

# Game Design Document

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# 1 Title

## 1.1 Game Name

### *THE CURSE OF AEGIS*

**About the game title :** Such a title is thought of because the ship named Aegis had been cursed by the sea monster and in order to remove the curse, the entire game is designed.

# 2 Game Overview

## 2.1 Game Concept

### 2.1.1 The Physical World

#### 1. Overview

The physical world of "The Curse of Aegis" is rather straightforward. In the different levels, the

#### • Travel

In various levels of this game, the sailor can advance in any direction i.e. right, left, front or back to collect the ship fuel for which he came in search of. He can revisit all the places, rooms and compartments of the haunted laboratory and can collect items like guns, coins, keys etc. along the way. He has to battle with the spirits which are hindering his search of fuel and trying to decrease his health or kill him.

#### • Objects

- **Gun** - These appear at random paths and compartments in the entire haunted laboratory.

#### **Properties :**

- \* It is a highly strong plastic made object.
- \* It shoots bullets to kill spirits.

#### **Usage :**

- The gun is used to kill the spirits.

- **Bullets** - These appear at random paths and compartments in the entire haunted laboratory.

#### **Properties :**

- \* It is a collection of three cylindrical-shaped object.

**Usage :**

- \* It is used to refill the gun to kill the spirits.

- **Speed Ups** - These appear at random paths and compartments in the entire haunted laboratory.

**Properties :**

- \* It is depicted through a thunder sign.

**Usage :**

- \* It will increase the running speed of the sailor for 15 seconds.

- **Coins** - These appear at random paths and compartments in the entire haunted laboratory.

**Properties :**

- \* It is a round shape golden object.

**Usage :**

- \* It will increase the score of the player.

- **First-aid box** - These appear at random paths and compartments in the entire haunted laboratory.

**Properties :**

- \* It is a red coloured bag with plus sign on it.

**Usage :**

- \* It is used to refill the energy bar of the sailor.

- \* **Keys** - These appear at random paths and compartments in the entire haunted laboratory.

**Properties :**

- It is a black coloured object.
- Sailor need to find 3 keys from entire map.

**Usage :**

- It is used to open to compartment door having the fuel bottle.

- **Ship Fuel Bottle** - It is locked inside one of the compartments of the haunted laboratory.

**Properties :**

- \* It is a bottle-shaped object filled with ship fuel.

**Usage :**

- \* It is required by the sailor to return to his home and break the curse on the ship.
- \* It is the end task of the game.

- **Time**

The entire game play takes around 10-15 minutes to get completed.

## 2.2 Genre

Adventure, puzzle and Fighting.

## 2.3 Target Audience

The targeted audience of the game are children of the age of 7 and above. This is so because of the following reasons :

- The children of the age 7 or above are easily able to distinguish between fantasy and reality and hence, will be able to play such a fictional game.

## 2.4 Game Flow Summary

When the game commences, the player is asked to select the options such as : Play, About, Rules, Rankings, Settings and Quit. Then on selecting the Play option, he will be asked to enter his name.

1. **On clicking Play** The game includes 2 levels with sub levels in each level and the player is asked to select between two levels : **Easy or Hard**

- (a) **Level 1 - Easy**

- The player begins the game in a room where the main door of the lab leads to.
- The player can move in all directions.
- The player has to save himself from the wandering spirits in the laboratory and pick up the ship fuel bottle to reach back safely.
- The player is able to pick up objects in order to help him get out of the laboratory. The objects help him restore his health and help him collect coins as well to increase his overall score.
- The player can visit any room or compartment of the haunted laboratory.

- (b) **Level 2 - Difficult**

- All the features and objects are the same as level 1 with increased difficulty.
- The speed of movement of spirits towards the sailor is faster as compared to Level 1.
- The sailor has fewer bullets in the beginning and needs to find and collect the bullets in the haunted laboratory.
- The affect of spirits colliding with the sailor on his health is much more as compared to Level 1.

2. **On clicking About** The storyline and the end task of the game is displayed with some instructions on how to proceed and achieve the goal.
3. **On clicking Rules** All the game rules are displayed to instruct the player to get familiar with the game.
4. **On Clicking Rankings -** The Rankings displays top 5 players in a listed format with names and scores achieved based upon the coins collected, zombies killed, and other scoring factors explained below.

- **Score Calculation**

- (a) Killing the spirit : 10 points
- (b) Speedups : 5 points
- (c) Coins : 5 points
- (d) Ship fuel : 50 points

The score is calculated in the following manner :

5. **On clicking Setting** The player can change the controls and manage the sound effects of the game.

- **Control**

- (a) Arrow keys : assign arrow keys(left, right, up and down) for the movement of the player.

- (b) W-A-S-D keys : assign alphabet keys(W, A, S and D) for the movement of the player.

- **Audio**

- (a) Mute : To mute the game sounds.

- (b) Unmute : To play the game sounds.

6. **On clicking Quit** - On clicking Quit, the game finishes.

Game can finish leaving the player in two states :

- (a) **Win State**

- The main aim of the game is to find the ship fuel locked in one of the compartments.

- In the end the player should have lives more than zero.

- (b) **Loss State**

- The player will lose the game if he loses all his energy and lives.

#### 2.4.1 Project Scope

- **Number of Locations** The game has just 1 location i.e. the haunted laboratory which the sailor enters to search for the ship fuel. Inside the laboratory, there are a number of rooms and compartments.

- **Number of Levels** According to the scope of the project, optimistically the game will showcase 2 different levels the player can choose with different types of difficulties and challenges it has to tackle.

- **Number of Non-Player Characters**

- 1. Spirits There are the moving ghosts or spirits in the isolated laboratory. These basically appear as enemies in the game, trying to hinder the sailor's search by coming close enough to the mariner and decreasing his health.

## 3 Game Play and Mechanics

### 3.1 Game Play

#### 3.1.1 Game Progression

The game progresses in the following manner :

- The player has a choice of choosing the level to play depending upon what difficulty level he wants to take up. There are two levels to make a choice from - Easy (less challenging) and Difficult (more challenging)

- Once the level is completed with 1 or more lives remaining in the end and ship fuel in hand, the player can go back to his home.

### **3.1.2 Mission Structure**

Levels will be structured. Levels will be short and can be completed with ease in about 10 to 15 minutes. There will be a clear objective in the beginning and the player will accumulate points and ship fuel bottles based on how he/she completes the mission.

### **3.1.3 Puzzle Structure**

The game location contains a haunted laboratory having multiple compartments. The compartments are opened and the keys to the room containing the ship fuel are scattered in the laboratory. All the compartments are joined by their sides and we have some empty corridors too.

### **3.1.4 Objective**

The ship got cursed, and the sailor is stuck in an island populated with spirits. To return to his home, the sailor needs ship fuel. In search of ship fuel, he enters a haunted laboratory filled with spirits and searches for the fuel. The room containing the ship fuel is locked, so he needs to collect 3 keys scattered all over the place. To achieve this, he needs to kill the spirits in his way because they will get attracted by the sailor and lower his health. The player needs to help the sailor find the 3 keys to the main room and collect the fuel.

### **3.1.5 Play Flow**

The player is stuck in the island cursed with dangerous and terrifying spirits. He needs ship fuel to sail back to his country. In search of the ship fuel he entered a haunted laboratory. The player/user needs to guide the sailor to find the fuel and return safely. Firstly the player can select among what type of level he want to play based on the hardness. The laboratory contains some compartments as well in which the sailor needs to kill the spirits in order to break the curse and return to his home. The laboratory consists of opened compartments and one locked compartment which require 3 keys to be opened. Player needs to find the keys to unlock it and finally when he has the ship's fuel bottle in his hand with one or more extra lives, he will succeed and win the game.

## **3.2 Mechanics**

### **3.2.1 Physics**

#### **• Space**

The game is built in 2-D space and has a top view perspective.

#### **• Rules**

1. A locked compartment containing the ship fuel can only be opened if the player has 3 keys to that particular compartment.
2. If the player collides with the spirit it will lower his energy. If the energy gets exhausted, one life will be decreased until all lives disappear.
3. The speedups will increase the speed of the sailor for 15 seconds then it will be back to its original speed.
4. The player can collect coins to increase the score.

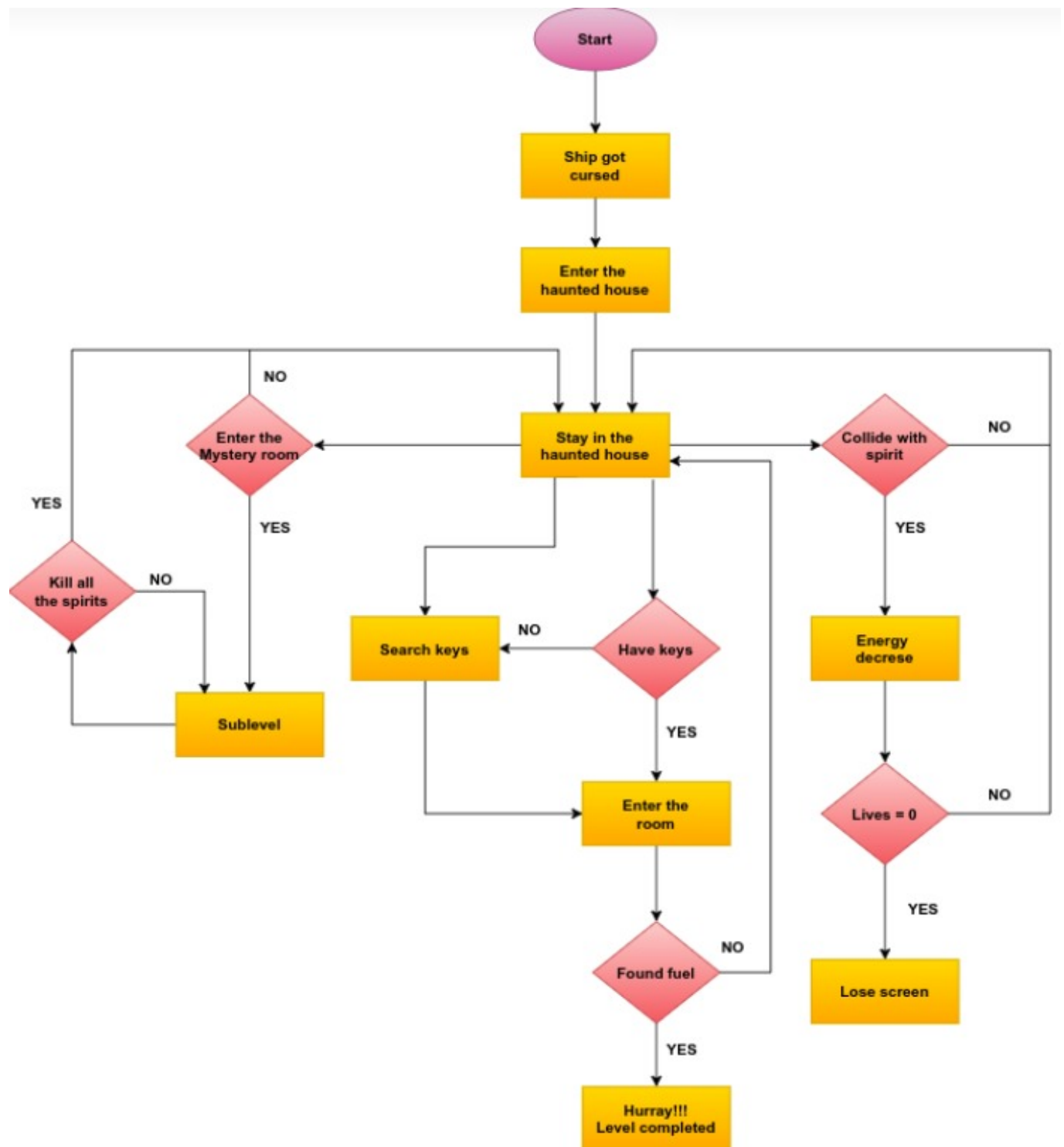


Figure 1: Game Flow Chart

5. the player can collect the first-aid box to restore the energy bar.
6. The player can shoot the spirits and they will die when their energy gets exhausted.
7. Once the player collects the ship fuel game will be over and he will win the game.
8. If the player uses up all the 3 lives, he will die and lose the game.

#### • Skills

##### 1. Sailor

- He can move in all the directions, i.e. forward, backward, left and right.
- He can shoot the bullets to kill the spirits.

##### 2. Spirits

- They can sense the position of the player and start moving towards him.
- They can lower the energy of the player if they collide with him.
- They have a specified energy level so the player needs to shoot multiple times in order to kill them.

#### • Chance

1. All the objects like health, speedups etc. are randomly placed at different positions so that the player does not have any idea in the beginning and he needs to search these items.
2. Since the spirits are attracted towards the sailor, the game as a whole contributes to Chance because each and every time, the spirits will be at a different position based upon sailor's motion.

### 3.2.2 Movement

The player can move in any direction, i.e. forward, backward, left, and right inside the laboratory using the corresponding keys. The player will be able to collect weapons like different types of guns which is used to shoot the spirits and other collectables like speed ups, coins etc.

- Forward movement** - Up arrow key or W key
- Backward movement** - Down arrow key or S key
- Left movement** - Left arrow key or A key
- Right movement** - Right arrow key or D key

#### Other keys used are :

- Shoot** - Space bar
- Pause and Resume the Game** - P key
- Mute** - M key
- Quit** - ESC key

#### Gun change :

- Pistol** - 1 key
- Shotgun** - 2 key
- Rifle** - 3 key
- Uzi** - 4 key



### 3.2.3 Objects

#### Level 1 and Level 2

1. **Ship fuel** - The main objective of the game is to find the ship fuel which is present inside one of the rooms of the haunted laboratory so that he can return to his house.
2. **Gun** - In order to fight with the spirits and kill them, there are multiple types of special guns present in different locations.
3. **Bullets** - So refill the gun player needs to collect the bullets from different locations.
4. **Keys** - All the doors are locked at the beginning of the game and the player needs to collect the keys in order to open the doors.
5. **Health** - During the fight with the spirits, if the spirits touch the player, it will decrease his health and it can be restored during the game by collecting these health bags.
6. **Speedups** - The player can collect the speedups in order to increase their speed.
7. **Coins** - The player can collect the coins in order to increase their score.

### 3.2.4 Actions

#### Actions performed by the player i.e. the sailor :

- Move in all directions.
- Can collect various objects coming in his way in the laboratory to improve his health, coins to make his wealth, ship fuel, guns etc.
- Can fight with the enemy spirits.

#### Actions performed by the non playable characters i.e. spirits :

- Can fight with the sailor to lower his health or eventually kill him.
- They are attracted by the sailor and move in the same direction as that of the sailor.

#### Actions performed by various objects :

- These are collectible entities of the game and do not perform any particular action. They can just be collected by the player.

### 3.2.5 Combat

In this game, combat is two-sided i.e. the spirits will be battling or following the lost trapped sailor to decrease his energy whereas the sailor will be fighting against the spirits to save his life because he has only 3 lives which he can exhaust finally to reach back to his home. The sailor can use weapons like a gun to battle with the spirits in order to kill them.

### 3.2.6 Economy

Since there is no currency or purchases done in the game, there really is no need for an economy.

### 3.2.7 Environment

For the scope of the project, the player will have limited ability to interact with his surroundings. The game starts with the sailor sailing through the deep ocean when his ship got a curse. Apart from this, there is no interaction with the environment during the game play.

### 3.2.8 Weapons

There are weapons like guns etc. which differ in the type of bullets they fire.

1. **Normal gun** - Shoot one bullet at a time with relatively slow speed.
2. **Multi-bullet gun** - Shoot three bullets at a time but take some time to reload again.
3. **Fast gun** - Shoot a single bullet, but the speed of bullet travelling will be fast compared to the normal gun.

## 3.3 Screen Flow

### 3.3.1 Screen Flow Chart

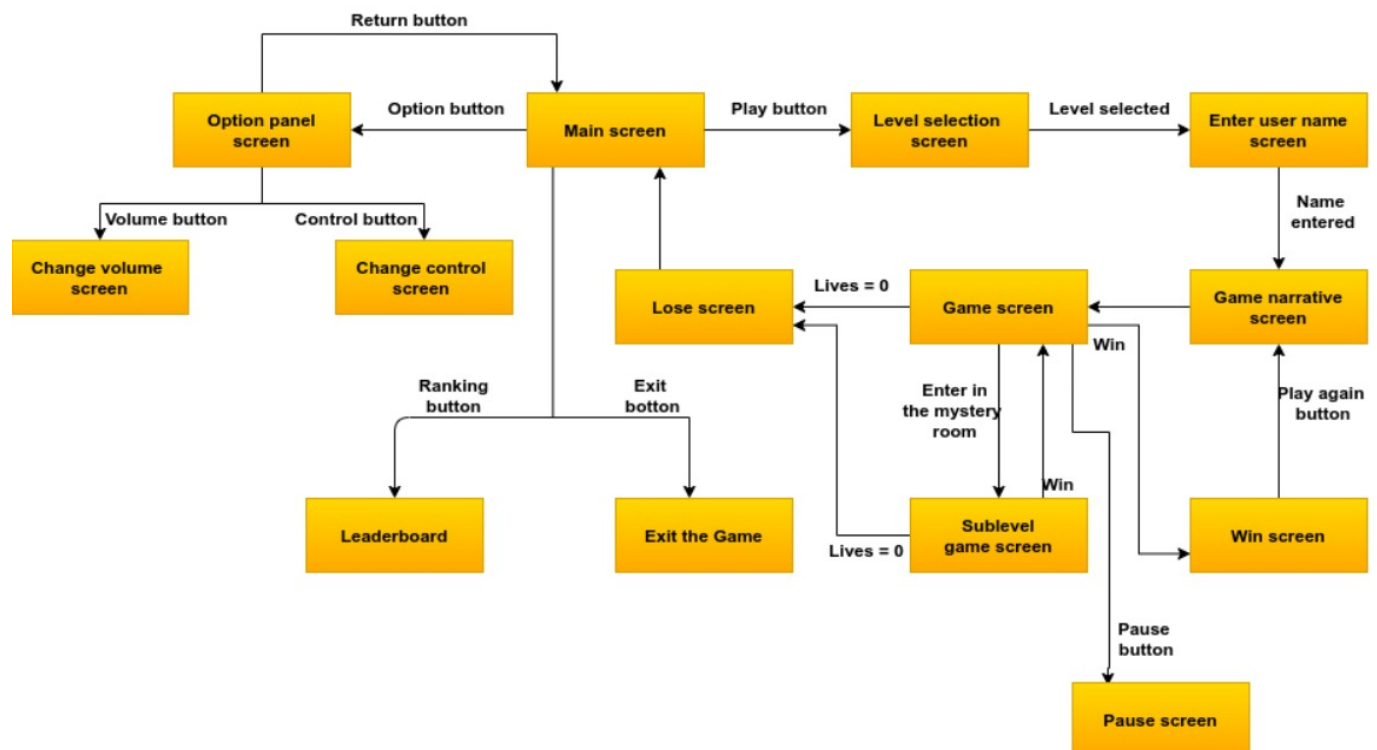


Figure 2: Screen Flow Chart

### 3.3.2 Screen Descriptions

- **Main Screen** - This is the main screen that the player will see when he/she starts the game. It contains six options, namely Play, About, Rules, Settings, Ranking, and Quit.
- **Level Selection Screen** - We have different levels based on the difficulty level, which can be selected by the player.
- **Enter name Screen** - After selecting the level, the player needs to enter his/her name to keep track of the score in leader board. **Story Narrative screen** - This is a short description of the story line of the game in the form of a short video.
- **Game screen** - This is the main game screen based on the level selected.
- **Pause Screen** - The array of options that you will see when the game is paused. There is a resume game play, restart the level, and return to the menu.
- **Win Screen** - Screen that you will see if the player wins the level. There will be a choice to redo level, continue, or go back to the menu. The score that was achieved will be shown.
- **Lose Screen** - If the player loses all the lives, this screen will be displayed, and we again get the main screen from where the player can restart the game.
- **About Screen** - The player can read about all the narrative and play flow from this page. One can select this option from the main screen.
- **Rules Screen** - The player can read about the rules of the games consisting what all keys to use for the game play and how to achieve the end task i.e. collect the 3 keys to collect the ship fuel bottle.

#### Settings screen

- **Control change** - To redefine the keyboard key controls manually. The screen contains the following options :
  1. Arrow Keys - The player can use the four arrow keys to play the game.
  2. W-A-S-D Keys - The player can use the alphabet keys W,A,S and D to move forward, left, backwards and right respectively.
- **Audio Control** - Turn the background music and sound effects off. It has the following options :
  1. Mute
  2. Unmute
- **Ranking** - Display the name of top 5 players, sorted according to the score.

### 3.4 Game Options

1. The player can manually change the game controls manually as per their convenience. For example, default movements are using arrow keys, but the player can modify it as A, W, D, S for using left, forward, right and backward respectively.
2. Game contains background music and sound effects which can be controlled by the player manually. They can turn it on/off.
3. The player can pause the game in between.
4. The player can end the game any time during the game play.

### **3.5 Replaying and Saving**

All levels/missions are repayable but saving the game while playing a level is not allowed. Since levels are relatively short, it should not hurt the player too much not to be able to save state during game play. The scores of the player are saved in the leader board if he successfully completes any level and beat the top five high scores.

## **4 Story, Setting and Character**

### **4.1 Story and Narrative**

#### **4.1.1 Back Story**

The game attempts to portray the story of a lost sailor named Michael. The story is as per the following : The lost sailor had set to a journey from Barcelona to Mollarca country in the ship named Aegis. The initial phases of his journey were smooth, energetic and lively. He did not face any hurdles. Yet, this didn't last for long. Over the span of his journey, the ocean waves ascended high and the ocean levels began to get lopsided. It happened that the ocean saw a hefty ocean storm and the ship lost its direction. The defenseless and helpless sailor became clueless of the ocean course the ship began to cruise on. It was the full moon night and as indicated by the old legends, an event of such disastrous tempests or storms was viewed as evil. They accepted that the ocean monsters woke up on those specific evenings and provided unholy and mischievous orders, for example, cursing individuals, destroying lives and so forth. And so occurred with the lost sailor who turned into a survivor of the beast's condemnations i.e. the sailor was cursed. The sailor's ship lost all the fuel because of the curse imposed upon him and was made to hit a secluded and haunted island. Despite the fact that he was granted three lives with the constraints that he has just a single whole night to look for the ship fuel bottles covered up on the island and can hazard his three enchanted lives to do so. If he is able to accomplish this objective, the curse will be taken out from the mariner and he can joyfully return to his destination, else he will lose his life on the solitary island. On getting onto the island, the sailor wanders on the island in anxiety wherever the path took him. He was unable to locate a single resource of ship fuel for the initial 2-3 hours. He at that point stopped by a disconnected and creepy lab. At first, the mariner was reluctant to enter it seeing the spooky and alarming appearance of the lab from outside. However, left with no decision, he concluded to enter the laboratory with a bold heart and brain. The lab looks abandoned and idle. The windows and entry gates facing up to the island were completely depleted up and what was inside was too appalling to even consider. However, needing to get back to home and the lab being the only spot on the island to visit, the lost sailor decided to risk and set out to the haunted laboratory. On entering it, he finds the lab brimming with moving spirits. It had broken tables and seats, skulls hanging from the rooftop, startling sounds and scary voices from everywhere, spider cobwebs on the walls etc. The sailor was already anxious and afraid of the curse and the look and feel of the laboratory made him more worried. He was sweating and his body started to shiver with nervousness but keeping the motive in mind to collect the ship fuel, the sailor became less panicky and started to explore the haunted laboratory. He finds moving spirits all around the laboratory with half opened and half closed/locked rooms and compartments in the laboratory. The sailor needs to combat with the spirits killing them who in turn are engaged in lowering the mariner's health and energy. The sailor needs to explore safely and smartly, keeping in mind the enchanted 3 lives he has to risk and come out safely from the haunted and maze-like laboratory. Thus the game story is full of challenges, risks and adventurous ventures the mariner needs to undertake to release himself from the imposed curse and depart safely from the scary island.

#### **4.1.2 Plot Elements**

When the sailor enters the haunted laboratory, he has no idea about how it looks and where he will find the fuel. After exploring he gets to know that it contains different compartments. To unlock the main compartment and find the fuel bottle, the sailor needs to find keys which are present inside the laboratory. Apart from this we have some mysterious rooms to make it more unexpected and adventurous. Other than this, the game is strategy based wherein the player needs to strategically enter the rooms and strategically kill the zombies by attracting them smartly.

#### **4.1.3 Game Progression**

Since there are no plot elements, the player gets the sense/feeling of progression by combating and avoiding enemies on the way of searching and completing it. For the project scope, there will not be many levels as the main focus is getting a solid game engine. Because levels are disjoint for the most part, updates could easily add more levels to groups or even a new group of levels.

#### **4.1.4 Cut-Scenes**

For the scope of this project, there will be no cinematic cut-scenes.

### **4.2 Game World**

#### **4.2.1 General Look and Feel**

The game world should have a scary, haunted look to it. The game graphics should resemble that of a well done 2D haunted laboratory. The images are clean and crisp low to moderate texture details. The game world should be semi-realistic, easily recognisable so that the game players/users can easily relate to it. The game graphics should be able to dive the player completely into the game so that he/she is able to live it. The haunted look to the game has been given in various ways like the torch in sailor's hand, the switching ON/OFF the laboratory light, the appearance of blood on killing a spirit, the haunted background music etc.

#### **4.2.2 Locations**

- **Haunted Laboratory**

- **General Description**

- In the search of the ship fuel, the sailor enters the laboratory which has the fuel locked in one of its compartments. The whole game is revolving around this place. It is a closed area populated with scary spirits.

- **Physical Characteristics**

- The dimmed light laboratory contains multiple compartments which may be closed/locked.

- **Levels that use the area**

- Both the level use this location, level 1 (Easy) and level 2(Hard).

- **Connections to other areas**

- The laboratory is situated on a cursed island on which the sailor was stuck.

### **4.3 Characters**

1. **Michael**

- **Back Story**

The main character of the game, sailor Michael was travelling from one country to another where he was hit by a storm and got cursed by the evil power. He was stuck in a terrifying and scary island where he spent some time to find the fuel for his ship which was necessary to start his journey again. He ends up searching it in a haunted laboratory which was populated with scary spirits. He needed to find the ship fuel which was locked in one of the compartments. If he succeeds to find the fuel and have one or more lives he can break the curse and can successfully start his journey again.

- **Personality**

He is a young, daring and adventure loving sailor having enough courage to fight the terrifying spirits and continue his journey.

- **Look**

The game shows the top view of every location. He is wearing a blue sailing uniform with a torch in his hand and wearing a hat.

- **Special Abilities**

He can run in all the directions and can shoot the spirits to kill them. He can double his moving speed on collecting the speed ups.

- **Relevance to the Game**

Story This is the main character of our game and the player needs to guide him to achieve his goal.

- **Relationship to other characters**

His task is to kill the other characters who are the enemies and cause hindrance in his path to find the ship fuel.

## 2. Spirits

- **Back Story**

The sailor lands up on a cursed island. The spirits are living there for millions of years to save the place and avoid the human to enter and disturb them. The curse of the island can only be broken if all the spirits are killed by a human.

- **Personality**

They are scary and terrifying spirits which will be attracted by the player and try to kill them.

- **Look**

These are scary white ghosts flying in the air.

- **Special Abilities**

They can lower the energy of the human if they collide with them. They also have the ability to get attracted towards the humans who come close to them. They can move in any direction and can be turned upside down.

- **Relevance to the Game Story**

They are the main enemy characters in the game.

- **Relationship to other characters**

They will lower the health of the player if they collide with him.

## 5 Levels

### 5.1 Level 1

#### 5.1.1 Synopsis

Eager to return his home, the main character, the sailor, enters a haunted laboratory populated with the scary spirits in search of ship fuel which is locked inside one of the rooms. The first level will teach the player the basics of controlling the character. There are no plot elements mixed into this level.

#### 5.1.2 Introductory Material

There will be graphical instructions on how to control the player. It will show how to control movement for both control schemes i.e. forward, backward, right, and left. The basic movements that will be explained in the beginning.

#### 5.1.3 Objectives

##### 1. High Level

- **Original Design**

The player needs to help guide the main character, the sailor, to find the ship fuel and fight with the spirits and successfully survive there.

##### 2. Player

The player should understand basic movements in order to move smoothly in all directions. Attacking included shooting and running away from the spirits.

#### 5.1.4 Physical Description

This level will pretty much be a straight shot from the entry door to the room containing the fuel. The laboratory contains multiple rooms locked for several years and have their keys scattered in the laboratory.

#### 5.1.5 Map

The map consists of a haunted laboratory structure containing the compartments which are surrounded by walls. There is a locked compartment and multiple opened compartments. There are maze like structured compartments too.

## 6 Interface

### 6.1 Visual System

#### 6.1.1 HUD (Heads-Up Display)

#### 6.1.2 Menus

1. **Play** - To start the game one needs to select the play option which will navigate the player to level selection screen.
2. **Level selection** - Players can choose the level according to the hardness of the game.
3. **Ranking** - One can see the top 5 scores pursued by the players.

4. **Option** - Switch control scheme, turn sound on/off.
5. **Exit** - This will close the game tab.
6. **Pause** – Back to the main menu, restart level/mission, options, and return to the game. Each menu option will be a button with an icon.
  - **Back to the main menu** – A square with three dots and lines arranged such that the lines are parallel and running horizontally. The dots will be lined up in one column and the lines in another. There will be one line and dot per row. Similar to the Angry Birds button.
  - **Restart** – An arrow that forms a circle to point to its tail.
  - **Options** – A gear/cog.
  - **Return to the game** – A circular button with an X on it.
7. **Win** – This screen will be displayed if the player completes the level. It will show the score that the player has earned.
  - **Restart Button** – Will load the same level
  - **Menu Button** – Takes the player back to the main screen.
  - **Next Button** – To continue playing and start the next level one needs to select the next button.
8. **Lose** – This screen will be displayed if the player fails to complete the level.
  - **Restart Button** – Reload the current level
  - **Menu Button** – Takes the player back to the main screen.

### 6.1.3 Lighting

To give a haunted look, we use dim light throughout the game. We assume that our sailor is holding a torch in his hand which will light up the room by a small radius covering the sailor. Light plays an important role in our game because all the ghosts are attracted by the light towards the sailor.

## 6.2 Control System

The player can move in four directions, i.e. forward, backward, left, and right. He can also shoot the bullets towards the spirits to kill them.

- **Forward movement** - Up arrow key or W key
- **Backward movement** - Down arrow key or S key
- **Left movement** - Left arrow key or A key
- **Right movement** - Right arrow key or D key
- **Shoot** - Space bar
- **Pause and Resume** - P key
- **Mute and Mute** - M key
- **Quit** - ESC key

### 6.3 Audio

It is a single player game so we don't have audio effects in the game.



## 6.4 Music

We have scary music playing in the background to give the effect of a horror scene with some screaming sound coming after constant time.

## 6.5 Sound Effects

Whenever the sailor shoots, there is a sound of a bullet. Then we have ghostly sounds when ghosts approach towards the player. On collecting the treasure, we have the sound of jingling coins, etc.

## 6.6 Help System

There will be a help system in the game to explain the game rules. The instructions should provide adequate help. A help screen requires a player to shift through text to find out how to perform the action they want.

# 7 Artificial Intelligence

For the scope of this project, Artificial Intelligence has not been incorporated in the game play.

# 8 Technical

For the game, the language used is : **Python**

pygame, pytweneing and pytmx libraries of Python have been used for the develeopment of the game.

1. **pygame** - pygame is a Free and Open Source cross-platform library for the development of multimedia applications like video games on Python. It uses the Simple DirectMedia Layer library and several other popular libraries to abstract most common functions and makes writing these program a more intuitive task.
2. **pytweneing** - A collection of tweening / easing functions implemented in Python.
3. **pytmx** - PyTMX is a map loader for python/pygame designed for games. It provides smart tile loading with a fast and efficient storage base. Not only does it correctly handle most Tiled object types, it also will load metadata for them so you can modify your maps and objects in Tiled instead of modifying your source code.

# 9 Game Art

Game Art is an essential component of the game. To make the game art more impactful, the following was done :

1. The game has colorful elements throughout.
2. The map in the game is clear with walls and floor easily distinguishable.
3. The horror effects in the game have been added in various ways :
  - The scary background music being played throughout the game.
  - The dim lights in the laboratory.

- The fluctuating background light in the haunted laboratory.
  - The fluctuating color of spirits.
4. The appearance of different collectables like bullets, speedups, guns, coins etc. add color to the game as well as thrill.
  5. To avoid repetitiveness in the game, following has been done :
    - The coins are arranged in different patterns,
    - There are different types of guns with different images.
    - The floor tiles have been taken in color contrast.

## 10 Management

### 10.1 Detailed Schedule

Task	Start Date	End Date
Project Ideas submissions and discussion as team with instructors	September 10	September 20
Planning, game play, levels, technology platform to use (get familiar with it too)	September 20	September 30
Write the complete GDD, show mock ups	October 1	October 12
Develop and test	October 13	November 25
Test and bug fix	November 26	December 3
Complete the final GDD report	December 3	December 4

### 10.2 Risk Analysis

There is little to no risk involved in this project. In the worst-case scenario, at the end of the semester, we will end up with an incomplete game. If this happens, we will be required to come up with a compact plan because we need to submit our project by the expected date.

### 10.3 Localization Plan

#### 10.3.1 Communication

All official communication will take place in the form of emails or telephone/video conferencing. Instant messaging can be used. During a telephone/video conference call, one person will be assigned to take notes, which will be archived and available to the team. Communications with team members can be done using WhatsApp and normal audio and video calls and communications with the instructor can be done using emails and Conference calls over Microsoft Teams etc.

#### 10.3.2 Code

All code will be stored in the GitHub repository. Code should not be shared through email. Code can be backed up on an external device or on a local drive and the person storing the code takes full responsibility if the code is stolen or copied without authorization.

#### 10.3.3 Documents

All documents will be stored on Google Docs/Latex (Overleaf) and shared with the whole team.

## 11 Mock Ups

### 11.1 Main Game Screen



Figure 3: Main Game Screen

**SELECT THE HARDNESS  
BE CAREFUL!!!**

**LEVEL 1**

**LEVEL 2**

Figure 4: Level Selection Screen



**ENTER YOU NAME!!!**

|

Figure 5: Player Details Screen

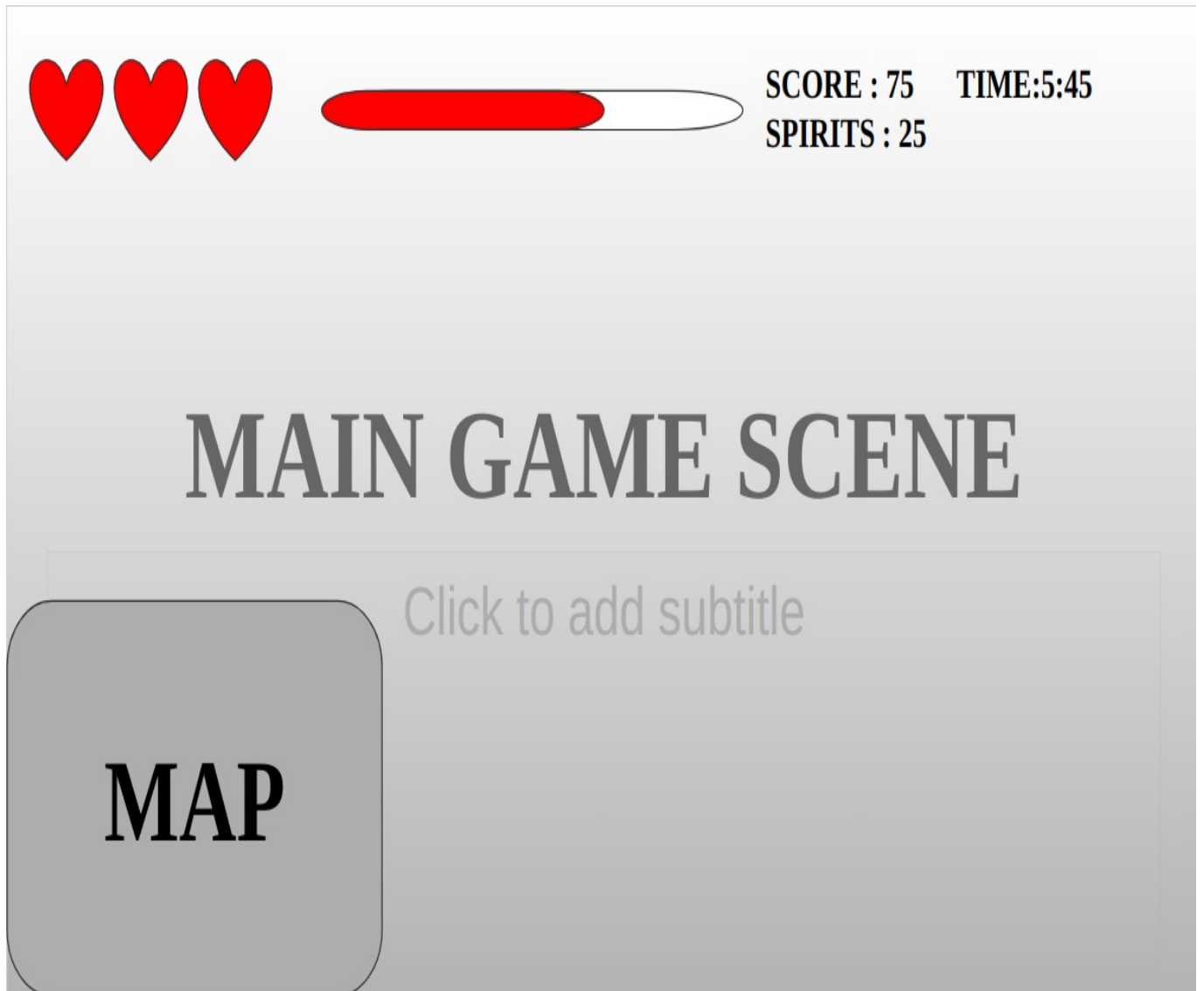


Figure 6: Main Play Screen

CONGRATULATIONS!!!  
YOU WIN

SCORE :

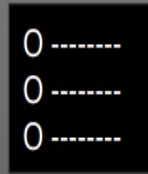


Figure 7: Win Screen

**11.2 Level Selection Screen**

**11.3 Player Details Screen**

**11.4 Main Play Screen**

**11.5 Win Screen**

**11.6 Lose Screen**

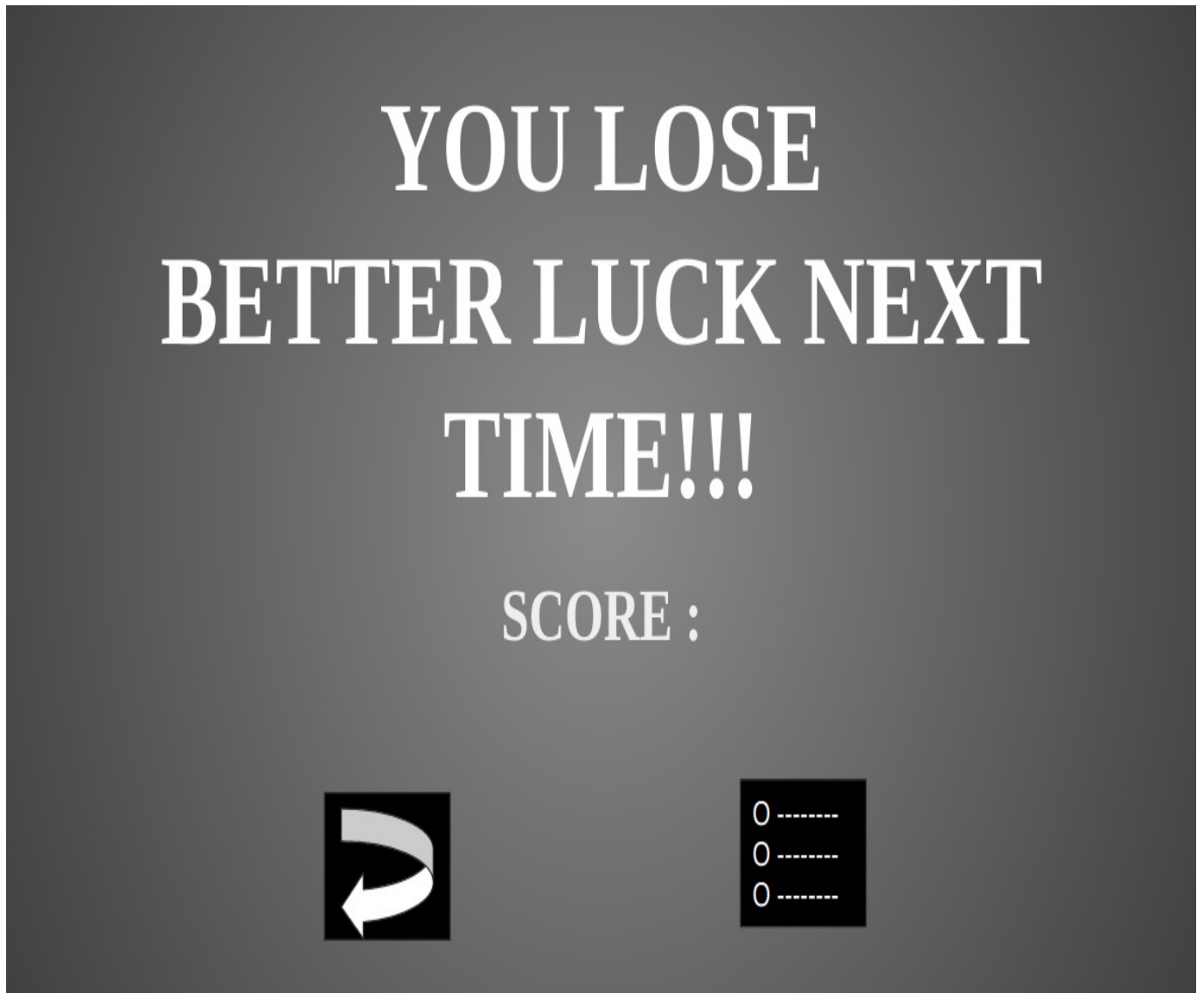


Figure 8: Lose Screen

**11.7 Pause Screen**



# WANT TO RESUME THE GAME?

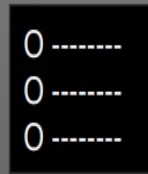


Figure 9: Pause Screen