

CMSC 128 Lab  
Software Engineering I

Software Requirements Specification (SRS)

Submitted By:  
Earl James Q. Rentillo  
BS in Computer Science III

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## I. Introduction

This section defines the purpose, intended use and audience, and scope of the document. It also defines domain-specific terms and acronyms used throughout the document.

### A. Purpose

The purpose of this document is to specify the requirements in creating the website “Unmuffled: Poetry and Prose”. The document aims to give an overall description of the functionalities and constraints that the website are assumed to have. The project itself are initially described by the following goals:

- to be a blogging platform for curated works of literature by the website administrator
- to act as a portfolio for these works
- to serve as a medium to promote discourse in said field through a community page.

### B. Intended Audience

To be able to create the website and meet specifications and the target goals, the developers and the project manager are given access to the SRS document. As the project is useful for an audience that is especially fond of literature, testers for the project are also included in this privilege. This can be used for verification for the implemented functionalities in the system and a means of cross-reference for the expected product.

Additionally, the project is intended for those who wants to explore the works of fellow writers aside from the administrator and engage with the relevant community which merits the roles of the actors necessary in developing the website.

### C. Intended Use

In the development of the website, the document is intended to be used by the client, administrator, developers, testers, and the project manager to meet what is required by the project and make recalibrations whenever necessary. This would also consequently help in planning the system development process.

Below is a summary of the project’s intended audience and use in its development:

- a. Client and Administrator – Aid in specifying system requirements and check whether or not the website meets their needs.
- b. Testers – Check if the current version of the project aligns to what is specified as requirements.

- c. Project manager – Plans and manages the system development process.
- d. Developers – From the gathered requirements and specifications, understand how and what kind of system is to be developed.

#### D. Scope

The scope specifies the exact project scope indicating project boundaries. This can also include the purpose of the software project, its benefits and overall goals. The aim of the project is to design and develop the website “Unmuffled: Poetry and Prose” where end users can read literary works of the website administrator as well as those of the relevant community through its community page.

This project will benefit those who show interest in the literary arts, more particularly in illustrative poetry and prose as it can give insight and reference as to how such works are crafted. The website also aims to promote discourse of its community through its own dedicated page. As a blogging site for such works, the website also serves as a portfolio which may be used for future reference, that also allows a donate feature to support the current administrator of the website. Lastly, the project is specified for the aforementioned features only and is not expected to cover content that is otherwise not specified in this section.

#### E. Definitions and Acronyms

The following terms and acronyms are used throughout the document. This subsection defines these terms and acronyms used.

Term/Acronym	Definition
Cascading Style Sheets (CSS)	Cascading Style Sheets (CSS) is a standard (or language) that describes the formatting of markup language pages (Techopedia, 2018).
Hypertext markup language (HTML)	Hypertext markup language (HTML) is the major markup language used to display Web pages on the Internet. It is used to display text, images or other resources through a Web browser (Techopedia, 2016).
JavaScript (JS)	Javascript (JS) is a scripting languages, primarily used on the Web. It is used to enhance HTML pages and is commonly found embedded in HTML code and renders web pages in an interactive and dynamic fashion. This allows the pages to react to events, exhibit special effects, accept variable text, validate data, create cookies, detect a user’s browser, etc. (Techopedia, 2016).
Literature	writings in prose or verse (Merriam-Webster, n.d.)
MySQL	MySQL is a full-featured relational database management system (RDBMS) that competes with the likes of Oracle DB and Microsoft’s SQL Server (Techopedia, 2016).

PHP: Hypertext Preprocessor (PHP)	PHP: Hypertext Preprocessor is a scripting language used to create dynamic and interactive HTML Web pages. A server processes PHP commands when a website visitor opens a page, then sends results to the visitor's browser (Techopedia, 2011).
Portfolio	a selection of a student's work (such as papers and tests) compiled over a period of time and used for assessing performance or progress (Merriam-Webster, n.d.)
SRS (Software Requirements Specification)	A software requirements specification (SRS) is a comprehensive description of the intended purpose and environment for software under development. The SRS fully describes what the software will do and how it will be expected to perform (Rosencrance, n.d.).
XAMPP	XAMPP is a popular cross-platform web server that allows programmers to write and test their code on a local webserver (EDUCBA, n.d.).

## F. References

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## II. Overall Description

This section contains an overview of the website being built, outlining the user needs, assumptions, and functionalities which are expected of the website to support.

### A. User Needs

The project is intended as a blogging site for literature and photography open for the perusal of users. To access the homepage, the website supports a log-in, log-out, and sign in functions for users. Leaving feedbacks are also supported through a contact form located on the homepage. The said webpage, which is also the main page, contains the literary and photographic works of the administrator where they can update the content of the website.

In addition, the website is also intended for the relevant community which allows users to share literary works and photographs of their own, as well as be able to interact to those of others' as well. This is done through its own community section found in the website. At the basic level, these functionalities are expected to address the user needs of the website and for it to be run with the intended purpose.

### B. Assumptions and Dependencies

The website prototype is expected to run with the following assumptions and dependencies:

- a. Operating Environment and Resolution – The website is optimized for devices that run in Windows 10 or Windows 11 with a 1366 x 768 resolution.
- b. Server – A local host, through XAMPP, is used to run the website and its database.
- c. Software – The website will be developed using HTML and CSS for the frontend, and MySQL and PHP for the backend.

### III. System Features and Requirements

This section discusses the essential features and functionalities that are implemented in the website. It includes subsections namely the functional requirements, external internet requirements, system features, and nonfunctional requirements.

#### A. Functional Requirements

The following functional requirements are supported by the website. Each bears a functionality which contribute to the website's overall function as a blogging site.

- a. Login, Logout, and Signup Page – These pages allow the user to manage their accounts. The login pages lets the user enter the website homepage while the logout lets the user leave the website with their account. Lastly, the signup page allows the user to create a new account.
- b. Homepage – This page contains the main content of the page, with the works of the administrator. It also allows the user to send feedbacks and join a newsletter system.
- c. Contact Form – In the homepage, this feature allows the user to send feedbacks to the administrator and join its newsletter through email.
- d. Community Page – A page in the website where users can post their own literary works and allows interaction between users through likes, comments, and replies.

#### B. External Interface Requirements

This subsection specifies how the functional requirements of the project are implemented.

##### a. User Interface

To establish the user interface of the website, the following software are used for the frontend and backend development.

- i. Frontend Software: HTML, CSS, JavaScript
- ii. Backend Software: MySQL, PHP

##### b. Hardware Interface

The hardware interface allows the user to interact with the website along with the user interface. The following are the requirements used for this.

- i. Windows 10 or 11 with 1366 x 768 resolution
- ii. A browser that supports HTML, CSS, and JavaScript

c. Software Interface

The following specifies the software used to run the system.

- i. Operating System – The website is expected to devices with Windows 10 or 11
- ii. Database – To save the user's account information for signup and login, MySQL and PHP are used. This is also for saving the feedback whenever a user decide to send one through the contact form.

d. Communication Interface

The project is expected to use the database requirement aforementioned to establish a communication interface through the contact form and login functionalities.

C. System Features

- a. Account Security – For account security, the website supports a session timeout feature where the account currently logged in will be automatically logged out after 5 minutes of inactivity.
- b. Login/Signup Stimulus Response – The project supports a feature where the account details being entered are checked for duplicates upon signup. The account password are also checked to contain at least 8 characters having at least 1 capital letter, 1 number, and 1 symbol which betters account security.
- c. Distributed database – Database created through MySQL and PHP is handled in a decentralized way, where account details and the newsletter invitation (contact form for feedback) are separate.



## D. Nonfunctional Requirements

This subsection includes E-R diagrams, relational schemas, and software quality attributes that the project must possess for its nonfunctional requirements.

### a. E-R diagrams

Below are the E-R diagrams of persons\_list and accounts\_list which are the relationships implemented for storing entries for the newsletter system and account details, respectively.

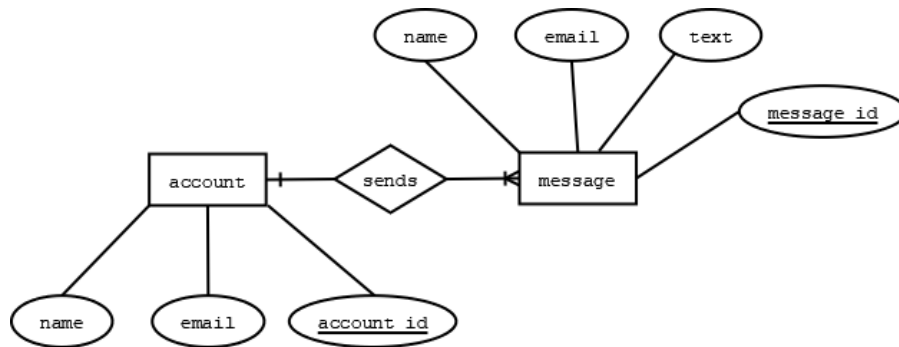


Figure 1. E-R diagram of persons\_list

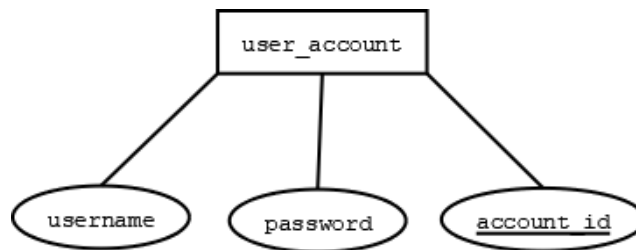


Figure 2. E-R diagram of accounts\_list

## b. Relational Schemas

Below are the relational schemas of persons\_list and accounts\_list which specify details how these are implemented for storing entries for the newsletter system and account details, respectively.

persons_list	
PK	<u>message_id</u>
	name email text id

Figure 3. Relational Schema of persons\_list

accounts_list	
PK	<u>account_id</u>
	email password

Figure 4. Relational Schema of accounts\_list

## c. Quality Attributes

Below are the following project quality attributes that are expected to be met by the website:

- i. Availability – The website is expected to limit account inactivity or downtime by 5 minutes.
- ii. Scalability and Maintainability – The database system should be maintained as the website content and user base grows. The website also has to be able to support more features as well as for website improvements and optimizations.
- iii. Security – The data collected by the website needs to be secured through some encryption. Backups for this data is also needed for any contingency that may occur.