Software Requirements Specification

Version 1.0

August 15, 2018

Library Management System

Shovan Kumar Behera

Rupsita Parida

Shakti Prasad Mishra

Submitted in partial fulfillment

of the requirements of

Software Engineering

# Table of Contents

[Table of Contents i](#_Toc77487619)

[1.0. Introduction 1](#_Toc77487621)

1.1. Project Description 1

1.2. List of Actors 1

[1.3. Scope of Projects 2](#_Toc77487624)

[1.4. References 2](#_Toc77487625)

[2.0. Overall Description 4](#_Toc77487627)

[2.1 Functional Requirements 5](#_Toc77487629)

[2.1.1 Use Case 5](#_Toc77487630)s

2.1.2 Entity Relationship Diagrams

2.1.3 Data Flow Diagrams

[2.2 Non-Functional Requirements 15](#_Toc77487649)

2.2.1 System Requirements

2.2.2 Performance Requirements

2.2.3 Security Requirments

2.2.4 Database Requirments

2.2.5 Safety Requirments

1. **Introduction**

**1.1 Project Description**

The purpose of this document is to present a detailed description of the Library Management System. It will explain the purpose and features of the system, the interfaces of the system, what the system will do, the constraints under which it must operate and how the system will react to external stimuli. This document is intended for both the users and administers of the system and will be proposed to the educational institutions for its approval.

**1.2 List of Actors**

Admin (Librarian), Issuer (Student/ Teacher)

**1.3 Scope of Projects**

This software system will be a Library Management System for a university. This system will be designed to manage the issuing of books efficiently by providing tools to assist in automating the book issue, return date and generation of fine, if any, which would otherwise have to be performed manually. By maximizing the librarian’s work efficiency the system will meet the users’ needs while remaining easy to understand and use.

More specifically, this system will keep a track of what and how many books a person issues on a regular basis. It’ll also keep a record of the number of copies of individual books that the library owns and currently has available for issuing. The system will also make it easy for the users to find their choice of books by categorising the books under authors, subjects and editions. The system also contains a relational database for all issuers and books.

**1.4 References**

Example: IEEE. IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998.

1. **Overall Description**

**2.1 Functional Requirements**

**2.1.1 Use Case**

Example: Search Article

Diagram:

Issuer

Search Book

Brief Description:

The Reader accesses the Online Journal Website, searches for an article and downloads it to his/her machine.

Initial Step-By-Step Description:

Before this use case can be initiated, the Reader has already accessed the Online Journal Website.

The Reader chooses to search by author name, category, or keyword.

The system displays the choices to the Reader.

The Reader selects the article desired.

The system presents the abstract of the article to the reader.

The Reader chooses to download the article.

The system provides the requested article.

**2.1.2 Entity Relationship Diagrams**

**Example:**

Review

Reviewer

Article

Author

writes

sent to

writes

has

**Author Data Entity**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Item** | **Type** | **Description** | **Comment** |
| Name | Text | Name of principle author |  |
| Email Address | Text | Internet address |  |
| Article | Pointer | Article entity | May be several |

**Reviewer Data Entity**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Item** | **Type** | **Description** | **Comment** |
| Name | Text | Name of principle author |  |
| ID | Integer | ID number of Historical Society member | Used as key in Historical Society Database |
| Email Address | Text | Internet address |  |
| Article | Pointer | Article entity of | May be several |
| Num Review | Integer | Review entity | Number of not returned reviews |
| History | Text | Comments on past performance |  |
| Specialty | Category | Area of expertise | May be several |

**2.1.3 Data Flow Diagram**

**2.2 Non Functional Requirements**

**2.2.1 System Requirements**

**2.2.2 Performance Requirements**

**2.2.3 Security Requirments**

**2.2.4 DatabaseRequirements**

**2.2.5 SafetyRequirements**