Instigate Design

Parallel Systems Development

Product Requirements Document

Battleship

Version 1.0
Last modified on 29 May 2018
Number of pages 5

Table of Contents

1. Introduction

1.1. Document Identifier

This is a Product Requirements Document for the “Battleship“ computer game.

1.2. Scope

Introduction section provides overview of the document content as well as the brief description of the game requirements. Definitions of terms and acronyms section includes the description of all the terms and acronyms used in the document. Overview Section briefly describes the requirements and the purpose of the game. All the requirements are described in the subsections of Requirements section. The features that the game should support are described in section Functional Requirements. Platform Requirements specifies all the hardware and software requirements of the game, including hardware models and operating system versions. Implementation Requirements section includes requirements on the tools, libraries, applications, programming languages. Performance Requirements 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 Verification Requirements section. Documentation Requirements lists all the documents that should be created for the project. Project Management section includes Dependencies, Assumptions, Risks and 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

Glossary

Sea	–	the playing board.
Ships	–	targets of the player
Shooting	–	the process of entering the coordinates of a targeted ship.

1.4. References

Морской бой (игра) This article describes the rules of the game.

1.5. Overview

This project supposes the development of a computer game “Battleship. The game doesn’t support a GUI and is played from console. It is a single player game where the player is playing against the computer. Note that it is also a “one sided” game, which means that only the player attacks the computer’s targets.

2. Requirements

2.1. Functional Requirements

After running the application a blank sea (playing board) where every point is a ‘0’ is printed to console. The computer randomly sets the ships on its board which aren’t shown to the player. There are ten ships in this game. One 4 sized ship, two 3 sized ships, three 2 sized ships and four 1 sized ships.
The player must enter the coordinates of their targeted ship in the following format:
First coordinate must be a letter from ‘a’ to ‘j’
Second coordinate must be a number from 1 to 10
This two coordinates must be separated by a space.
Committing the entered coordinates is done by pressing the enter key on the keyboard.
In case if the player enters coordinate in wrong format they receive the following message:
"Please enter coordinates in the right format.
First coordinate should be a letter from 'a' to 'j'.
Second coordinate should be a number from '1' to '10'.”
In case if the player enters coordinates that they already entered they receive the message “Already hit.”
If the entered coordinates match with any of the computer’s ships coordinates the player receives the message “Hit!” and the corresponding point on the sea is replaced with ‘X’. Otherwise the player receives the message “Miss!” and the corresponding point on the sea is replaced with ‘.’. When player hits every point on one ship they receive the message “Sank!”.
After the player sinks all the ships of the computer the game is over and they receive the following message:
"Congratulations! You won the game!”

2.2. Platform Requirements

Any piece of junk that can be called a computer.

Supported OS:

- Ubuntu 4.10 (Warty Warthog) and higher

2.3. Implementation Requirements

The program is written in C++ language. The following libraries are used: time.h, cstdlib, string.

2.4. Performance Requirements

None.

2.5. Verification Requirements

Verification of the project should be done by playing the game.

2.6. Documentation Requirements

The project should have the following documents: EADME, PRD, DevSpec, FSpec.

3. Project Management

3.1. Dependencies, Assumptions, Risks

The main risk of this project is failing it and being kicked out of ITC.

3.2. Schedule and Effort Estimations

The project must be finished and delivered before May 29, 2018 10:00 AM.

3.3. Acceptance Criteria

The acceptance criteria for this project would be the complete and undeniable satisfaction of Ms. Shahinyan, Ms. Khurshudyan and Ms. Julhakyan.