Software Requirements Specification
for
Snake Project

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Version 1.0

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Revision History

Version	Date	Name	Description
1	22.05.2017	Alexander Orel	Initial document.

1. Introduction

1.1 Overview

The Snake application will be a game available users with an Windows and Linux platforms. The application will provide the gameplay of well known game.

This document provides information on the requirements for the Snake software application. Project goals, scope and definitions are given in the introduction. Design constraints and application environment are described in the following section. Non-functional requirements are outlined for later verification. Functional requirements are given to show the system features and expected user interaction.

Project constraints will be included in separate documentation. The Software Project Management Plan will give specifics on project budget and schedule. A separate Test Plan document will address test specifications and procedures.

1.2 Goals and Objectives

The main objective of this project is to create a Snake game application for educational purpose. In process of development should be covered following topics:
- Documentation creation.
- Game engine design.
- C++11 standard.
- Cross-platform development.
- Database library usage.

As the result expects completely functional cross-platform portable game application.

1.3 Scope

The Snake game application will provide users to play an interesting game from Windows and Linux. User will be able to use a player nickname to save the score for future. Also user will be able to check out the records table which will contain nicknames and corresponding best scores in decreasing order.

1.4 Definitions

Snake Application – the product that is being described here. The software system specified in this document.

Project – activities that will lead to the production of the Snake application.

User – the person or persons who will actually interact with the Snake application.

Use case – describes a goal-oriented interaction between the system and an actor. A use case may define several variants called scenarios that result in different paths through the use case and usually different outcomes.

Scenario – one path through use case.

Actor – user or other software system that receives value from a user case.

2. General Design Constraints

2.1 Snake Application Environment

The Snake application product will include a cross-platform application designed to work on Windows and Linux platforms. The application will interact with user through the keyboard and the system console.

2.2 User Characteristics

Snake Application Users: any owner of PC with Windows or Linux operating system who like old classic games.

2.3 Mandated Constraints

The application will run on Windows and Linux platforms. These platforms were chosen to increase expertise level of development under them.

3. Non-functional Requirements

3.1 Operational Requirements

Usability: 95% of users will not need to read the user manual to be able to use the application.

3.2 Performance Requirements

Performance: Not less than 60 frame per second.

3.3 Security Requirements

No security is required.

3.4 Documentation and Training

The Snake application will be delivered to users as a download and portable without any trainings. A user guide and system documentation will be provided.

3.5 External Interface

3.5.1 User Interface
The interface will be intuitive. It will consist of Start Screen to provide a possibility to choose the action. As a game application it will be streamlined and simple to use. No training will be provided and it is expected that 95% of users will be able to use the application without any training.

3.5.2 Software Interface
No special software interfaces needed except of platform built-in API.

4. Functional Requirements

4.1 Required Features

4.1.1 Use Case #1
Description: User starts a new game.

Actor: Any user.

Value = high. Cost = high.

Basic Path
1. User starts Snake application.
2. Application prompts user select from such menu items: Start, Records, Credits and Exit.
3. User clicks Start item.
4. System prompts user to enter new user nickname.
5. User enters new nickname and click Enter.
6. Game starts from first level.
7. User plays the game.

4.1.2 Use Case #2
Description: User looks for records.

Actor: Any user.

Value = medium. Cost = medium.

Basic Path
1. User starts Snake application.
2. Application prompts user select from such menu items: Start, Records, Credits and Exit.
3. User clicks Records.
4. System displays table of records with nickname and score.

4.2 Optional Features

4.2.1 Use Case #3
Description: User looks for credits.

Actor: Any user.

Value = low. Cost = low.

Basic Path
1. User starts Snake application.
2. Application prompts user select from such menu items: Start, Records, Credits and Exit.
3. User clicks Credits.
4. System displays text with credits names and contact information.