Requirements and Analysis Document for Group 1's project: Candy Monsters (RAD)

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This version overrides all previous versions.

1 Introduction

This section gives a brief overview of the project.

1.1 Purpose of application

The goal of this project is to create a new desktop based game with a constructive type of format. The intention will be to make a game people of all ages can play without having a destructive, negative effect on the people playing it. This desktop based application is solely for entertainment purpose.

1.2 General characteristics of application

The application will be a standalone, single-player, desktop based application. A single-player, platform game with a “collect and deliver” principle that can be shown in fullscreen. The game will have a set number of levels where each level has a time limit. Your mission will be to move around your character to collect and deliver items to other characters in the world. When all targets have been delivered their specific item, you’ll move to the next level. Your character has three lives during the whole game and these can be lost if your character gets hurt from the dangerous obstacles placed in the world. When all levels are cleared, and your character still is obtaining some life, you’ve finished the game.

There may occur moveable boxes in the courses too which can be moved as an extra feature.

1.3 Scope of application

The application is to be controlled with the keyboard alone. It will not be web-based and will not show the highscore online since it’s a standalone application. However, the highscore will be accessed within the game. The game will contain a set of levels that together will represent the game as a whole. There levels are in a specific order but there is a “pool” of level 1, level 2 and so on to not get the same level all the time. These level versions are randomly taken. Furthermore, it is not a customizable application. The user cannot change the layout as the application always will be shown in fullscreen. The character will solely move within the game window. Therefore, it won’t be possible to go through one side and come out the other.

1.4 Objectives and success criteria of the project

The application will be complete with a runnable version including determined components has been established and works fluently. Determined components include, other than an established gameplay with several levels, a movable player controlled character, items, obstacles, moveable boxes and item receivers.

1.5 Definitions, acronyms and abbreviations

solid ground: everything that the character can’t walk through.
non-empty space: all things that are not “air”, for example solid ground and walls
the chosen item: the item that the character is standing near
placed on the... = on the image (not on top of the character, target, etc.)
world = the area of the screen which can be referred as the “game window” (the area where the

character is able to move without moving passed walls)
wall = included in solid ground

2 Requirements

In this section all requirements will be specified.

2.1 Functional requirements

The player will be able to:

1. Start a new game, and in the start menu there should also be options to:
    -Turn music on and off
    -Turn sound effects on and off
    -See character controls
    -View highscore
2. Move and jump around in the world.
3. Pick up items.
4. Drop down items.
5. Pause the game.

2.2 Non-functional requirements

NA

2.2.1 Usability

The normal user should after a short period of time understand and be able to play the game. The keyboard is used for navigation, which includes moving the character across the screen.

2.2.2 Reliability

The score will be saved on the hard drive. If the files are deleted the new files are created.

2.2.3 Performance

When the user presses an arrowed key the character will interact directly. That will also happen in the menus.

2.2.4 Supportability

The application will be released in different version and will be able to support Windows, Mac OS X and Linux.

An expansion containing more levels, a bot and further advancements is set as the next milestone.

2.2.5 Implementation

The application will use the Java environment.

2.2.6 Packaging and installation

The application will be delivered in a ZIP-file with associated JAR-file and resources (pictures, sounds etc.).

2.3 Application models

The model of the application is described below.

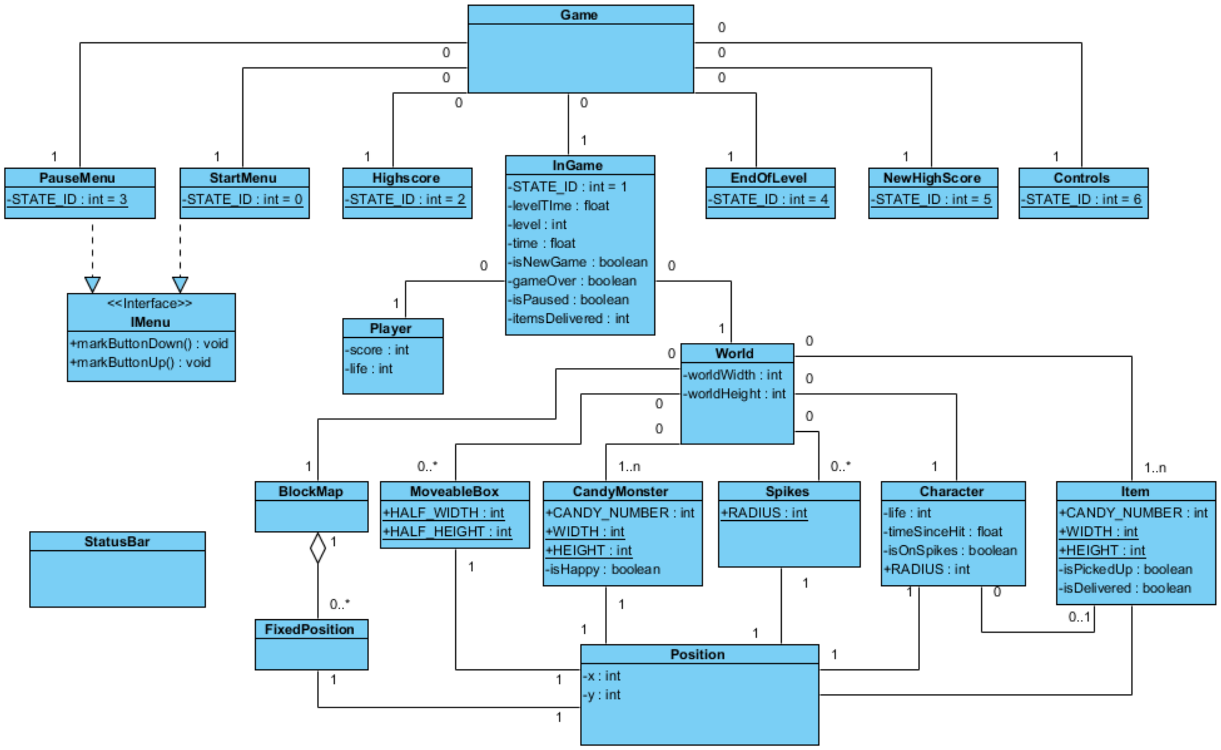
2.3.1 Use case model

See Use cases appendix.

2.3.2 Use cases priority

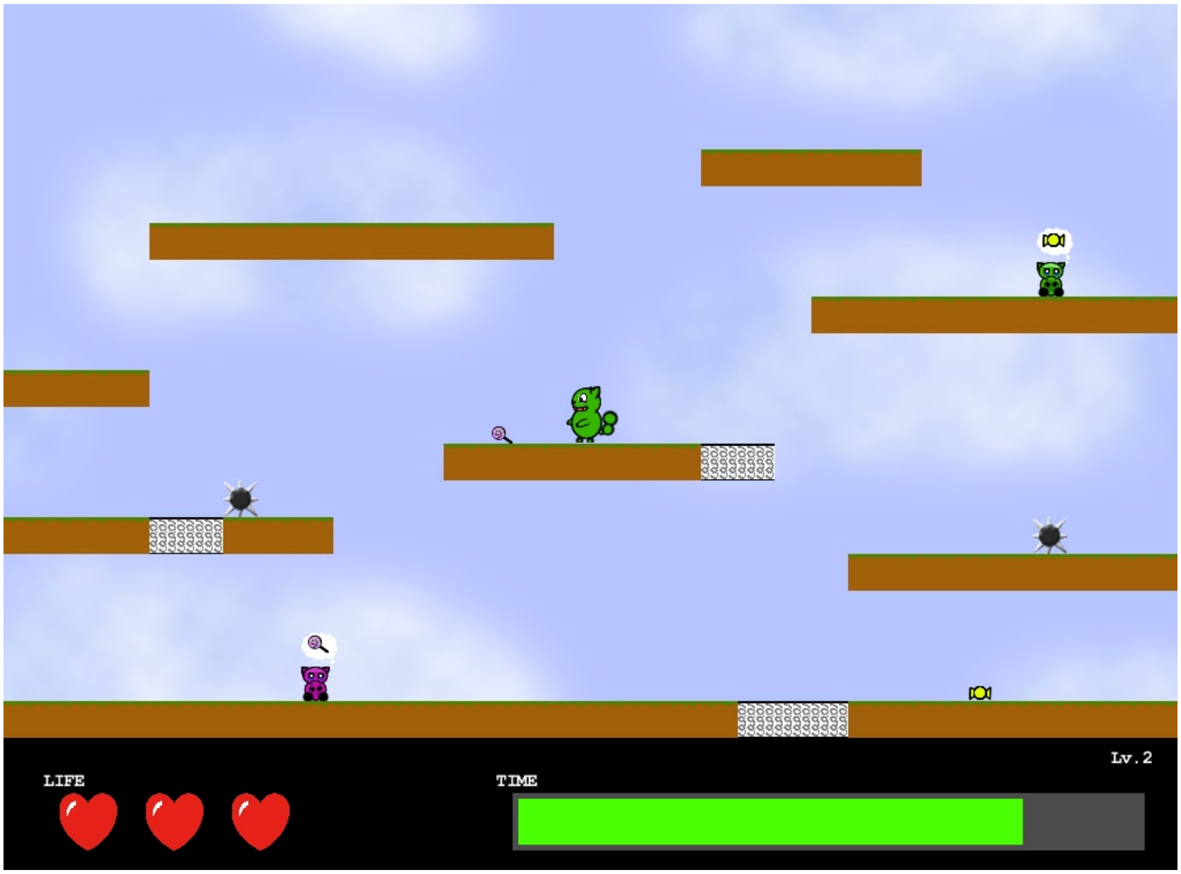
1. Move
2. Jump
3. Pick up item
4. Drop down item
5. Stepping on spikes
6. Game Over
7. Start Menu
8. Pause
9. Pause Menu

2.3.3 Domain model



2.3.4 User interface

The application will be running in fullscreen or windowed. The game will be built up by game tiles and will be a platform game. The resolution of the game is 1024x768.



2.4 Appendix

Use case texts

See Use Case documents

- Use Case: Drop down an item
- Use Case: Game Over
- Use Case: Jump
- Use Case: Move
- Use Case: Pause
- Use Case: Pause Menu
- Use Case: Pick up an item
- Use Case: Start menu
- Use Case: Stepping on spikes