Software Requirements Specification SNAKE

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1 Reference Material

This section records information for easy reference.

1.1 Table of Units

Not applicable.

1.2 Table of Symbols

Not applicable

1.3 Abbreviations and Acronyms

2 Introduction

The scope of the requirements is limited to...

2.1 Purpose of Document

The purpose of Snake is to help users have fun. Snake is designed to engage users in an enjoyable activity which encourages them to use strategic planning and time management to achieve higher and higher scores.

2.2 Scope of Requirements

The scope of the requirements is limited to...

2.3 Organization of Document

The template for this document follows the SRS for Volere template.

3 General System Description

This section provides general information about the system, identifies the interfaces between the system and its environment, and describes the user characteristics and the system constraints.

3.1 User Characteristics

The end user should be familiar with the basics of using a computer enough to install python and pygame using instructions outlined on their respective websites.

3.2 System Constraints

There are no system constraints.

4 Specific System Description

This section first presents the problem description, which gives a high-level view of the problem to be solved. This is followed by the solution characteristics specification, which presents the assumptions, theories, definitions and finally the instance models (ODEs) that model the solar water heating tank with PCM.

4.1 Problem Description

The traditional snake game is to be built on to include additional features which are more relatable to todays gamers.

4.1.1 Terminology and Definitions

This subsection provides a list of terms that are used in the subsequent sections and their meaning, with the purpose of reducing ambiguity and making it easier to correctly understand the requirements:

- Client: Administrative staff of SFWR ENG 3XA3 (Doctor Smith and TAs)
- Constraint: A global requirement that affects decisions about the scope of the project.
- Stakeholder: A person, group or organization that has interest or concern in the project.
- Player: A person who plays the video game.
- Snake: The classic video game conceptualized in the late 1970s, where a player manoeuvres a line which grows in length, with the line itself being a primary obstacle

4.1.2 Physical System Description

There are no physical portions to this project.

4.1.3 Goal Statements

Given the temperature of the coil, initial conditions for the temperature of the water and the PCM, and material properties, the goal statements are:

GS1: The game must serve as a source of entertainment for the user.

GS2: The game must consist of additional features to what is traditionally included in the snake game.

GS3: The game must have ample documentation and well commented code so that the program is maintainable and expandable in the future.

4.2 Solution Characteristics Specification

4.2.1 Assumptions

5 Requirements

This section provides the functional requirements, the business tasks that the software is expected to complete, and the nonfunctional requirements, the qualities that the software is expected to exhibit.

5.1 Functional Requirements

R1: The user must be able to start the game by a single click.

R2: The game must be controlled by keyboard.

R3: R3: When the snake hits an obstacle , freeze the game indicating game over.

R4: When the snake collects food its size grows.

R5: As the user advances in the game, the snake becomes faster.

R6: When the user goes off border, the snake appears from the other side.

R7: As an additional feature, when the snake goes through portals it comes out from the other side.

R8: The game calculates a score that is based on the amount of time spent in the game and any food collected.

R9: The game outputs the score after the game is finished.

R10: The game must respond instantly to user inputs without any lag.

5.2 Nonfunctional Requirements

R11: The project must satisfy the requirements of the course.

R12: The code of the game must function correctly.

R13: R3: The code of the game must be verifiable (by means of testing?)

R14: There must be ample documentation for the game and it must be well commented in order to allow future expandability, maintainability and reusability.

6 Likely Changes