



**Instituto Superior de Engenharia de Lisboa**  
Licenciatura em Engenharia Informática e Multimédia  
Ano Letivo 2022/2023

# **FINAL PROJECT**

## **REALM RAIDERS**

### **GAME DESIGN DOCUMENT**

#### **Developers**

47455 - André Faria  
47504 - Sara Nobre

#### **Advisor**

Pedro Fazenda

# 1 Game Overview

A strategy turn-based rogue-like (when the player dies, returns to the beginning) mobile game where the player progresses through the world utilizing cards and receiving rewards.

## 1.1 Game Concept

A team of three adventurers explore ancient ruins in the hopes of uncovering long lost relics. Soon they discover unorthodox creatures' dwell deep within the ruins and are hostile towards them.

Fighting their way through the ranks of the creatures, they will uncover small relics which will assist them in progressing further.

Each turn the player can choose cards from each of the characters hands to play corresponding to the character actions. Being limited by a pool of energy/mana, each card has its own requirement to be used. When the turn ends, the creatures will use their attacks to attack the player characters.

When the player is successful in defeating the enemies, they will be rewarded depending on the fight difficulty (normal or elite) and game difficulty.

If the player loses all characters, they'll be rewarded according to how deep they reached their path.

## 1.2 Target Audience

Age: 13–27 years old.

Young people/adults who tend to spend their free time playing video games. Likes mobile games, a bit of strategic planning and cartoon like visuals.

People who like to game on their mobile devices while waiting or on breaks.

## 1.3 Genre(s)

- Action;
- Turn-based;
- Card battle;
- Rouge-like deck builder;
- Fantasy.

#### 1.4 Game Flow Summary

When the player loads up the game, they will be presented with a start screen which will prompt them to login/register with a Google Play account. If the player is already logged in, then a “Press to begin” will appear instead with an option to logout.

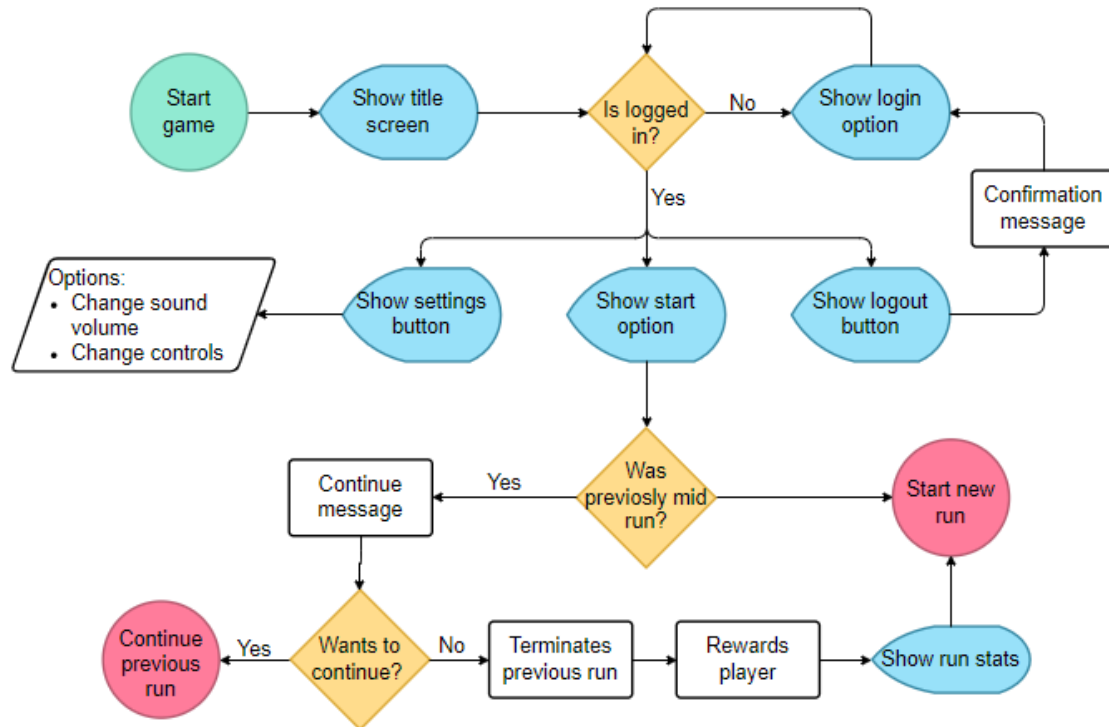


Figure 1 - Flow Diagram of the title screen

In the main menu their will be 4 key options:

- New Run – Start a new attempt at completing the game;
- Shop – Buy upgrades/cards;
- Decks – Edit the current decks;
- Options – Customize the volume and logout.

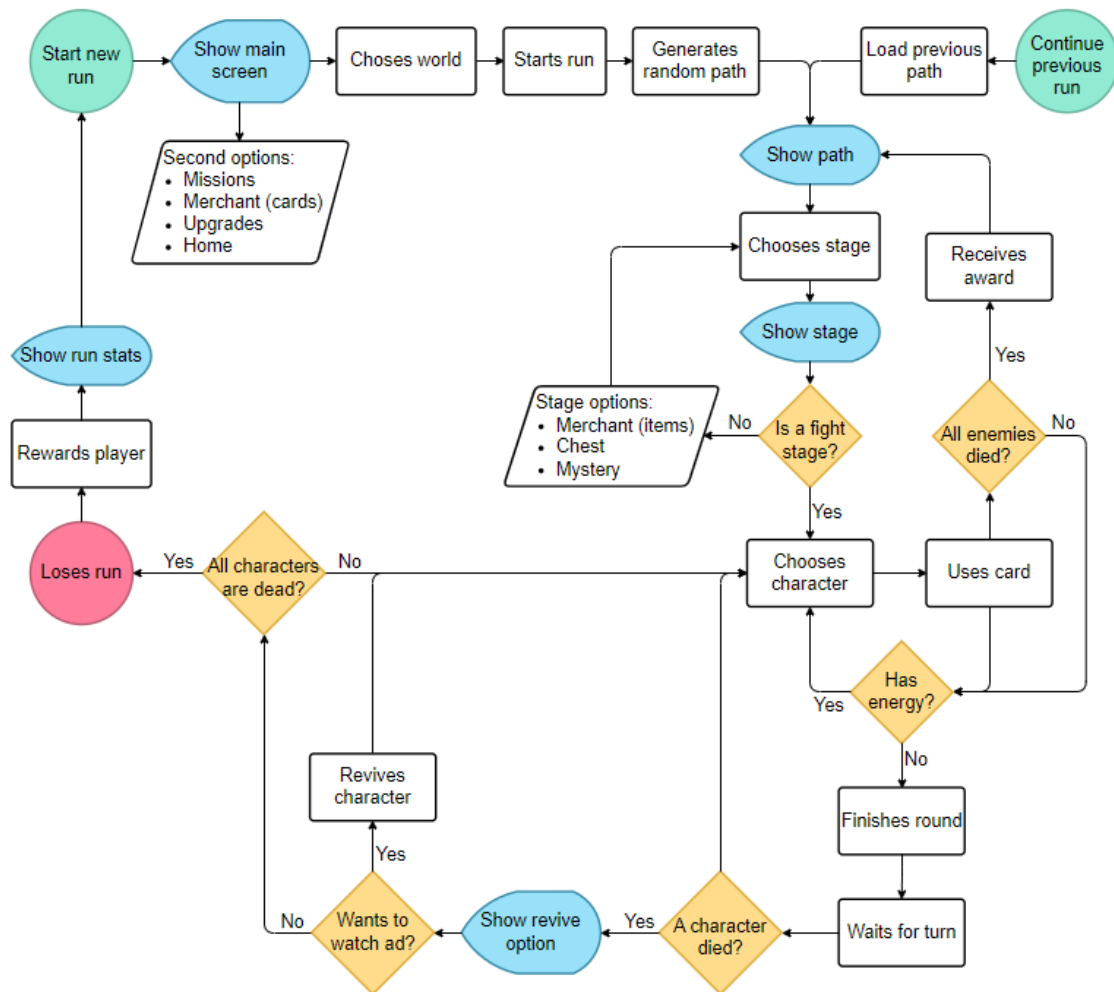


Figure 2 - Flow Diagram of the main screen

### 1.5 Look and Feel

In terms of art the game will inherit the style of pixel-art and the world will take place in a fantasy medieval style era.

The game interface needs to be compact and responsive so it can work on a variety of android devices.

## 2 Gameplay

As this is a rogue-like game, most functions will have a random factor (world generation, rewards after combat, levels, ...). The player will mostly be going through dungeons, choosing their desired path from different ramifications. They'll encounter enemies which they'll defeat using a set of cards corresponding to the characters actions.

### 2.1 Objectives

The game main objective is progressing through rooms (with enemies, NPCs, secrets...) and reach the final level which rewards the player with a Great Relic if beaten (will significantly affect the game).

### 2.2 Game Progression

The player characters start the game with basic gear and cards. After each level the player will be rewarded with a choice of upgradable items (cards or relics).

Each combat will have its difficulty increased to that the player can be punished more easily for his mistakes.

The player chooses their path, as the world will be generated with different paths and levels.

### 2.3 Play Flow

The player will feel challenged since the beginning as the game won't hold his hand. The difficulty at the beginning won't be massive, but the player can still be punished for bad decisions.

As the game progresses so does the characters powers and enemies difficulty, prompting the player to think about their next play.

### 2.4 Mission/challenge Structure

Difficulty increases:

- Enemy:
  - Damage;
  - Health;
  - Punishing effects;
  - Numbers.

The characters carry their current health to each combat stage, which means that their health won't regenerate.

### 3 Mechanics (Key Section)

#### 3.1 Rules

1. The player can't use a card if their energy is lower than the card's cost.
2. If a character is dead, their cards become unusable.
3. There is a limit to a character deck so when its full, the reward pool won't contain more cards of that character.

#### 3.2 Model of the game universe

The world is procedural generated, meaning every run is different than the last, that includes path, rewards, and enemies.

#### 3.3 Physics

As the game focus will be a card turn-based game, there is no need for a physics system.

#### 3.4 Economy

The player will complete levels and accumulate gold coins which later can be spent in upgrades via shopkeepers. When the player loses the current run, they will be rewarded based on their performance with platinum coins that can be used to upgrade the characters at the base.

#### 3.5 Cards

Each character has their own cards, and the player can choose which cards to play by selecting the character and then the card.

#### 3.6 Actions

During the player's turn, cards can be used to affect enemies and allies, depending on the card's effect. Every character shares the same energy, meaning a character can spend all of it making the others unable to use any cards.

#### 3.7 Combat

Turn-based, each side uses their actions:

Player:

- Three characters, each has their own unique cards that simulate actions (Ex: slash, magic, healing, ...).
- The player can choose to end their turn any time or be forced to it if they consume all energy or is unable to do anything else.
- The cards can be used to deal damage to enemies or protect a companion, be it or single or multiple targets.

Enemy:

- Each enemy will have a different set of attacks (Ex: damaging, status like poison, healing).
- During their turn, each creature will perform an action, only after all finish will the player have a new turn.

### 3.8 Game Options

This game won't have a lot of options that affect gameplay, but in the final stages of development, some quality-of-life options can be created.

Game options like volume of music and effects will be included, and the option to quit the game and logout will also be mandatory.

### 3.9 Replaying and saving

The players progress will be saved utilizing Google Play or/and Google Firebase. There are also plans to save the current run so the player can leave mid run and return later without losing their progress.

## 4 Story and Narrative

This game will have a simple story of some adventurers forming a party to discover more about their past ancestors.

### 4.1 Cutscenes

There are no plans for cutscenes at the moment, but in future updates some, boss introduction cutscenes can be added to further immerse the player in the game.

## 5 Game World

Procedural generating the world, means the player can replay as much as they want, and the game will always feel different.

### 5.1 General look and feel of world

The world will contain two regions in this version, meaning two maps with different styled levels.



## 6 Characters

There will be three characters, each with their own unique cards and playstyles.

### 6.1 For each character

#### 6.1.1 Red

This character will be the tank of the party dealing physical damage and shielding the party.

##### 6.1.1.1 *Card abilities*

#### 6.1.2 Green

This character will be the physical damage dealer and trapper, dealing massive single target damage and immobilizing enemies.

##### 6.1.2.1 *Card abilities*

#### 6.1.3 Blue

This character will be the mage of the party dealing magic damage and causing status effects (like burning, poison, etc...) and healing the party.

##### 6.1.3.1 *Card abilities*

### 6.2 Artificial Intelligence Use in Opponent and Enemy

Each enemy has a different set of attacks, both normal and unique. Normal attacks are more common but unique attacks have a higher impact on the game. The attacks will be random, and an enemy can only use one attack per turn. Unique attacks are rarer than normal attacks.

### 6.3 Non-combat and Friendly Characters

During a run a player may press the merchant path. This NPC will sell the player artifacts and cards.

## 7 Levels

A level in this game, is a path full of ramifications with different stages which the player can decide to face or avoid.

### 7.1 Stages

The stages can vary from combat encounters and random events to a merchant that can provide help to the player.

#### 7.1.1 Combat

A combat stage will contain one or more enemy. These can range from a difficulty of 1-3:

- 1- Normal encounter (normal enemies).
- 2- Elite encounter (harder stage).
- 3- Boss encounter (last level of the world).

#### 7.1.2 Merchant

The merchant appears one time per world and is responsible for upgrading the power level of the player's characters.

#### 7.1.3 Event

The event stage prompts the player with a choice that can be rewarding or punishing.

#### 7.1.4 Secret

This stage can be a combat or event stage which will only be revealed if the player selects this stage.

### 7.2 Map

The map will take the shape of tree roots, meaning the player can choose their path but ultimately will reach a destination (a boss encounter).

## 8 Interface

The first step was to create the wireframes to have a better idea of the layout.

### 8.1 Visual System

#### 8.1.1 HUD

The main interface will have a similar look as the wireframe below.

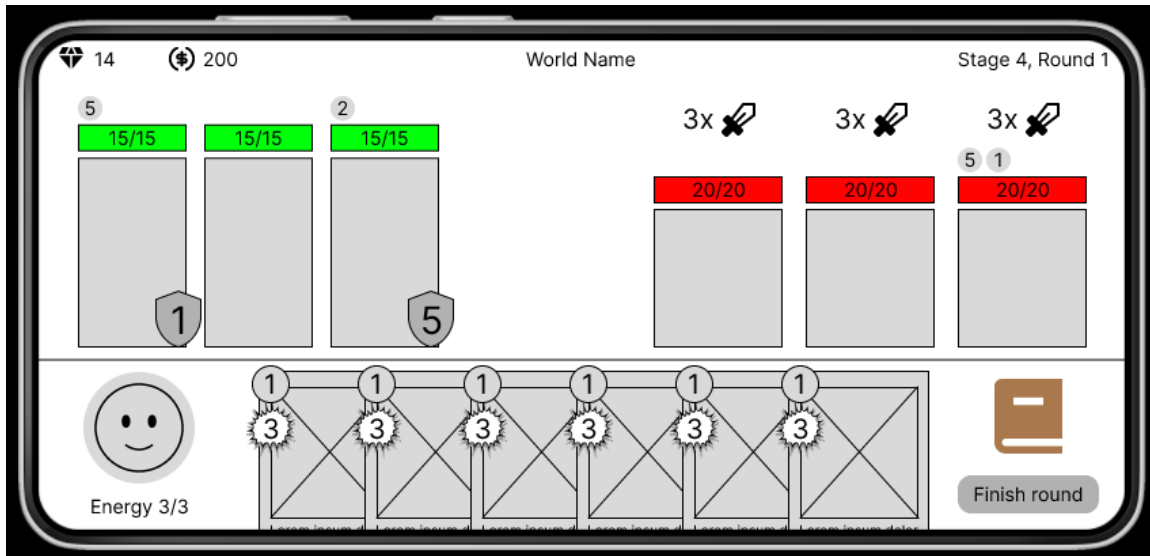


Figure 3 - Main gameplay interface

The main components shall be:

- The characters look and status (HP bar, status effects, protection);
- The cards the player can use;
- The energy available to the player;
- The enemies look and status (same as the characters with the addition of the next action they'll perform)

To help the player, it'll have some addition information like currency, current stage, and the active character. A button will be available to open a side menu with more information like the map and others.

### 8.1.2 Menus

The menus will have the same layout, changing the content. The player will be able to change from each menu using the sidebar. The icons will represent each topic:

- Gear – Settings: basic account information, game settings;
- Map – Shows the full path hiding the unknown chambers;
- Bag – Inventory: shows a simple description of the items;
- Cards – Shows a more detailed description of every card.

Figure 4 - Menu sidebar



#### 8.1.2.1 Game settings

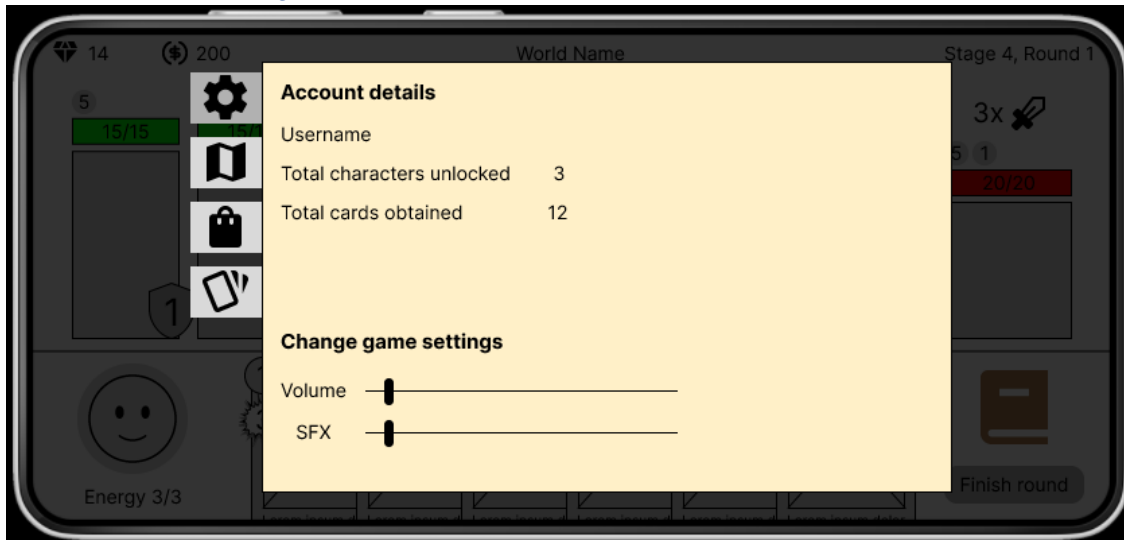


Figura 5 - Menu with game settings

#### 8.1.2.2 Map

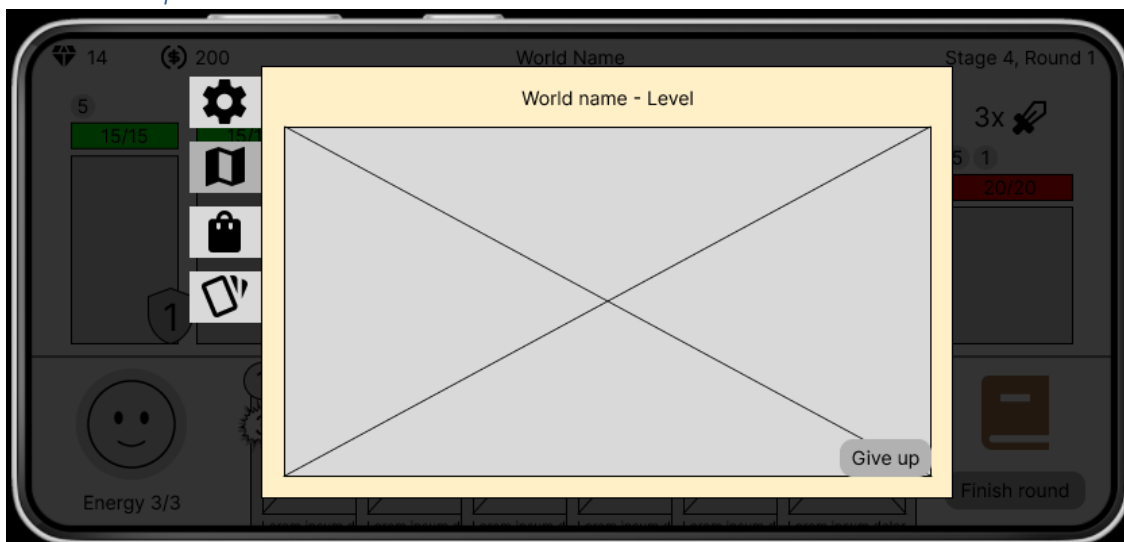


Figura 6 - Menu with map

### 8.1.2.3 Inventory

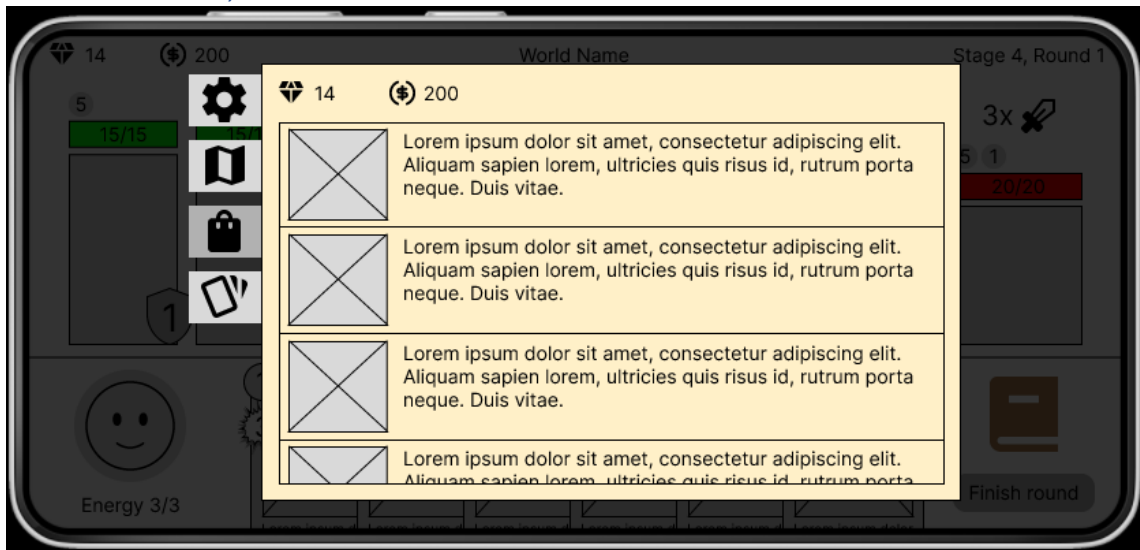


Figura 7 - Menu with inventory

### 8.1.2.4 Deck

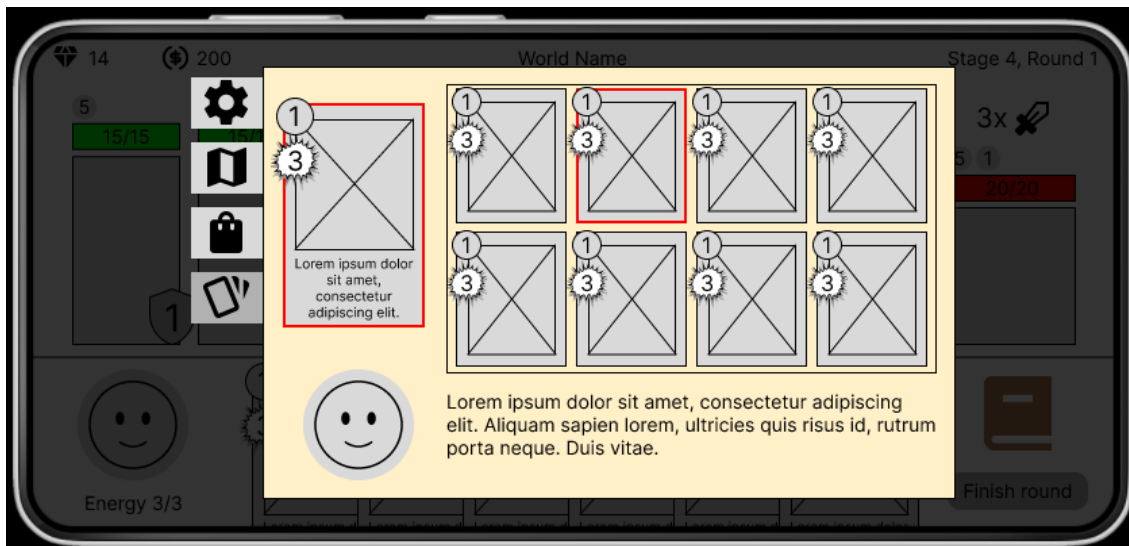


Figura 8 - Menu with deck information