

WyrLang

WyrPad
Software Requirements Specification
Version 1.0

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Revision History

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Software Requirements Specification

1. Introduction

The introduction of the Software Requirements Specification (SRS) provides an overview of the entire SRS with purpose, scope, definitions, acronyms, abbreviations, references and overview of the SRS. The aim of this document is to gather and analyze and give an in-depth insight of the complete **WyrdPad** word processing software by defining the problem statement in detail. Nevertheless, it also concentrates on the capabilities required by stakeholders and their needs while defining high-level product features. The detailed requirements of the **WyrdPad** are provided in this document.

1.1 Purpose

The purpose of the document is to collect and analyze all assorted ideas that have come up to define the system, its requirements with respect to consumers. Also, we shall predict and sort out how we hope this product will be used in order to gain a better understanding of the project, outline concepts that may be developed later, and document ideas that are being considered, but may be discarded as the product develops.

In short, the purpose of this SRS document is to provide a detailed overview of our software product, its parameters and goals. This document describes the project's target audience and its user interface, hardware and software requirements. It defines how our client, team and audience see the product and its functionality. Nonetheless, it helps any designer and developer to assist in software delivery lifecycle (SDLC) processes.

1.2 Scope

Primarily, the scope pertains to the WyrdLang features for making the WyrdPad project live. It focuses on providing a platform for the users to use WyrdLang more effectively. This SRS is also aimed at specifying requirements of the software to be developed.

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1.3 Definitions, Acronyms, and Abbreviations

WyrdLang	The name of the computer language the text editor supports natively.
WyrdPad	The name of the text editor.

1.4 Overview

The remaining sections of this document provide a general description, including characteristics of the users of this project, the product's platform, and the functional and data requirements of the product. General description of the project is discussed in section 2 of this document. Section 3 gives the functional requirements, data requirements and constraints and assumptions made while designing the WyrdPad. It also gives the user viewpoint of the product. Section 3 also gives the specific requirements of the product. Section 3 also discusses the external interface requirements and gives detailed description of functional requirements. Section 4 is for supporting information.

2. Overall Description

This document presents the problem statement that led to the development of WyrdPad, a simple notepad application designed to integrate with WyrdLang. Since no prior system exists, WyrdPad is being developed from scratch to provide users with a lightweight and easy-to-use text editing tool.

The document also identifies the stakeholders and users involved in the project, along with their needs and expectations gathered during the brainstorming and requirements workshop. It further outlines the major features and provides brief descriptions of each component of the proposed system.

The following Software Requirements Specification (SRS) describes the product perspective of WyrdPad from different stakeholder viewpoints. It details the key product functions, user characteristics, constraints, assumptions, dependencies, and categorized subsets of requirements relevant to this academic project.

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3. Specific Requirements

The specific requirements are –

3.4 Functional Requirements

Introduction:

This subsection outlines the functional requirements of WyrdPad. The requirements are described in natural language to clearly explain the expected behavior of the system. Each requirement specifies what the system should do from the user’s perspective, ensuring that the notepad functions as intended. These requirements form the foundation for the design and implementation of WyrdPad.

3.4.1 File Management

3.4.1.1 FR1: The system shall allow users to create new text files.

Element	Description
Condition	When the user selects the “New” option from the File menu or toolbar
Subject	The WyrdPad application
Action	Will create
Object	A new blank text document
Constraint	That does not overwrite any existing unsaved document and allows immediate text input

3.4.1.2 FR2: The system shall allow users to open already existing text files.

Element	Description
Condition	When the user selects the “Open” option from the File menu or toolbar
Subject	The WyrdPad application
Action	Will open
Object	An already existing text file selected by the user
Constraint	The system will prompt the user to select a file location and load its content without altering the file until explicitly saved.

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3.4.1.3 FR3: The system shall allow users to save new text files (Save).

Element	Description
Condition	When the user selects the “Save” option from the File menu or toolbar.
Subject	The WyrdPad application
Action	Will save
Object	The currently open text document.
Constraint	The system will prompt for a file name and location if the document has not been saved before and will store the text content in that location.

3.4.1.4 FR4: The system shall allow users to overwrite text files (Save As).

Element	Description
Condition	When the user selects the “Save As” option from the File menu or toolbar
Subject	The WyrdPad application
Action	Will overwrite and save
Object	The currently open text document with a new name or in a new location
Constraint	The system will prompt the user for confirmation before overwriting an existing file and ensure data loss occurs without user consent.

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3.4.2 Text Editing

3.4.2.1 FR5: The system shall allow users to enter and delete text within the editor freely.

Element	Description
Condition	When the user focuses the text editor area
Subject	The WyrdPad application
Action	Will allow
Object	Text to be entered or deleted by the user
Constraint	That changes are reflected immediately without affecting other document contents

3.4.2.2 FR6: The system shall support cut,copy and paste operations.

Element	Description
Condition	When the user selects text and chooses cut, copy, or paste from menu, toolbar, or keyboard shortcuts.
Subject	The WyrdPad application
Action	Will allow
Object	Cut, copy, or paste operations on selected text.
Constraint	That the clipboard operations do not corrupt the document and maintain previous content integrity

3.4.2.3 FR7: The system shall support undo and redo operations.

Element	Description
Condition	When the user performs an action and selects undo or redo from menu, toolbar, or keyboard shortcuts
Subject	The WyrdPad application
Action	Will allow
Object	The last change made to the text document
Constraint	That multiple undo/redo steps are supported and document consistency is maintained.

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3.4.2.4 FR8: The system may provide a “Select All” option to select the entire text.

Element	Description
Condition	When the user chooses “Select All” from the menu, toolbar, or keyboard shortcut
Subject	The WyrdPad application
Action	Will allow
Object	All text in the current document
Constraint	That selection does not alter text content and allows subsequent operations like cut, copy, or formatting

3.4.3 View and Display Options.

3.4.3.1 FR9: The system shall allow users to enable or disable word wrap.

Element	Description
Condition	When the user selects the “Word Wrap” option from the menu
Subject	The WyrdPad application
Action	Will toggle
Object	The word wrap feature in the text area
Constraint	That text lines will automatically wrap or unwrap based on the selected state

3.4.3.2 FR10: The system may allow resizing or maximizing the text area window.

Element	Description
Condition	When the user resizes or maximizes the application window
Subject	The WyrdPad application
Action	Will adjust
Object	The text area to fit the new window dimensions
Constraint	That text visibility and layout remain consistent during resizing

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3.4.4 Application Control

3.4.4.1 FR11: The user shall be able to exit the application using a menu option or window close button.

Element	Description
Condition	When the user selects “Exit” from the File menu or clicks the window close button
Subject	The WyrdPad application
Action	Will terminate
Object	The running instance of the application
Constraint	That the user is prompted to save unsaved changes before closing

3.4.4.2 FR12: The application shall initialize with a blank document upon startup.

Element	Description
Condition	When the WyrdPad application is launched
Subject	The WyrdPad application
Action	Will create
Object	A new blank text document
Constraint	That the document is ready for immediate text input

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3.5 Non-Functional Requirements

3.5.1 Usability

3.5.1.1 The user interface shall be simple, clean, and easy to navigate without any prior training.

Element	Description
Condition	When the user launches and interacts with the WyrdPad application
Subject	The WyrdPad user interface
Action	Shall provide
Object	A simple, clean, and easy-to-navigate layout
Constraint	That users can operate the application effectively without any prior training or assistance

3.5.2 Performance

3.5.2.1 The application shall load and be ready for use within 3 seconds of launching

Element	Description
Condition	When the user launches the WyrdPad application
Subject	The WyrdPad system
Action	Shall load and be ready for use
Object	The application interface and core features
Constraint	Within 3 seconds of launching

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3.5.2.2 The system shall open and save text files with less than 1 second delay for files under 1 MB

Element	Description
Condition	When the user opens or saves a text file in WyrdPad
Subject	The WyrdPad system
Action	Shall perform
Object	File open and save operations
Constraint	With less than 1 second delay for files under 1 MB in size

3.5 Supportability

3.5.1 Source Code Management

The source code developed for *WyrdPad* shall be maintained using a **Git client** (such as GitHub) as an **open-source project**.

Version control shall be used to track code changes, enable collaboration among team members, and maintain the history of the software development process.

3.6 Standard Development Tools

The system shall be built using Eclipse IDE with the Java programming language and Swing for the graphical user interface.

These tools were selected for their ease of use, platform independence, and suitability for developing lightweight desktop applications.

All development shall conform to standard Java GUI design conventions and follow consistent code formatting and naming standards.

3.7 System Requirements

3.7.1 Platform Requirements

3.7.1.1 WyrdPad shall operate as a desktop application, not a web-based system.

3.7.1.2 The application shall run on computers with the following minimum specifications:

- Operating System : Windows 10 or Later
- Java Runtime Environment : Version 8 or above

3.7.2 Installation and Accessibility

3.7.2.1 The application shall be packaged as a .jar or .exe file for easy execution.

3.7.2.2 The software shall not require an internet connection to function.

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3.7.2.3 Users shall be able to install and launch the program locally on their computer.

3.8 Licensing Requirements

GNU General Public License v3.0

3.9 Legal, Copyright, and Other Notices

WyrdPad is released under the GNU General Public License version 3 (GPL v3). This means:

- Users are free to use, modify, and distribute the software, provided that any modifications or derived works are also released under GPL v3.
- The software is provided “as-is” without any warranty, either expressed or implied, including but not limited to warranties of merchantability or fitness for a particular purpose.
- All copies or derivative works must include the full GPL v3 license text, along with copyright notices for the original developers.
- No proprietary claims are made; the software and source code remain open and free for educational and non-commercial use.

3.10 Applicable Standards

It shall be as per the industry standard.