Software Requirements Specification (SRS) for Notepad Java Project

1. Introduction

1.1 Purpose

The purpose of this document is to define the requirements for the development of a Notepad application using Java. This application will provide basic text editing functionalities similar to the Windows Notepad.

1.2 Scope

The Notepad application will offer features such as creating, editing, saving, and opening text files. It will also include basic text formatting options.

1.3 Definitions, Acronyms, and Abbreviations

- GUI: Graphical User Interface

- JDK: Java Development Kit

- JRE: Java Runtime Environment

1.4 References

- Java SE Documentation

- Swing API Documentation

2. Overall Description

2.1 Product Perspective

The Notepad application will be a standalone desktop application, developed using Java and Swing for the GUI.

2.2 Product Functions

- Create a new text file

- Open an existing text file
- Save the current text file
- Save the current text file with a new name (Save As)
- Edit text (Cut, Copy, Paste, Select All)
- Undo and Redo actions
- Basic text formatting (font type, size, style)

2.3 User Characteristics

The primary users of this application are individuals who need a simple text editing tool. No specific technical knowledge is required to use the application.

2.4 Constraints

- The application must be developed using Java.
- It should be compatible with the latest JDK and JRE.
- The application must run on Windows, macOS, and Linux.

2.5 Assumptions and Dependencies

- Users have Java Runtime Environment (JRE) installed on their system.
- The application relies on the Java Swing library for GUI components.

3. Specific Requirements

Functional Requirements

3.1. File Operations

- FR1: The system shall allow the user to create a new file.
- FR2: The system shall allow the user to open an existing file.

- FR3: The system shall allow the user to save the current file.
- FR 4: The system shall allow the user to save the current file with a new name (Save As).

3.2 Edit Operations

- FR2.1: The system shall allow the user to cut the selected text.
- FR2.2: The system shall allow the user to copy the selected text.
- FR2.3: The system shall allow the user to paste the text from the clipboard.
- FR2.4: The system shall allow the user to select all text.
- FR2.5: The system shall allow the user to undo the last action.
- FR2.6: The system shall allow the user to redo the last undone action.

3.1.3 Formatting

- FR3.1: The system shall allow the user to change the font type of the text.
- FR3.2: The system shall allow the user to change the font size of the text.
- FR3.3: The system shall allow the user to change the font style (bold, italic, underline).

3.2 Non-Functional Requirements

3.2.1 Performance

- The application should load and save files within 2 seconds.
- The text editing operations should be instantaneous.

3.2.2 Usability

- The application should have an intuitive and user-friendly interface.

- All functionalities should be easily accessible through menu options and keyboard shortcuts.

3.2.3 Portability

- The application should be platform-independent and run on any operating system with JRE installed.

4. System Features

4.1 User Interface

The GUI will include:

- A menu bar with File, Edit, and Format options.

- A text area for displaying and editing text.

- Dialogs for opening and saving files.

- Options for font customization.

Conclusion

The Notepad Java project aims to develop a simple, intuitive text editor with essential text manipulation and file management features. This SRS outlines the functional and non-functional requirements to guide the development process, ensuring the application is user-friendly, efficient, and platform-independent. By adhering to these specifications, the project will deliver a reliable and accessible text editing tool suitable for general use.