

Requirements and Analysis Document

MachoDude, Grupp 13

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Table of Contents

TABLE OF CONTENTS

Requirements and Analysis Document for MachoDude, Grupp 13	1
1 Introduction	3
1.1 Purpose of application	3
1.2 General characteristics of application	3
1.3 Scope of application	3
1.4 Objectives and success criteria of the project	3
1.5 Definitions, acronyms and abbreviations.	3
2 Requirements	4
2.1 Functional requirements	4
2.2 Non-functional requirements	4
2.2.1 Usability	4
2.2.2 Reliability	4
2.2.3 Performance	4
2.2.4 Supportability	4
2.2.5 Implementation	4
2.2.6 Packaging and installation	4
2.2.7 Legal	5
2.3 Application models	5
2.3.1 Use case model.....	5
2.3.2 Use cases priority	5
2.3.3 Domain model	5
2.3.4 User interface	5
2.4 References	5
APPENDIX	6
GUI.....	6
Domain model	6
Use Cases	6

1 INTRODUCTION

Macho Dude is a side scrolling fast paced shooter taking place in a dystopian future where the universe is in danger. Only one man can save us, Machodude, a cybernetically enhanced centaur with a macho attitude. With a grand arsenal of mass destruction Machodude has to fight several enemies and bosses in jungles, deserts and the arctic.

1.1 PURPOSE OF APPLICATION

This project aims to create a side scroller game. For definitions, acronyms and/or abbreviations see chapter 1.5.

1.2 GENERAL CHARACTERISTICS OF APPLICATION

The application will be desktop single player game for the Windows/Mac/Linux platforms. It aims to be a side scroller so the player starts on a level with one goal: get to the end of the level, defeating enemies along the way. The graphical style is retro (think NES). Which makes the graphics simple to create.

1.3 SCOPE OF APPLICATION

The window will have a fixed size (1600px,900px). It will be single player non-networked and we are using Slick2D an open source java game engine. Slick2D is powerful enough for our purposes and easy enough to learn to work with. Also our graphics being retro makes the graphics simple(r) to create.

1.4 OBJECTIVES AND SUCCESS CRITERIA OF THE PROJECT

1. It should be possible to complete an entire level in Macho Dude. An entire level should include enemies that fight back, challenging obstacles that you have to destroy/navigate around and a boss fight in the end.
2. The game should be able to save statistics such as the number of killed enemies or total time played.

1.5 DEFINITIONS, ACRONYMS AND ABBREVIATIONS.

- **Macho Dude:** The name of our game and the main character himself.
- **Side Scroller:** Is a video game genre, this is how Wikipedia describes side scrollers: "A side-scrolling game or side scroller is a video game in which the gameplay action is viewed from a side-view camera angle, and the onscreen characters generally move from the left side of the screen to the right (or less commonly, right to left) to meet an objective."
- **Slick2D:** Is an open source game engine we use on this project. On their website they describe Slick2D as "...an easy to use set of tools and utilities wrapped around LWJGL OpenGL bindings to make 2D Java game development easier."

2 REQUIREMENTS

In this section we specify all requirements.

2.1 FUNCTIONAL REQUIREMENTS

When playing Macho Dude the player should be able to:

1. Start a new level
 - a. Move Mach Dude character.
 - b. Make Macho Dude jump.
 - c. Fire Macho Dudes weapon – will possibly kill an enemy or damage surroundings.
2. View statistics
3. Exit application

2.2 NON-FUNCTIONAL REQUIREMENTS

Not applicable.

2.2.1 USABILITY

Like any other game, usability is key. The controls and the objectives in Macho Dude are both very straight forward. Gaming experience or not, one shouldn't have trouble picking up on how to play Macho Dude. However, the game will be solely in English. To counter that, text is kept to a minimum.

2.2.2 RELIABILITY

Not applicable.

2.2.3 PERFORMANCE

Macho Dude will run at a fixed rate of 60 frames per second and the game play will feel smooth.

2.2.4 SUPPORTABILITY

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2.2.5 IMPLEMENTATION

To achieve platform independence Macho Dude will use the Java environment. To play Macho Dude one must have the JRE installed and configured.

2.2.6 PACKAGING AND INSTALLATION

Macho Dude will come as a zip-archive containing:

1. Jar-file (MachoDude.jar) containing everything you need to play Macho Dude.

2. README-file with instructions of how play Macho Dude.

2.2.7 LEGAL

Graphics, sound or code used in this project is either created during the project or referenced open source material.

2.3 APPLICATION MODELS

2.3.1 USE CASE MODEL

See APPENDIX.

2.3.2 USE CASES PRIORITY

1. Enter a new game
2. Move
3. Jump
4. Enemies
5. Weapons
6. Boss
7. Statistics

2.3.3 DOMAIN MODEL

See APPENDIX.

2.3.4 USER INTERFACE

Macho Dude-window will have a fixed size of 1600 pixels by 900 pixels. See APPENDIX for pictures of GUI.

2.4 REFERENCES

Wikipedia, Side-scrolling video game, 2014-04-01, http://en.wikipedia.org/wiki/Side-scrolling_video_game
Slick2D, 2014-04-01, <http://slick.ninjacave.com/>

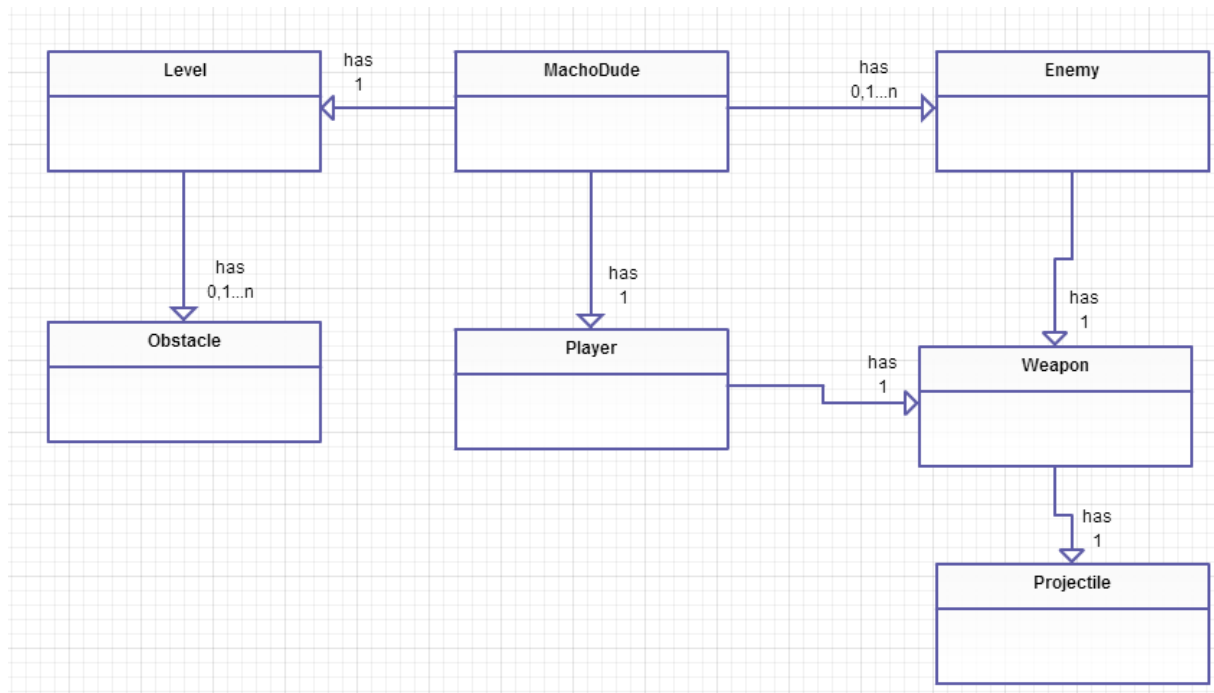
APPENDIX

GUI

Pictures...

DOMAIN MODEL

Early Domain Model



USE CASES

Use cases...