
Software Requirements Specification

for

Dungeon Adventure 2.0

Prepared by: Sanya Sinha, David Woolston, Jackson Davis

Organization: TCSS 504A

Created on: 29 January, 2024

Table of Contents

1. Introduction	1
1.1 Purpose	1
1.2 Document Conventions	1
1.3 Intended Audience and Reading Suggestions	1
1.4 Project Scope	1
1.5 References	1
2. Overall Description	2
2.1 Product Perspective	2
2.2 Product Features	2
2.3 User Classes and Characteristics	2
2.4 Operating Environment	2
2.5 Design and Implementation Constraints	2
2.6 Assumptions and Dependencies	2
2.7 Maze Generation	3
2.8 Save/Load/Reload Feature	3
3. External Interface Requirements	4
3.1 User Interfaces	4
3.2 Hardware Interfaces	5
3.3 Software Interfaces	5
3.4 Communications Interfaces	5
4. Other Nonfunctional Requirements	5
4.1 Performance Requirements	5
4.2 Safety Requirements	5
4.3 Security Requirements	6
4.4 Software Quality Attributes	6
5. Other Requirements	6

Revision History: N/A CURRENTLY

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

The purpose of this software requirement specification(SRS) document is to outline all of the requirements for the maze-based dungeon adventure game. This document will go over in detail the software features, user classes, as well as the operating environment and other essential information.

1.2 Document Conventions

Throughout the document, if any particular word is in bold, it is a key word that will later be referenced in the glossary as well as the dictionary.

1.3 Intended Audience and Reading Suggestions

This document is intended for everyone in collaboration for this project, as well as the professor. Suggested sequence for reading the document: Purpose -> Project Scope -> System Features (Will be reorganized/expanded on)

1.4 Project Scope

“Dungeon Adventure 2.0” is a maze-based game that requires you to traverse through rooms and locate pillars in order to exit the maze. Before retrieving the pillars you must first answer a trivia question. If answered correctly, the pillar will be added to your inventory. If answered incorrectly, the pillar will disappear and relocate in which you must continue traversing the maze to relocate it.

1.5 References

Canvas provided example reports:

SRSEExample-webapp.doc

COS-SRS.pdf

<more references will be added throughout the project process.>

2. Overall Description

2.1 Product Perspective

Dungeon Adventure 2.0 is a game that is being introduced for the first time. Due to a previous project, there were some aspects of the classes and code that could be reused for this project and formatted to improve the user experience.

2.2 Product Features

Players will have the option to pick their adventurer and select the difficulty of the game, as well as have the option to restart the game.

2.3 User Classes and Characteristics

There are two types of users that will be affiliated with the game: there will be the players and the administrators.

The players will have access to the game, and will be able to provide player feedback to the administrators to better overall gameplay.

The administrators will oversee the front end and back end of the program to ensure the application is working correctly and administer updates/bug fixes if needed.

2.4 Design and Implementation Constraints

<Potential interface and database constraints will be more visible throughout the project process. >

2.5 Assumptions and Dependencies

For the entirety of the project we will be using PyGame which is a third party module designed to create 2D games using Python. A potential constraint that we could come across would be assembling the GUI. The project is also highly dependent on code used from a prior project that will be reused due to similarities in both projects. This will include, and is not limited to: the maze formation, being able to traverse, and the randomization of items that will appear throughout the dungeon.

System Features

2.6 Maze Generation

3.1.1 Description and Priority

This feature involves the random generation and regeneration of mazes for the game. Priority: High.

3.1.2 Stimulus/Response Sequences

Player selects "Start Game" > System randomly generates a collection of rooms > maze is then displayed on the screen.

3.1.3 Functional Requirements

REQ-1: Generated maze must be solvable

REQ-2: Maze size and difficulty must be changeable/adjustable (?)

2.7 Save/Load/Reload Feature

3.1.1 Description and Priority

This feature involves the ability to save the game as well as restart the game once the player has beat the maze. Priority: High.

3.1.2 Stimulus/Response Sequences

Player selects “Restart Game” > System randomly generates a collection of rooms > maze is then displayed on the screen.

Player goes to pause screen and selects “Exit and Save” > System then saves game progress and exits the game.

3.1.3 Functional Requirements

REQ-1: System must be able to save game progress

REQ-2: System must be give the player the option of restarting the game

REQ-3: Restarting the game should require the system to rerandomize the rooms giving the player a new maze to play.

2.8 Character Selection

3.1.1 Description and Priority

This feature involves the ability for the player to select their “Adventurer”. Priority: Medium.

3.1.2 Stimulus/Response Sequences

Player selects character from “Character Selection” menu > System uses the players chosen character for the entirety of the game

3.1.3 Functional Requirements

REQ-1: When saving and exiting the game, system should remember character that was selected

REQ-2: When restarting the game the system should return the the start menu and ask for player to select their “Adventurer”

2.9 Visual/Audio

3.1.1 Description and Priority

This feature involves the use of visual and audio effects throughout the game. Priority: Medium.

3.1.2 Stimulus/Response Sequences

Various sound effects will initiate once a player does a certain action (Example. fighting an enemy will initiate “fight” effects).

3.1.3 Functional Requirements

- REQ-1: Sound effects and music should start and end when needed
- REQ-2: Sound effects and music volume should be adjustable on start screen menu
> Settings.

3. External Interface Requirements

3.1 User Interfaces

Player will enter the start screen and will have the option to “Start Game” or click on “How to Play” to read the directions of the game. If the player would like to have any adjustments made to the sound effect or music volume there will also be an “Options” button to click on which will take the player to the settings screen.

3.2 Hardware Interfaces

Since the game is a web application it has no particular hardware requirements, although adjustments might be needed if players wish to have a mobile version of the game.

3.3 Software Interfaces

<Interfaces will be added in throughout the project process.>

4. Other Nonfunctional Requirements

4.1 Performance Requirements

<Will be added throughout the project process.>

4.2 Safety Requirements

A safety feature/requirement that will be added would be the ability to exit the game and save progress.

4.3 Security Requirements

<Will be added throughout the project process>

4.4 Software Quality Attributes

<Will be added throughout the project process>

5. Other Requirements

<Will be added throughout the project process>

Appendix A: Glossary

<Will be added throughout the project process>

Appendix B: Analysis Models

<Will be added later in the project>

Appendix C: Issues List

02/02/2024: Currently no issues.