



# Hope Island

Game Design Document

Version 1.0

03/17/2020

# Table of Contents

## Introduction

- Premise
- Inspirations
- Similar Games
- Goals
- Target Demographic

## Development

- Design Team
- Engineering Team
- Tooling
- API

## Gameplay

- Gameplay Overview
- Key Features

## Story

- Background
- Worldview
- Storyline
- Sequel

## Levels

- Level Design
- Tutorial Level - Walnut Town
- Level 1 – Wild Timberland
- Level 2 – Barren Dessert
- Level 3 – Harbor Town

## Characters

### Player

- Player Design
- Battle System
- Vincent Hart
- Charlotte Hart
- Marc Nelson

### Enemy

- Enemy Design
- Boss Design
- Wildland Monsters
- Death Skeletons
- Matrad Army

## **Art Direction**

- Theme
- Textures
- Lighting
- Camera Settings
- UI

## **Sound & Music**

- TBD

## **Production Plan**

- DLC
- In-game Purchases

# Introduction

## Premise

Hope Island is a 2.5D, third person, single player, rouge-like, role-playing game (RPG). In Hope Island, the player plays the role of a player character from a player character team, using unique skills of a character, beat the enemies and boss on the way to escape Hope Island. In this game, there will be a free world the player can choose the player character the player wants to play the role of, try different combination of character and skills, experience different terrains and environments on Hope Island. The game focus on the gameplay, as a result, the is weak story narration.

## Inspirations

The key feature of Hope Island is that the game follows the principle of a rouge-like game. The gameplay system design is inspired from a series of popular rouge-like games.

The scenes and environments are also a feature in our game. Hope Island is set in a medieval, fantasy background, the game is inspired from a series of 3D open-world adventure games.

## Similar Games



### Hades

Gameplay inspired from Hades, a rouge-like gameplay system.

The camera settings also inspired from this game, a 2.5D camera view with 3D modeling.



### The Binding of Isaac

Gameplay inspired from The Binding of Isaac, a rouge-like gameplay system.

The random map generation system is inspired from this game. The player moves in different pre-built scenes in random orders.



### **Crown Trick**

Gameplay inspired from Crown Trick, a rouge-like gameplay system.

The art theme is in the theme of fantasy and cartoon, combined with a realistic environment.



### **The Witcher 3: Wild Hunt**

The scene design and development are partial influenced by The Witcher 3: Wild Hunt.

The design of medieval town environment is inspired from the wild areas in this game.



### **Red Dead Redemption 2**

The scene design and development are partial influenced by Red Dead Redemption 2.

The design of dessert environment is inspired from the wild areas in this game.

Some background music and ambient sound is from this game.



### **The Elder Scrolls V: Skyrim**

The scene design and development are partial influenced by The Elder Scrolls V: Skyrim.

The design of forest environment is inspired from the wild areas in this game.

**Goals**

**Target Demographic**

## Development

### Design Team

Dan Peng	Character Design, Boss; Game System Design
Xinhe Yang	Character Design, Enemy; Game System Design
Yingjie Shen	Level Design; UI Design; Game System Design
Yunxuan Cai	Character Design, Player; Game System Design

### Engineering Team

Dan Peng Gameplay	Character Engineering, Boss; UI Engineering,
Jialuo Zhang	UI Engineering, Gameplay
Ruiqi Liu Engineering, Gameplay	Scene Engineering; Technical Artist; UI
Xinhe Yang Gameplay	Character Engineering, Enemy; UI Engineering,
Yunxuan Cai Gameplay;	Character Engineering, Player; UI Engineering, Technical Artist
Yingjie Shen	Scene Engineering

### Tooling

#### Game Engine



Unity 3D

#### Version Control



GitHub

#### Programming



C#

## Design



Adobe Xd



Adobe Photoshop

## File Management



Google Drive

Google Drive

## Communication



zoom

Zoom

## API

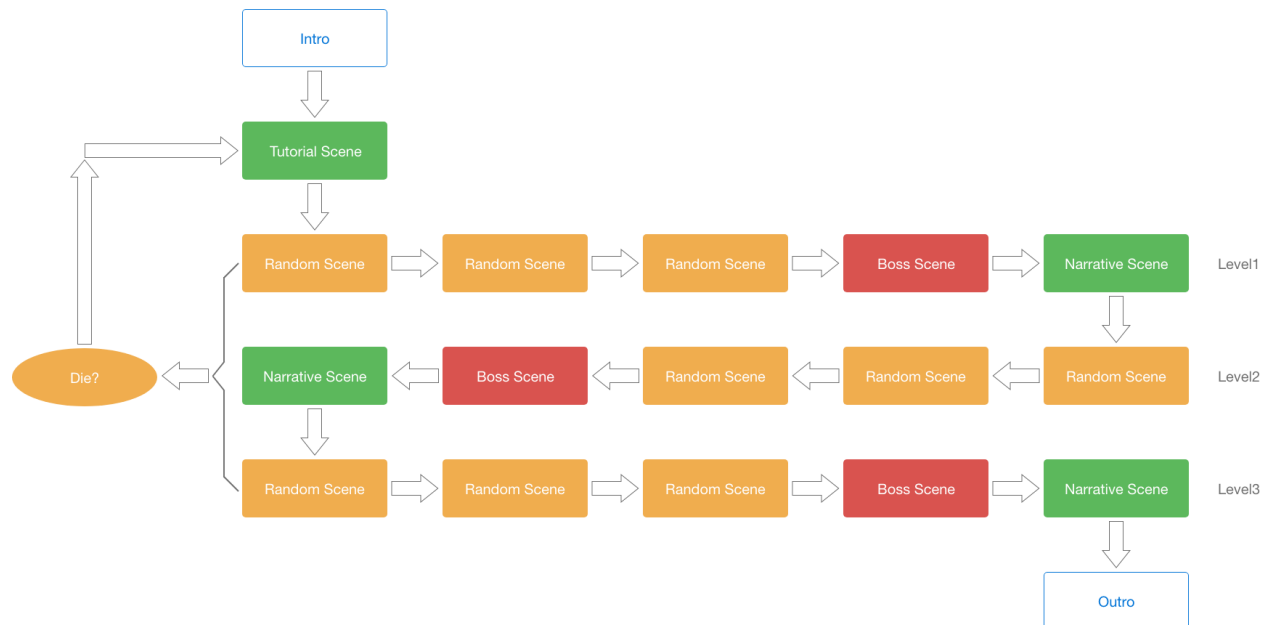


# Gameplay

## Gameplay Overview

Hope Island is a rouge-like game, where there are random maps, random skills. In this game, the player will play the role of among team consists of three characters. The player is able to select the player character when leave the level 0, the tutorial scene, or revive from level 0, the tutorial scene. When clear a level, the player can update the skill sets.

Here is a diagram of the ideation of basic level design:

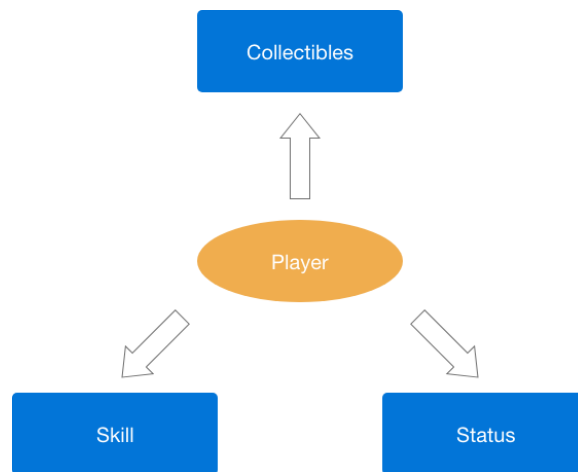


In order to implement the random map mechanism in Hope Island, there will be four levels, the level 0, the tutorial level, Walnut Town, level 1, Wild Timberland, level 2, Barren Dessert, and level 3, Harbor Town. In each level, besides level 0, the level is made of three scenes in a random order followed by a boss scene.

In order to pass a level, the player should keep alive, finish the tasks in each scene in predecessor scenes and beat the boss the boss scene. The player will be asked to accomplish the task given in the predecessor to clear the on-going scene, otherwise, the teleporter in the scene will not teleport the player to the next scene.

If the player dies in any scene besides the tutorial scene, the player will be teleported to level 0 immediately, losing all game progress and all the skills during last generation. The player will start over from level 1, and a new generation to try to pass the game.

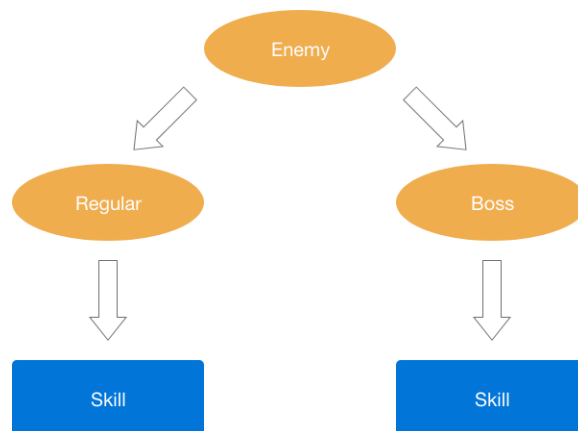
Here is a diagram of the ideation of basic player design:



The player is connected to collectibles mechanism and related to the skill system and status.

In the adventure of different levels, the player can collect items from treasure boxes, drop off from enemies to recover the status. In the skill system, different player characters have different sets of skills can launch to deal with the enemies and bosses. The status keeps tracks the health, energy, stamina and other prosperities of the player and indicates the skill usage.

Here is a diagram of the ideation of basic enemy design:



There are two types of enemies in the game, the regular enemy and the boss. The regular enemy and boss will launch regular attacks and skills to make damages to the player.

## **Key Features**

### **Randomized scenes**

Hope Island used a unique algorithm that makes the player experience different scenes in a level in a generation.

### **Randomized skills**

The player will not know how much the skills will make different the player selects between levels since different skills have different effects on different scenes.

### **Multi-player System**

Although there are only three players in the game, the player still has to freedom to choose the player he wants to play in the next generation of the gameplay.

### **Free strategies**

Different player characters have unique skill sets, different skills can choose between levels, different skills fit different scenes, different enemies wander on different scenes. There exist thousands of combinations to pass the game.

### **High detailed scenes**

Each scene is well designed and carefully developed. From forests to desserts, there exists different layouts and terrains in the game. The selected ambient sounds and carefully adjusted lighting system is a great plus to the gameplay experience.

### **User-friendly UI**

The well-designed UI is a necessity for the game to hold so many elements and systems. The UI is another a great plus to the gameplay experience.

## Story

# Levels

## Level Design

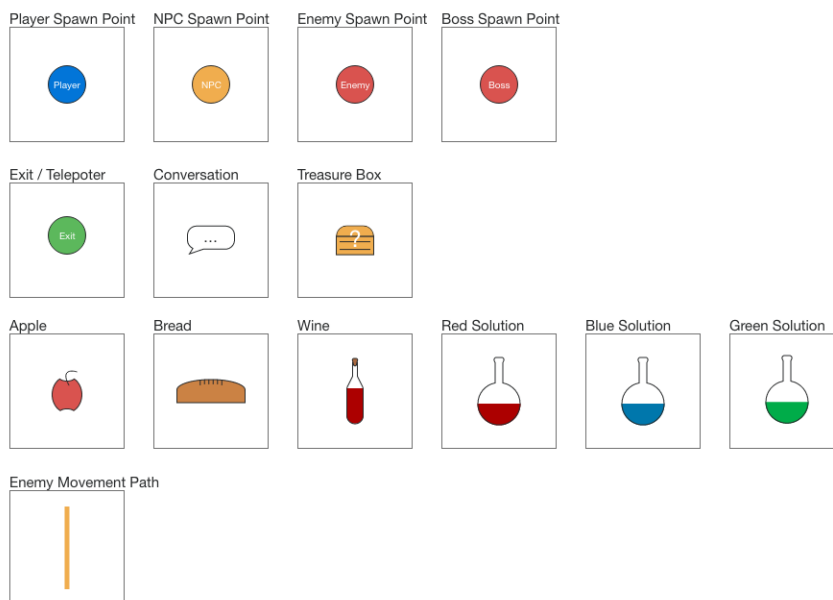
There are four levels in Hope Island, level 0, *Walnut Town*, the tutorial level, level 1, *Wild Timberland*, level 2, *Barren Dessert*, and level 3, *Harbor Town*. The order of the three levels is determined. However, the game will shuffle the order of scenes in each level, which adds challenges to the players as well as create more possibilities to pass the levels and increase the experience playing this game.

In each level, there exists two sets of scenes with two levels of difficulty, easy and hard. Usually, a level contains four scenes, containing one scene of the easy level, two scenes of hard levels and one scene of the boss battle.

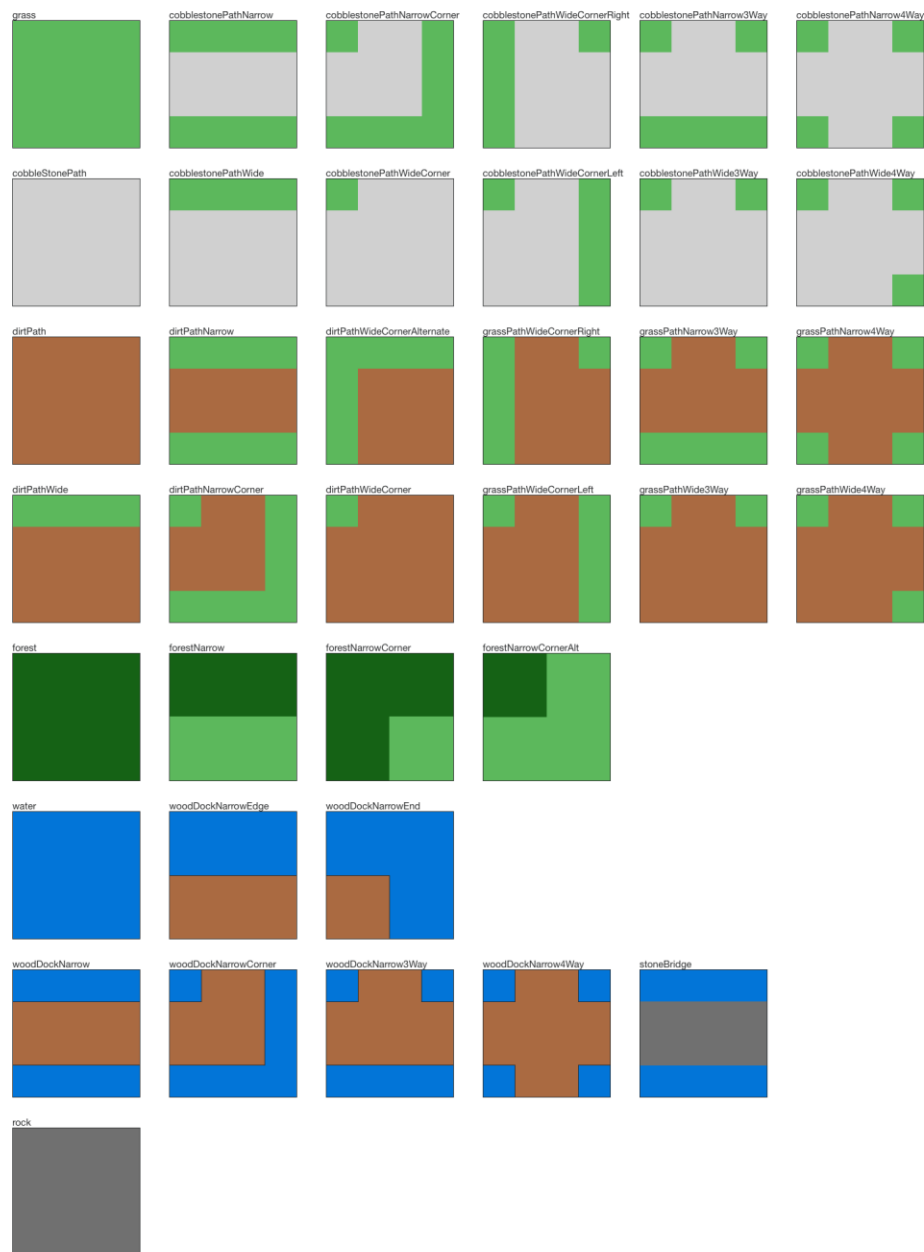
To clear a level, the player must pass all levels priority to the boss scene and kill the boss in the boss battle scene. To clear a scene, the player must accomplish the required tasks. In each scene, the player will be asked to accomplish one task. According to different level themes and scene settings, there will be various of tasks for the player to accomplish. The task will be different from one scene to another but may repeat.

In each scene, there will be such elements called gameplay elements:

1. Spawn points
2. Interactable elements
3. Collectibles
4. Enemy movement path



In order to development the scenes in a fast pace and keep consistent theme and styles, which took inspiration from [Minecraft](#), using reusable blocks to build up maps. Here are the blocks used during the scene development:



In order to generate a 'random' map system, the game has a set of pre-built maps with above blocks and connect different maps in a random connection order in each level.

## Tutorial Level - Walnut Town

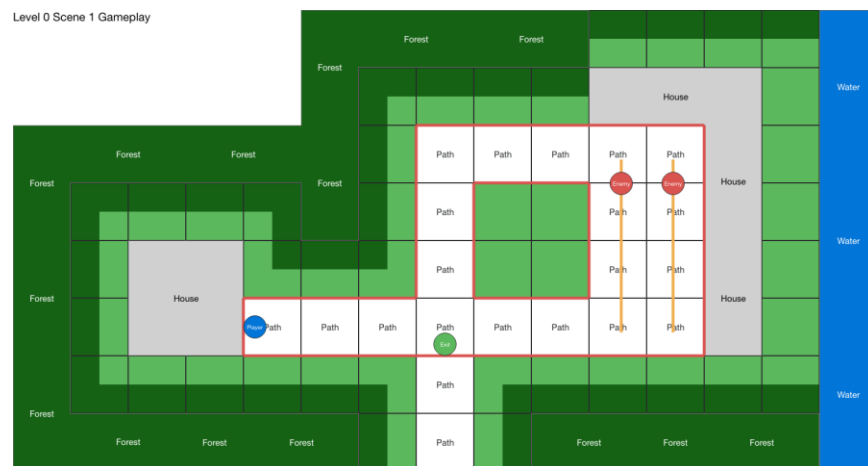
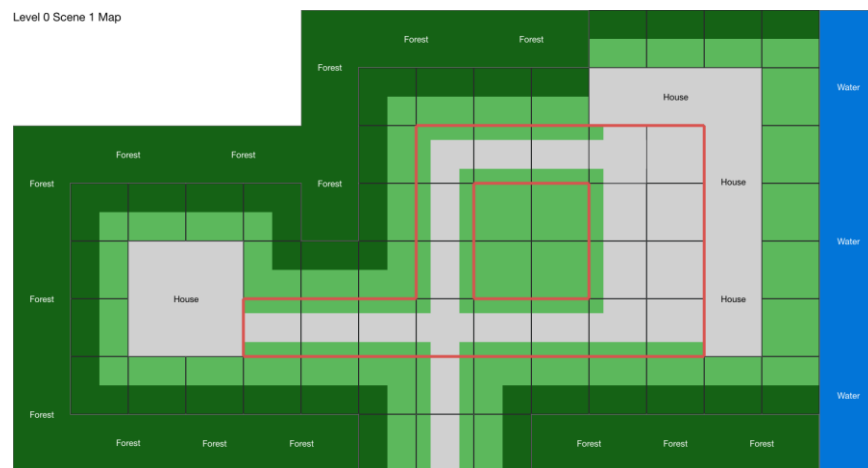
There's only one scene in this level. According to the story, the player will learn how to learn the basic movement and basic attack controls. Also, this scene also plays the role of revival scene, where the player restarts his journey during the gameplay.

### Background

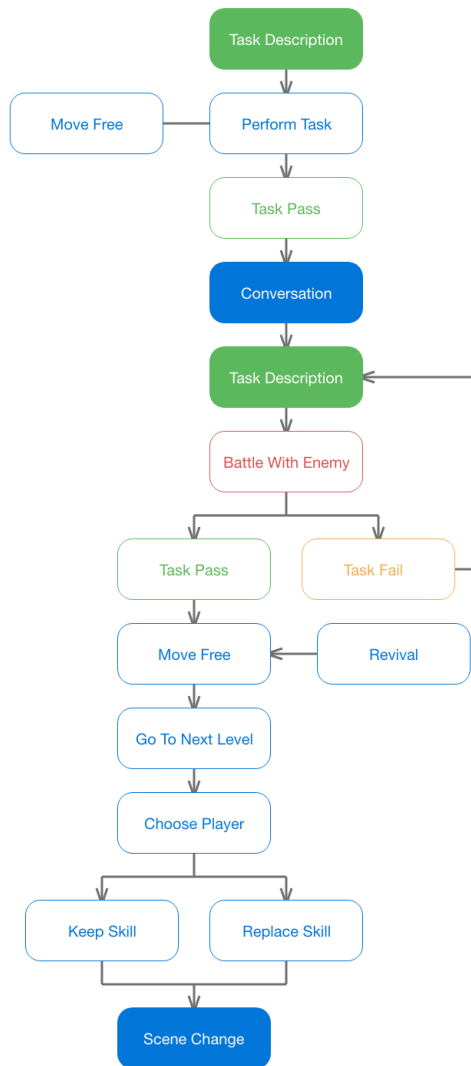
Walnut Town is a town of hope island. It is a beautiful and quiet town in the heart of Wild Timberland. It is also the hometown of our main characters.

### Map

These are the map layout and gameplay layout of level 0 scene 1.



## Task



## Level 1 – Wild Timberland

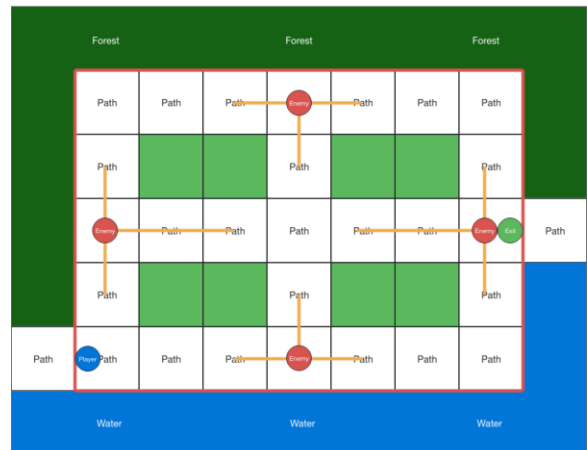
### Background

Wild Timberland possesses the wildest the most ancient forest on hope island. This area owns an amazing landscape with forest, valleys, rivers and lakes. There also exists lots of challenges and difficulties on the way across the Wild Timberland. Wild Timberland is a must for the players to across to reach the final destination.

### Scene 1 Series

The map generation algorithm selects one of the following maps. This series of scenes locates between Wild Timberland lake and edge of Wild Timberland Forest. Player should finish the required task to get to the next scene. The task in any scene in this





The map is a 10x10 grid. The top row is labeled 'Forest' and the bottom row is labeled 'Water'. The left column is labeled 'Forest' and the right column is labeled 'Water'. The central area is brown. The path is highlighted in red, starting from a red dot at (row 4, col 1) and ending at a green dot at (row 8, col 9). The path follows a route that avoids the brown area and the water area.

The diagram shows a 3x7 grid world. The top row consists of three green cells labeled 'Forest'. The bottom row consists of three blue cells labeled 'Water'. The middle row consists of seven white cells. The grid is divided into three sections by vertical red lines. The first section (left) has a blue circle labeled 'robot' in the bottom-left cell. The second section (middle) has a red circle labeled 'start' in the top-right cell. The third section (right) has a red circle labeled 'start' in the top-right cell and a green circle labeled 'goal' in the top-right cell. The grid contains several paths (yellow lines) connecting cells. The paths are: a horizontal path from the robot to the first 'start' node; a vertical path from the first 'start' node to the cell below it; a horizontal path from the cell below the first 'start' node to the second 'start' node; a vertical path from the second 'start' node to the cell below it; a horizontal path from the cell below the second 'start' node to the 'goal' node; and a vertical path from the 'goal' node to the cell below it. There are also several isolated paths in the other cells of the middle row.

[illegible]

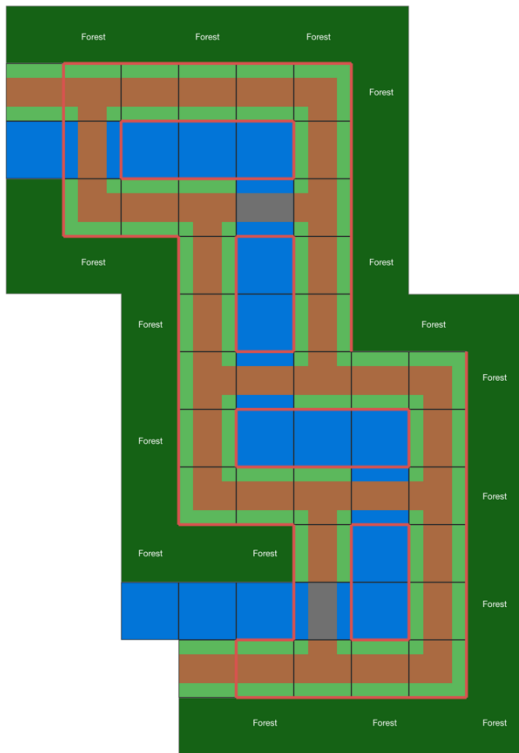
```
graph TD; TD[Task Description] --> PT[Perform Task]; BE[Battle With Enemy] --> PT; PT --> TP[Task Pass]; PT --> TF[Task Fail]; TP --> MF[Move Free]; MF --> GTS[Go To Next Scene]; GTS --> SC[Scene Change]; TF --> R[Revival];
```

## Scene 2

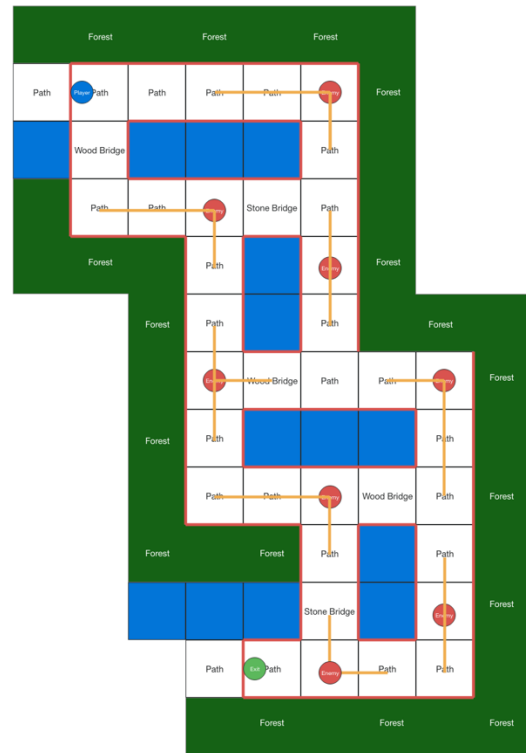
The map generation algorithm selects next two scenes from level 1 scene 2, level 1 scene 3 and level 1 scene 4. This scene locates in the Wild Timberland River in Wild Timberland. Player should finish the required task to get to the next scene.

## Map

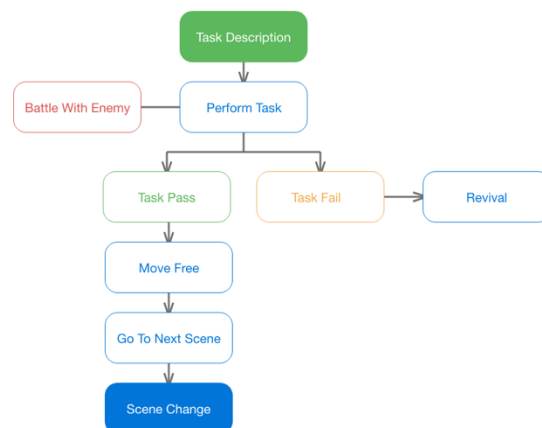
Level 1 Scene 2 Map



Level 1 Scene 2 Gameplay



## Task



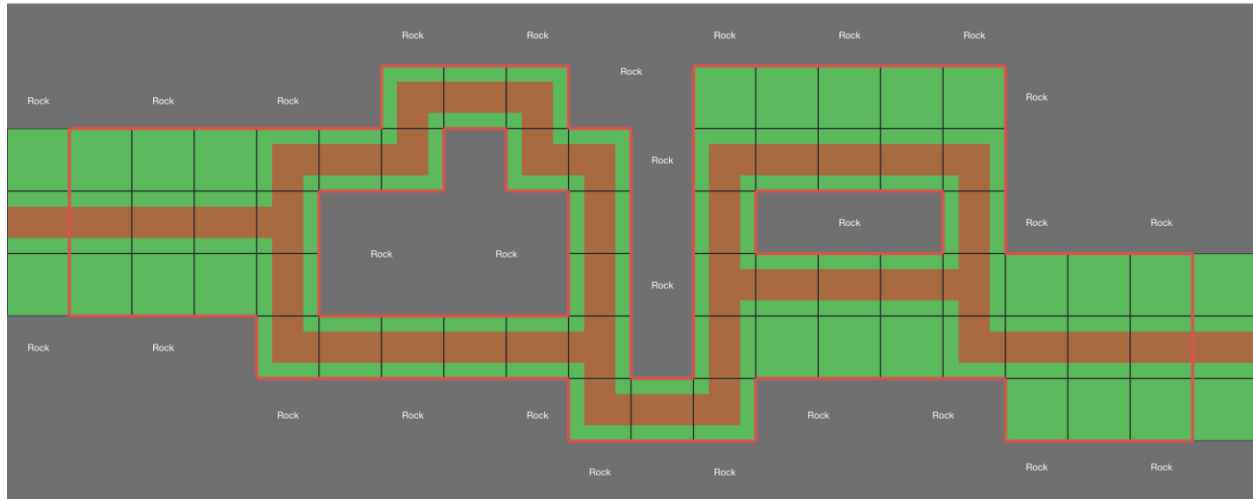
## Scene 3

The map generation algorithm selects next two scenes from level 1 scene 2, level 1 scene 3 and level 1 scene 4. This scene locates in the Wild Timberland Valley in Wild Timberland. Player should finish the required task to get to the next scene.

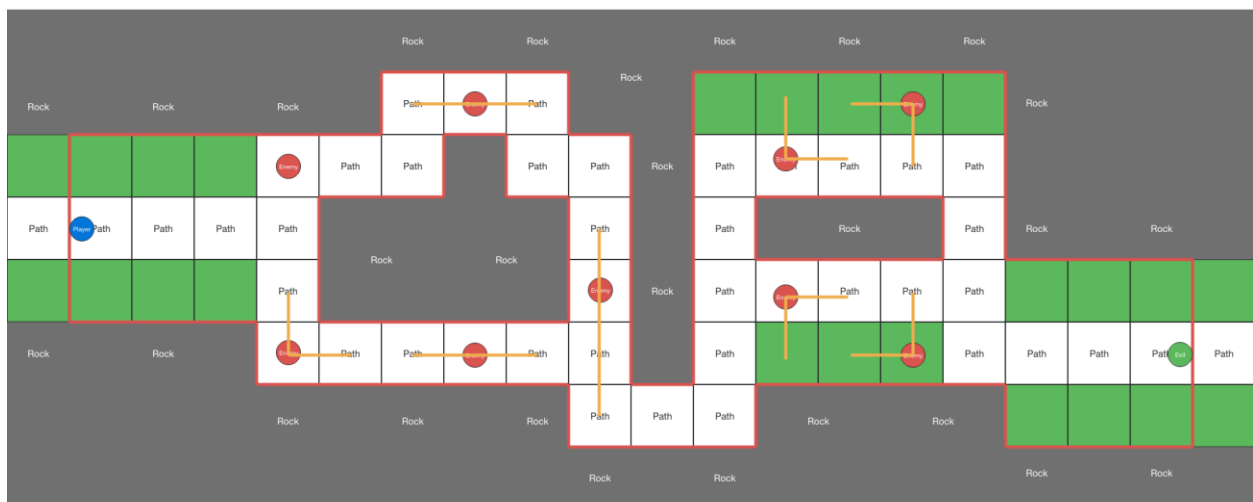
## Map

These are the map layout and gameplay layout of level 1 scene 3.

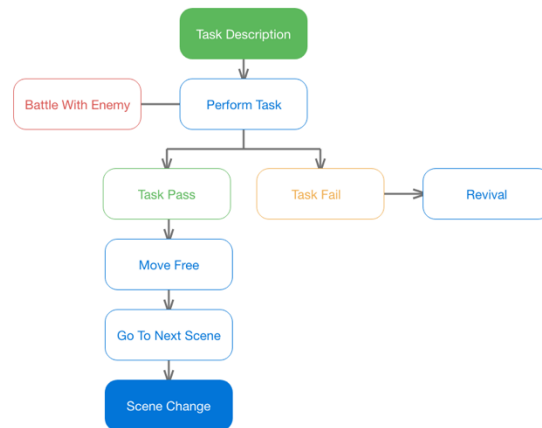
Level 1 Scene 3 Map



Level 1 Scene 3 Gameplay



## Task



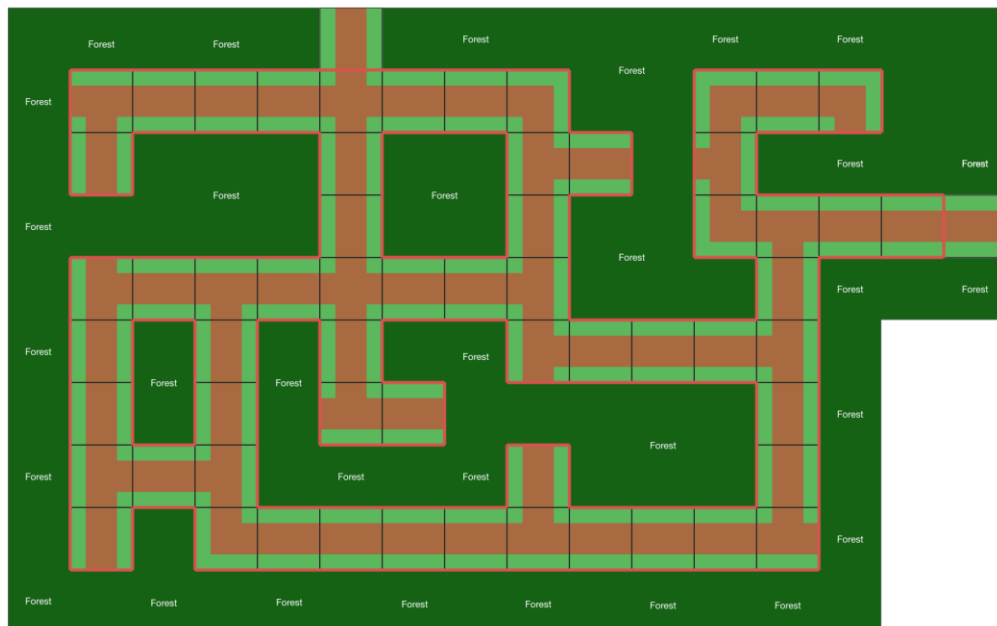
## Scene 4

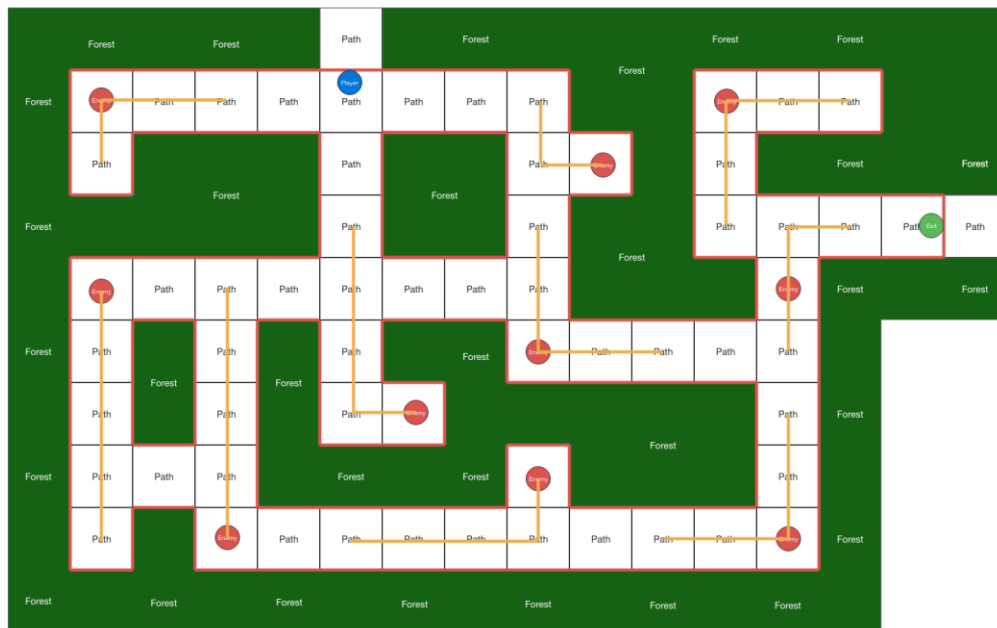
The map generation algorithm selects next two scenes from level 1 scene 2, level 1 scene 3 and level 1 scene 4. This scene locates in the Wild Timberland Forest in Wild Timberland. Player should finish the required task to get to the next scene.

## Map

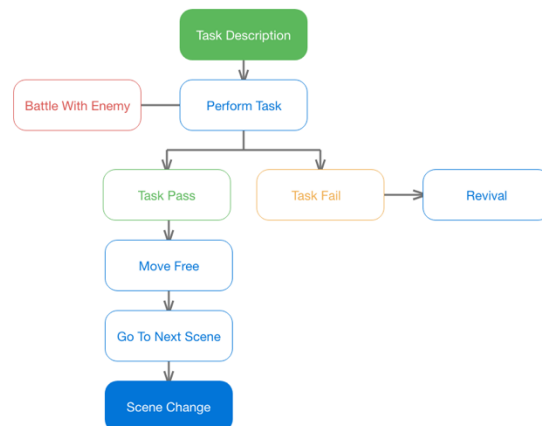
These are the map layout and gameplay layout of level 1 scene 4.

Level 1 Scene 4 Map





## Task



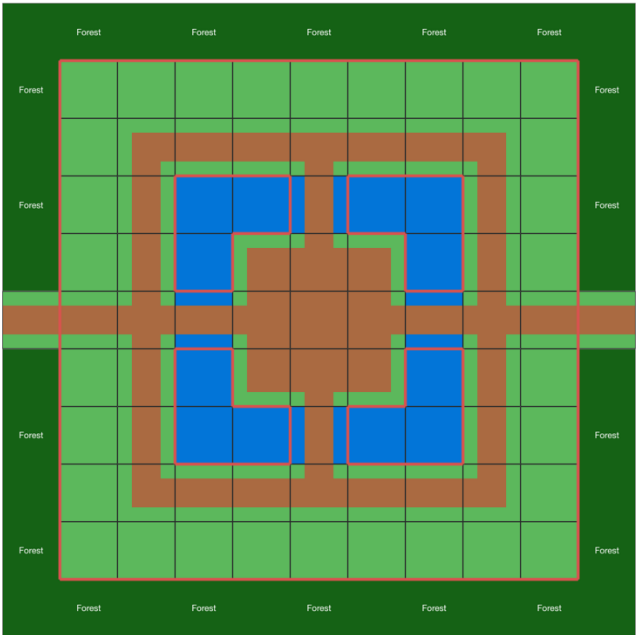
## Boss Scene

This is the boss scene of level 1. The player finally arrives at the fortress located in the deep of Wild Timberland of the forest monsters. In this scene, the player should kill the boss, the rocky monster, to pass level 1.

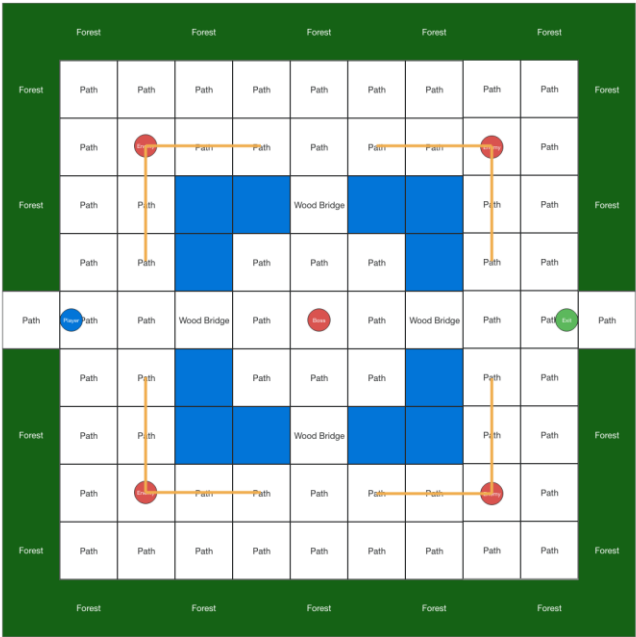
Map

These are the map layout and gameplay layout of level 1 boss scene.

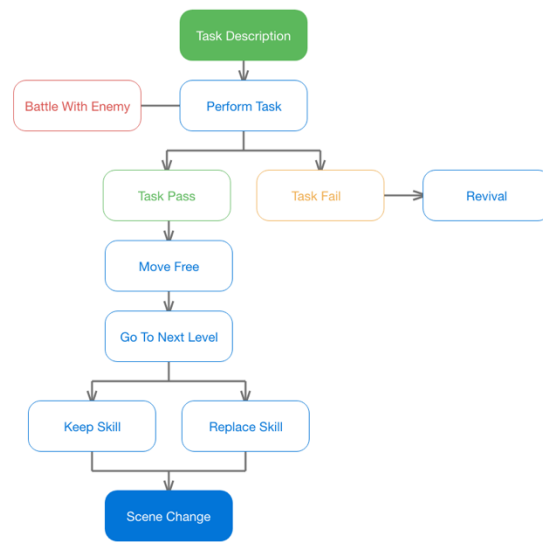
Level 1 Boss Scene Map



Level 1 Boss Scene Gameplay



# Task





## **Level 2 – Barren Desert**

This level hasn't finished its design.

**Background**

**Scene 1**

**Map**

**Task**

## Level 3 – Harbor Town

### Background

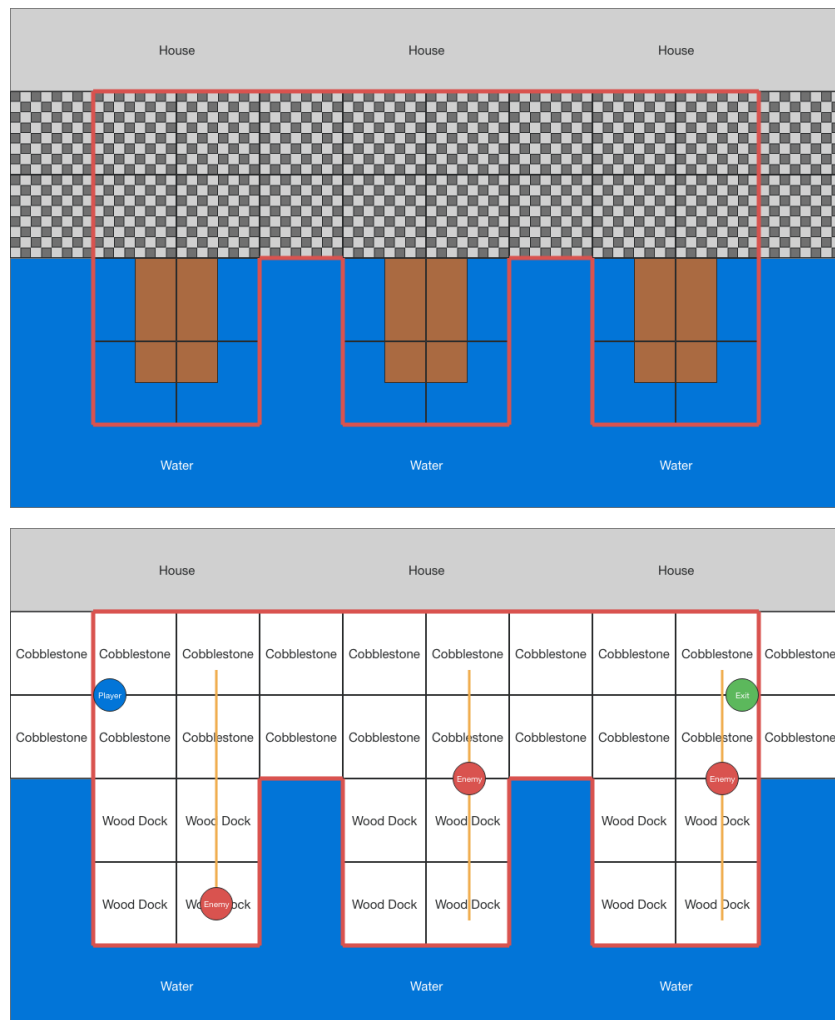
This is the last level in the game. According to the story, the player will clear the enemies in the harbor town and get on the ship to leave the hope island.

### Scene 1

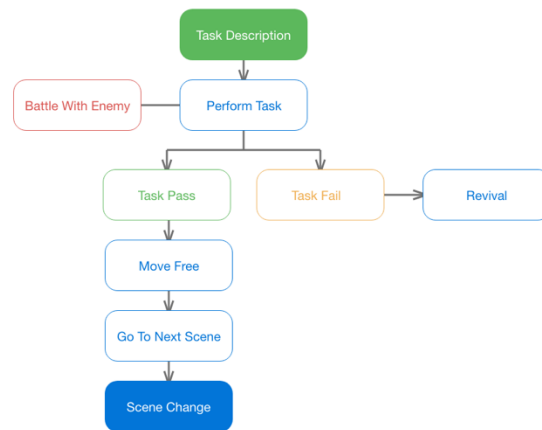
This scene locates at the market dock of the Harbor Town. In the scene, there are townhouses, market stalls and wood docks. Player should finish the required task to get to the next scene.

### Map

These are the map layout and gameplay layout of level 3 scene 1.



## Task

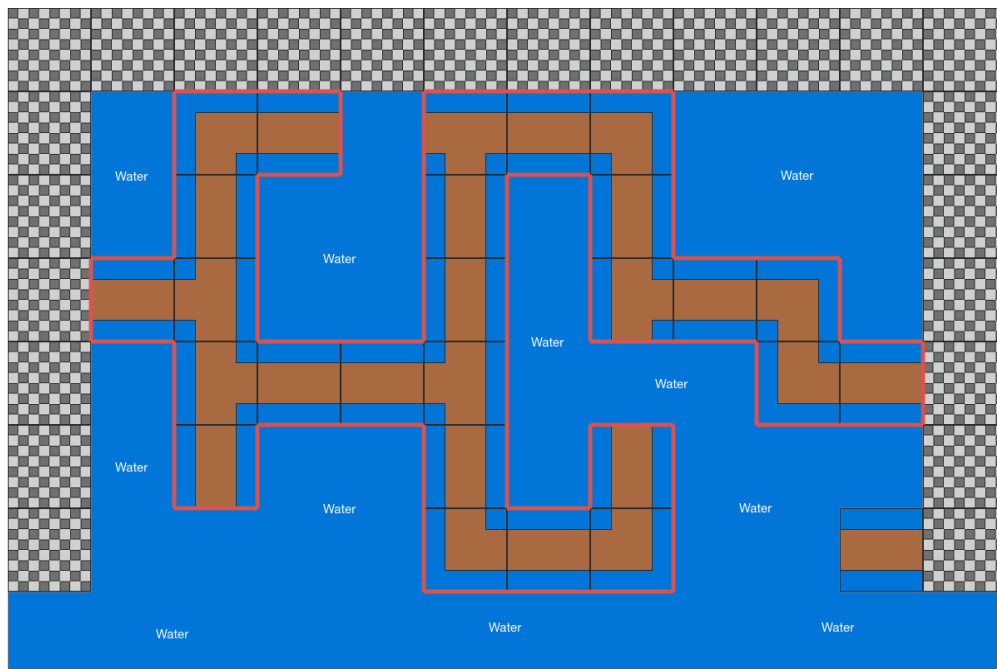


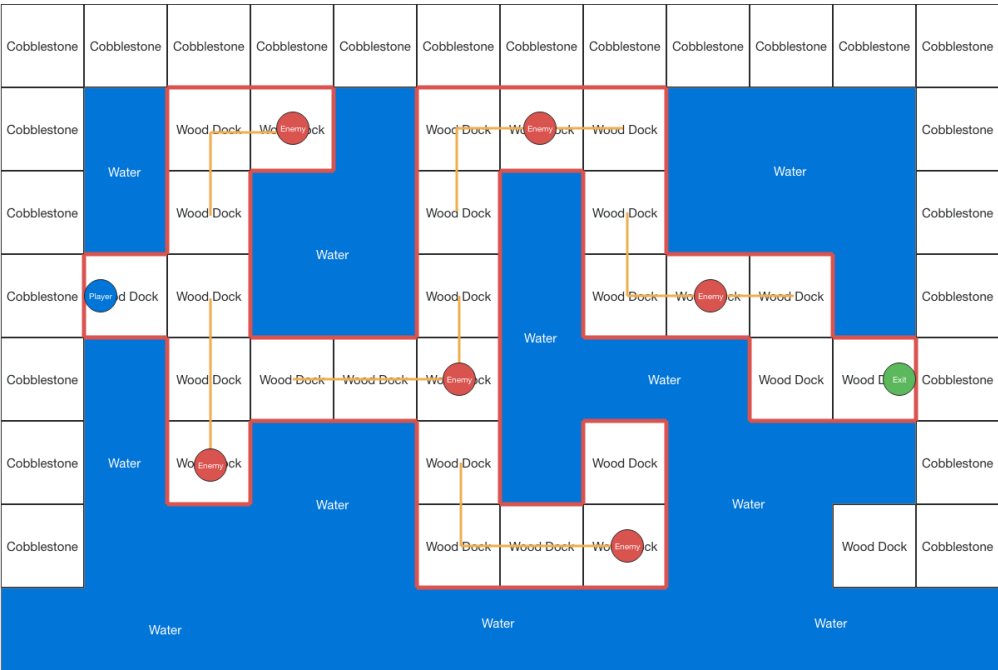
## Scene 2

This scene locates at the fishing dock of Harbor Town. In the scene, there is a huge maze in the fishing dock. Player should finish the required task to get to the next scene.

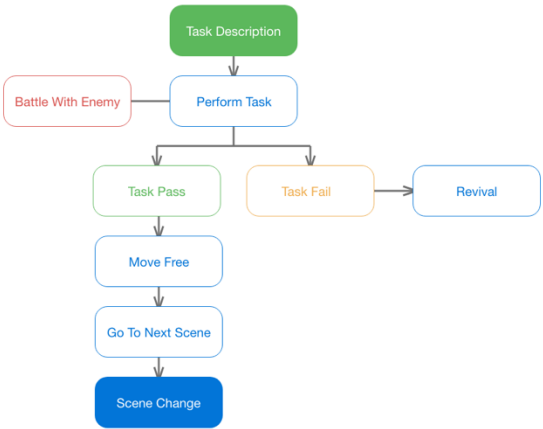
## Map

These are the map layout and gameplay layout of level 3 scene 2.





**Task**

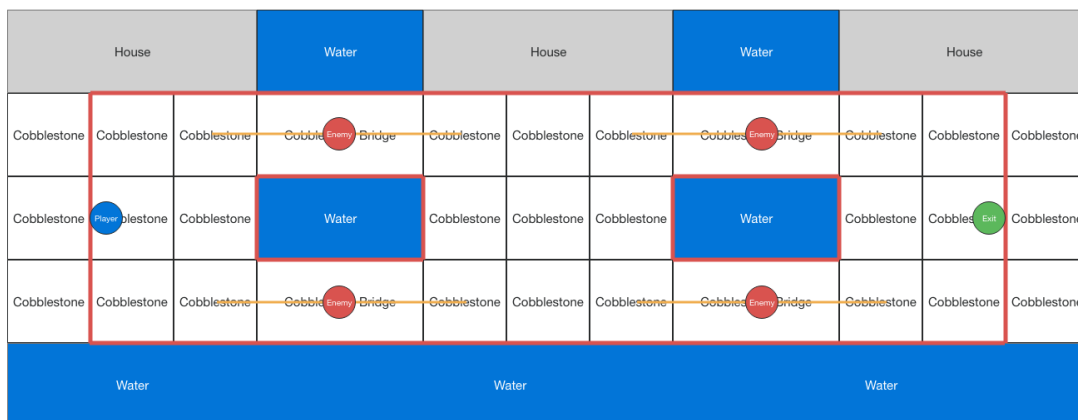
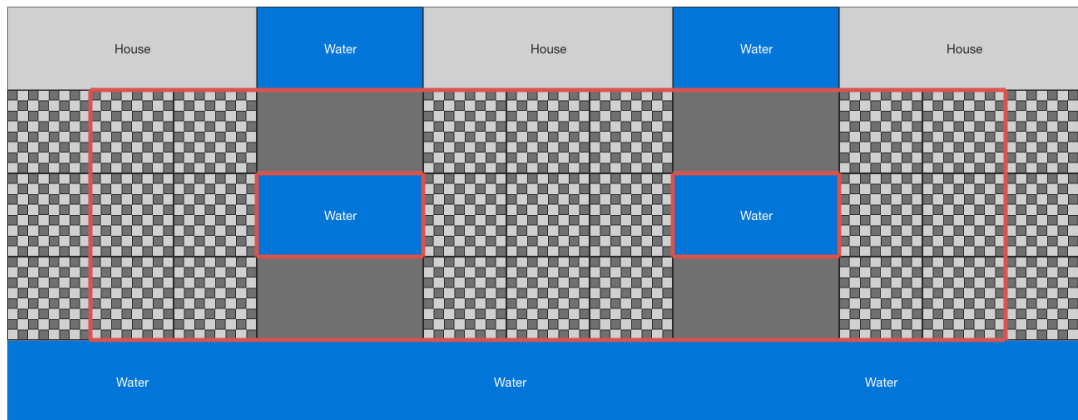


**Scene 3**

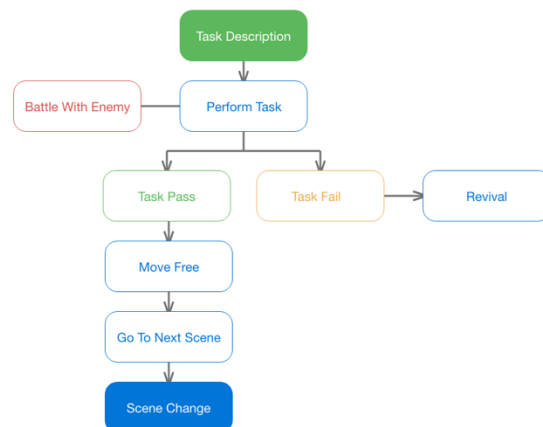
This scene locates at the cannal exit of Harbor Town. In the scene, there are cannels, stone bridges. Player should finish the required task to get to the next scene.

## Map

These are the map layout and gameplay layout of level 3 scene 3.



## Task

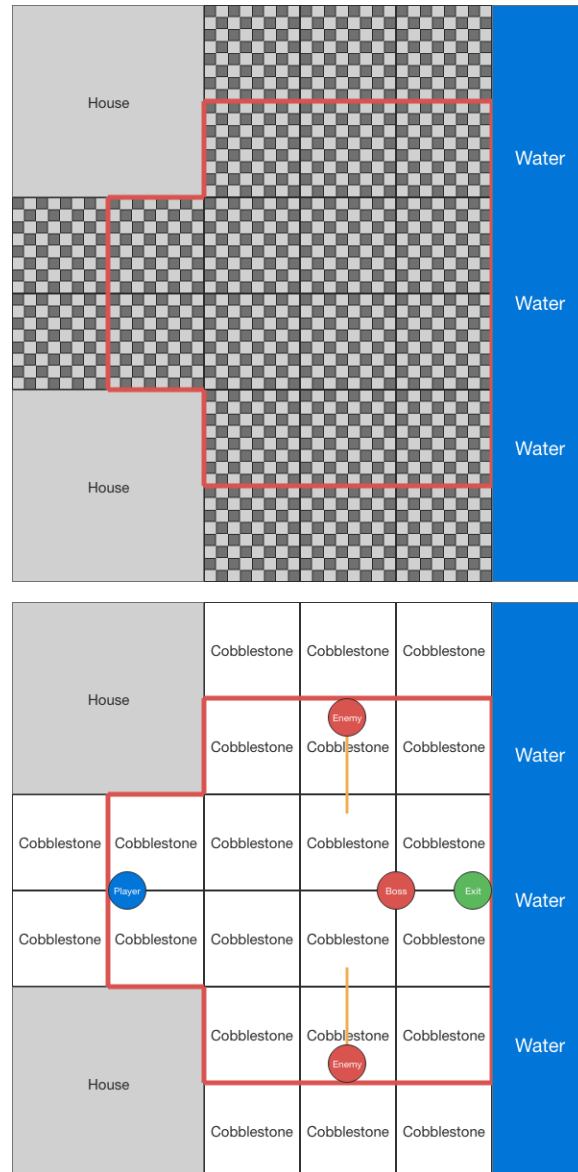


## Boss Scene

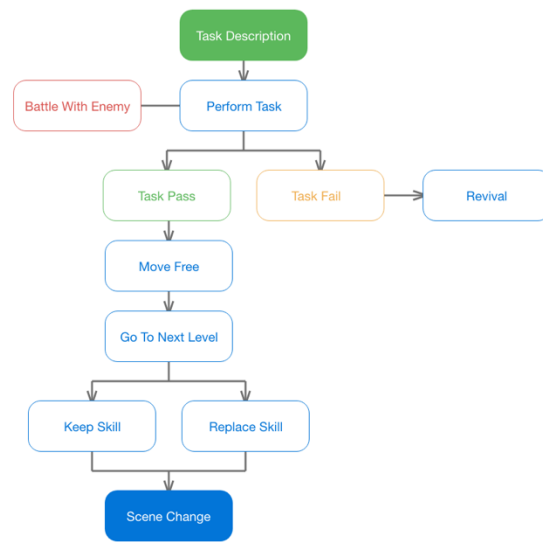
This is the boss scene of level 3. The player finally arrives at the dock of the Harbor Town. In this scene, the player should kill the boss, the knight of invade army, to pass level 3.

## Map

These are the map layout and gameplay layout of level 3 boss scene.



# Task



# Characters

## Player Design

There are three player characters to choose in the game. In each generation of game, the player will play the role of one player character. The player will be asked to choose the player character when the player leaves the tutorial scene after he finishes the tutorial or revived from the last generation.

Each player character has a status of health, energy, stamina, speed of movement, strength of attack, defense of attack. Each player has the ability to launch regular attack and launch skills.

## Player Status

Health	A numerical value displaying health. If it reaches 0, the character can no longer take part in battle.
Energy	The maximum number of points that a player can store for launching Energy skills.
Stamina	The maximum number of points that a player can store for launching Movement skills.
Speed	The distance that the player character can travel in a given amount of time.
Strength	A numerical value displaying attack power. The larger the number, the more damage the character deals.
Defense	A numerical value determines how much damage is taken by an attack.
Element Res	Reduces damage taken by attacks of a specific elemental type.

## Battle System

### Regular Attack

Here's the formula to calculate the regular damage:

$$\frac{(100 - \text{Element Res})\% * \text{Attacker's Strength} * \text{Attack Mod}\%}{\text{Defender's Defense}}$$

### Skill Attack



In each level, the player can launch skills besides regular attacks. The player can keep three skills. In the beginning, the player will be given three defined skills for tutorial use.

In Hope island, the player can select the skills to use in the next level. When the player beats a boss in a level or leaves level 0, the game will pop up a dialog with three random skills with random skill levels. The player can make a choice to choose one of the random generated skills to replace it with the current one or skip the selection.

In the next section, there will be a list of skills designed for the players to use during the gameplay for each player character. For each skill, the skill has a skill name, skill icon, which is the same as that displayed on the UI, skill description, including skill details, cost and effect on different skill levels.

The movement skills cost stamina and energy skills cost energy. Energy is recharged with basic attack and over time, but stamina is only recharged overtime.

## Vincent Hart



Vincent Hart is the primary male player character in Hope Island. Vincent is the descendant of the Estian, the native resident of Hope Island. Vincent's ancestors are the knights of Estia, the duty of Hart family is to defend the Hope Island from invasion.

## Charlotte Hart



Charlotte Norman is the primary female player character in Hope Island. Charlotte is the sister of Vincent. On Hope Island, Charlotte is too young to join the army. However, with worries of his brother, Vincent, Charlotte followed the steps of his brother without notice.

## Regular Attack

Regular attacks cost nothing, is equipped on default.

Basic Attack



Sword attack: deal physical damage, recharge energy, character with lock on the closest enemy while swinging sword.

50%, gain 10 energy

## Movement skills

Movement skills cost stamina can be equipped in 1 skill slot, a maximum of one of following can be equipped.

Sprint



Increases player's movement speed by 40%.

Roll



The player performs a dodge roll. During a dodge roll, the player is immune to all damage.

Teleport



After 0.5s, the player teleports to a random reachable location in the current scene.

Invisible



Turns a player's character model faintly translucent. Breaks upon casting or taking damage.

## Energy Skills

Energy skills cost stamina can be equipped in 1 skill slot, a maximum of two of following can be equipped.

Fireball



Deals fire damage to one enemy  
80%/90%/100%,  
energy cost: 50

Summon Arrows



Deals physical damage

100%/110%/120%,

energy cost: 80

Lightning



Deals electro damage to the target and nearby enemies

60%/65%/70%,

energy cost: 100

Poisonous Fumes



Creates poison aura, enemy in the aura take damage over time

dealing 10%/12%/15% damage every 2s, the aura last for 8s

energy cost: 80

War cry



Player gets strength up. The player's basic attack deals more damage

10%/15%/20%, 10%, 5s

energy cost: 50

Metallicize



Player gets invincible, at the cost of the player's speed down

5s, 50%, 10s

energy cost: 100

Berserk

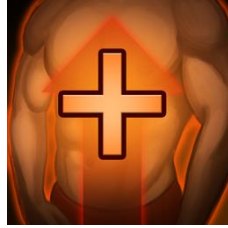


The player's strength and speed gets up, loses HP over time

20%/25%/30%, 10%, 2% HP/s, 10s

energy cost: 60

Feel No Pain



Defense up

20%/25%/30%, 10s

energy cost: 50

Rush Down



Every time player launches basic attack, the player's movement speed goes up

8%, 2s/2.5s/3s, 10s

energy cost: 30

## Marc Nelson



Marc Nelson is the best friend of Vincent Hart. Marc is not only the neighbor of Vincent and his sister, but also the Nelson family is the sponsor of weapons to Estia. When Marc knows Charlotte wants to join her brother secretly, Marc makes his mind to join them the defense the country together.

## Enemy Design

There are three groups of enemies at different levels. In the tutorial level, Walnut Town, and level 3, Harbor Town, the Matrad Army appears on the scene. In level 1, Wild Timberland, the Wildland Monsters appear on the scene. In level 2, Barren Dessert, the Death Skeletons appear on the scene.

In each level the enemy is in a different position and the appearance that fits the theme of each level. Before the player approaches, the enemy has two states, patrolling according to a specific route and standing still. Enemy will drop some bonus items after death.

## Enemy Status

Health	A numerical value displaying health. If it reaches 0, the enemy character can no longer take part in battle.
Speed	The distance that the enemy character can travel in a given amount of time.
Damage	A numerical value displaying attack power. The larger the number, the more damage the enemy character deals.

## Enemy Behaviors

Idle	The enemy stands in place.
Patrol	The enemy starts patrolling the responsible place.
Chase	<p>The enemy starts running and chasing the player character when the player is exposed to the enemy.</p> <p>Condition: when the player enters the enemy's chasing range and view angle. The chasing range and viewing angle can be different for each enemy.</p>
Attack	The enemy performs a regular attack when the health value is not below the threshold.
Dead	When health value decreases to 0, the enemy dies and drops some bonus item.

## **Boss Design**

In Hope Island, boss is a special category of enemies. There are three bosses belongs to different powers at different levels. In level 1, Wild Timberland, the Rock Monster of Wildland Monsters appear on the boss scene. In level 2, Barren Dessert, the King of Death Skeleton of Death Skeletons appear on the boss scene. In level 3, Harbor Town, the Matrad Horse Knight of Matrad Army appears on the boss scene.

In each level the enemy is in a different position and the appearance that fits the theme of each level. Before the player approaches, the enemy has two states, patrolling according to a specific route and standing still. Enemy will drop some bonus items after death.

### **Boss Status**

Health	A numerical value displaying health. If it reaches 0, the boss character can no longer take part in battle.
Speed	The distance that the boss character can travel in a given amount of time.
Damage	A numerical value displaying attack power. The larger the number, the more damage the boss character deals.

### **Boss Behaviors**

Idle	The boss stands in place.
Patrol	The boss starts patrolling the responsible place.
Chase	The boss starts running and chasing the player character when the player is exposed to the enemy.
Regular Attack	The boss performs a regular attack when the health value is not below the threshold.
Rage Attack	When the health value of the boss belows the threshold, the boss starts to enter the rage mode, light appears on the body, and will change the attack mode to increase the damage
Dead	When health value decreases to 0, the enemy dies and drops some bonus item.

## Wildland Monsters



### The Berserker

Health: 20

Walk Speed: 1

Chasing Speed: 3

Damage: 10



### The Grunt

Health: 20

Walk Speed: 1

Chasing Speed: 4

Damage: 10



### The Rock

Health: ???

Walk Speed: ???

Chasing Speed: ???

Damage: ???

## Death Skeletons



### The Mage

Health: ???

Walk Speed: ???

Chasing Speed: ???

Damage: ???



### The Warrior

Health: ???

Walk Speed: ???

Chasing Speed: ???

Damage: ???



### **The King**

Health: ???

Walk Speed: ???

Chasing Speed: ???

Damage: ???

## **Matrad Army**



### **The Footman**

Health: 20

Walk Speed: 2

Chasing Speed: 4

Damage: 10



### **The Knight**

Health: 40

Walk Speed: 2

Chasing Speed: 4

Damage: 10



### **The Horse Knight**

Health: ???

Walk Speed: ???

Chasing Speed: ???

Damage: ??



# Art Direction

## Theme

## Textures

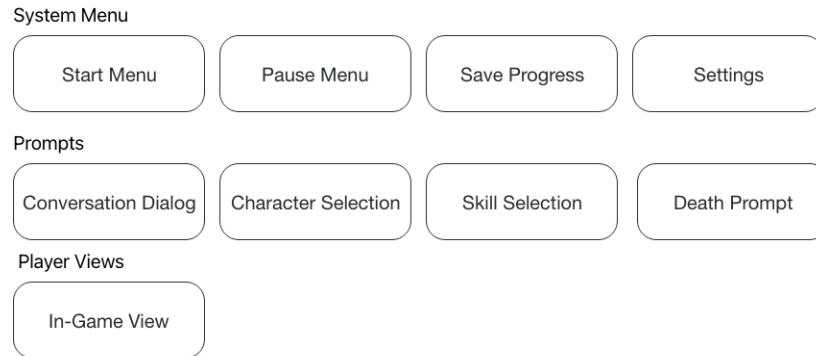
## Lighting

## Camera Settings

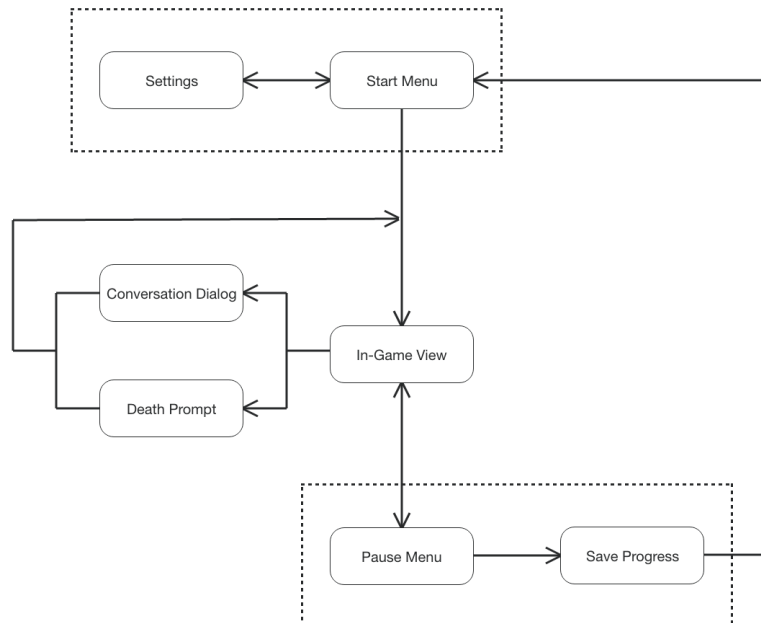
## UI

### UI Workflow

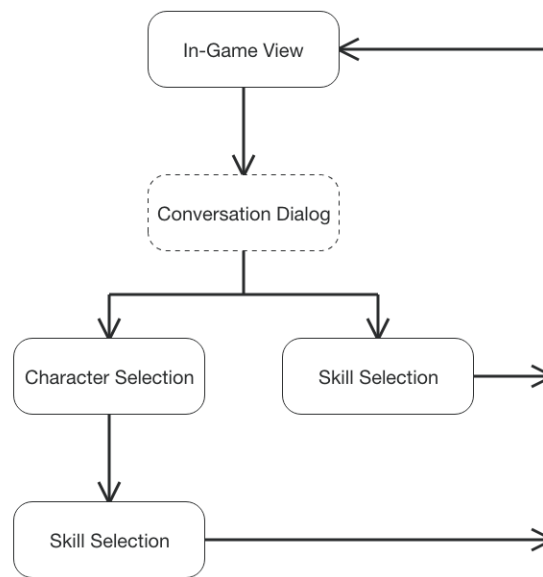
This diagram illustrates the events and corresponding UI components in the game:



This diagram illustrates the basic workflow of the game:



This diagram illustrates the workflow between scenes and levels:



When the player clears a level, the player can update the player's skill slots from random generated skills, which is the right branch. When the player leaves the tutorial level, the player can select a player character from the team of player characters and select three skills to start the adventure.

## UI Design

In this section, the followings are high fidelity UI designs.

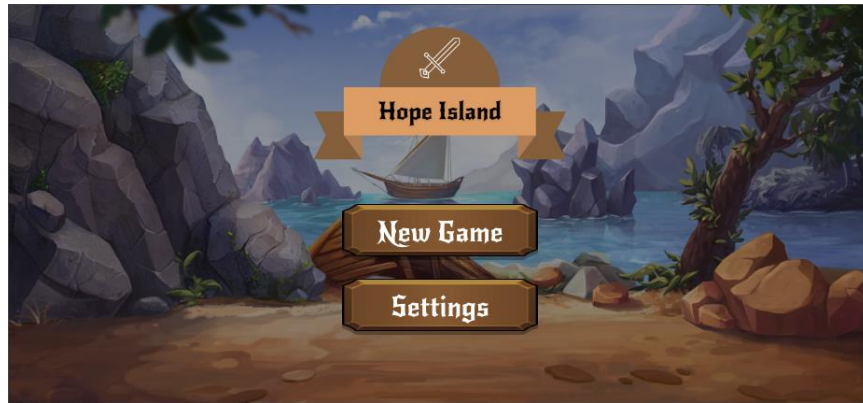
### Landing Screen

The landing screen holds for 3 seconds.



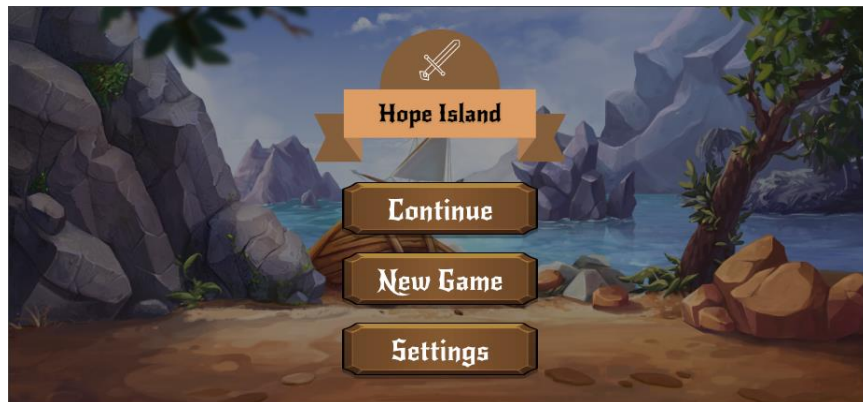
### Main Menu (No Saved Game Progress)

In this screen, the player can choose to start a new game from beginning or do some settings.



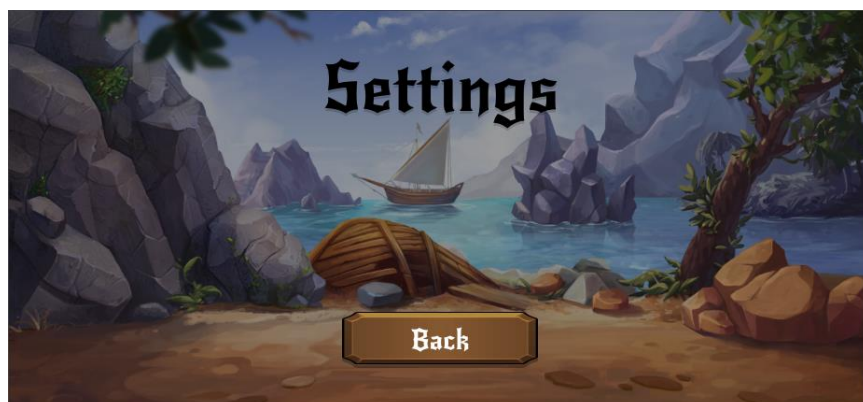
### Main Menu (With Saved Game Progress)

In this screen, the player can choose to start a new game from beginning, start game from last save game or do some settings.



### Settings

In settings, the player can set background music on or off and sound effects (SFX) on or off.



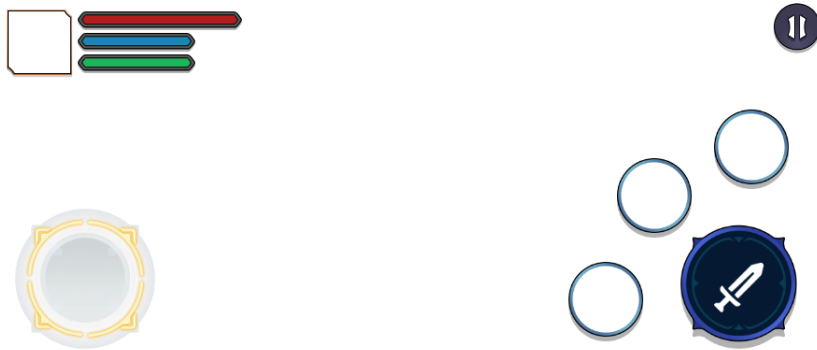
## In-game Controller

On the top left, there are the player character's avatar, the health bar, the energy bar and the stamina bar.

On the top right, the button pauses the game.

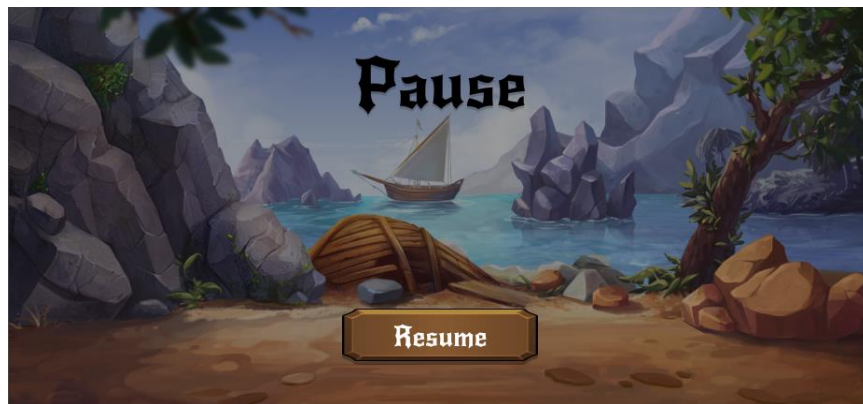
On the bottom left, the joystick controls the player character's movement.

On the bottom right, the buttons allow the player character's to launch a regular attack and skill attacks.



## In-game Pause

In this screen, the player can save current progress, continue the game and do some settings.



### In-game Death Prompt

This screen shows when the player character dies, on press the restart button, the player will be teleported to the tutorial level (level 0).



## **Sound & Music**

## **Production Plan**

Video with sound for midterm demo

<https://drive.google.com/file/d/1OciT1CYioeOGUyNhXLdl0Djl3j1Uvjih/view>