Software Requirements Specification

for

Dungeon Adventure 2.0

Version 2.0 in review

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Table of Contents

Revision History

Name	Date	Reason For Changes	Version
Preston Harms	02-06-25	Initial Draft	2.0

1. Introduction

1.1 Purpose

1.1.1 This SRS describes the requirements of the Dungeon Adventure 2.0 release. This document is intended to be used by the project members to correctly implement the required functionality. Unless otherwise stated, the specifications documented within this document are high priority for release 2.0.

1.2 Intended Audience and Reading Suggestions

The intended audience for this document is anyone working towards the 2.0 release of Dungeon Adventure. The prime focus will be on the developers working on the code base which comprises Dungeon Adventure. While the wording will be at a high level and omit implementation details, the goal is to create a guide for development for the technical team.

1.3 Project Scope

We will be expanding the V1 version of Dungeon adventure with enemies, new player character classes, and a combat system. We will also be expanding the graphical user interface(GUI) to better display the action within the game. Players will be able to choose between Warrior, Priestess, and Thief classes to battle monsters including Ogres, Gremlins, and Skeletons. The characters classes will determine their hit points and the amount of damage they can do to the monsters they encounter. The monsters will have different abilities and statistics as well.

1.4 References

<List any other documents or Web addresses to which this SRS refers. These may include user interface style guides, contracts, standards, system requirements specifications, use case documents, or a vision and scope document. Provide enough information so that the reader can access a copy of each reference, including title, author, version number, date, and source or location.>

2. Overall Description

2.1 Product Perspective

Dungeon Adventure started as a game where players could traverse a maze, avoiding pits and collecting OOP pillars to escape. Users could take potions to restore their health or to reveal the maze around them.

Dungeon Adventure 2.0 will build on the capabilities of Dungeon Adventure 1.0 with more Gameplay and better graphics. We will be adding a combat system and character selection. To do this we will be changing the graphical user interface, adding persistent configuration for characters

and monsters, and expanding the user's gameplay experience with a combat system featuring different monsters.

2.2 Product Features

The Dungeon Adventure 2.0 project aims to enhance the original game by introducing several major features and significant functions. The key features include Expanded Gameplay: The game will now include new player character classes (Warrior, Priestess, and Thief) and a variety of enemies (Ogres, Gremlins, and Skeletons). Each character class will have unique hit points and damage capabilities, while the enemies will have different abilities and statistics1.Combat System: A new combat system will be integrated, allowing players to engage in battles with the monsters they encounter. This will add a strategic element to the gameplay, as players will need to choose their actions carefully to defeat their foes1.Graphical User Interface (GUI) Enhancements: The GUI will be updated to better display the action within the game. This includes improved graphics and a more intuitive interface to enhance the overall user experience1.Persistent Configuration: Players will be able to save their character configurations, allowing for a more personalized and continuous gameplay experience2.These features are designed to provide a richer and more engaging experience for players, building on the foundation of the original Dungeon Adventure game.

2.3 User Classes and Characteristics

Casual Players: These users play the game occasionally and may not have extensive gaming experience. They will primarily use basic functions and expect an intuitive and easy-to-navigate interface. Their focus is on enjoying the game without delving into complex strategies or mechanics.

Regular Players: These users play the game frequently and have a good understanding of its mechanics. They will use a broader subset of functions, including advanced gameplay features. They expect a balance between challenge and accessibility, with a focus on strategic elements and character development.

Hardcore Gamers: These users are highly experienced and play the game extensively. They will utilize all available functions and expect a high level of difficulty and depth. They are interested in mastering the game, exploring all its features, and achieving high scores or completing all challenges.

Developers and Testers: These users are involved in the development and testing of the game. They require access to debugging tools, detailed logs, and configuration options. Their focus is on ensuring the game's functionality, performance, and stability.

Administrators: These users manage the game's deployment, updates, and user accounts. They need access to administrative functions, security settings, and user management tools. Their priority is maintaining the game's integrity and ensuring smooth user experience for all players. Each user class has specific requirements that must be addressed to ensure a satisfying experience for all. The favored user classes are the Regular Players and Hardcore Gamers, as they are the primary audience for the game's advanced features and strategic elements.

2.4 User Documentation

2.4.1.1 User Manuals: Detailed manuals that cover all aspects of the game, including installation, gameplay mechanics, character classes, and combat strategies. These manuals will be available in both digital and printed formats.

2.4.1.2 Developer Documentation: Comprehensive documentation for developers and testers, including API references, configuration guides, and debugging instructions. This documentation will be available in digital format and accessible through the project's development portal.

3. System Features

3.1 Combat System

3.1.1 Description and Priority:

3.1.1.1 The combat system in Dungeon Adventure 2.0 is a high-priority feature that introduces strategic gameplay elements by allowing players to engage in battles with various monsters. This system is essential for enhancing the game's depth and providing more engaging experience for players.

3.1.2 Stimulus/Response Sequences:

3.1.2.1 When a player encounters a monster, the combat system is triggered. The player can choose from a set of actions such as attacking, defending, or using items. The system then calculates the outcome based on the player's and the monster's statistics, and the result is displayed on the screen. The sequence continues until either the player or the monster is defeated.

3.1.3 Functional Requirements:

REQ-1: The system must allow players to initiate combat with monsters encountered in the game.

REQ-2: The system must provide options for the player to attack, defend, or use items during combat.

REQ-3: The system must calculate the outcome of each action based on the player's and the monster's statistics.

REQ-4: The system must display the results of each action to the player in real-time.

REQ-5: The system must end the combat sequence when either the player or the monster is defeated.

REQ-6: The system must update the player's and the monster's health points based on the actions taken during combat.

REQ-7: The system must provide feedback to the player on the effectiveness of their actions.:

3.2 Character Selection Feature

3.2.1 Description and Priority:

3.2.1.1 The character selection feature in Dungeon Adventure 2.0 is a high-priority feature that allows players to choose from different character classes before starting their adventure. This feature is essential for providing players with personalized gameplay experience and enabling them to select a character that suits their preferred playstyle.

3.2.2 Stimulus/Response Sequences:

3.2.2.1 When a player starts a new game, the character selection screen is displayed. The player can choose from available character classes such as Warrior, Priestess, and Thief. Each class has unique attributes, including hit points and damage capabilities. Once the player selects a character, the game initializes with the chosen character's attributes and abilities.

3.2.3 Functional Requirements:

REQ-1: The system must display a character selection screen when a new game is started.

REQ-2: The system must provide options for the player to choose from different character classes (Warrior, Priestess, Thief).

REQ-3: The system must display the attributes and abilities of each character class to help the player make an informed decision.

REQ-4: The system must initialize the game with the selected character's attributes and abilities.

REQ-5: The system must allow players to change their character selection before confirming their choice.

3.3 Monster System Feature

3.3.1 Description and Priority:

3.3.1.1 The monster system in Dungeon Adventure 2.0 is a high-priority feature that introduces various enemies for players to encounter and battle. This system is essential for adding challenge and excitement to the game, as players must strategize to defeat different types of monsters.

3.3.2 Stimulus/Response Sequences:

3.3.2.1 When a player navigates through the game, they may encounter monsters such as Ogres, Gremlins, and Skeletons. Each monster has unique abilities and statistics. The player can choose to engage in combat or avoid the monster. If the player engages in combat, the system will calculate the outcome based on the player's and the monster's attributes. The sequence continues until either the player or the monster is defeated.

3.3.3 Functional Requirements:

REQ-1: The system must generate monsters at various locations within the game.

REQ-2: The system must assign unique abilities and statistics to each type of monster (e.g., Ogres, Gremlins, Skeletons)1.

REQ-3: The system must allow players to engage in combat with monsters encountered in the game.

REQ-4: The system must calculate the outcome of combat based on the player's and the monster's attributes.

REQ-5: The system must update the player's and the monster's health points based on the actions taken during combat.

REQ-6: The system must provide feedback to the player on the effectiveness of their actions during combat.

REQ-7: The system must remove defeated monsters from the game environment.

3.4 Persisted Configuration Feature

3.4.1 Description and Priority:

3.4.1.1 The persisted configuration feature in Dungeon Adventure 2.0 is a high-priority feature that allows players to save their character configurations. This feature is essential for providing a personalized and

continuous gameplay experience, enabling players to resume their progress and maintain their character's attributes and settings across gaming sessions.

3.4.2 Stimulus/Response Sequences:

3.4.2.1 When a player customizes their character's attributes, abilities, and equipment, the system will save these configurations. The next time the player starts the game, the system will load the saved configurations, allowing the player to continue from where they left off. This ensures a seamless and consistent gameplay experience.

3.4.3 Functional Requirements:

REQ-1: The system must allow players to save their character configurations, including attributes, abilities, and equipment.

REQ-2: The system must automatically save the player's configurations at regular intervals and upon exiting the game.

REQ-3: The system must load the saved configurations when the player starts the game.

REQ-4: The system must provide an option for players to manually save their configurations.

REQ-5: The system must ensure that saved configurations are secure and not prone to corruption.

4. External Interface Requirements

4.1 User Interfaces

4.2 Main Menu:

4.2.1.1 The main menu serves as the entry point to the game. It includes options such as "Start Game," "Load Game," "Settings," and "Exit." The layout is designed to be simple and easy to navigate, with standard buttons and functions that are consistent across all screens.

4.3 Character Selection Screen:

4.3.1.1 This screen allows players to choose their character class before starting the game. It displays the available classes (Warrior, Priestess, Thief) along with their attributes and abilities. The layout is designed to provide clear information to help players make an informed decision.

4.4 Gameplay Interface:

4.4.1.1 The gameplay interface includes the main game screen where players navigate through the dungeon, encounter monsters, and engage in combat. The interface displays the player's health, inventory, and available actions. It also includes a mini-map to help players navigate the dungeon.

4.5 Combat Interface:

4.5.1.1 When a player engages in combat, the combat interface is displayed. It provides options for the player to attack, defend, or use items. The interface displays the player's and the monster's health points and provides real-time feedback on the outcome of each action.

4.6 Settings Menu:

4.6.1.1 The settings menu allows players to customize their game experience. It includes options for adjusting the graphics, sound, and control settings. The layout is designed to be user-friendly, with clear labels and descriptions for each option.

4.7 Error Messages:

4.7.1.1 The game includes standard error messages to inform players of any issues or invalid inputs. These messages are displayed in a consistent format, with clear and concise language to help players understand and resolve the issue.

4.8 Help and Tutorials:

4.8.1.1 The game includes an integrated help system and tutorials to assist players. The help system provides context-sensitive assistance, while the tutorials guide new players through the basics of the game. Both components are designed to be easily accessible and provide clear instructions.

4.9 Software Interfaces

4.9.1 Database

4.9.1.1 The game will communicate with a database to persist and retrieve configuration for character stats.

4.10 Communications Interfaces

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