

FINAL PROJECT

I.E.S. San Vicente
San Vicente del Raspeig (Alicante)
2015/2016

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1. Introduction

Project name

Starbound

Made by

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Short description of the project

This is a "Starbound" game for one or more against the world. There will be 3 difficulty levels. It is a graphical application that uses the SDL graphics library.

2. Functionality of the project

After entering the program, a welcome screen will be displayed, where the user can choose between:

- Play alone.
- Play with another player.
- Quit the game.

If the user chooses to play alone or with a player, he will go to the same world where he can run in the world, breaking stones, build houses... You can die because in the world there are so many enemies, you can kill them and then they will drop, or not, items, you can't kill a friend, but if you activate the pvp mode, you can kill him, the game never finishes, if you close the game and open again, the world will generate again, but your things will not be lost.

3. Screen prototype

The game screen will look like this:



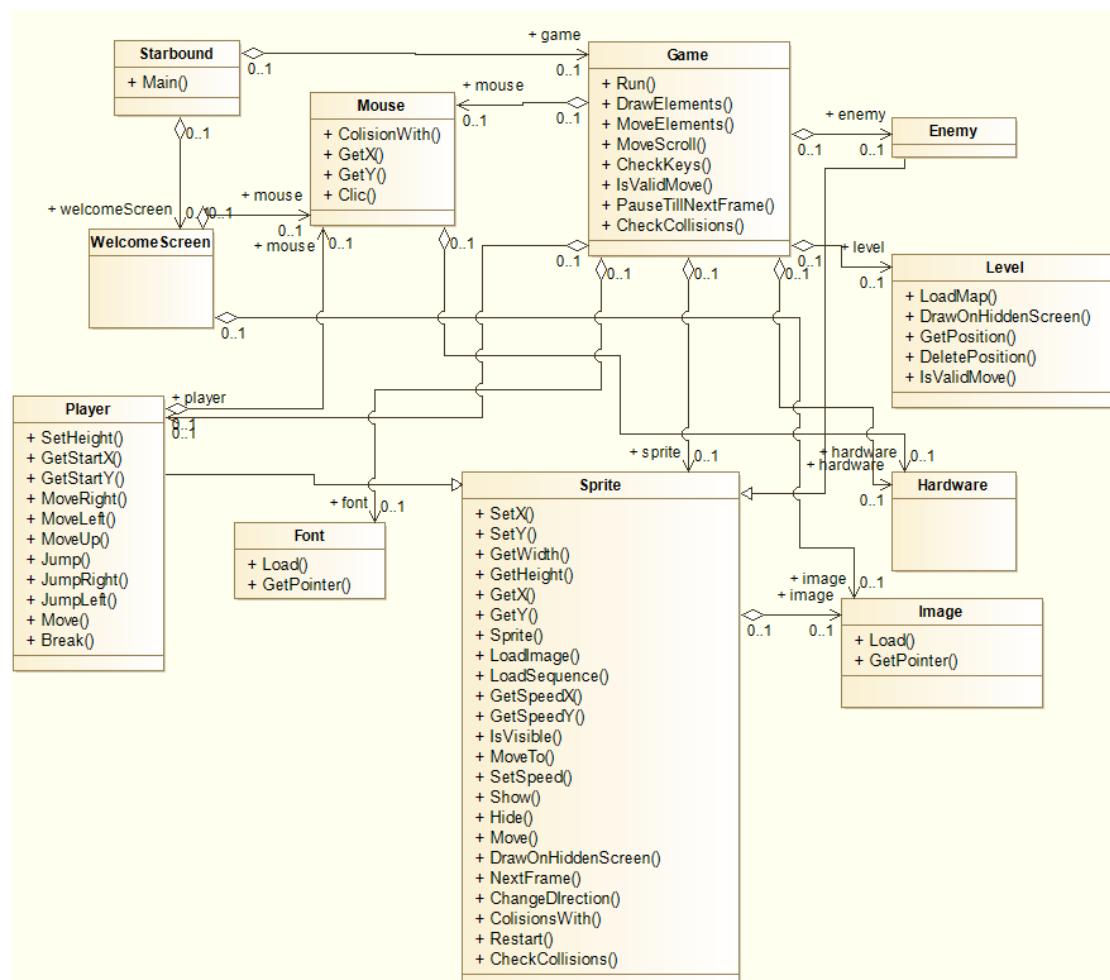
4. Analysis

4a. Requisites

Requisite	Date achieved
The program will allow a player to play in a world, the same world	
The program will allow to play in a multiplayer mode	
The program will allow a player to breaking stones	
The program will allow to quit the game with "ESC"	
The game will use SDL graphics library, and the images will be optimized so that the whole game fits in no more than 5 Mb	
The program will allow to use the mouse	
The intro screen will allow the user to enter a one player or multiplayer or exit the game	
The game can be display a menu options pressing "ESC", and then returned by pressing the same key or clicking continue playing.	

4b. Basic pseudocode

4c. Classes diagram



5. Initial planning and expected deliveries

5a. Expected deliveries

- **Version 1:** The main menu, Welcome screen, and the GameOverScreen. Still not playable.
- **Version 2:** The Game mode in SDL, can break the stone.
- **Version 3:** Implements the Enemies.
- **Version 4:** Implement the house in the map, the bank at base, and can go at the world again (with animation).
- **Version 5:** Implement the inventory for the player.
- **Version 6:** Tools in the main game, implement the top bar that can store there.
- **Version 7-8:** Can drop items when break the stone, save it at inventory.
- **Version 9:** Weapons to the player (melee and range weapons).
- **Version 10:** Rain, randomly in a part of the map (not in all map), snow, and toxic rain, the toxic rain damage the player.
- **Version 11:** Save and load the player, always load at start, and save every X sec.
- **Version 12:** Enemy IA, follow the player, move in a determinate area...
- **Version 13:** A menu option can change the directory to save the player, change the player with another skin...
- **Version 14-15:** Multiplayer.

5b. Real deliveries

- **Version 1:** The main menu, Welcome screen, and the GameOverScreen. Still not playable.
- **Version 2:** The Game mode in SDL, can break the stone.
- **Version 3:** Implements the Enemies without follow the player and try to implement the ESC button.
- **Version 4:** Implement the house in the map, the teleport to home and sleep at button to can swap all the time.
- **Version 5:** Add a top bar, try to generate an item, and finish the classes diagram.

6. File formats

6a. Plain files format

The world saved to a text file with extension “.sb”, which contains the map, as in this example:

```
.....X.....  
.....X.....  
.....X.....  
_____  
_____
```

6b. Entity-Relationship Diagram (If needed)

7. Problems found and solutions

8. Improvements or restrictions to the starting design

9. Screenshots of the final project

10. Source code of the final project