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# THE DARK MASK



## GAME DESIGN DOCUMENT

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## 1. Design History

### 1.1 Version 1.x

#### 1.1.1 Version 1.0

First draft of the document.

### 1.2 Version 2.x

#### 1.2.1 Version 2.0

In the following version of the document you were made the following changes and additions:

- Inserting the title of the document on the cover;
- Improvement of the paragraph on "Logline";
- Expansion and improvement of the concepts contained in the paragraphs of "Target Audience" and "Platforms" giving further explanation on the choices made;
- Grouping compared games belonging to the same series, described in the "Top Performers";
- Improved description on the "Gameplay", mixing the best research of the mask fragments with the type shooter;
- Addition of The Dark Mask interfaces;
- Improving and adding rules in the paragraph of "Rules" with the definition of the countdown time;
- Rearranging and adding a title to various Flowchart;
- Improved description of each character abilities;
- Improving and adding information in the paragraph of "NPCs";
- Addition of artwork relating to gaming arena features, such as a map, the traps, the gadget stand, and the dressing rooms of cosplayers.

### 1.3 Version 3.x

#### 1.3.1 Version 3.0

In the final version of the document you were made the following changes and additions:

- Improving and adding information in the Chapter 2;
- Improving information in the Chapter 3, con l'aggiunta delle descrizioni per ciascun link;
- Improving and adding information in the paragraph of "Target Audience";
- Adding of paragraph "Business Model";
- Adding information in the paragraph of "System Requirements";
- Adding information in the paragraph of "Feature Comparison";
- Improving and adding information in the paragraph of "Controls";
- Adding interfaces in the paragraph of "Interfaces";
- Adding images in the Chapter "The Game World";
- Improving and adding information in the Chapter "Media List";
- Adding of Chapter "Developed Since Now".

## 2. Vision Statement

The Dark Mask is intended as an immersive and frenetic experience for the player, out of the ordinary, thanks to great and ironic characters (see more on chapter 6) and a dynamic environment (more on chapter 8). In the game, which is an online action game shooter like in a 3D arena, the player will be able to choose between 3 characters (witch, warriors, soldier) and fight the opponent team while trying to gather pieces of a mysterious mask in just 10 minutes. In the end the winner team will be



facing the evil mayor, who will be helped out by the loosing. The arena will be full of A.I. characters and traps, that will make catching the mask harder.

## 2.1 Game logline

Become the cosplayer of your dreams, fight against other players to gather the pieces of a mysterious mask and defeat the insane "mayor" to gain back your freedom!

## 2.2 Gameplay Synopsis

The Dark Mask is intended to be a **competitive online multiplayer** game in which one player can play against another or against a monster, different from today's market standards. The chosen set is a comic-book fair in which guests, dressed as cosplayers, will be transformed into their real counterparts of their costumes. The experience is meant to be very challenging and not relaxing at all, since there will be plenty of menaces which will make the game like a nightmare. Players will be stuck in this fair and even though they will have the powers of their characters, they will have to fight for their freedom again others and again a mysterious mayor.

The Dark Mask tells the story of a group of people that got transformed by a mysterious mayor with fake promises and tricks, while they were at a comic book convention. Right after this transformation, the mayor's game begins in which 6 cosplayers (controlled by 6 video gamers) will be divided in 2 groups of 3 and will have to rescue 3 pieces of a mysterious object (a dark mask) which will give them the chance to get back their freedom.

With the rules set by the mayor there will only one team that will be able to get out of its insane game and go back to reality, when the other will lose its soul to the mayor's property. The players will only have 10 minutes to gather all 3 fragments of the mask to get to safety and this means that they 2 teams will have to fight for it. The winners will have chance to get to a secret room of the arena but instead of getting their promised freedom they will be facing the mayor. The enemy will also have the help of the members of the loosing team which will have to try to not let the winning team beat the mayor.

During the first round, in which it will be necessary to seek around and try to find the pieces of the mask, a series of AI enemies will try to get in the way of players. If one of the player will get killed by either an enemy team's member or an AI, it will be respawned after a short amount of time.

Once pieces of the mask will be carried to a base they will have to be protected from other players trying to steal them. If someone is defeated while it is carrying a fragment of the mask it will drop it and the piece will then be available for pick up by someone else.

At the end of round one, the winning team will be able to face the mayor in the final round and only after this step the game will be actually over. If during the first round the 10 minutes will be over but not all the pieces will be brought home by one of the team, there will be then a short deathmatch between the teams and the surviving one will be consider the winner of this section of the match.

There will be 3 characters to choose from (in 2 different colors which will distinguish the 2 teams). Each one of them will have specific attacks and animations. The mechanics of the games as in attacks and defenses were specifically thought for this game, since the main goal is picking up the mask's components the fighting is only a way to get there. Therefore, the combat system was conceived for each character to give them even more originality. Each one of them will be able to attack from far away as well as from close up. There will also be special attacks. We also thought of using both third person view as well as first person view, which the player will be able to choose base on its personally taste.

Another interesting feature we will implement is the change of atmosphere throughout the gameplay. In the beginning there will be a calm and relaxing atmosphere which will slowly decay into a dark and nightmarish one in order to add drama to the game.

### 3. Audience, Platform, and Marketing

The following are the sources we used to define our target audience and Platforms:

- <https://adwords.google.com/da/DisplayPlanner/>: Display Planner is a free tool in AdWords that you can use to plan advertising campaigns on the Display Network. To start, you need only a few basic details such as the interests of customers or the landing page. Display Planner then guides you in planning, generating ideas for targeting, impression estimates and historical costs. The ideas for targeting include keywords, interests, topics, placements of websites, mobile apps, demographic, and remarketing data.
- <https://www.superdataresearch.com/blog/global-games-market-2015/>: The following website contains the Global Games Market relative to 2015, which provides insights into the current state and future prospects in the global gaming market.
- <https://newzoo.com/insights/articles/global-games-market-reaches-99-6-billion-2016-mobile-generating-37/>: The following website is especially for the games market analysis, which allowed the choice of platform to use according to occurred on forecasts of this market movement towards 2019 and to better understand the trends on which is pushing the games industry.

#### 3.1 Target Audience

The game is intended for those who like action online genre, to be precise, 3D shooters inside of an arena. In the graph below, we present the percentage of our target, in a matter of **sex**, **age** and **platform** obtained through the use of AdWords. Players are divided with the following parameters to be identified as possible users of our product:

- Countries: Italy, Germany, Spain, France, US, UK, China, Japan, Russia, South Africa
- Language: Italian and English;
- Interest: "Computer e videogames" and related website as discussed in paragraph "3.4 top performers", as follows:
  - "www.pvzgw2.com";
  - "www.epicgames.com/unrealtournament";
  - "www.teamfortress.com";
  - "www.quakelive.com".
- Single ideas for targeting:
  - Interest (shooter and action game enthusiasts);
  - Subject (shooter, online game, computer e videogames);
  - Demography: Sex (Women, man, unknown) and Age (18-24, 25-34, 35-44, 45-54, 55-64, 65+).

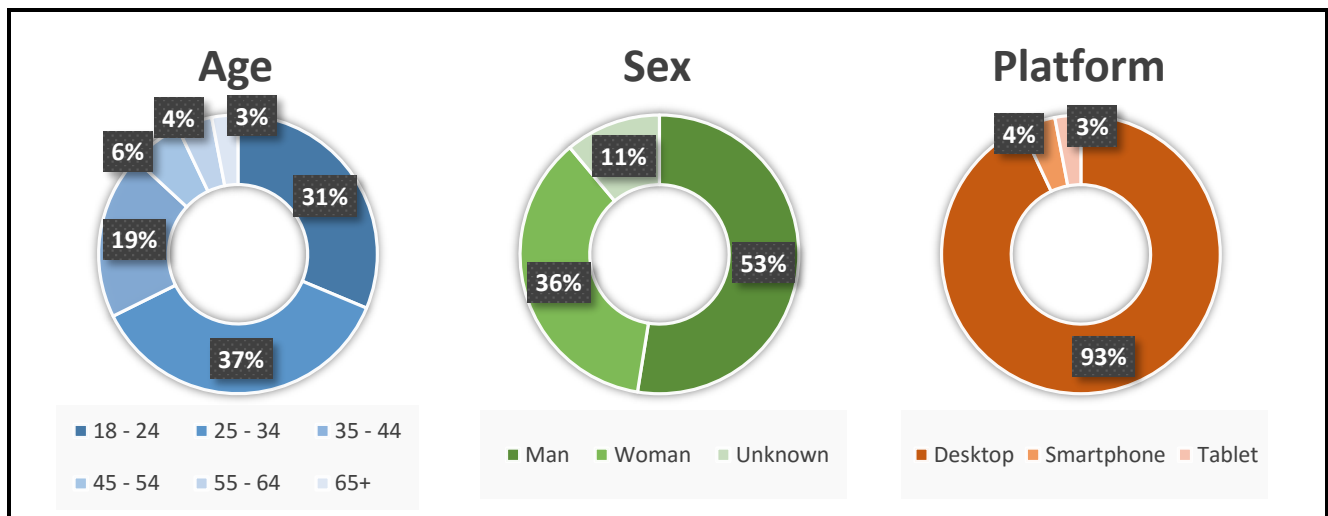


Figure 1. Percentage of the target according to age, sex and platform used.

The result obtained shows that our focus is between the age of 18 and 44, with a higher percentage between 24 and 34. Also, the 53% of the total player is male, the 36% female and 11% is of unknown gender. The most used platform for this kind of player is Desktop, with a 93% out of the total. Desktop platform is therefore the best bet on which we should deploy our game. Deeper analysis has shown that this will be the right choice as discussed in paragraph "3.2 Platform".

We have also esteemed the target audience subdividing it with the Bartle Test:

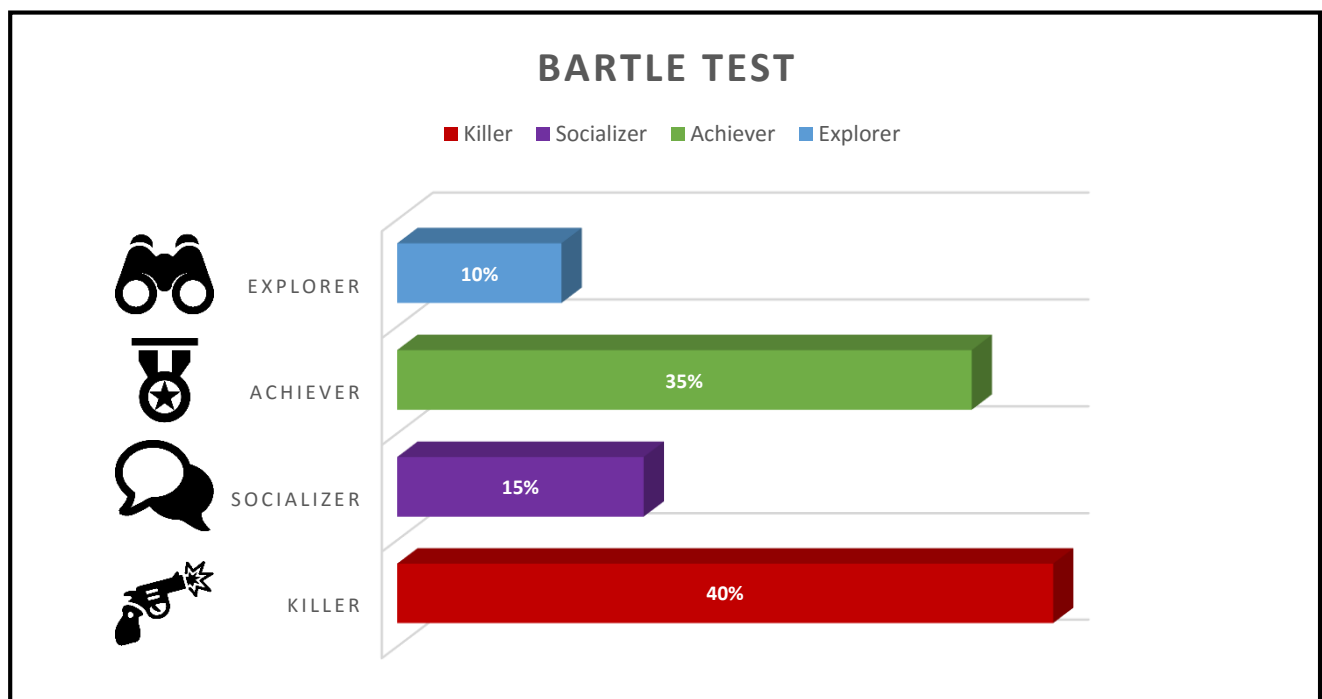


Figure 2. Bartle test

The above graph (Figure 2.) shows and evaluation of the type of players to whom the game is targeted to.

40% of the total is taken by player who like action (Killer), 35% by people that like to be in a competition against others (Achiever). With a percentage of 15 and 10 we find Socializers and Explorers, meaning the players which have a stronger will to create relationships during the game or explore the map. Clearly, with further development, (as an example: vocal chats, etc....), it will be possible to raise the percentage of Socializers interested in the game.

Approximately PEGI rating will be 12+ as some kind of explicit violence will be present towards fantasy characters or realistic ones, with human or animal look.

For known reason, in Japan, where the rating method is CERO, the category chosen is B. In the United States, where the method is ESRB, it will be T.

### 3.2 Platform

As mentioned in the previous paragraph, deeper surveys have underlined how choosing our target platform as in PCs is the right decision. Analyzing how the videogame market as changed and will change between 2015 and 2019 make us notice that the use of PCs and consoles has been stable and will keep being like that for a long time (Figure 3.).

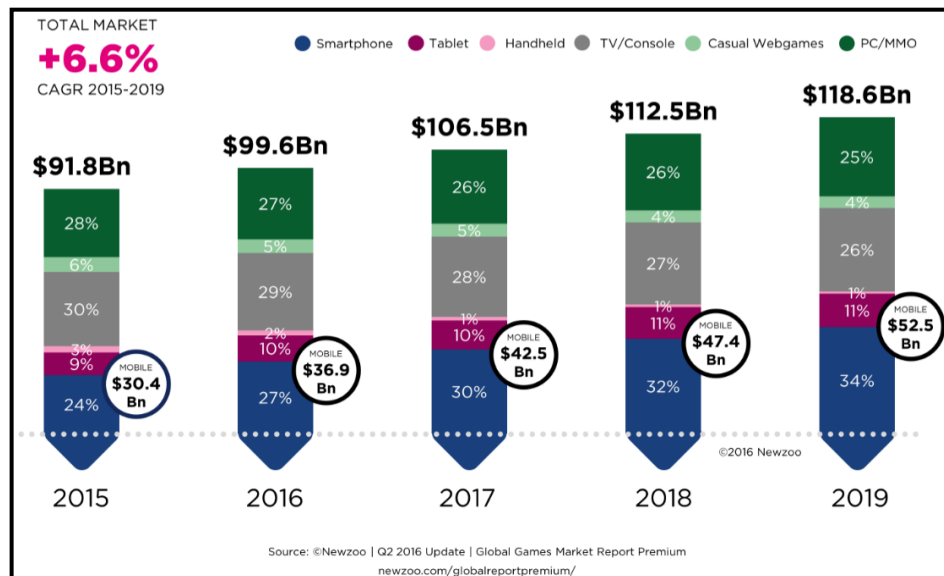


Figure 3. Change of the market of videogames based on the different platforms, from 2015 up to a forecast in 2019

This information gives us no doubt on our decision and shows that we could possibly also extend our target to home consoles or portable ones. This possibility, in addition of being a good market move, is also easily deployable as our game can also be played with a gamepad. We could also think of a

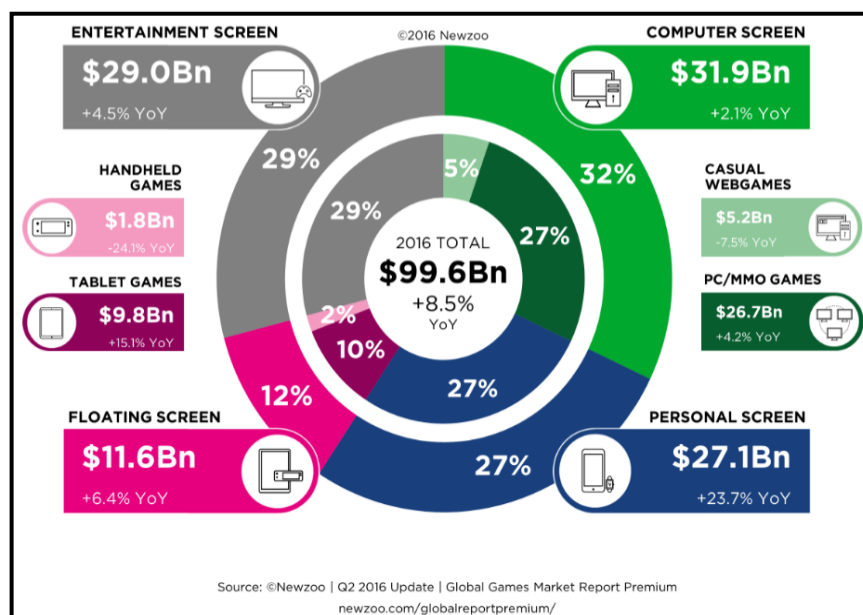


Figure 4. The worldwide profits of videogame selling in 2016.

mobile version playable through touch systems but in this case the mechanics of the game wouldn't be able to match that kind of environment.

In this picture (Fig.4), the worldwide collecting's based on the platform are shown. Their values tell us that our choice is the most accurate when taking in consideration future incomes. In fact the highest percentage, 32%, is referred to computer screen with an income of 32 billion dollars.

### 3.3 Business Model

The Dark Mask will be using the “**InApp/DLC**” model and therefore will be distributed for free and will have as entrance features one arena and just three playable characters.

In the future, which **micro-transactions**, new contents will be available.

These new contents will be purely aesthetic but they will give a better chance of identification between player and character.

There won't be any **pay-to-progress** o **pay-to-win** systems, because we decided to guarantee an equilibrium between the playable characters.

This model was chased to **maximize the starting number of users**, in order to have a better starting spread of the game. With this decision we think we will make more money compared if we'd have used a **pay-to-play standard**, because premium user will spend more than if they had paid to play the game right away.

This model will give us the possibility to interact with the community about feature of post-releases, making sure that the new contents will match what the users wants, maximizing again, income.

### 3.4 System requirements

The Dark Mask will need:

- **Keyboard and Mouse:** the interface will be optimized for interacting with mouse and keyboard since this is the preferred way between desktop platforms users;
- **Gamepad:** the game will also be optimized to be played with gamepad since it fits well the mechanics of the game;
- **High Speed Internet Connection:** in order to play the game flawlessly, with no lagging.
- **Personal Computer:** To start the game executable.

Right below, the minimum requirements for both software and hardware to be able to play correctly on both PC and Mac:

#### Windows

	MINIMUM REQUIREMENTS	RECOMMENDED SPECIFICATIONS
Operating System	MS Windows 7	MS Windows 10 Home
Processor	Intel Core™ 2 Duo 2.4 GHz or AMD Athlon™ 64 X2 5600+ 2.8 GHz	Intel® Core™ i5-4460 Processor (6M Cache, up to 3.40 GHz) or AMD FX-8350 Processor (16 MB Cache, 4GHz)
Video	NVIDIA® GeForce® FX 5500 or AMD Radeon 9550	NVIDIA® GeForce™ 6600 GT or AMD Radeon X1550
Memory	2 GB RAM	4 GB RAM



Storage	4 GB	
Internet	Broadband Internet connection	
Resolution	1024x768 minimum display resolution	1920x1080 maxim display resolution

## Mac PC

	MINIMUM REQUIREMENTS	RECOMMENDED SPECIFICATIONS
Operating System	Mac® OS X 10.8 (latest version)	Mac® OS X 10.9 (latest version)
Processor	Intel® Core i3	Intel® Core i5
Video	NVIDIA® GeForce® 8600M GT or ATI Radeon™ HD 2600 Pro	NVIDIA® GeForce® GT 650M or ATI Radeon™ HD 5670 or better
Memory	4GB RAM	8GB RAM
Storage	4 GB	
Internet	Broadband Internet connection	
Resolution	1024x768 minimum display resolution	1920x1080 maxim display resolution

## 3.5 Top performers

Following a field research were identified the following games, who approach for mechanical and characteristics, to that into design time:

- Plants vs. Zombies: GARDEN WARFARE Series:** Series of videogames genre third-person-shooter Tower Defense, develops entirely on battles conducted online or in split screen by the variable duration and provide for the clash between teams in groups of plants and zombies groups. The plants negotiate for Dave crazy, that their creator. The zombies negotiate instead for their boss. Everything is summed up in the eternal struggle between good and evil. The second episode of this series, unlike the former, has introduced a kind of campaign mode, suitable for those who prefer the singleplayer. The series are considered the following issues:
  - Plants vs. Zombies: GARDEN WARFARE (Xbox One, Xbox 360, PlayStation 3, PlayStation 4, Windows);**
  - Plants vs. Zombies: GARDEN WARFARE 2 (Xbox One, PlayStation 4, Windows).**
- Unreal Tournament Series:** The Unreal Tournament series of games based his story on the participation of your character in the tournament organized by unscrupulous companies named Liandri, where the goal is to kill the other participants, in order to advance in the tournament and eventually defeat the final boss, Malcolm. Has a setting multiplayer online, yet it has a campaign for single player articulated not as a classic mode "History", but as a tournament in meetings of increasing difficulty. The series includes the following editions:
  - Unreal Tournament 1999 (PlayStation 2, Windows, Linux, Mac, Dreamcast);**
  - Unreal Tournament 2003 (Windows, Linux, Mac);**
  - Unreal Tournament 2004 (Windows, Linux, Mac);**
  - Unreal Tournament 3 (PlayStation 3, Windows, Mac, Xbox 360);**
  - Unreal Tournament 2014 (PlayStation 3, Windows, Mac, Xbox 360).**
- Team Fortress Series:** Series of shooter videogames and online multiplayer in which two teams of players, differentiated by red and blue colored clothes in the role of various classes,

cooperate to complete certain goals depending on the map and game mode in which you are (like for example the predominance of a part of territory, or capture the opponent's flag). The "History" component is almost entirely absent. The series includes the following editions:

- **Team Fortress (Windows);**
- **Team Fortress 2 (Windows, Linux, Mac);**
- **Quake Series:** Series of video games in the first person shooter genre. Because of its high multiplayer characterization, the plot has no influence on the game, but to make the background to the modes for solo play, especially in the fighting bloodthirsty justifying in part the motivation and the setting. The "single player" mode is in fact articulated in a series of challenges in closed arenas in which you meet different opponents (called Bot) who once defeated unlock various "tiers". Each of these allows you to find new and more skilled NPC opponents; the ultimate challenge of the game is a clash with Xaero. The next episode, Quake IV also allows you to take part in the ongoing battle being able to rely on the invaluable help of some fellow adventurers. The series are considered the following issues:
  - **Quake III: Arena (Windows, Linux, Mac, Dreamcast, PlayStation 2, Xbox, Amiga, Pocket PC, MorphOS);**
  - **Quake IV (Windows, Linux, Mac; Xbox 360).**

### 3.6 Feature comparison

Considering the games described in the previous paragraph, it's now possible to make comparisons with the one that we are developing, with the following tables:

- **Plants vs. Zombies: GARDEN WARFARE:**

Feature	Plants vs. Zombies: GARDEN WARFARE Series		The Dark Mask
Platform(s)	<b>Plants vs. Zombies: GARDEN WARFARE</b>	Xbox One, Xbox 360, PlayStation 3, PlayStation 4, Windows	Windows, Mac, Linux
	<b>Plants vs. Zombies: GARDEN WARFARE 2</b>	Xbox One, PlayStation 4, Windows	
Player Interaction patterns	<b>Plants vs. Zombies: GARDEN WARFARE</b>	Team competition, cooperative, multiplayer, shooter	Cooperative, team competition, multiplayer, Singleplayer (Tutorial mode), shooter
	<b>Plants vs. Zombies: GARDEN WARFARE 2</b>	Team competition, cooperative, multiplayer, singleplayer, shooter	
Power up	Coins, Sticker packs		Gadgets (food and drink)
Units	Customized		Pre-defined
Colors	Identify functions		Identify teams
Factions	Two factions		Two factions

- **Unreal Tournament Series:**

Feature	Unreal Tournament Series		The Dark Mask
Platform(s)	Unreal Tournament 1999	PlayStation 2, Windows, Linux, Mac, Dreamcast	Windows, Mac, Linux
	Unreal Tournament 2003	Windows, Linux, Mac	
	Unreal Tournament 2004	Windows, Linux, Mac	
	Unreal Tournament 3	PlayStation 3, Windows, Mac, Xbox 360	
	Unreal Tournament 2014	PlayStation 3, Windows, Mac, Xbox 360	
Player Interaction patterns	Team competition, player vs player, multiplayer, singleplayer, shooter		Cooperative, team competition, multiplayer, Singleplayer (Tutorial mode), shooter
Power up	Gadgets (arms)		Gadgets (food and drink)
Units	Pre-defined		Pre-defined
Colors	Identify teams		Identify teams
Factions	none		Two factions

- **Team Fortress Series:**

Feature	Team Fortress Series		The Dark Mask
Platform(s)	Team Fortress	Windows	Windows, Mac, Linux
	Team Fortress 2	Windows, Mac, Linux	
Player Interaction patterns	Team competition, cooperative, multiplayer, singleplayer, shooter		Cooperative, team competition, multiplayer, Singleplayer (Tutorial mode), shooter
Power up	Neutral and team-specific gadgets (Strength, Resistance, Vampire, etc..)		Gadgets (food and drink)
Units	Specialized but fixed		Pre-defined
Colors	Identify team		Identify teams
Factions	Two factions		Two factions

- **Quake III: Arena:**

Feature	Quake Series		The Dark Mask
Platform(s)	Quake III: Arena	Windows, Linux, Mac, Dreamcast, PlayStation 2, Xbox, Amiga, Pocket PC, MorphOS	Windows, Mac, Linux
	Quake IV	Windows, Linux, Mac, Xbox 360	

<b>Player Interaction patterns</b>	<b>Quake III: Arena</b>	Team competition, cooperative, multiplayer, singleplayer, shooter	Cooperative, team competition, multiplayer, Singleplayer (Tutorial mode), shooter
	<b>Quake IV</b>	Team competition, cooperative, multiplayer online, singleplayer, shooter	
<b>Power up</b>	Gadgets (Energy, Armor, Arms, etc..)		Gadgets (food and drink)
<b>Units</b>	Pre-defined		Pre-defined
<b>Colors</b>	Identify teams		Identify teams
<b>Factions</b>	Two factions		Two factions

In conclusion, **The Dark Mask** differs from competition for the following facts:

- The arena is unique;
- There's a plot which can develop in different ways depending on how the game ends;
- The possibility that none of the teams wins the game, which will be won by the A.I. then;
- The loosing team will join the A.I. and fight the other team for a final round.

## 4. Legal Analysis

"The Dark Mask" is under trademark and copyright protection.

The underlying code is protected as a literary work, and the artwork and sound are protected as an audiovisual work.

THE "SOFTWARE" INCLUDES ALL SOFTWARE INCLUDED WITH THIS AGREEMENT, THE ON-LINE MATERIALS AND DOCUMENTATION.

THE SOFTWARE IS LICENSED, NOT SOLD, BY OPENING, DOWNLOADING, INSTALLING, COPYING, OR OTHERWISE USING THE SOFTWARE, AND ANY OTHER MATERIALS INCLUDED WITH THE SOFTWARE, YOU AGREE TO BE BOUND BY THE TERMS OF THIS AGREEMENT WITH THE ITALIAN INDIE TEAM COMPANY ("LICENSOR").

PLEASE READ THIS AGREEMENT CAREFULLY, IF YOU DO NOT AGREE TO ALL THE TERMS OF THIS AGREEMENT, YOU ARE NOT PERMITTED TO OPEN, DOWNLOAD, INSTALL, COPY, OR USE THE SOFTWARE.

## 5. Gameplay

### 5.1 Overview

The Dark Mask will offer a gameplay made out of the fusion between a typical **third person shooter** and an **action game**, focusing also on **exploration**. The player will be able to:

- **Move** with the avatar in order to explore the areas of the map;
- **Interact** with the dynamic elements of the game (restoration areas traps, pick up places, etc.)
- **Attack** enemies using weapons and abilities of the character selected (see chapter 6).
- **Defend** from enemies using block and shield abilities of the character selected (see chapter 6).

Also, we decided to introduce into the game the possibility to use both **First-person** and **Third-person** view, so players can choose the level of empathy on the basis of personal taste.

This kind of choose allows a more precise control in case of player are using a weapon or particular ability.

The main gameplay mode of The Dark Mask is **competitive multiplayer**, where two groups composed by 3 players will compete each other to capture 3 mask's fragments. Also, into arena we can find an undetermined numbers of enemies (controlled by A.I.) that will obstruct teams to reach their goal. At the beginning of a match, every player (included also enemies) will start play with the **health bar** loaded to the maximum. This health bar will empty following received enemy attacks, obviously player can empty enemies health bar with an attack.

If health bar is completely empty, player will die temporarily and can't be controlled until occurs respawn (after 10 seconds), that will "resurrect" player on a determined map point (see chapter 8). Even in case of death of an A.I. enemy, he will be respawned (after 30 seconds) in a different map position than player.

Every character, in addition to health bar, will have a set of **personal characteristics**, such as:

- **attack;**
- **defense;**
- **speed;**

that will affect gameplay and combat system. Obviously, we will dedicate particular attention to the balance of these three values, to ensure players characters with same "power" even with different ability.

Every character has **a default set of moves**, formed by:

- **weak attack;**
- **mid attack;**
- **strong attack;**
- **special attack;**
- **parry/deviate a hit.**

We will also ensure a good balance of these moves, so will be impossible to find characters with strongest abilities then others.

## 5.2 Gameplay description

The followings are specific details of the characters:

- **Moving the avatar:** the avatar will be able to move inside the arena within it's physical boundaries, therefore it won't be able to pass objects with a rigid body. Each avatar will be able to move at different speeds as in normal speed and run speed. Running will be limited with a fatigue variable ("stamina") which will prevent the playing to keep this state for too many seconds. After a recharge state running will be available again.
- **Interaction between the avatar and the objects of the arena:** the avatar will be able to interact with a series of objects inside the arena like restore docks, traps, pick up places. Interaction is also intended with other entities like other players and AI enemies in both a faraway way and a close up one using kicks, fists, swords and when in a distance magic, guns, and the throwing of objects. When hit, an avatar will lose some of its health.
- **Combat system of the avatar:** each player will have a specific set of moves made out of a weak, a medium and a strong attack as well as a special one. The player will also be able to shield or block enemies attacks. Each one of these moves will be animated and designed to match the character.
- **Dynamic arena:** a great feature of the videogame will be its arena. The Map will be dynamic and interactive thanks to the possibility of picking up special object and perform different action with objects like restore kiosks or being tricks into traps.



## 5.3 Controls

Since the target platform for "The Dark Mask" is a personal computer, the game is designed to use mouse and keyboard, or gamepad.

There are different controls for the various stages of the game. In the menu stage the controls are the default control for an application, the mouse is used to navigate the interface. While, in the game stage the player will need mouse and keyboard (or gamepad) to play. The controls will be described in the standard actions and special actions.

### Starting actions:

- **Join an online match:** player joins an online match from the menu of the game.
- **Join an offline match:** player starts a game tutorial from the menu of the game.

### Standard actions:

- **Move a character:**

#### **Mouse/Keyboard:**

- W-A-S-D: to move the character in the direction of its orientation.
- MOUSE POINTER: to rotate the camera view and use the viewfinder.
- SPACE: to blow up the character (for "soldiers" is equivalent to the sprint).
- SHIFT: to lower the character.

#### **Gamepad:**

- LEFT STICK: to move the character in the direction of its orientation.
- RIGHT STICK: to rotate the camera view and use the viewfinder.
- A: to blow up the character (for "soldiers" is equivalent to the sprint).
- LB: to lower the character (for "soldiers" is not present).

- **Attack by a character:**

#### **Mouse/Keyboard:**

- LEFT CLICK: to perform a weak attack with character.
- Q: to perform a medium attack with the character.
- E: to perform a strong attack with the character.
- R: to perform a special attack with the character.

#### **Gamepad:**

- X: to perform a weak attack with the character.
- Y: to perform a medium attack with the character.
- B: to perform a strong attack with the character.
- LT + RT: to perform a special attack with the character.

- **Game Menu:**

#### **Mouse/Keyboard:**

- TAB: to view the game statistics.
- ESC: to display the game menu.

#### **Gamepad:**

- BACK: to display statistics ("scoreboard") game.
- START: to display the game menu.

Special actions:

- **Conquer / recover a mask fragment:** to recover a mask fragment is simply "walk-on" with the character and carry it inside of his team's dressing room.
- **Recover health:** to recover a quantity of health is simply "walk on" in one of two game elements (hamburger or soft drink) with character.

Resolving actions 1° round:

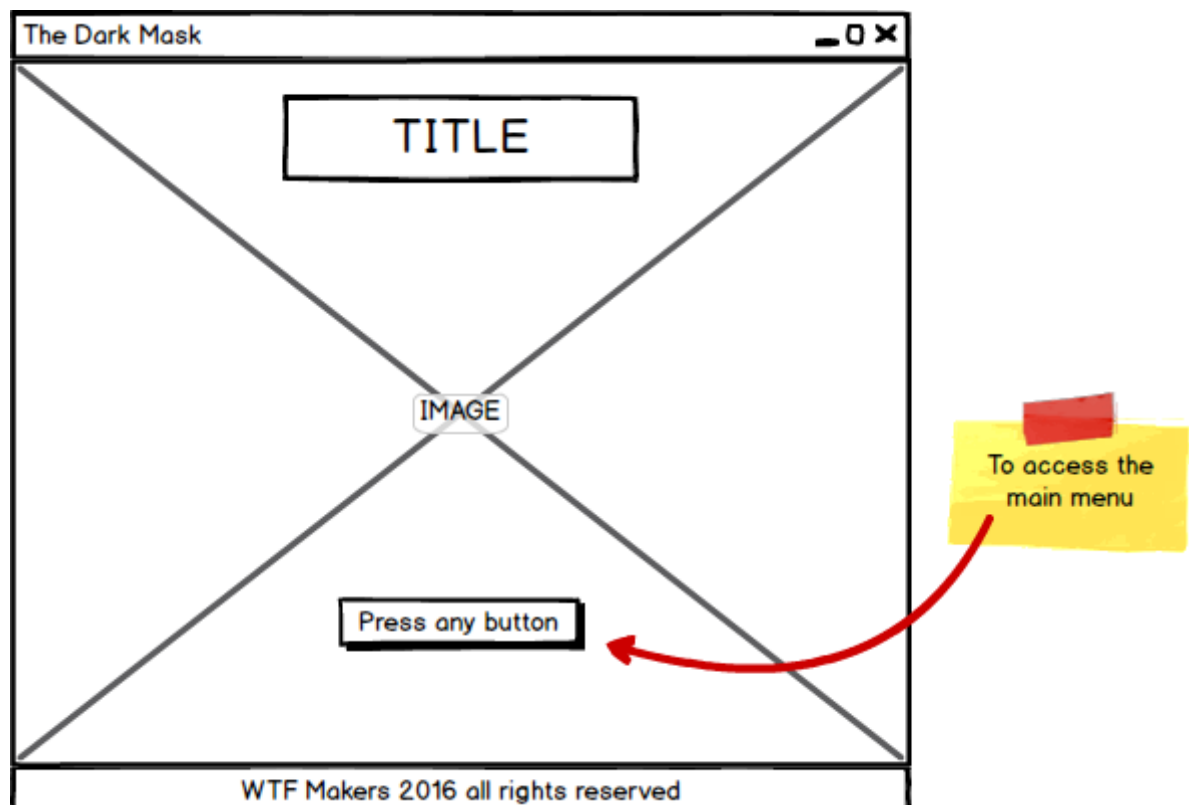
- Conquer the three pieces of the mask.
- Time run out and the enemies of a team are all dead.

Resolving actions 2° round:

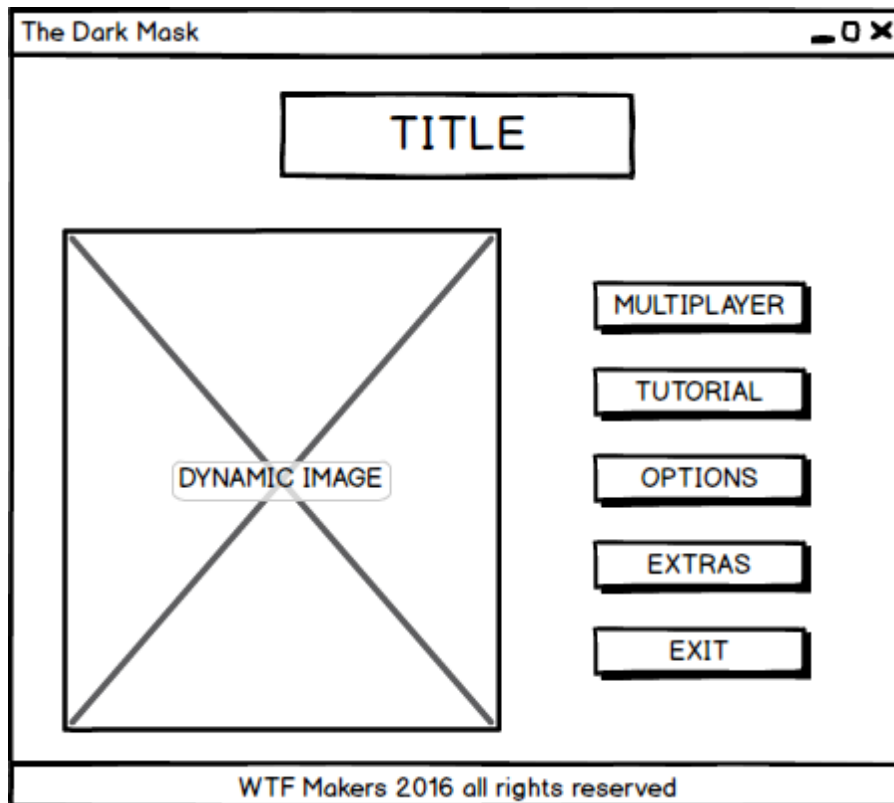
- Win the boss-battle.

5.3.1 Interfaces

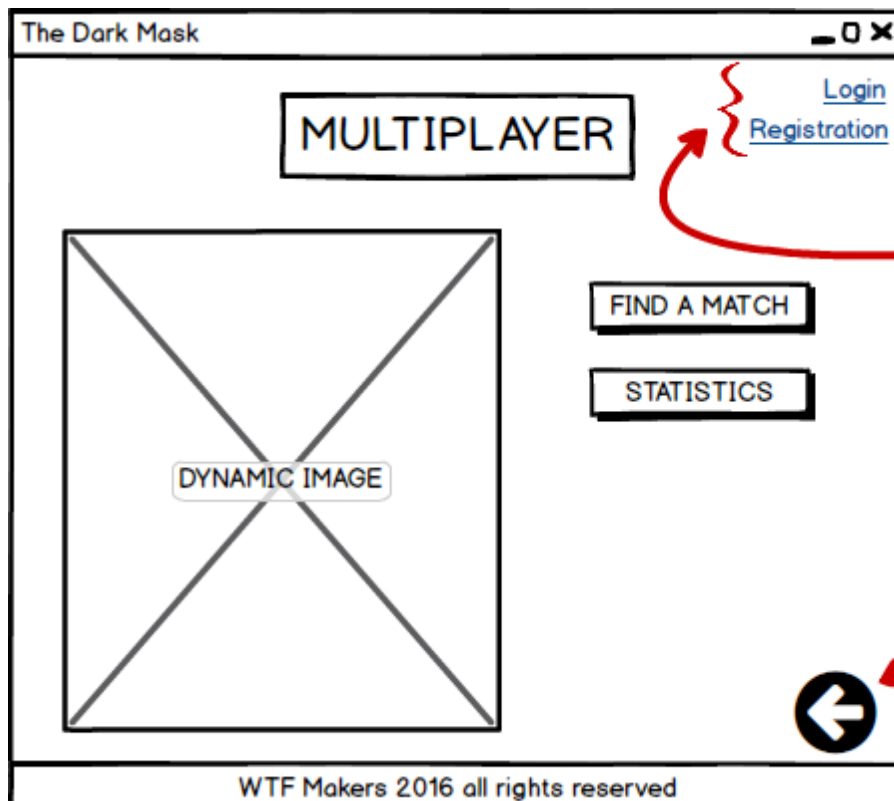
Homepage screen:



**Menu screen:**



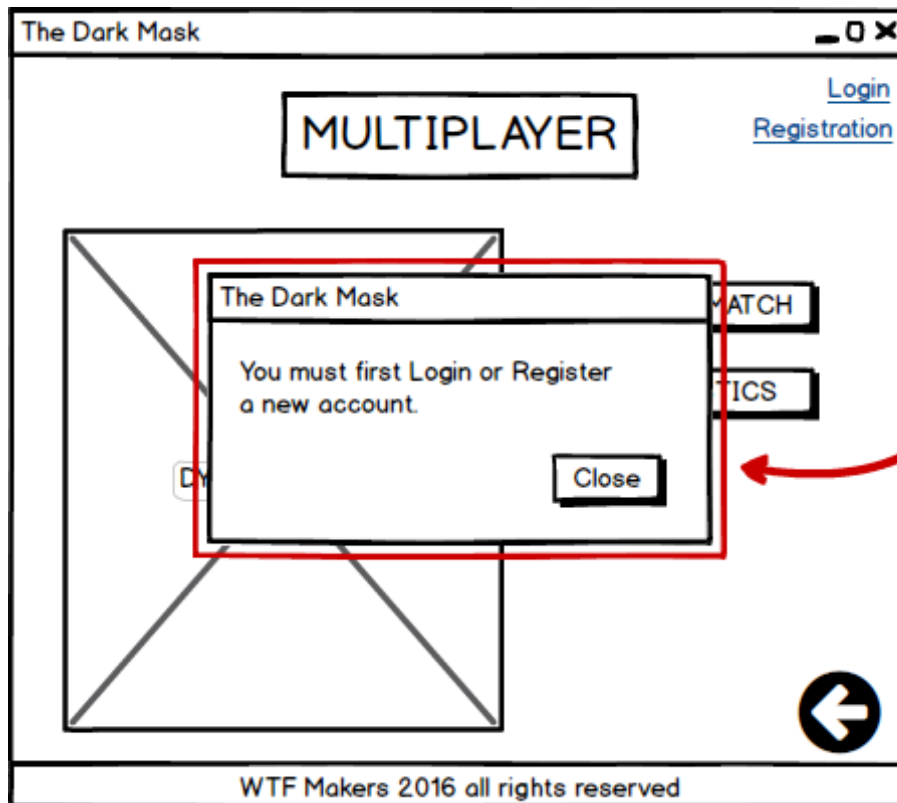
**Multiplayer screen:**



It allows you to sign in or register.

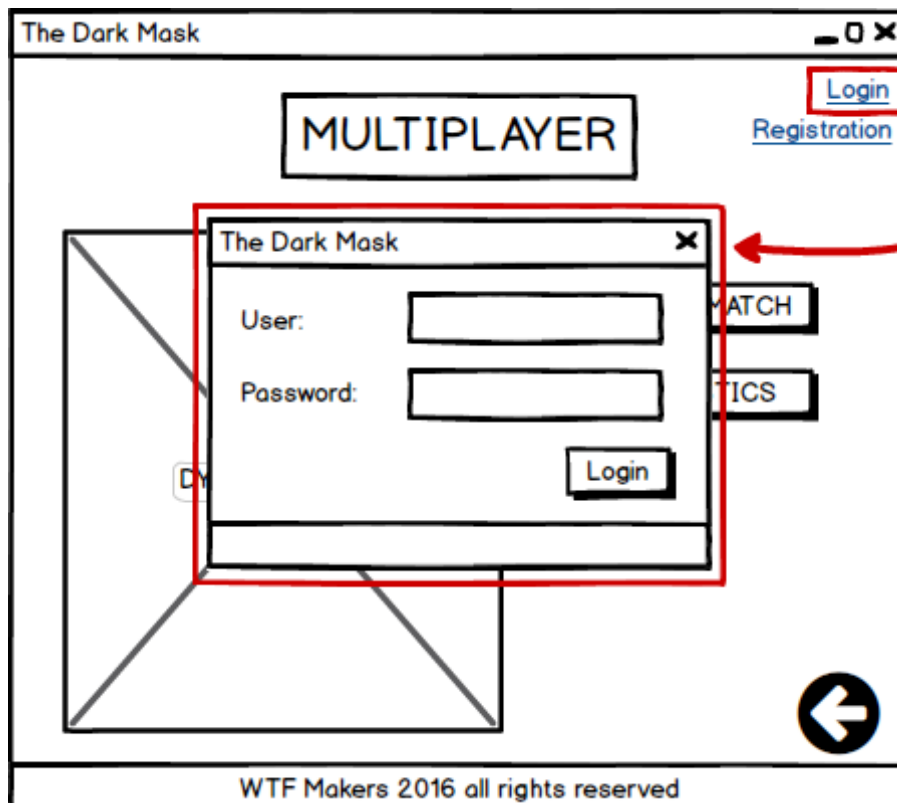
It allows you to return to the main menu screen.

Popup error screen:

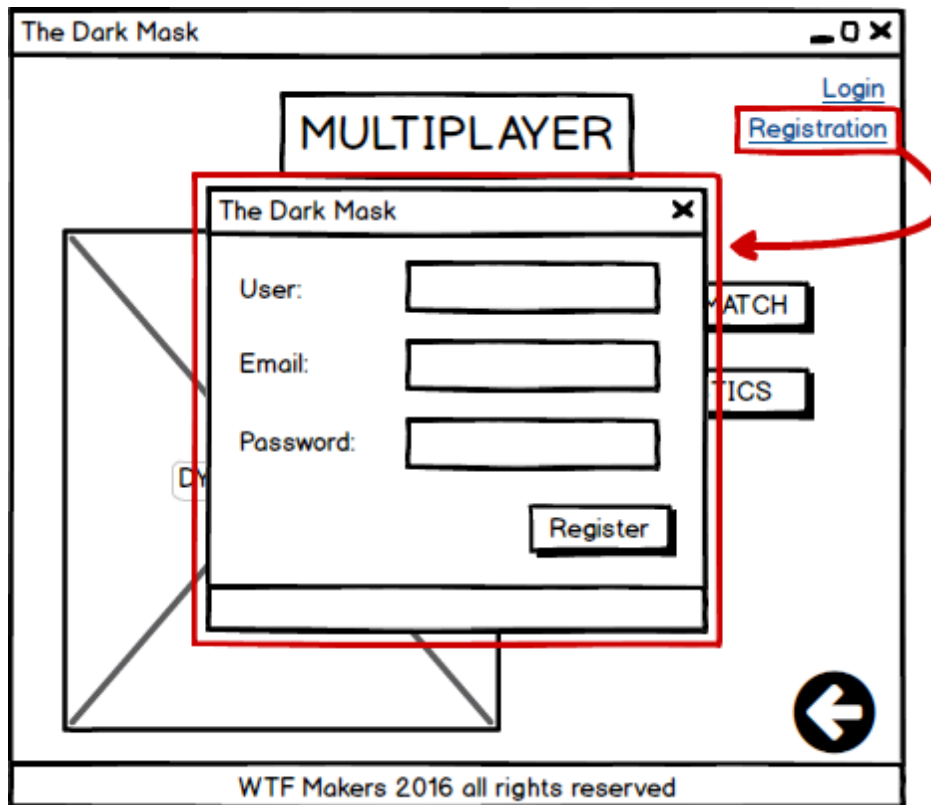


Popup error when you press "Find a match" and access or registration is not made.

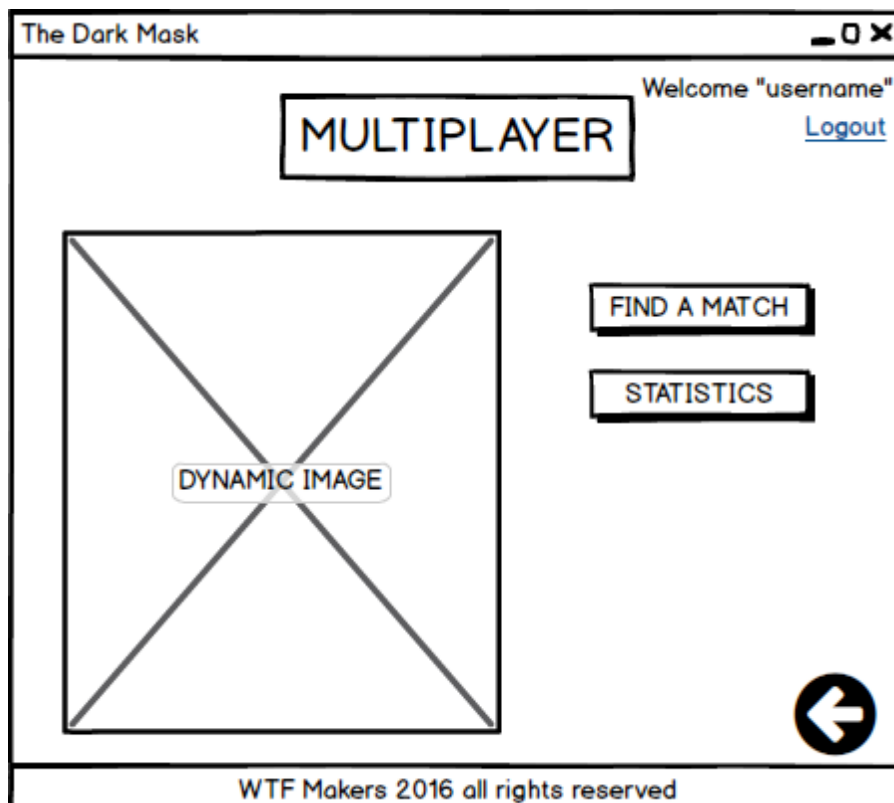
Login screen:



**Registration screen:**

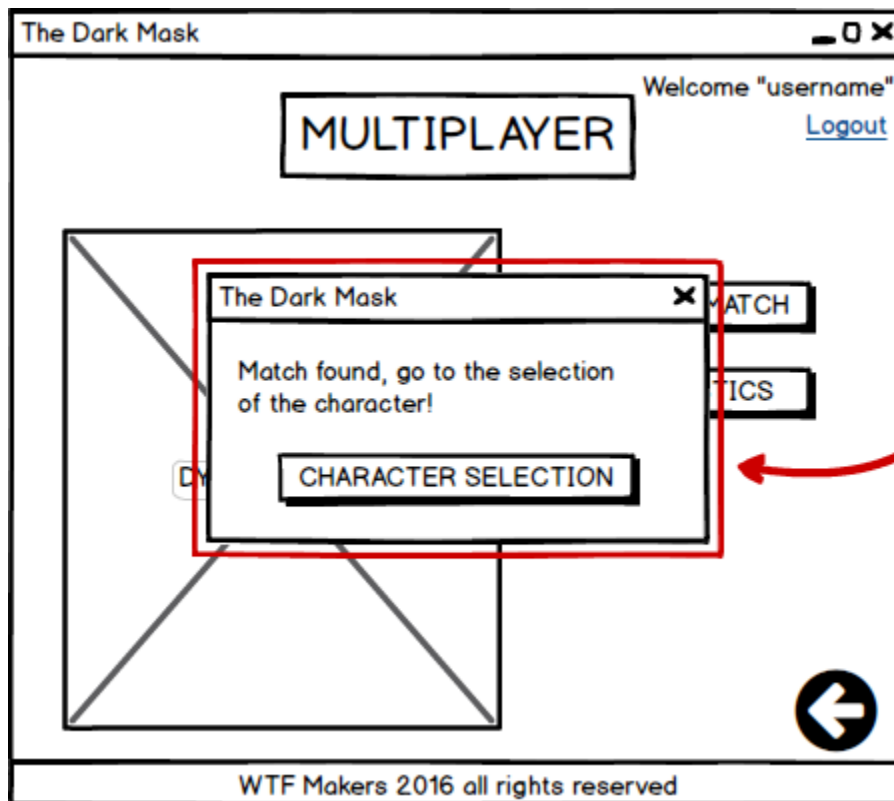


**Login made:**

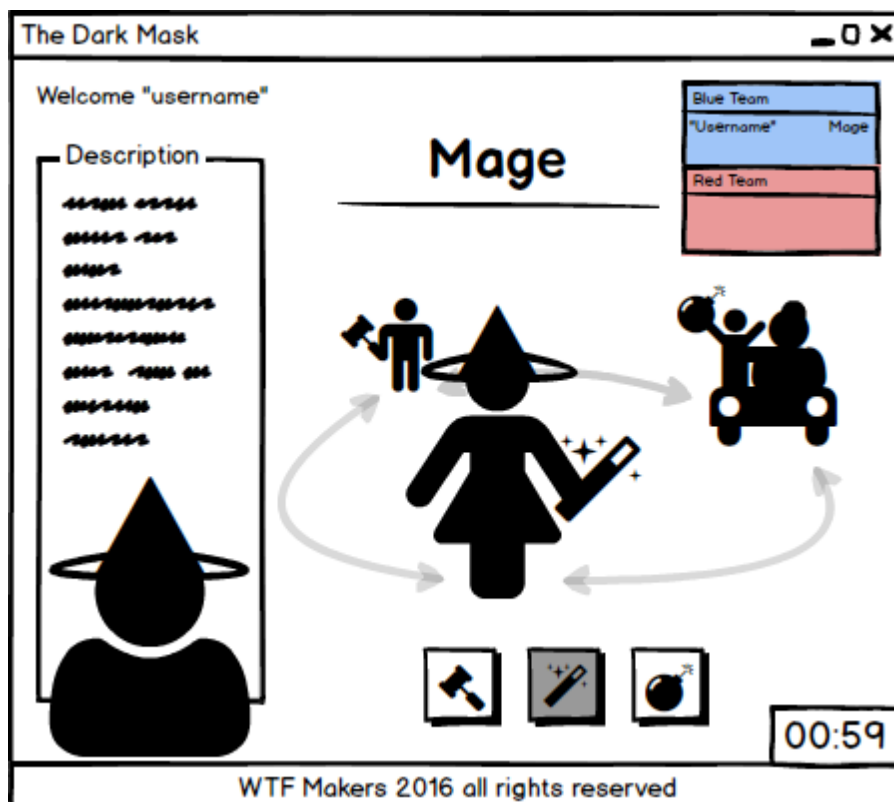




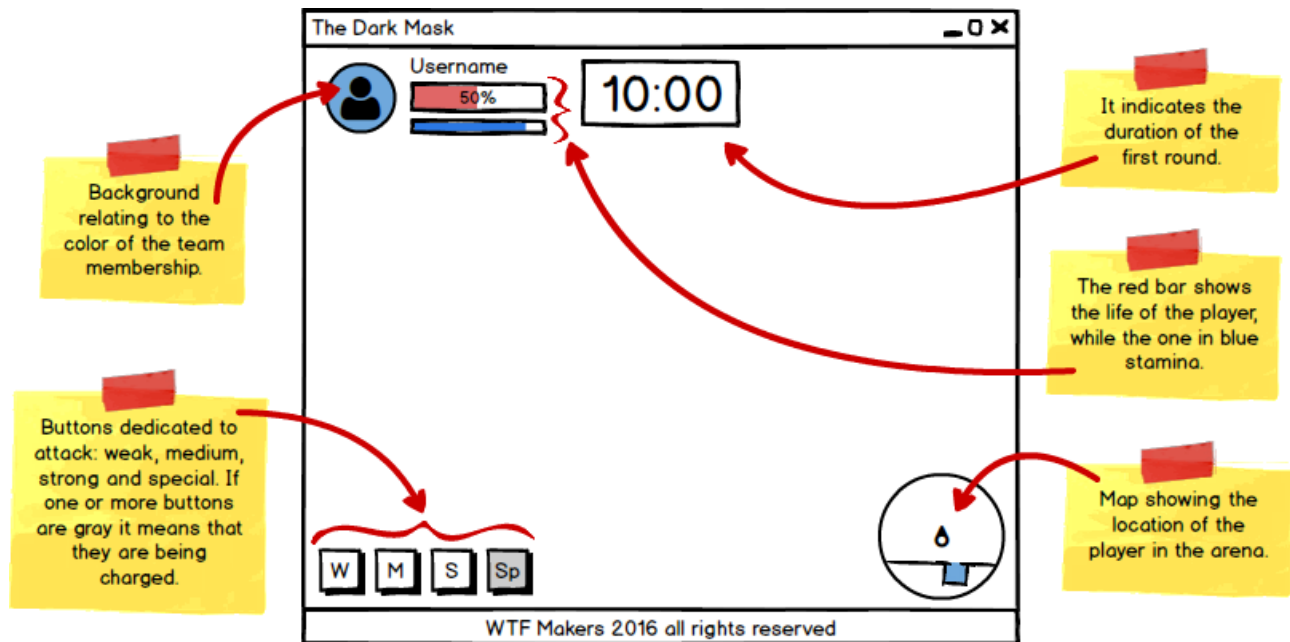
Popup match found screen:



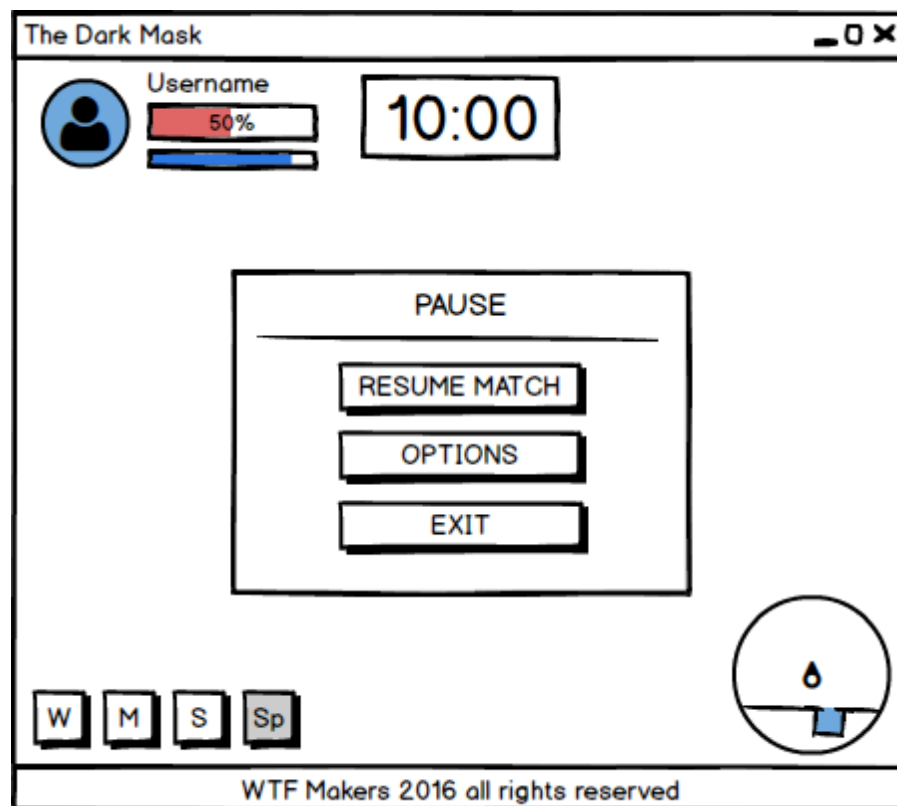
Character selection screen:



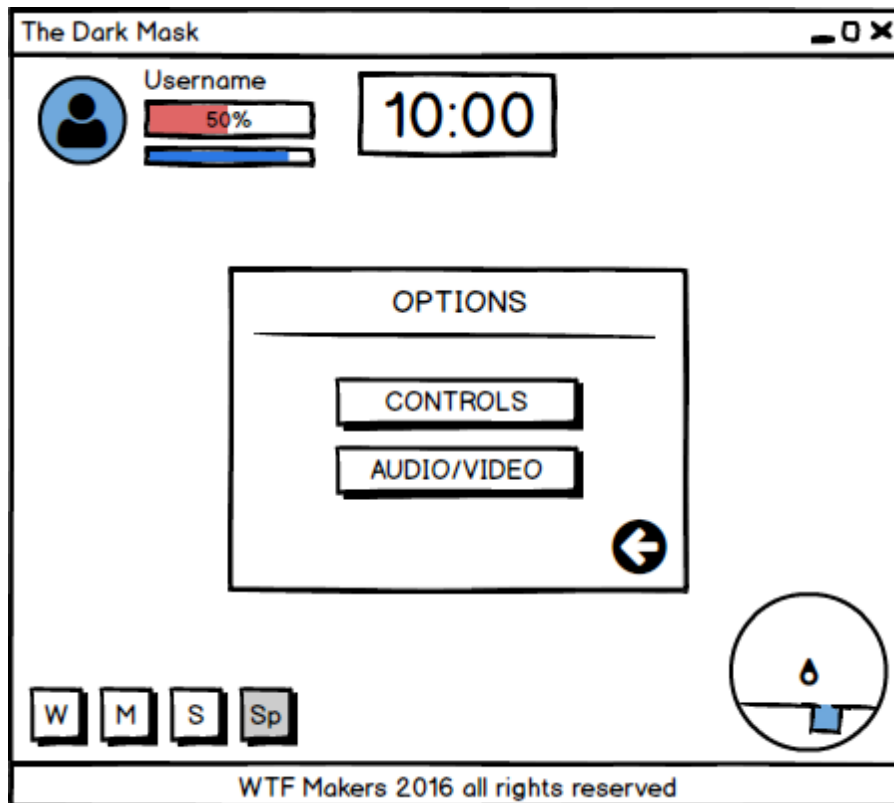
**Game screen:**



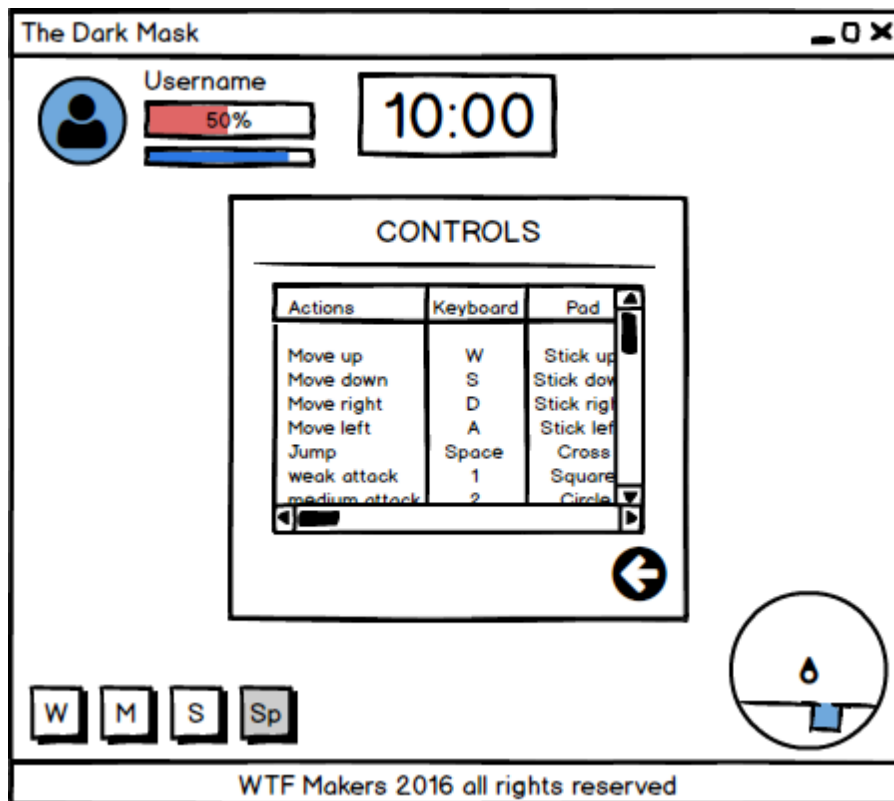
**Pause game screen:**



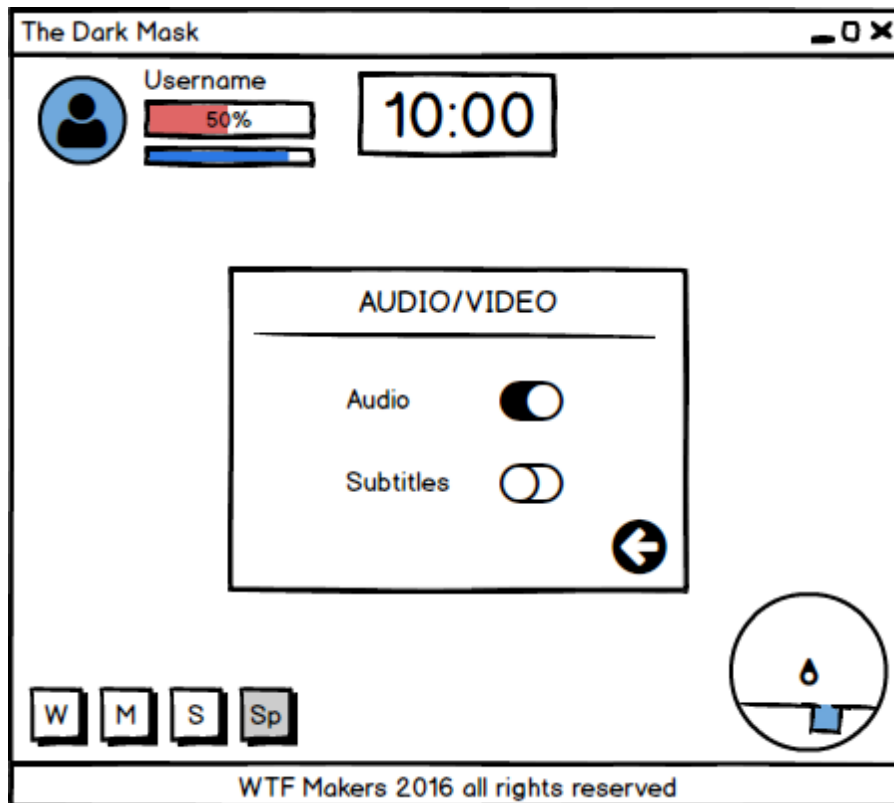
**Pause game – options screen:**



**Pause game – options – controls screen:**



Pause game – options – audio/video screen:



Statistics First Round screen:

The screenshot shows a game window titled 'The Dark Mask' with a close button in the top right. The main title is 'STATISTICS 1° ROUND'. Below this, there are two tables: 'TEAM BLUE' and 'TEAM RED'. Each table has columns for 'Player', 'Kills', 'Dead', 'Frogments', and 'Exp'. Below the tables, the text 'THE WINNER IS TEAM BLUE!' is displayed in green. The footer text reads 'WTF Makers 2016 all rights reserved'.

TEAM BLUE					TEAM RED				
Player	Kills	Dead	Frogments	Exp	Player	Kills	Dead	Frogments	Exp
Player 1	4	0	2	460xp	Player 1	3	0	0	300xp
Player 2	2	1	1	230xp	Player 2	1	2	0	50xp
Player 3	1	3	0	50xp	Player 3	0	2	0	0xp

**Statistics Second Round screen:**

The Dark Mask

STATISTICS 2° ROUND

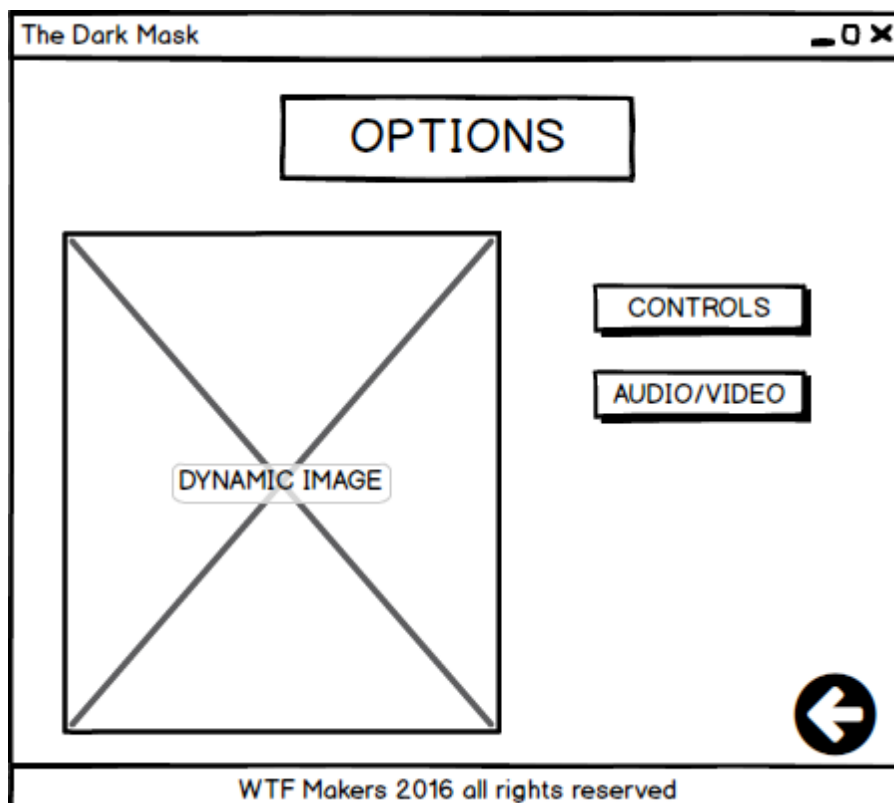
Player	Kills	Dead	Exp
Player 1	1	0	860xp
Player 2	3	0	830xp
Player 3	0	1	760xp

Player	Kills	Dead	Exp
Mayor	0	1	/
Player 1	0	1	300xp
Player 2	1	1	150xp
Player 3	0	1	0xp

THE WINNER IS TEAM BLUE!

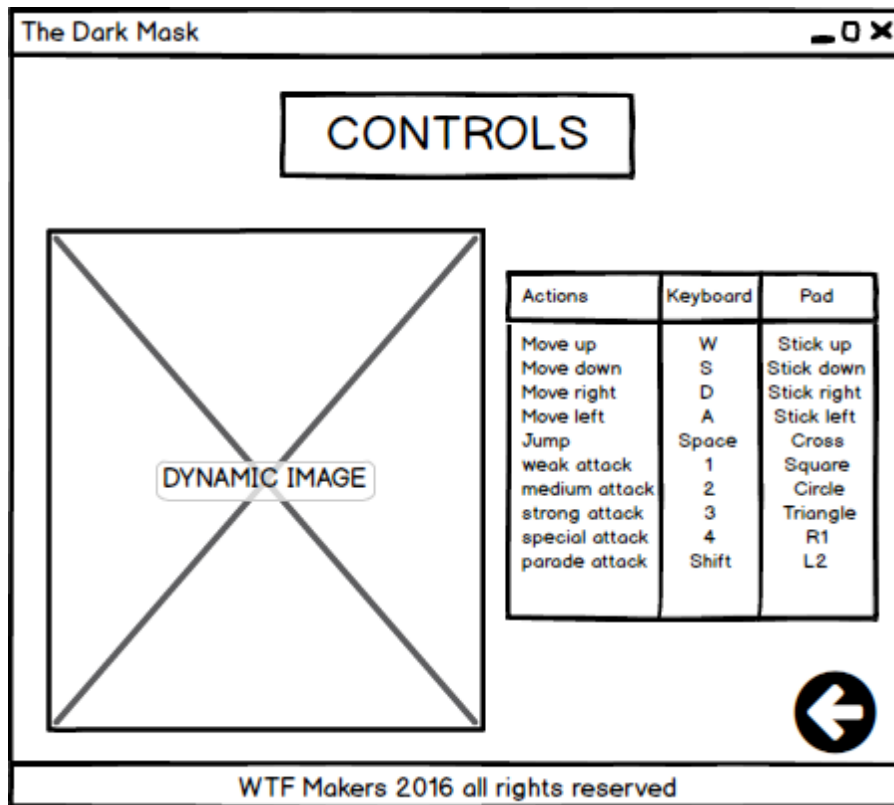
WTF Makers 2016 all rights reserved

**Option screen:**

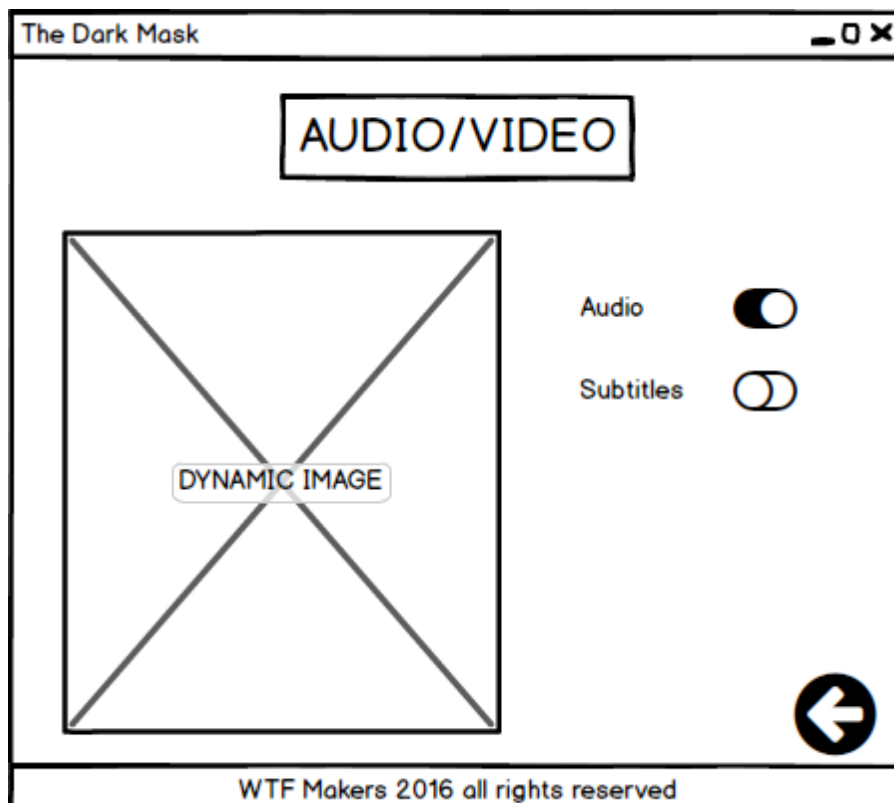




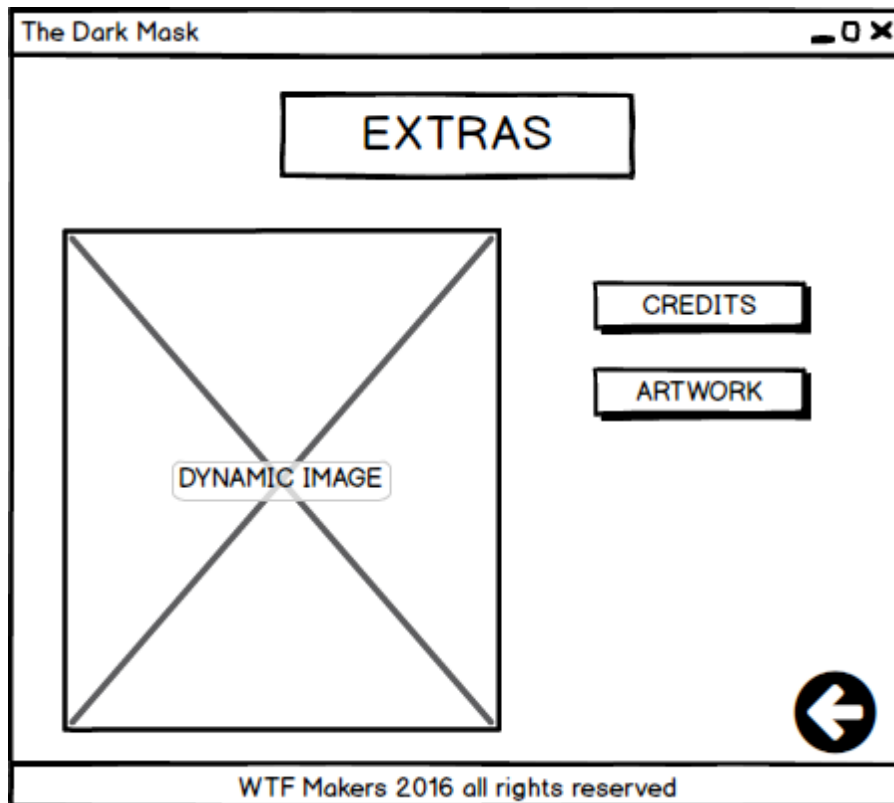
Controls screen:



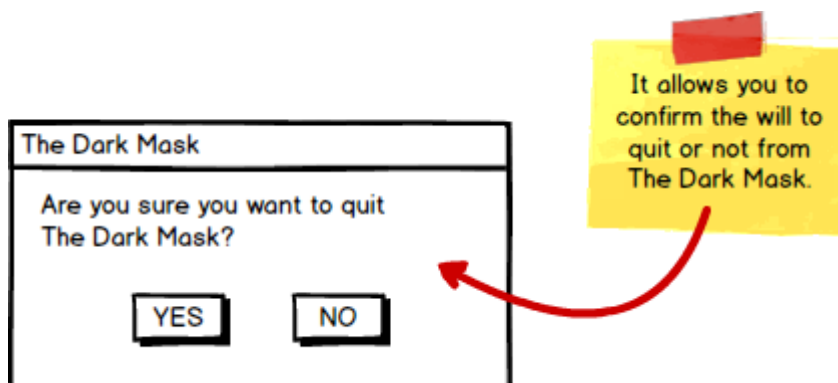
Audio/Video screen:



Extras screen:



Popup Exit:



### 5.3.2 Rules

We can describe the rules of the game based on when they apply:

- **Match Prep:**
  - Each match can be played with just one character choose between the 3 from the menu;
  - Each player has access to a game during matchmaking and see the players of the two teams;
  - Every player can create a match and other players can join it;
  - Each match is played by 2 teams and they can be made of a minimum of 1 person to a max of 3 (a match can't start until there's at least 1 person for each team and the 2 teams reach the same amount of players).

- At the end of a countdown (of 60 seconds), if the previous rule is satisfied, the gameplay automatically begins, else it is expected that the above rule is met.
- **Creation of the match:**
  - 3 fragments of the mask will be placed in the area (See chapter 8);
  - There's a countdown of 10 minutes, which starts at the beginning of every match. It dictates how much time the teams have to gather the fragments of the mask;
  - The players are spawned inside the dressing rooms of their team (See chapter 8); since then they can move freely.
- **Characters rules:**
  - A player can't go through any wall, stand and other objects of the game. In the case there will be an attempt to, the avatar has to go into the idle state;
  - The players of each team or the AI-controlled agents can perform actions that lead to the damage of other players;
  - Each damaging action has a field of effectiveness, out of which the action results into no damage;
  - Players of the same team cannot damage each other's;
  - A player who walks on one of the fragments of the mask picks it up;
  - A player can pick up only one fragment at the time;
  - If the player who has collected a fragment of the mask is killed, he drops it and will be collected again by any other player;
  - If the player who has collected a fragment of the mask reaches the dressing room of their team, the team has this fragment.
- **Team rules:**
  - In the case in which a team conquers all the fragments of the mask, it will be able to access the second round of the game, namely access to the Mayor's room.
- **Rules of Round 1:**
  - If the countdown ends and no team has collected the three fragments of the mask, a disabled respawn of players from each team, and the team that stays with at least one player alive wins this round;
  - Only one team can win the first phase of the game which, completed, leads to the second phase.
- **Rules of Round 2:**
  - The team that won the previous round must defeat the mayor to win the game;
  - The team that lost the previous round takes the side of the mayor and undergoes a weakening of their statistics;
  - The mayor is an agent controlled by the AI, who will attack the team players who won in the previous round;
  - In case that one player dies it won't be respawned;
  - If all team players who won the previous round die, the match is lost; however, they receive a higher bonus than the one assigned to the opposing team.
- **Match Ending:**
  - Whatever is the result, a summary of the match will be displayed and points will be assigned depending on the different possible outcomes.

### 5.3.3 Scoring/winning conditions

The following are the conditions necessary in order to win a match in the only mode available, the multiplayer mode.

#### **Scoring:**

- Each player who will kill an enemy controlled by AI will gain 50pt;
- A player who defeats an enemy team's avatar will gain 100pt;
- Each player who will be able to pick up and bring to case a fragment of the mask will obtain 80pt;
- If a player is able to get 3 fragments of the mask the reward will be 150pt;
- If a player defeats the mayor in the final round will get 300pt;

As soon as the match will end a summary table will be presented on screen so that every player will be able to identify who was the one who scored the most points and see its own score.

#### **Winning conditions:**

- Each team will either have to pick up and bring to its base 3 fragments of the mask before the 10 min count down goes off or in case the time is over defeat all members of the enemy's team in a short deathmatch session;
- The winning team of the first phase will have to defeat the mayor in the second and final phase.

## 5.4 Modes and other features

The videogame will be mainly composed of a fighting and challenging online mode managed in real-time. In order to get to know all the necessary commands to control the game there will also be a brief offline mode as a tutorial.

Therefore, we will have:

- **Unranked online multiplayer:** fixed ruleset, reward with experiences point only.
- **Tutorial offline singleplayer:** example of game mechanics.

## 5.5 Levels

The Dark Mask, with its first release, will only give the chance to play in just one area.

This set will be made of a closed space, with lots of decorations and elements like walls, windows and comic books stands or videogames.

There will also be obstacles and enemies controlled by AI in specific spots, as well as restoring points to gain back some health since the area will be dynamic and interactive.

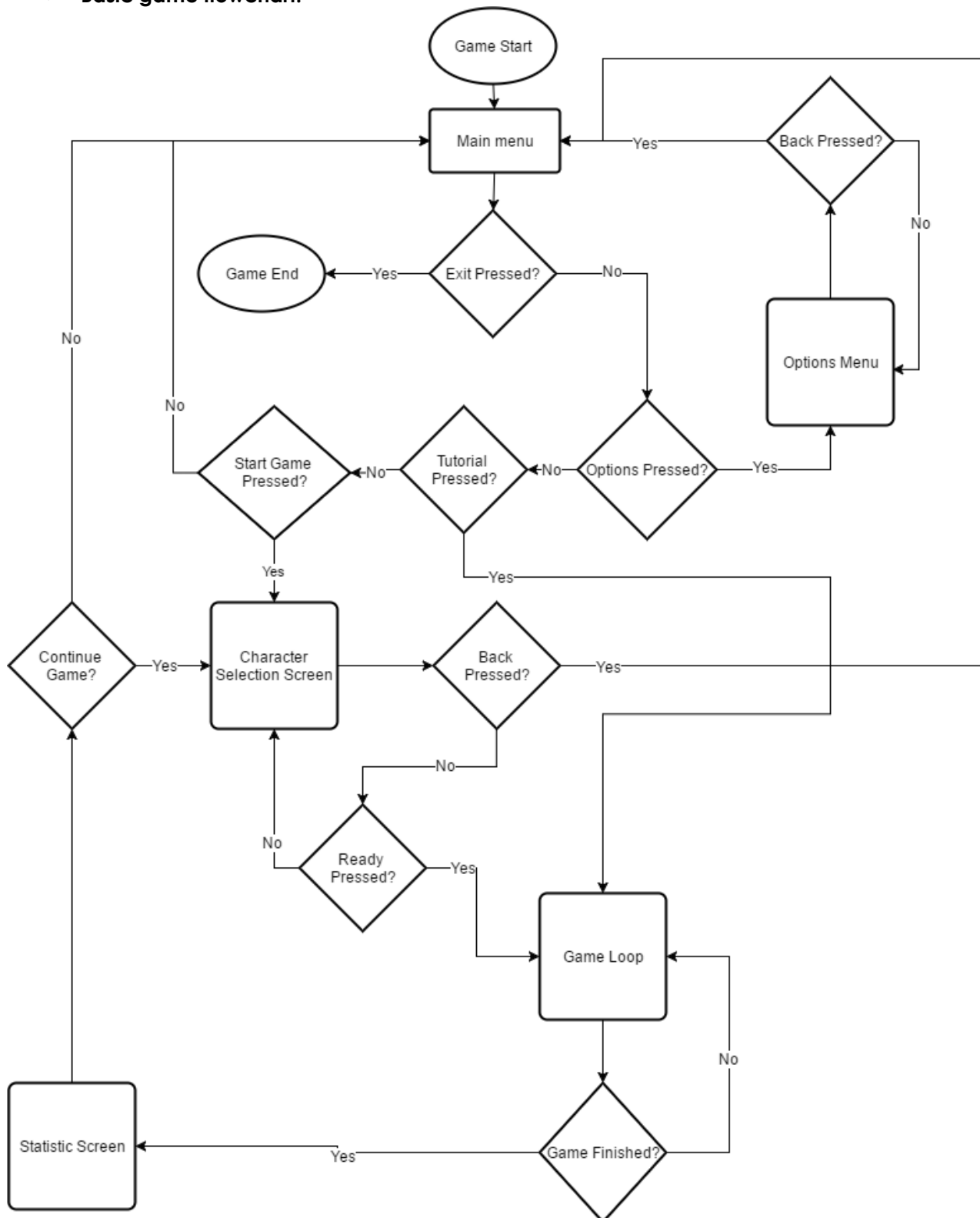
Inside it, there will also be a secret area (the mayor room) which will be unlocked only after phase 1 will be over. In this second area the final round will take place and the winning team will have to face the mayor of the comic book fair.

An important feature of the game will be mood changing.

During gameplay the mood will slowly change, going from relaxed and pleasant to dark, frenetic, and unsettling in order to create anxiety in rush in the player's emotions.

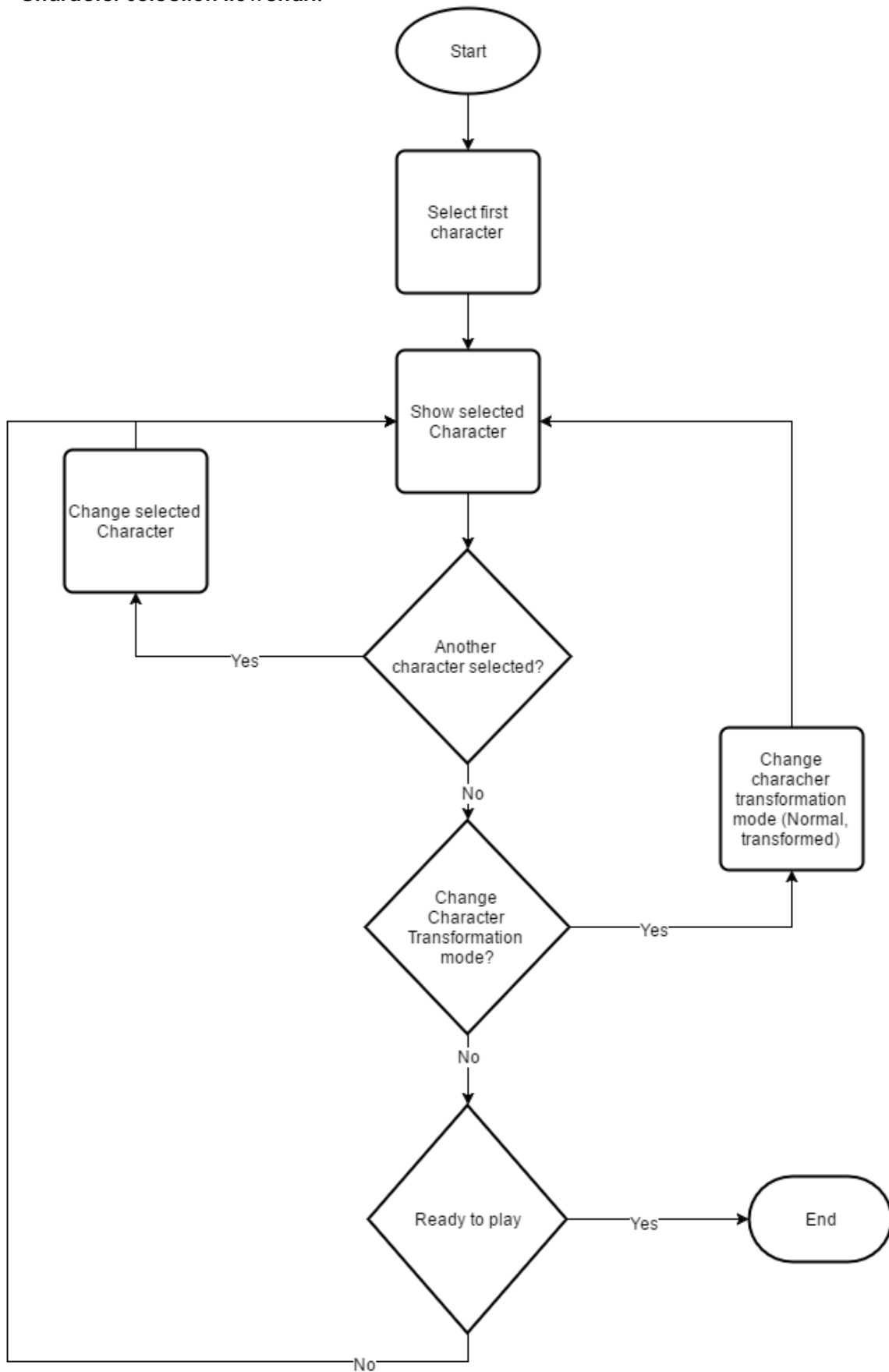
## 5.6 Flowchart

- **Basic game flowchart:**

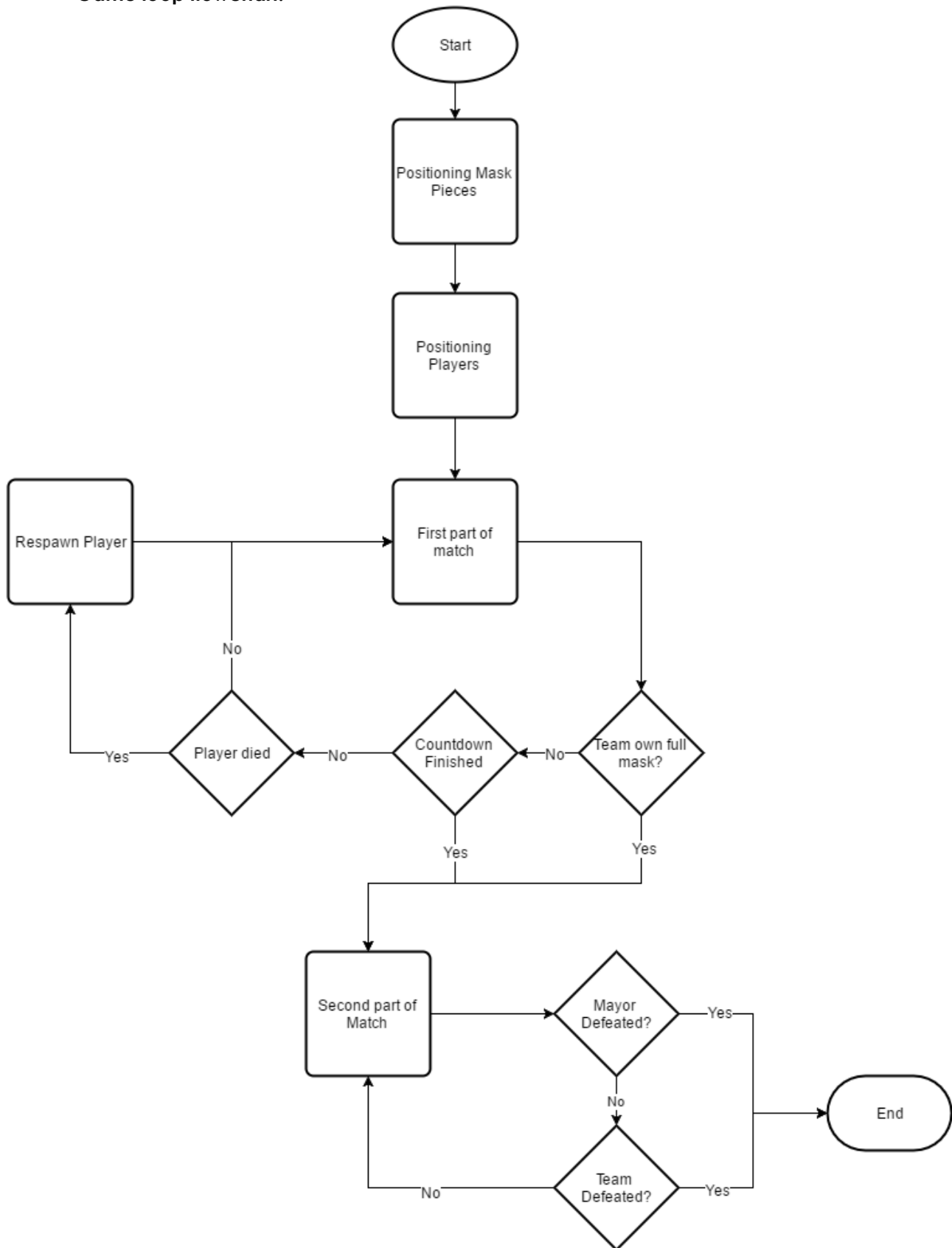




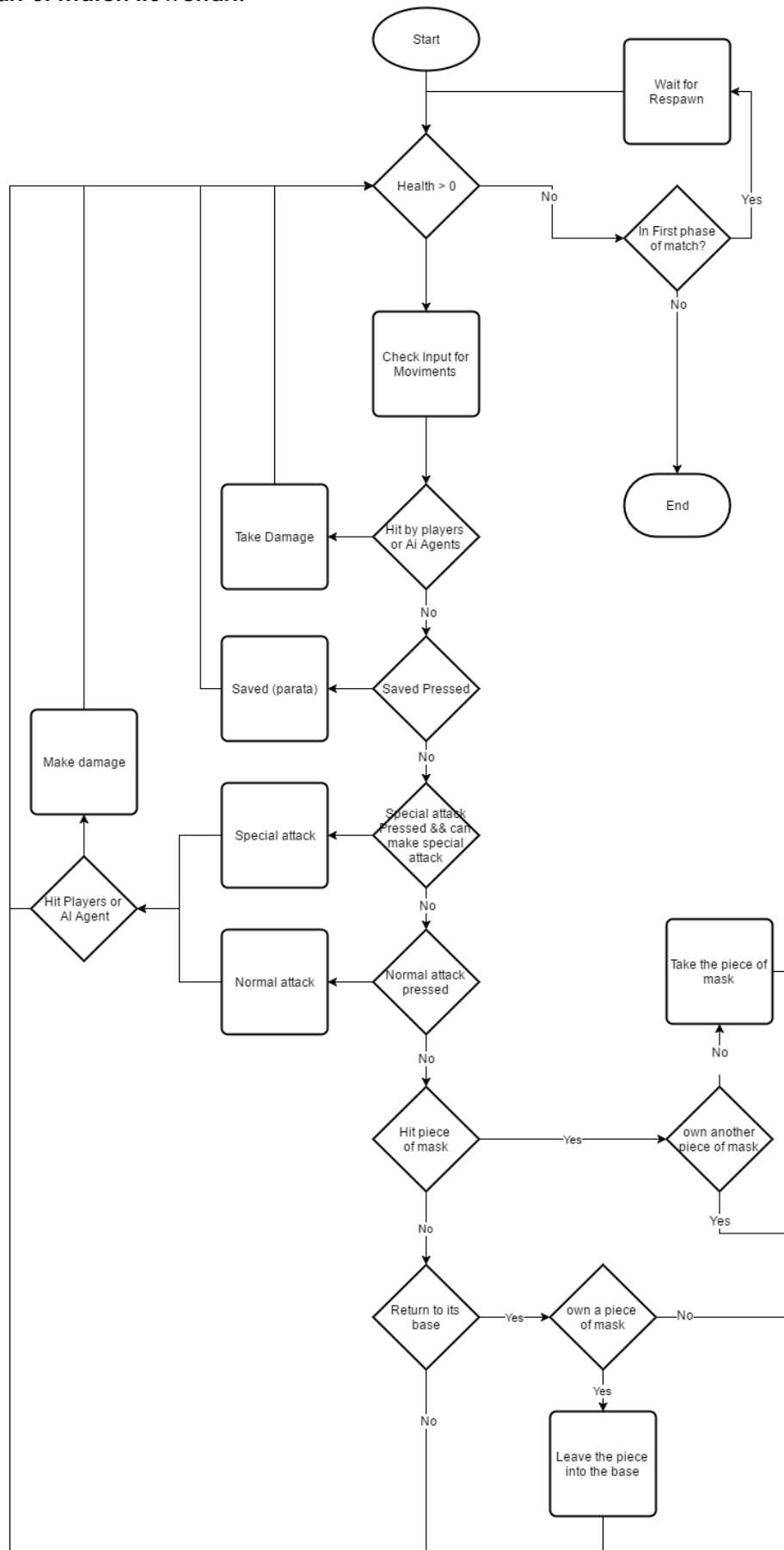
- **Character selection flowchart:**



- **Game loop flowchart:**



- First part of match flowchart:



## 6. Game Characters

### 6.1 Characters design

The player will be able to control one character at the time for each match played. This choice will be made in the menu. Each character will be available in 2 versions: **real\*** (cosplayer costume) and **transformed** (transformed into the cosplay character). All characters of the game in their real version will be made with a realistic style and in a cartoonish way as they transform.

\* **NOTE:** the realistic version won't be available for gameplay but will only show in cinematics.

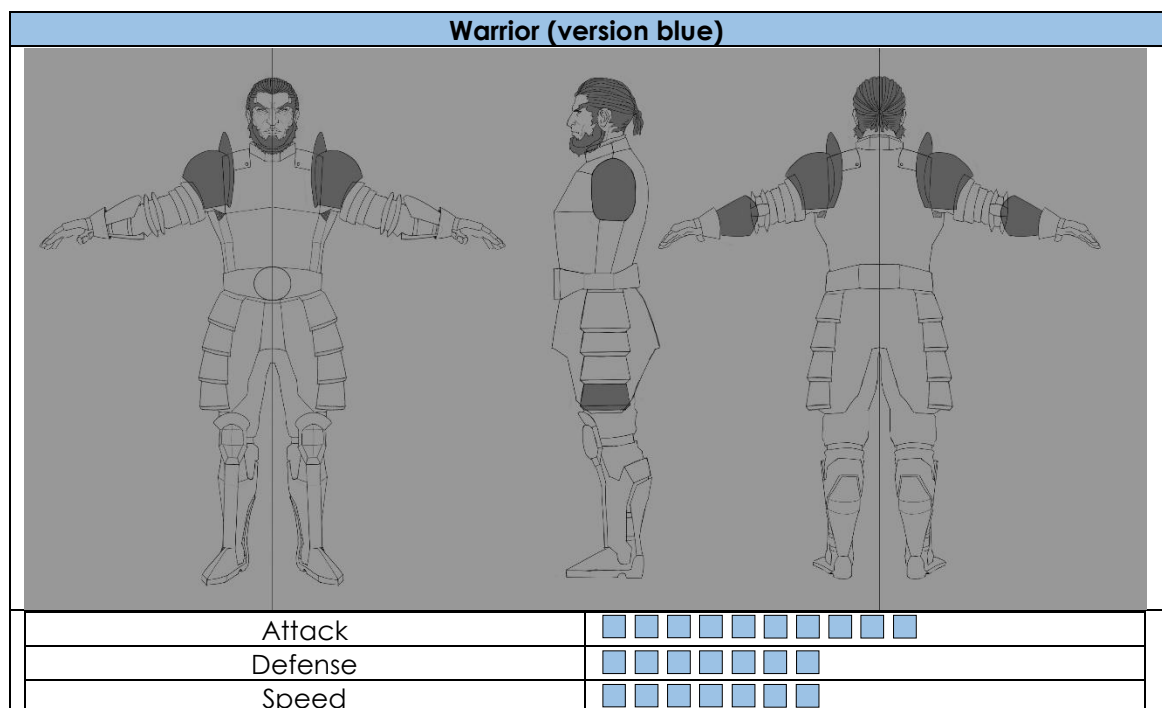
### 6.2 Types

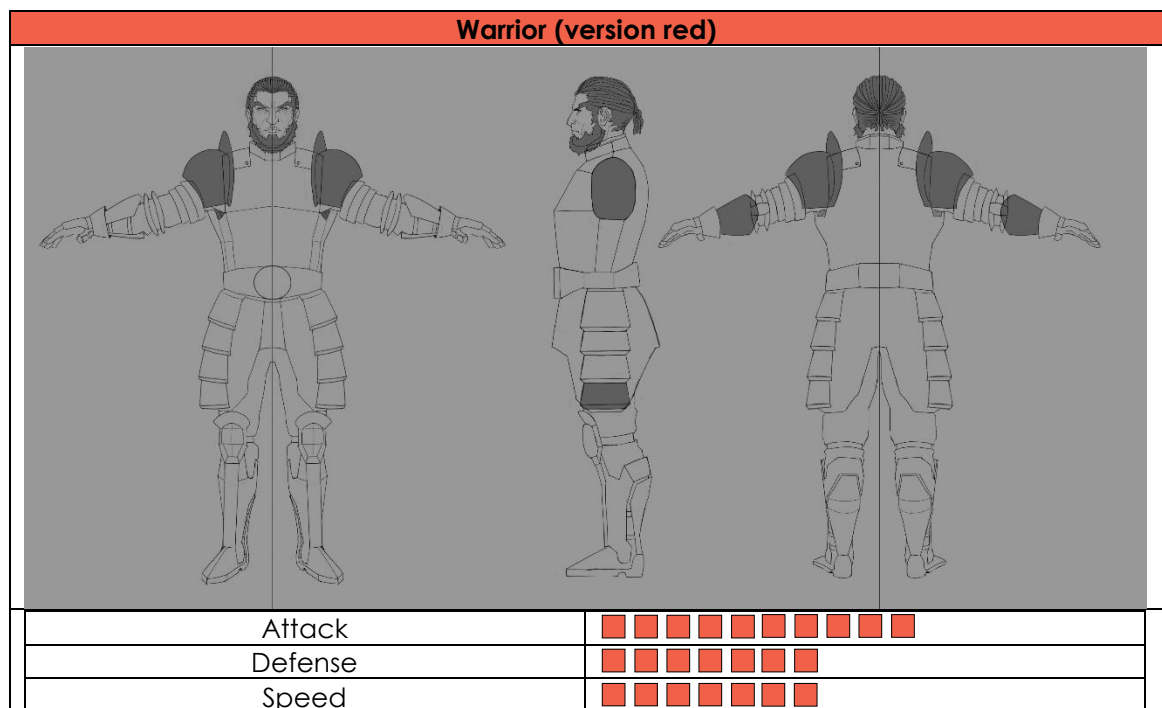
#### 6.2.1 PCs

The playable characters will be three and will be divided into two different colors and teams: blue team and red team. Also, each character will have a particular ability and a set of basic ones:

- **weak attack;**
- **medium attack;**
- **strong attack;**
- **special attack/special ability;**
- **shield/deflection.**

Each player will have a health bar set to 100pt at the beginning of each match.





### **ATTACK SPECIFICATION:**

Each attack the warrior inflicts a precise number of damages and will have a charging time to wait before being reused, made weak attack exclusion. The following specifications in detail:

ATTACK	DAMAGE INFLICTED	RECHARGE TIME
Weak	30	0 s
Medium	40	15 s
Strong	50	30 s
Special	100	60 s

### **DEFENCE SPECIFICATION:**

Any damage suffered by the warrior will be reduced by an amount equal to 7. Listed below are the damages that a warrior can suffer from possible attacks of other players, whether they are a warrior, a witch or soldiers.

ATTACK	SUFFERED DAMAGE (WARRIOR)	SUFFERED DAMAGE (WITCH)	SUFFERED DAMAGE (SOLDIERS)
Weak	23	11	8
Medium	33	17	13
Strong	43	23	18
Special	93	53	43

### **SPECIFICATIONS OF SPEED / REACTIVITY:**

The warrior's speed/reactivity will be increased by a value of 50% compared to the standard value of N.

Witch (version blue)

Attack	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div>
Defense	<div></div> <div></div> <div></div> <div></div>
Speed	<div></div> <div></div> <div></div> <div></div> <div></div>

Witch (version red)

Attack	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div>
Defense	<div></div> <div></div> <div></div> <div></div>
Speed	<div></div> <div></div> <div></div> <div></div> <div></div>

**ATTACK SPECIFICATION:**

Each attack the witch will inflict a precise number of damages and will have a charging time to wait before being reused, made weak attack exclusion. The following specifications in detail:

ATTACK	DAMAGE INFLICTED	RECHARGE TIME
Weak	18	0 s
Medium	24	15 s
Strong	30	30 s
Special	60	60 s


#### **DEFENCE SPECIFICATION:**

Any damage suffered by the witch will be reduced to a value of 4. Listed below are the damage that a witch may suffer from possible attacks of other players, whether they are a warrior, a witch or soldiers.


ATTACK	SUFFERED DAMAGE (WARRIOR)	SUFFERED DAMAGE (WITCH)	SUFFERED DAMAGE (SOLDIERS)
Weak	26	14	11
Medium	36	20	16
Strong	46	26	21
Special	96	56	46

#### **SPECIFICATIONS OF SPEED / REACTIVITY:**

The speed/reactivity of the witch will be increased by a value of 30% compared to the standard value of N.

Soldiers (version blue)	
	
Attack	■ ■ ■ ■ ■
Defense	■ ■ ■ ■ ■ ■ ■
Speed	■ ■



Soldiers (version red)	
	
Attack	■ ■ ■ ■ ■
Defense	■ ■ ■ ■ ■ ■ ■
Speed	■ ■

#### **ATTACK SPECIFICATION:**

Each attack soldiers inflict a precise number of damages and will have a charging time to wait before being reused, made weak attack exclusion. The following specifications in detail:

ATTACK	DAMAGE INFLICTED	RECHARGE TIME
Weak	15	0 s
Medium	20	15 s
Strong	25	30 s
Special	50	60 s

#### **DEFENCE SPECIFICATION:**

Any damage suffered by soldiers will be reduced by an amount equal to 7. Listed below are the damages that the soldiers may suffer from possible attacks of other players, whether they are a warrior, a witch or soldiers.

ATTACK	SUFFERED DAMAGE (WARRIOR)	SUFFERED DAMAGE (WITCH)	SUFFERED DAMAGE (SOLDIERS)
Weak	23	14	8
Medium	33	21	13
Strong	43	28	18
Special	93	63	43

#### **SPECIFICATIONS OF SPEED / REACTIVITY:**

The soldiers speed/reactivity will be increased by a value of 0% compared to the standard value of N.

### 6.2.2 NPCs

Gaming arena there will be 4 different types of NPCs:

- zombie;
- dragon;
- wrestler;
- soul/ghost;

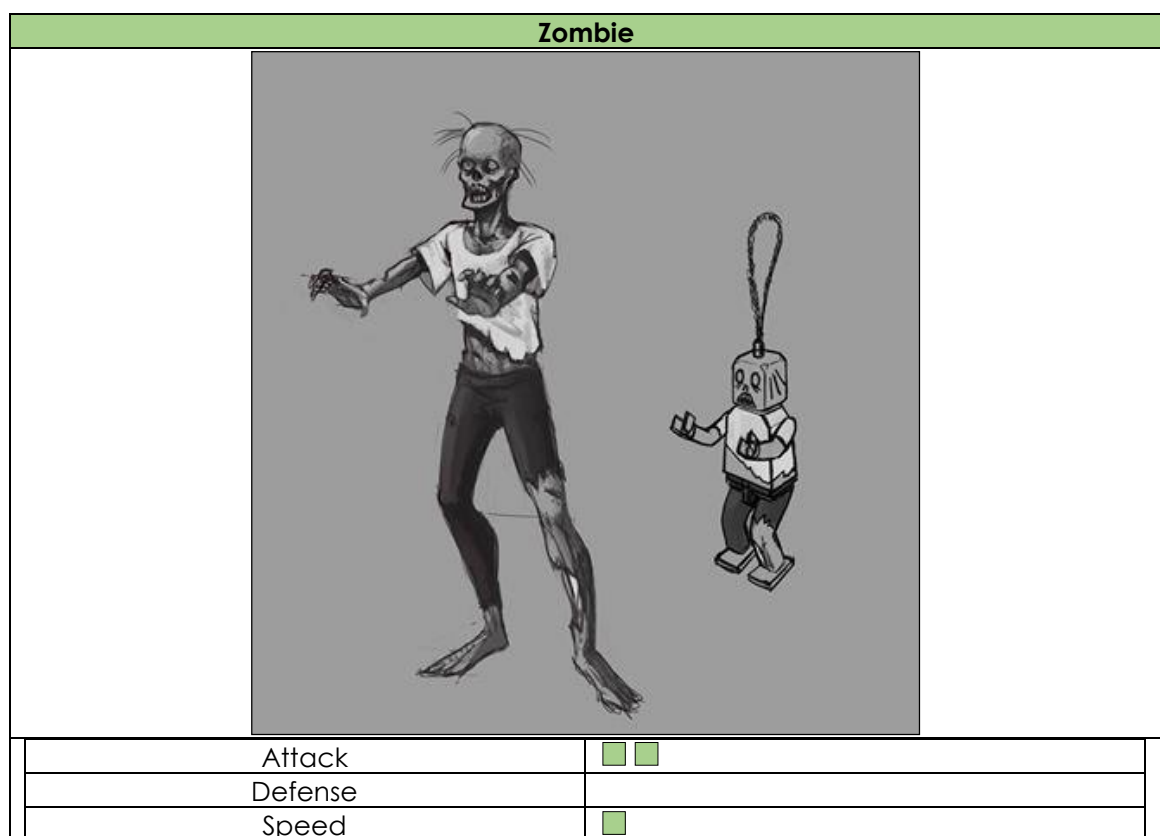
and each of them will have only one type of attack, the standard course and an initial life bar set at a value of 100 vital points.

The goal of each NPCs will be trying to get in the way of each player who's trying to get the pieces of the mask.

Mainly, none of these will go around freely in the area but they will be confined in a specific spot such as close to the mask's pickups.

In case they will be killed by a player they will be respawned (after 30 seconds) in a specific area of the map, meaning where they are assigned to be before.

The followings are some illustrations from a graphical point of view and also from a technical one.



#### **ATTACK SPECIFICATION:**

Each attack of a zombie inflicts a precise number of damage and will have no recharge time to wait before it is reused.

ATTACK	DAMAGE INFLICTED	RECHARGE TIME
Standard	6	0 s


**DEFENCE SPECIFICATION:**

Listed below are the damages that a zombie can suffer from possible attacks of other players, whether they are a warrior, a witch or soldiers.

ATTACK	SUFFERED DAMAGE (WARRIOR)	SUFFERED DAMAGE (WITCH)	SUFFERED DAMAGE (SOLDIERS)
Weak	30	18	15
Medium	40	24	20
Strong	50	30	25
Special	100	60	50

**SPECIFICATIONS OF SPEED / REACTIVITY:**

The speed/reactivity of a zombie will be increased by a value equal to -20% compared to the standard value of N.

Dragon	
	
Attack	■ ■ ■
Defense	■ ■ ■
Speed	

**ATTACK SPECIFICATION:**

Every attack of a dragon statue inflicts a precise number of damages and will have a recharge time to random wait before it is reused.

ATTACK	DAMAGE INFLECTED	RECHARGE TIME
Standard	9	RANDOM s


### DEFENCE SPECIFICATION:

Any damage suffered by the dragon statue will be reduced to a value of 3. Listed below are the damages that a dragon statue may suffer from possible attacks of other players, whether they are a warrior, a witch or soldiers.

ATTACK	SUFFERED DAMAGE (WARRIOR)	SUFFERED DAMAGE (WITCH)	SUFFERED DAMAGE (SOLDIERS)
Weak	27	15	12
Medium	37	21	17
Strong	47	27	22
Special	97	57	47

### SPECIFICATIONS OF SPEED / REACTIVITY:

The dragon statue being a static NPC will obviously have zero velocity, this results in a decrease to a value of N compared to the standard value of N.

soul/ghost	
	
Attack	■
Defense	
Speed	■ ■ ■

### ATTACK SPECIFICATION:

Each soul/ghost attack does a certain number of damage and will have no recharge time to wait before it is reused.

ATTACK	DAMAGE INFLICTED	RECHARGE TIME
Standard	3	0 s


#### **DEFENCE SPECIFICATION:**

Listed below are the damage that a soul/ghost may suffer from possible attacks of other players, whether they are a warrior, a mage or soldiers.

ATTACK	SUFFERED DAMAGE (WARRIOR)	SUFFERED DAMAGE (WITCH)	SUFFERED DAMAGE (SOLDIERS)
Weak	30	18	15
Medium	40	24	20
Strong	50	30	25
Special	100	60	50

#### **SPECIFICATIONS OF SPEED / REACTIVITY:**

The speed/reactivity of a soul/ghost will be increased by a value equal to 25% compared to the standard value of N.

Wrestler		
		
Attack	<input type="checkbox"/>	<input type="checkbox"/>
Defense	<input type="checkbox"/>	<input type="checkbox"/>
Speed	<input type="checkbox"/>	<input type="checkbox"/>

#### **ATTACK SPECIFICATION:**

Each wrestler attack does a certain number of damage and will have no recharge time to wait before it is reused.

ATTACK	DAMAGE INFLICTED	RECHARGE TIME
Standard	6	0 s

### DEFENCE SPECIFICATION:

Any damage suffered by the wrestler will be reduced to a value of 2. Listed below are the damages that a wrestler can suffer from possible attacks of other players, whether they are a warrior, a witch or soldiers.


ATTACK	SUFFERED DAMAGE (WARRIOR)	SUFFERED DAMAGE (WITCH)	SUFFERED DAMAGE (SOLDIERS)
Weak	28	16	13
Medium	38	22	18
Strong	48	28	23
Special	98	58	48

### SPECIFICATIONS OF SPEED / REACTIVITY:

The wrestler speed/reactivity will be increased by a value of 15% compared to the standard value of N.

Also, there is another very important NPC, the mayor of the fair, which will be present only in the final stage of the game, and it will behave like a typical boss-battle.

Below, it is shown both from the point of view of graphics that from a technical point of view, in terms of specifications of attack, defense and speed/reactivity:

Mayor of the fair	
	
Attack	■ ■ ■ ■ ■ ■ ■ ■ ■ ■
Defense	■ ■ ■ ■ ■ ■ ■ ■
Speed	■ ■ ■ ■ ■

### ATTACK SPECIFICATION:

Each mayor's attack will inflict a precise number of damages and will have a charging time to wait before being reused, made weak attack exclusion. The following specifications in detail:

ATTACK	DAMAGE INFLICTED	RECHARGE TIME
Weak	30	0 s

Medium	40	15 s
Strong	50	30 s
Special	100	60 s

### **DEFENCE SPECIFICATION:**

Any damage suffered by the mayor will be reduced to a value of 8. Listed below are the damages that the mayor may suffer from possible attacks of other players, whether they are a warrior, a witch or soldiers.

ATTACK	SUFFERED DAMAGE (WARRIOR)	SUFFERED DAMAGE (WITCH)	SUFFERED DAMAGE (SOLDIERS)
Weak	22	10	7
Medium	32	16	12
Strong	42	22	17
Special	92	52	42

### **SPECIFICATIONS OF SPEED / REACTIVITY:**

The mayor's speed/reactivity will be increased by a value of 30% compared to the standard value of N.

## **7. Story**

### **7.1 Synopsis**

The Dark Mask tells the story of a group of people of different ages, dressed with different costumes, which visited a comic book fair during a sunny day. They had no idea that the fair had appeared the day before from nowhere and that the people who have organized are also unknown and no one actually knows much about it.

With a clueless mind they passed the gates of the entrance which closed right behind them.

What they saw was unexpected: a mysterious vibe in the air and a whispering voice echoing everywhere. After a cold welcome, rules of survival followed in the words of the mysterious speaker. Their bodies transformed into the imaginary characters they were dressed as acquiring special powers and abilities. The mayor of the fair told them what to do in order to survive and be free again facing different challenges regarding a mysterious mask.

### **7.2 Narrative devices**

The Dark Mask will feature a story to go with the multiplayer action in order to set a scene in which the story is inserted and to give a reason why specific action should be accomplished.

Therefore, each match will be preceded and followed with cinematics with narrative.

## **8. The Game World**

The Dark Mask takes place inside a comic book fair of a small town in Italy. The game world could be defined as an **arena** since the gameplay will always take place in a closed environment even though it will present 2 different sections. The first one intended for phase one where the teams will fight to get to phase 2 where the final boss battle will take place.



Right under here a map of the arena is presents, with its specifications:

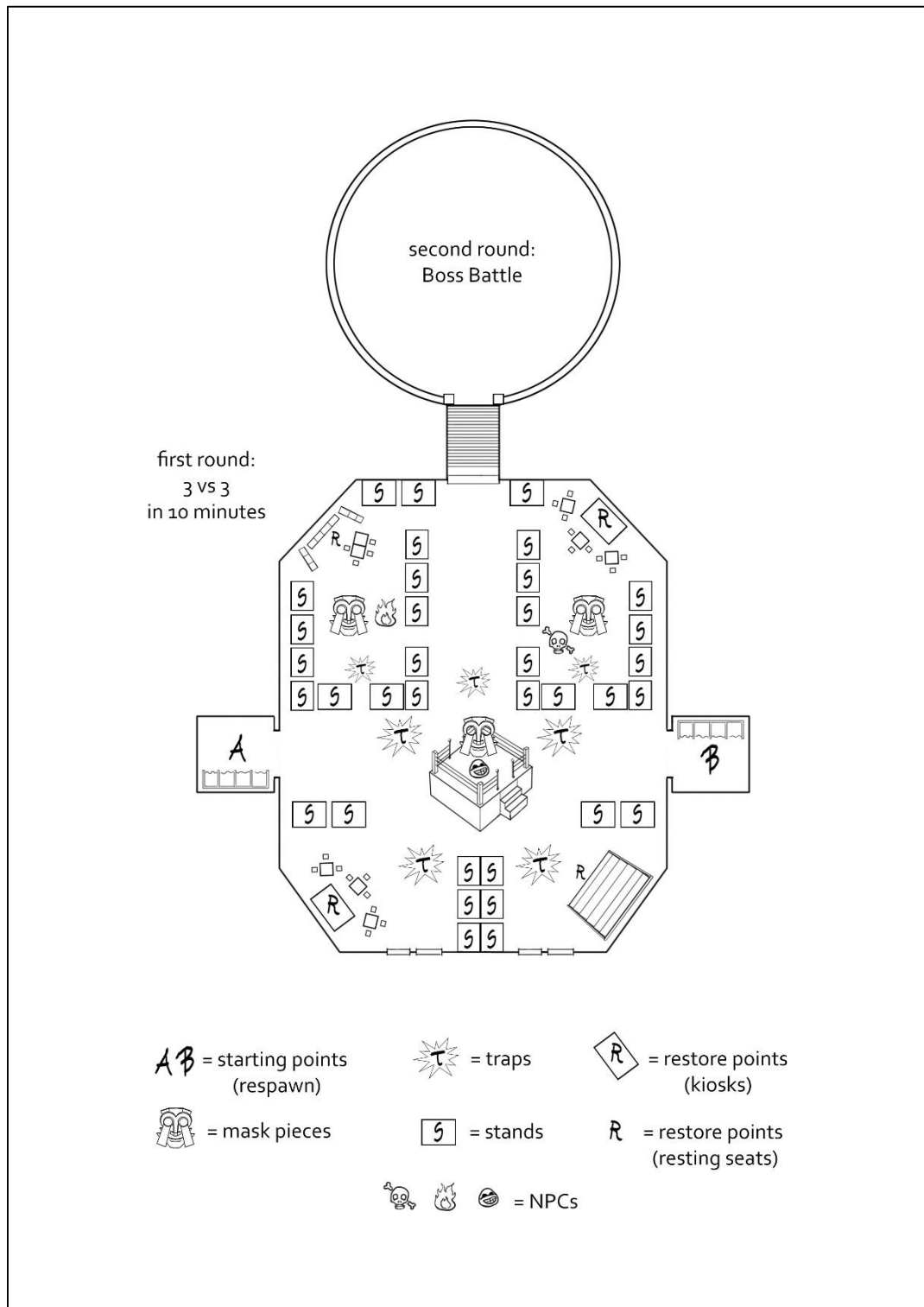


Figure 5. Map of The Dark Mask

In this arena, as shown by the artwork (Figure 5.), there are static elements as well (comic book stands, tables, chards) as dynamic ones (restoration spots, recharge docs, gadgets stand, etc.) The following graphs show some of them:

**STAND COMICS:**

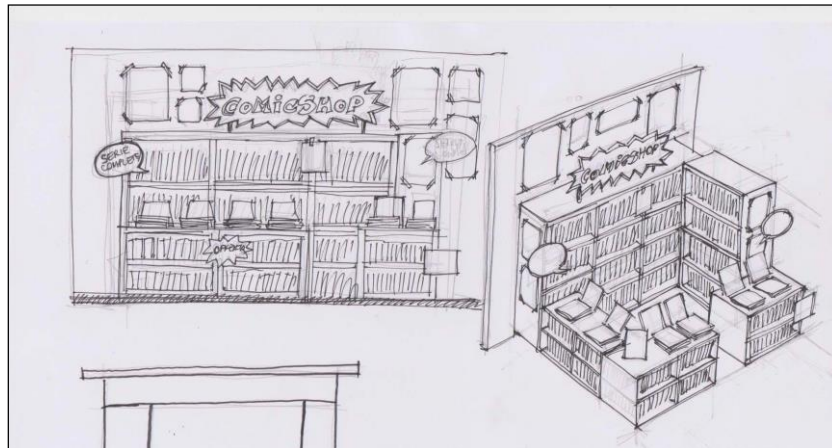


Figure 6. Artwork of the comic stand

**STAND GADGET:**

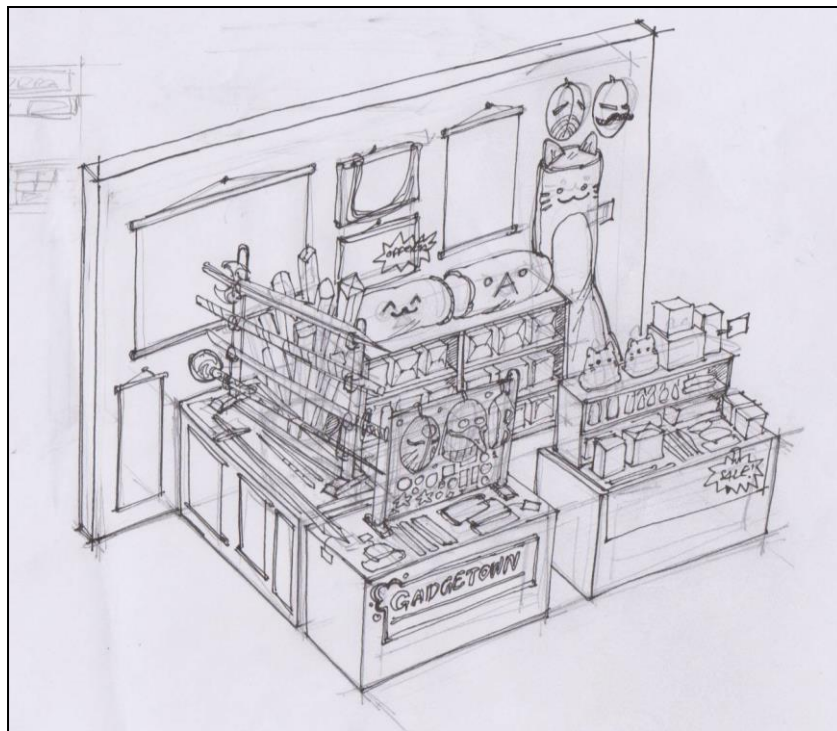


Figure 7. Artwork of the gadget stand

**RESTAURANT/ENERGY RECOVERY POINT:**



**TRAP EXAMPLE:**

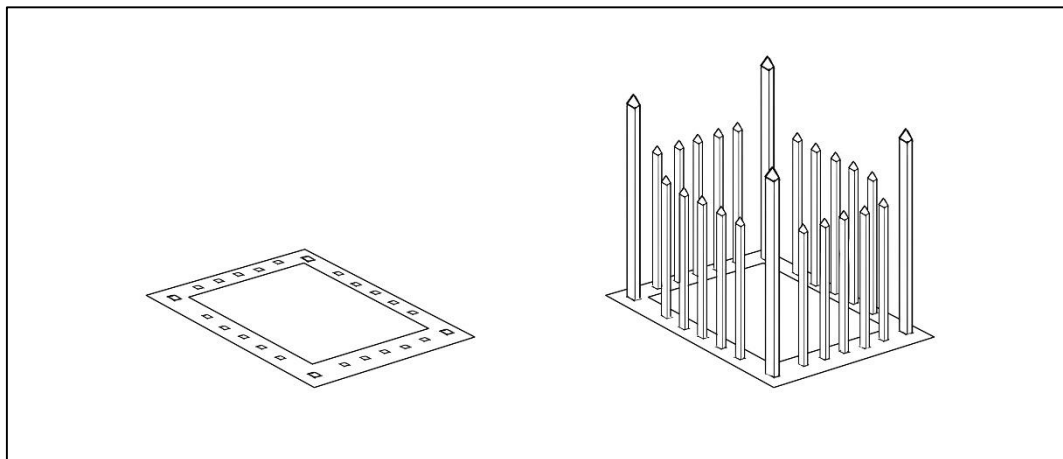


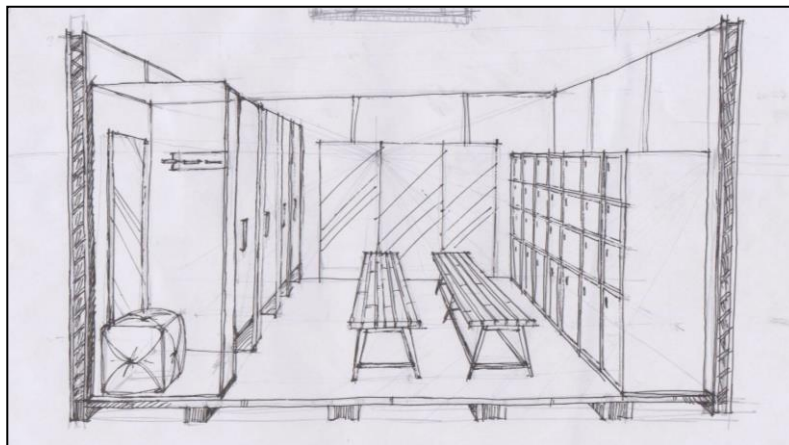
Figure 8. Artwork of the traps in the gaming arena

**MASK:**



*Figure 9. Artwork of the dark mask*

**RESPAWN POINT/ DRESSING ROOMS COSPLAY:**



*Figure 10. Artwork of the cosplayer dressing room*

The three fragments of the mask will be placed so that they will be far away from each other in order to be equally distanced.

There will also be a day/night cycle in the phases of the game. This to give the feeling that time is going. In order to underline the change of mood there will also be a change of weather so it will match the transition between the relaxed atmosphere of the beginning and the dark one of the end. All these features will highly increase the sense of realism and the feeling of immersion that the player will be able to get from The Dark Mask.

## 9. Media List

Listed below are all media that will be used during the game development.

### **Interface Assets:**

- **Menu (UI elements):**
  - Main Menu;
  - Multiplayer;
  - Tutorial;
  - Options;
  - Extras;
  - Statistics;
  - Login;
  - Registration;
  - Character selection.
- **In-Game (UI elements):**
  - HUD picture profile and username;
  - HUD life bar;
  - HUD stamina bar;
  - HUD timer;
  - HUD mini-map;
  - HUD mask pieces' recapture;
  - Buttons attack;
  - Pause menu.

### **Environments and decorations:**

- Arena: first and second round (3d model and texture);
- Comics stand (3d model and texture);
- Gadgets stand (3d model and texture);
- Food stand (3d model and texture);
- Trap (3d model and texture);
- Mask pieces (3d model and texture);
- Energy recovery point (3d model and texture);
- Restaurant point (3d model and texture);
- Tables (3d model and texture);
- Chairs (3d model and texture);
- Wrestling ring (3d model and texture);
- Trash bin and litter (3d model and texture);
- Doors (3d model and texture);
- Blue team's dressing room (Respawn point) (3d model and texture);
- Red team's dressing room (Respawn point) (3d model and texture);
- Terrain;
- Skybox.

### **Playable characters (PCs):**

- Red Witch (3d model and texture);
- Red Warrior (3d model and texture);
- Red Soldiers (3d model and texture);
- Blue Witch (3d model and texture);
- Blue Warrior (3d model and texture);

- Blue Soldiers (3d model and texture).

**Non Playable characters (PCs):**

- Souls zombies (3d model and texture);
- Soul wrestler (3d model and texture);
- Dragon statue (3d model and texture);
- Mayor (3d model and texture).

**Animation PCs:**

- Witch idle;
- Witch walk;
- Witch run;
- Witch turn;
- Witch weak attack;
- Witch medium attack;
- Witch strong attack;
- Witch special attack;
- Witch dead;
- Warrior idle;
- Warrior walk;
- Warrior run;
- Warrior turn;
- Warrior weak attack;
- Warrior medium attack;
- Warrior strong attack;
- Warrior special attack;
- Warrior dead;
- Soldiers idle;
- Soldiers walk;
- Soldiers run;
- Soldiers turn;
- Soldiers weak attack;
- Soldiers medium attack;
- Soldiers strong attack;
- Soldiers special attack;
- Soldiers dead.

**Animation NPCs:**

- Souls zombies idle;
- Souls zombies walk;
- Souls zombies turn;
- Souls zombies basic attack;
- Souls zombies dead;
- Soul wrestler idle;
- Soul wrestler walk;
- Soul wrestler turn;
- Soul wrestler basic attack;
- Soul wrestler dead;
- Dragon statue basic attack;
- Dragon statue dead (broken);
- Mayor idle;
- Mayor walk;
- Mayor run;

- Mayor turn;
- Mayor weak attack;
- Mayor medium attack;
- Mayor strong attack;
- Mayor special attack;
- Mayor dead.

**Music:**

- Menu theme;
- In-game theme;
- Boss theme.

**Sound effect:**

- Witch walk;
- Witch run;
- Witch weak attack;
- Witch medium attack;
- Witch strong attack;
- Witch special attack;
- Witch dead;
- Warrior walk;
- Warrior run;
- Warrior weak attack;
- Warrior medium attack;
- Warrior strong attack;
- Warrior special attack;
- Warrior dead;
- Warrior flaming sword;
- Soldiers walk;
- Soldiers run;
- Soldiers weak attack;
- Soldiers medium attack;
- Soldiers strong attack;
- Soldiers special attack;
- Soldiers dead;
- Ambiences for all the rooms;
- Foley for all characters;
- Environmental sounds (furniture being thrown away by attacks);
- Mayor's narrating voice;
- Characters punch lines and fight murmurs;
- Characters hearth beats (when health is low);
- Pick up objects sfx;
- Menu icons sfx;
- Spawning;
- Damage received sfx.



## 10. Developed since now

Because of lack of time and resources we have not been implemented everything. Every asset can be rearranged and every mechanism could be changed or parametrized in a better way. Here is the list of implemented stuff:

- 3d models of the main characters (Warrior, Witch, Soldiers): implemented;
- Animation characters: partially implemented;
- Combat system: implemented;
- Selection of the characters: implemented;
- Graphic menu interface: implemented;
- HUD: implemented;
- Music and sound effect: implemented;
- First round of the game: implemented;
- Second round of the game: not implemented;
- 3d models of the NPCs: partially implemented;
- NPCs simple AI: not implemented.

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