Product Requirements Document

Battleship

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1 Introduction

1.1 Document Identifier

This is a document to describe the Product Requirements Document of the game “Battleship“.

1.2 Scope

Error: Reference source not found section provides overview of the document content as well as the brief description of the game requirements. Section 1.3 Definitions of terms and acronyms includes description of all the terms and acronyms used in the document. 1.4 Overview Section briefly describes the requirements and purpose of the game. All the requirements are described in subsections of 2 Requirements section. The features that the game should support are described in section 2.1 Functional Requirements. 2.3 Platform Requirements specifies all the hardware and software requirements of the game, including hardware models and operating system versions. 2.4 Implementation Requirements section includes requirements on the tools, libraries, applications, programming languages. Error: Reference source not found section contains information of the performance of the developed product, in particular run-time of the applications developed for the game. The methods used to verify the project are specified in 2.5 Verification Requirements section. 2.6 Documentation Requirements project lists all the documents that should be created for the project. 3 Project Management section includes Error: Reference source not found, 3.1 Dependencies, Assumptions, Risks and 3.2 Schedule and Effort Estimations sections which describe the project state and estimations with consideration of the dependencies and risks.

1.3 Definitions of terms and acronyms

Sea - playing board, which contains ' 0 '-s to mark empty spaces in the sea.
Ship - spaces in the sea marked as ' 1 '
Shooting - process that requires X and Y coordinate to change the state of the sea.

1.4 Overview

Our project is based in developing a "Battleship" game. It is a console game without a GUI. The game is designed for a single player, who plays against the computer. The computer randomly generates the ships. Once CPU and player have set all their ships the game begins. Now the player enters the coordinates of their targeted ship. The computer displays player's move for the turn and prints coordinates of it's targeted ship. This process continues until computer or the player wins the game. The one who sinks all of the opponent's ships wins the game.

2 Requirements

2.1 Functional Requirements

End user:

- ✔ Start Game: The system should be capable of starting a new game when the user enters “START”.
- ✔ Position ships: The system should allow the user to position their ships wherever they like, and warn them when they are not allowed place a ship a certain direction.
- ✔ Attack: The system should return the status of an attack on a console and indicate whether or not it was a hit.
- ✔ Sink ship: The system should be able to tell when a ship has been sunk and inform the user.
- ✔ Sunk all ships: Once all the ships have been sunk on one side of the board, the system should output win/loss information to the user

System:

- ✔ The system should be able to randomly place the computer player’s ships so that none are overlapping and all are within the bounds of the board.
- ✔ The system should be able to keep track of all attacks made by player.
- ✔ The system should be able to tell when a ship has been hit.
- ✔ The system should be able to tell when entered coordinates have been a miss.The system should be able to tell when win/loss point in the game has been reached.
- ✔ The system should be able to restart a new game at the end of the game or reset in the middle of the gameplay.

2.3 Platform Requirements

The hardware requirements are fairly simple as long as they can meet the OS's requirements. For single player games only one computer is required.

Supported OS:

- Ubuntu 16.04 (64 bit)

2.4 Implementation Requirements

Coding and implementation of the project is based on the language of c ++.

2.5 Verification Requirements

For verification one must play the game or do make test.

2.6 Documentation Requirements

Here are the documents that are required: PRD, README, Devspec, Fspec.

3 Project Management

3.1 Dependencies, Assumptions, Risks

There aren’t any dependencies, assumptions or risks.

3.2 Schedule and Effort Estimations

On this project were working 2 developers 4 hours a day. It was started on 23/04/2018 and was finished on 10/04/2018.

3.3 Acceptance Criteria

For finishing the project the company(in this case developer) must hand in all docs, tests and finished project to customer.