Software Requirements Specifications for Send Me Home (A Platformer Game)

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Revision history

VERSION	AUTHOR	DATE
1.0	Bryce Mecham	10/15/2020
1.1	Bryce Mecham	10/16/2020
1.2	Bryce Mecham and Adam Maxwell	10/21/2020

Sections 1-2:

1. Introduction

1.1. Purpose

We are creating a platformer type game for the purposes of entertainment, as a resume builder, and to complete CS 2450. This document will outline the software requirements for our project.

1.2. Conventions

The platformer will be written in C++ using the engine Coco-2dx. It hopefully will be exported to the Google Play store and/or the Apple Appstore. Our team consists of Adam Maxwell as team leader and code quality manager, Bryce Mecham as developer and code testing manager, and Yucheng Long as developer and documentation manager.

1.3. Intended audience

The intended audience is future employers, our professor, and anyone who likes to play platformer games.

2. Overall Description

2.1. Product description

Our goal is to create a platformer game that can be used across platforms. The concept is an alien whose spaceship has broken down, and to fix it he must collect parts by completing levels which could include trying not to fall or land on dangerous terrain and avoid creatures. We will use a game engine (Cocos2d-x) to create the game.

2.2. Product features

- Primary goals
    - Build a platformer game that is cross platform.
    - Levels which the goal is to collect parts to fix the alien's spaceship.
    - Final goal is to collect enough parts to fix the spaceship and get off the planet.

  - Make menus for the settings, main menu, and end screen.
  - Add nice looking animations.
  - Finished before due date.
- Secondary goals
  - Include puzzle like elements to get parts.
  - Add sound effects and music.
  - Add other game modes.
- Tertiary goals
  - Be able to randomize the levels.
  - Publish on the app stores.

2.3. Operating environment

Our goal is to be able to put it on mobile Devices.

2.4. Constraints

- We are a smaller team, so our game can't be too large.
- Time is our biggest constraint, because we have to have this completed by the end of the Fall 2020 semester.

2.5. User documentation

User documentation will be found within our repository.

2.6. Assumptions and dependencies

Assumptions

- We assume that our users will have an android device. -We assume that we will be able to implement all the features in time. Dependencies
- We will depend on Coco-2dx as our game engine.
- We will depend on the whole team staying on task, and doing their part.

Section 3:

3. System Features

3.1. Player Control

3.1.1. Description and priority

The player will be able to control the character for actions like moving around the level, and interacting with the environment. This is essential to the game.

3.1.2. Stimulus and response

- Stimulus: The user will use swipe gestures or a virtual joystick/ buttons to control the Character.
- Response: The character will run, jump, duck, grab, throw, etc.

3.1.3. Functional requirements

Feature ID: FR-1

3.2. Graphics Rendering

3.2.1. Description and priority

The character and the environment have to be viewable inorder to play the game. This is essential to the game.

3.2.2. Stimulus and response

- Stimulus: The objects positions are updated.
- Response: The graphics will be updated to the new positions.

3.2.3. Functional requirements

Feature ID: FR-2

3.3. Gameobject Updates

3.3.1. Description and priority

This is essential to the games function. It must happen in order for game objects positions and states to be changed.

3.3.2. Stimulus and response

- Stimulus: An event occurs.
- Response: Game object updates accordingly.

3.3.3. Functional requirements

Feature ID: FR-3

3.4. End Objective

3.4.1. Description and priority

The user needs something to work towards, and so an end objective achieves that goal. The priority is moderate.

3.4.2. Stimulus and response

- Stimulus: The player completes the end objective.
- Response: The player wins.

3.4.3. Functional requirements

Feature ID: FR-4

3.5. Menus

3.5.1. Description and priority

There will be menus for the user to change settings and start the game. This is mandatory.

3.5.2. Stimulus and response

- Stimulus: The player needs a way to start the game and adjust settings.
- Response: The player uses the menus.

3.5.3. Functional requirements

Feature ID: FR-5

Section 4:

4. Nonfunctional Requirements

4.1 Programming Language

4.1.1 Description

In order to use Coco-2dx the program must be coded in C++.

4.2 Game Engine

4.2.1 Description

Coco-2dx is the game engine we will use, and it allows us to release the game on multiple platforms such as Android and IOS.

4.3 Music

4.3.1 Description

Music to entertain the player and create the mood.

4.4 Must have 5 levels

4.4.1 Description

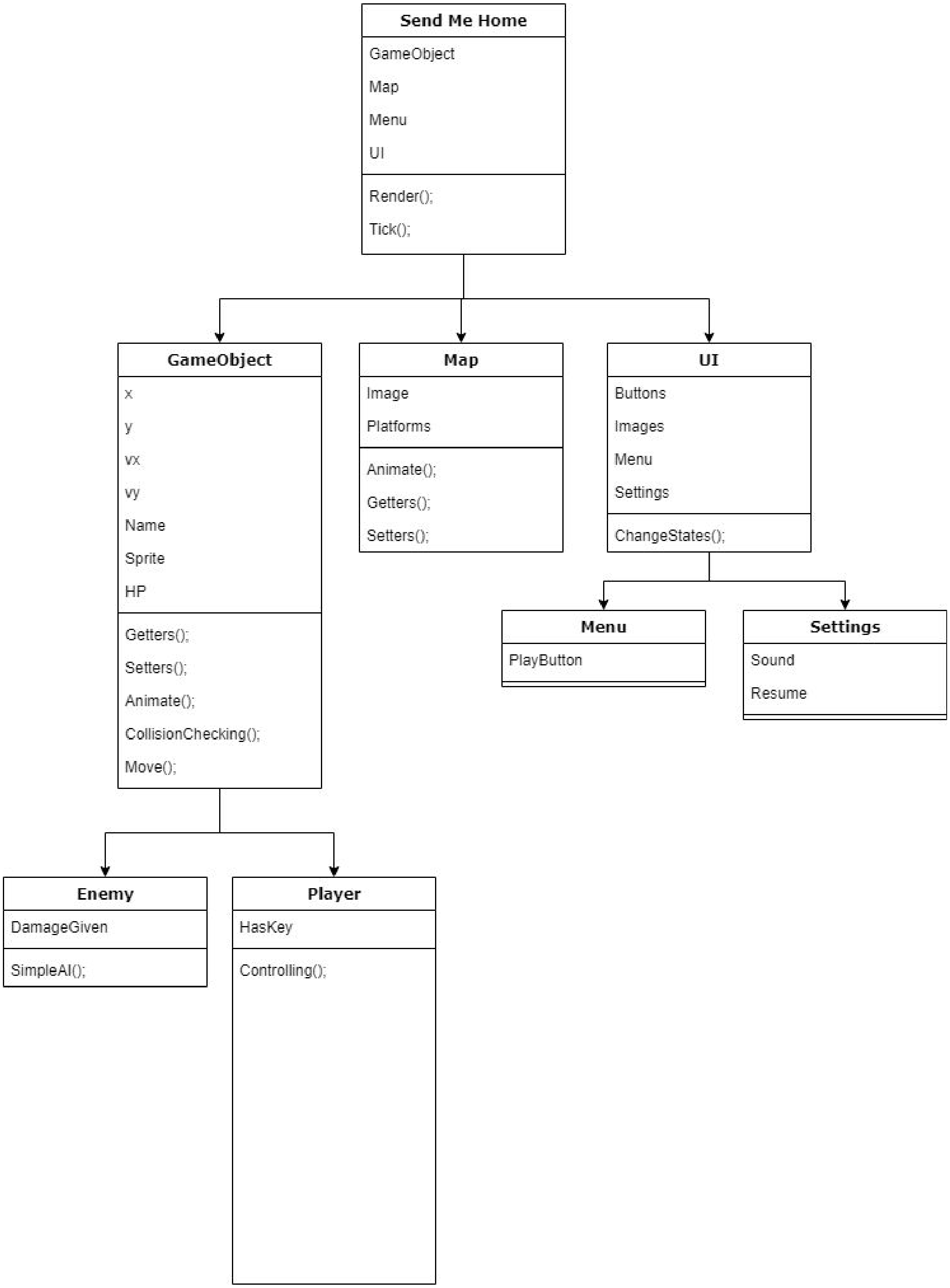
We will have 5 levels/ stages that are playable within the game.

4.5 Publish on App Store

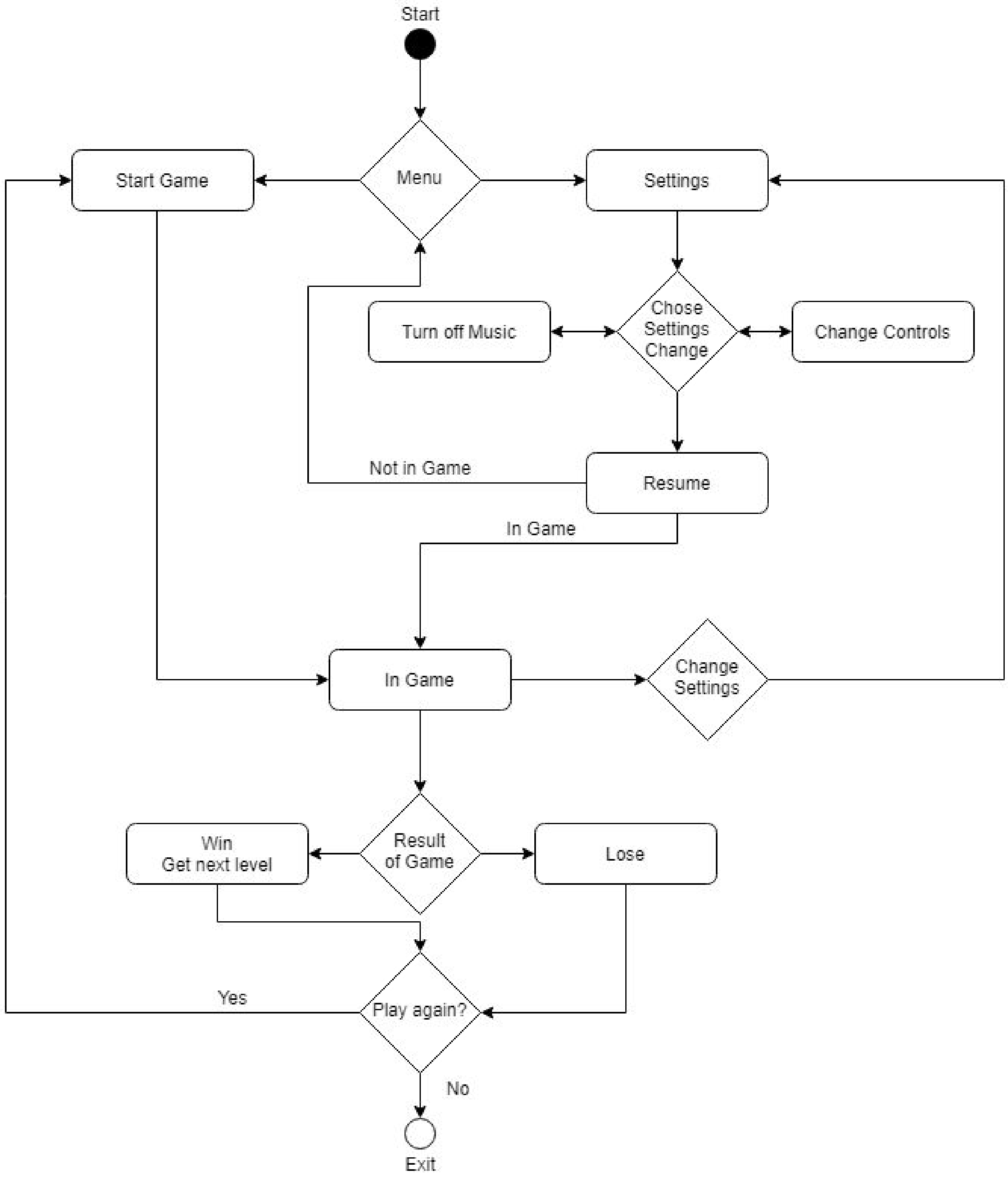
4.5.1 Description

We would love to be able to publish our game on the Google Play Store.

Appendix A: Class Diagram:



Appendix B: Activity Diagram:


Start
Menu
Start Game
Settings
Turn off Music
Chose Settings Change
Change Controls
Not in Game
Resume
In Game
In Game
Change Settings
Win
Get next level
Result of Game
Lose
Yes
Play again?
No
Exit