**[GAME TITLE TBD]**

**Software Requirements Specification**

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# Introduction

## Software Purpose and Scope

[GAME TITLE] is a 2D RPG developed in Java by four students at the University of Montana as a class assignment.

## Document Purpose and Contents

This document is intended to define the software requirements for [GAME TITLE]. It will outline the processes and procedures featured in [GAME TITLE].

## Definitions, Acronyms, and Abbreviations

This section provides definitions for terms and acronyms necessary to understand the function of the program.

### Definitions

|  |  |
| --- | --- |
| Software Failure | A failure will be attributed to this software product whenever one of the delivered work products does not meet the requirements specified in this SRS, or does not meet ordinary and reasonable customer/user expectations. |

### Acronyms and Abbreviations

|  |  |
| --- | --- |
| 2D | Two-Dimensional |
| FPS | Frames Per Second |
| NPC | Non-Player Character |
| RPG | Role Playing Game |

## References

There are no pertinent references used by this program.

# General Factors

## Product Perspective

The program is a stand-alone game. The only software required to run it is an installation of Java and the files for the game itself.

## Product Functions

The program should be able to utilize an interactive view that passes arguments to a controller that handles a variety of player, enemy, and item classes that all interact in either a friendly or hostile way. The controller then passes this updated data to the model, which will populate the application view with the images of the interactive player, NPCs, and items. This updated model view is then returned to the view of the user, which completes the interactive cycle.

## Environmental Conditions

The system running this program must have Java version 1.8 installed, at least (TBD) RAM, and (TBD) disk space.

## User Characteristic

The program is intended for users of all ages and demographics.

## Dependencies

No current dependencies for this program.

# Explanatory User Interfaces

The user interacts with program using keyboard and mouse input.

# Specific Requirements

## Functional Requirements

### Movement

Keyboard input up should move the player character up. Keyboard input left will move the player character left. Keyboard input left will move the player character left.

### Boundary Detection

Player character will not be able to move through walls or NPCs. NPCs will not be able to move through player character or walls.

### Actions

The position of the cursor, controlled by the mouse, will determine where the player character is aiming. The left mouse button will execute firing the player character’s weapon.

Pressing the ‘Esc’ button will open the Pause Menu. Pressing the ‘Esc’ button while the Pause Menu is open will close the Pause Menu.

Pressing the ‘I’ button will open the player’s Inventory Menu. The arrow keys will be used to navigate the Inventory Menu. The ‘Enter’ button will be used to use or equip an item. Pressing the ‘I’ or ‘Esc’ button while the Inventory Menu is open will close the Inventory Menu.

### Display

The world will be dynamically displayed to the user, with the player character always visible. NPCs will be visible to the user.

A small dialogue box will be displayed to the user at all times, showing the properties of the player character including name, health, level, and experience.

## Non-Functional Requirements

### Design Constraints

There are no design constraints for the program.

### External Interface Requirements

#### Hardware

Keyboard, mouse, screen.

#### Software

Java 1.8

### Delivery Environment

#### Site

The program must be able to read from and write to storage.

### Performance

The game must run at a minimum 24 FPS. Ideally, the game will run at 60 FPS.

### Quality

#### Reliability

Game will run without crash or freeze.

#### Availability

Code will be maintained on Github.

#### Maintainability

Likely failures to be had are collision based errors which can be corrected in the collision classes of the software. Inefficient runtime speed would also be a possible error, in which a more defined data structure would be needed to solve this error.

#### Usability

Intuitive controls and navigation.

#### Portability

Software is portable to any Java software environment.