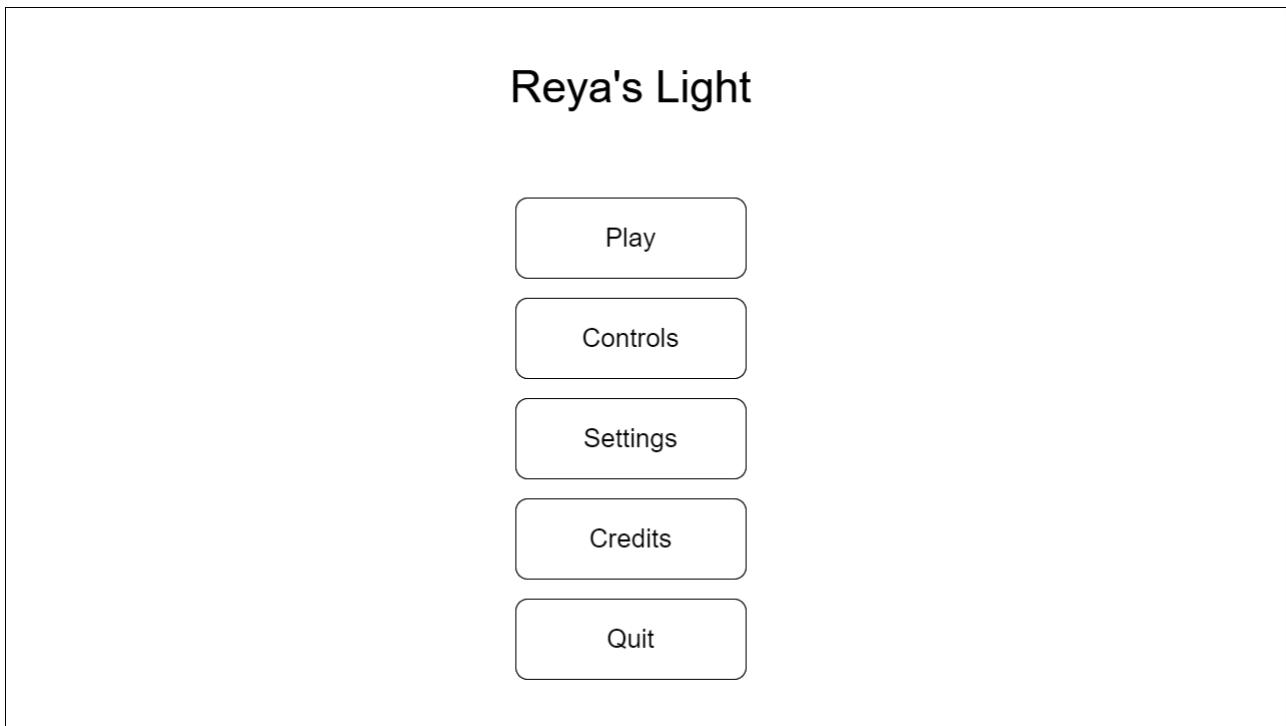


Main Menu

To quickly develop a working prototype, its main menu interfaces must be much simpler than the final game's UI. It won't feature an account system, therefore all information concerning player's account like rank, previous matches, unlocked Light Bringers and shop are not needed.

Prototype's main menu will show only the following buttons:

- Play: go to list of lobbies
- Controls: a panel will show the list of possible actions and related input keys. It won't be possible to customize input mapping.
- Settings: display music and sound volume
- Credits: show information about developers
- Quit: close the application



Lobby List

Here users can choose to join a lobby created from another player or to create its lobby. Unlike the final game, to quickly develop the prototype, the matchmaking will be managed by a list of custom lobbies.

Lobby list

Name_lobby_1	Join
Name_lobby_2	Join
Name_lobby_3	Join
Name_lobby_4	Join
Name_lobby_5	Join

New Lobby

Prematch Lobby

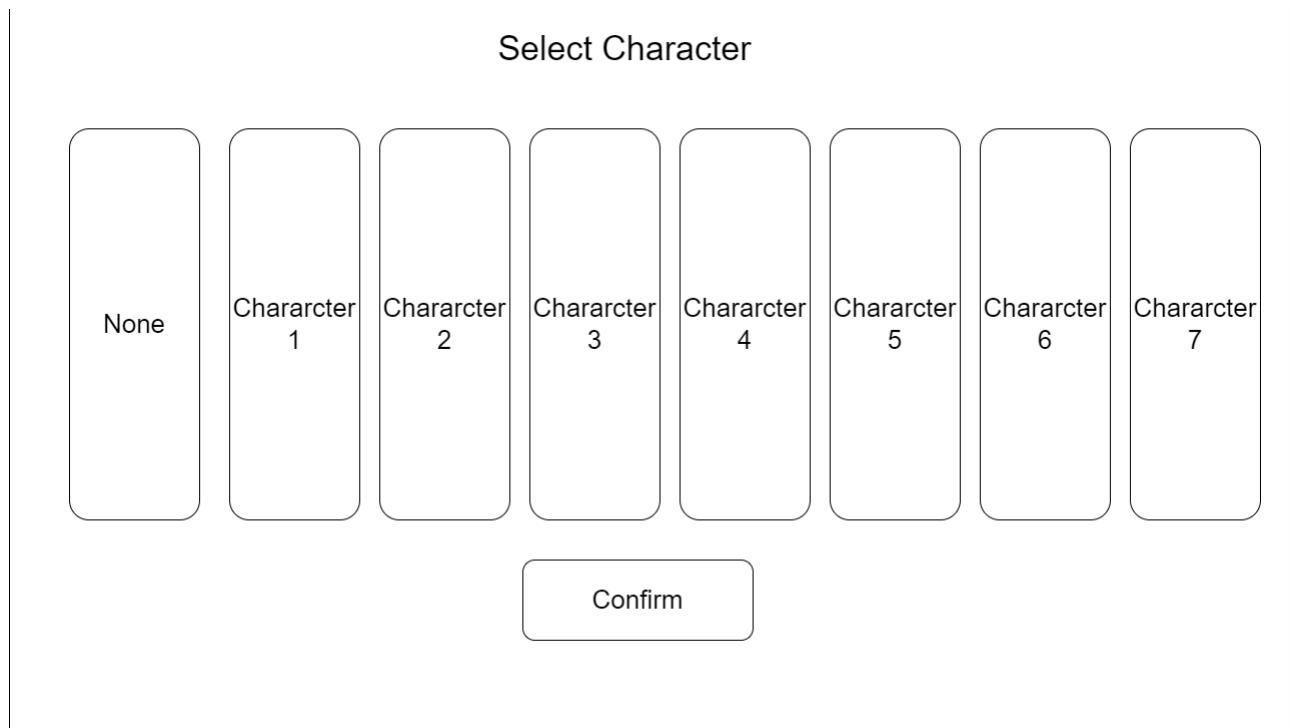
This window will show the list of players that have joined the lobby.
 Each player can choose its name for the match, its team, and its characters. After every player has made his choice, the lobby owner can start the match.

Prematch Lobby

				Disconnect
<input type="text" value="Your name..."/> <input type="button" value="None"/> <input type="button" value="Red"/> <input type="button" value="Green"/> <input type="button" value="Blue"/> <input type="text" value="Select your character"/> <input type="button" value="Ready"/>				
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="button" value="Ready"/>				
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="button" value="Ready"/>				
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="button" value="Ready"/>				
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="button" value="Ready"/>				
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="button" value="Ready"/>				
				Waiting others player / Start Match
Lobby Info				

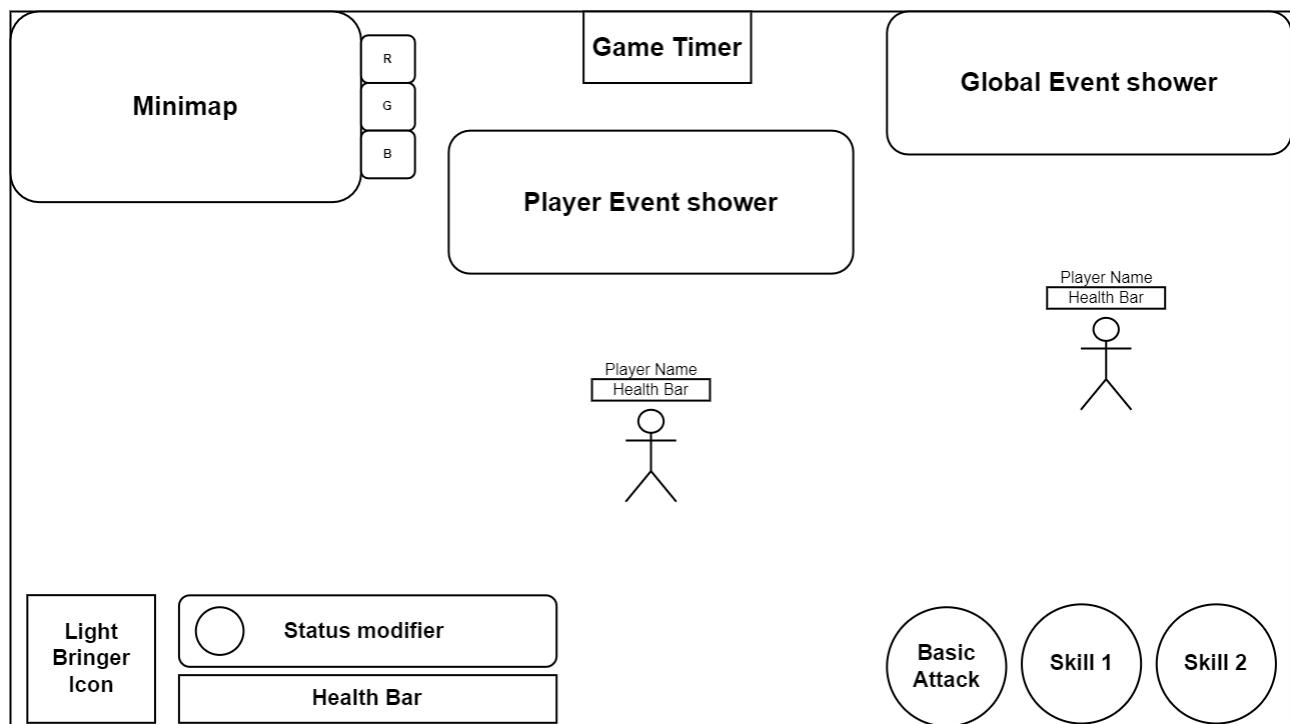
Character Selection

To choose a character, a panel with the list of available Light Bringers will be shown when the user presses "select your character" in the pre-match lobby.



Gameplay Interface

During the match, will be shown a gameplay interface recalling the UI of the final product, but simpler in terms of polishing and visual effects. Please refer to the Interface section for the general description of each UI element in this interface.



Post-match Interface (Leaderboard)

At the end of the match, the leaderboard will be shown to users, with some stats regarding each user. Since assists are not implemented in the prototype, the score is calculated with the following formula:

$$(K + B) / D$$

K = number of kills

B = number of Conquered LS (as single player)

D = number of deaths

Victory / Defeat 3 2 1					
LB	Player name	Score	KD	Conquered LS	MVP
LB	Player name	Score	KD	Conquered LS	
LB	Player name	Score	KD	Conquered LS	
LB	Player name	Score	KD	Conquered LS	
LB	Player name	Score	KD	Conquered LS	
LB	Player name	Score	KD	Conquered LS	
LB	Player name	Score	KD	Conquered LS	
LB	Player name	Score	KD	Conquered LS	