SOFTWARE

REQUIREMENTS SPECIFICATION

**For**

**Blog Platform**

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# Introduction

## Purpose

The main objective of this document is to define the requirements for a blogging site. The document gives the detailed description of the both functional and non-functional requirements proposed by the client. The site will allow users to create an account, write blog posts, and interact with other users through comments. Our mission is to create a space for people to express themselves, share their expertise, and engage in meaningful conversations. This project describes the hardware and software interface requirements using ER diagrams and UML diagrams.

## Document Conventions

* + - Entire document should be justified.
    - Convention for Main title

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* + - Convention for Sub title

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* + - Convention for body

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## Scope of Development Project

Online Blogging System, as described above, can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus, it will help organization in better utilization of resources. The organization can maintain computerized records without redundant entries. That means that one need not be distracted by information that is not relevant, while being able to reach the information.

The aim is to automate its existing manual system by the help of computerized equipments and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same. Basically, the project describes how to manage for good performance and better services for the clients.

The project can be easily implemented under various situations. We can add new features as and when we require, making reusability possible as there is flexibility in all the modules.

The language used for developing the project is Java as it is quite advantageous than other languages in terms of performance, tools available, cross platform compatibility, libraries, cost (freely available), and development process.

## Definitions, Acronyms and Abbreviations

JAVA -> platform independence SQL-> Structured query Language ER-> Entity Relationship

UML -> Unified Modeling Language

IDE-> Integrated Development Environment SRS-> Software Requirement Specification

## References

* + - Books

 Software Requirements and Specifications: A Lexicon of Practice, Principles and Prejudices (ACM Press) by Michael Jackson

Software Requirements (Microsoft) Second Edition by Karl E. Wiegers

Software Engineering: A Practitioner’s Approach Fifth Edition by Roger S. Pressman

* + - Websites

**https://www.studocu.com/in/document/galgotias-university/software-engineering/srs-post-blogs-site/53760750**

**https://www.freeprojectz.com/project-report/1665**

# Overall Descriptions

## Product Perspective

Use Case Diagram of Library Management System

This is a broad level diagram of the project showing a basic overview. The users can be either staff or student.. This System will provide a search functionality to facilitate the search of resources. This search will be based on various categories viz. book name or the ISBN. Further the library staff personnel can add/update the resources and the resource users from the

system.The users of the system can request issue/renew/return of books for which they would have to follow certain criteria.

## Product Function

Entity Relationship Diagram of Library Management System

The Online Library System provides online real time information about the books available in the Library and the user information. The main purpose of this project is to reduce the manual work. This software is capable of managing Book Issues, Returns, Calculating/Managing Fine, Generating various Reports for Record-Keeping according to end user requirements. The Librarian will act as the administrator to control members and manage books. The member’s status of issue/return is maintained in the library database. The member’s details can be fetched by the librarian from the database as and when required. The valid members are also allowed to view their account information.

## User Classes and Characteristics

The system provides different types of services based on the type of users [Member/Librarian]. The Librarian will be acting as the controller and he will have all the privileges of an administrator. The member can be either a student or staff of the university who will be accessing the Library online.

The features that are available to the Librarian are:-

* + - A librarian can issue a book to the member.
    - Can view the different categories of books available in the Library
    - Can view the List of books available in each category
    - Can take the book returned from students
    - Add books and their information to the database
    - Edit the information of existing books
    - Can check the report of the existing books
    - Can check the report of the issued books
    - Can access all the accounts of the students

The features that are available to the Members are:-

* + - Can view the different categories of books available in the Library
    - Can view the List of books available in each category
    - Can own an account in the library.
    - Can view the books issued to him
    - Can put a request for a new book
    - Can view the history of books issued to him previously
    - Can search for a particular book

## Operating Environment

The product will be operating in windows environment. Blog Platform is a website and shall operate in all famous browsers, for a model we are taking Microsoft Internet Explorer, Google Chrome, and Mozilla Firefox. Also it will be compatible with the IE 6.0. Most of the features will be compatible with the Mozilla Firefox & Opera 7.0 or higher version. The only requirement to use this online product would be the internet connection.

The hardware configuration includes Hard Disk: 40 GB, Monitor: 15” Color monitor, Keyboard: 122 keys. The basic input devices required are keyboard, mouse and output devices are monitor, printer etc.

## Assumptions and Dependencies

The assumptions are:-

* + - The coding should be error free
    - The system should be user-friendly so that it is easy to use for the users
    - The system should have more storage capacity and provide fast access to the database
    - Ability to create and edit blog posts
    - User profile pages to showcase personal information and recent activity
    - Users may access from any computer that has Internet browsing capabilities and an

Internet connection

* + - Users must have their correct usernames and passwords to enter into their online accounts and do actions
    - Add categories and tags to blog posts for effective organization and search.

The dependencies are:-

* + - The specific hardware and software due to which the product will be run
    - On the basis of listing requirements and specification the project will be developed and run
    - The end users (admin) should have proper understanding of the product
    - The information of all the blogs must be stored in a database that is accessible by Blog Platform
    - Any update regarding the blog from the user is to be recorded to the database and the data entered should be correct

## Requirement

Software Configuration:-

This software package is developed using java as front end which is supported by sun micro system. Microsoft SQL Server as the back end to store the database.

Operating System: Windows NT, windows 98, Windows XP Language: Java Runtime Environment, Net beans 7.0.1 (front end) Database: MS SQL Server (back end)

Hardware Configuration:- Processor: Pentium(R)Dual-core CPU Hard Disk: 40GB

RAM: 256 MB or more

## Data Requirement

The inputs consist of the query to the database and the output consists of the solutions for the query. The output also includes the user receiving the details of their accounts. In this project the inputs will be the queries as fired by the users like create an account, Create Blog and Edit and Manage blogs. Now the output will be visible when the user requests the server to get details of their account in the form of time, date and which blogs are currently posted in the account.

# External Interface Requirement

## GUI

The software provides good graphical interface for the user to operate on the system, performing the required task such as create, update, viewing the Blog.

* + - User-friendly follow and notification system to enable users to follow other bloggers
    - Timely notifications to inform users about new posts from followed bloggers
    - Robust comment system for users to engage with blog posts and share their thoughts
    - Threaded comment system to facilitate organized and meaningful discussions
    - Seamless social media sharing options to allow users to share blog posts with their networks
    - Integration with popular social media platforms to extend blog post reach and engagement

Login Interface:-

In case the user is not yet registered, he can enter the details and register to create his account. Once his account is created, he can ‘Login’ which asks the user to type his username and password. If the user entered either his username or password incorrectly then an error message appears.

Search:-

The user can enter the name of the blog he is looking for, then he can search for the required blog by entering the blog name.

Categories View:-

Categories view shows the categories of blogs available and provides ability to the user to add/edit or delete category from the list.

Control Panel:-

This control panel will allow user to add/remove/edit a Blog.

# System Features

The users of the system should be provided the surety that their account is secure. This is possible by providing:-

* User authentication and validation of members using their unique member ID
* This site is designed for optimal performance, with fast load times and minimal downtime. The server will be capable of handling a large number of simultaneous users.
* Implement robust security measures to protect user data and prevent unauthorized access, including encryption of sensitive data

# Other Non-functional Requirements

## Performance Requirement

The proposed system that we are going to develop will be used as the Chief performance system. Therefore, it is expected that the database would perform functionally all the requirements that are specified by the user.

* + - The performance of the system should be fast and accurate
    - Blog Platform shall handle expected and non-expected errors in ways that prevent loss in information and long downtime period. Thus it should have inbuilt error testing to identify invalid username/password
    - The system should be able to handle large amount of data. Thus it should accommodate high number of books and users without any fault

## Safety Requirement

The database may get crashed at any certain time due to virus or operating system failure. Therefore, it is required to take the database backup so that the database is not lost. Proper UPS/inverter facility should be there in case of power supply failure.

## Security Requirement

* + - System will use secured database
    - Normal users can just read information but they cannot edit or modify anything except their personal and some other information.
    - System will have different types of users and every user has access constraints
    - Proper user authentication should be provided
    - No one should be able to hack users’ password
    - There should be separate accounts for admin and members such that no member can access the database and only admin has the rights to update the database.

## Requirement attributes

* + - There may be multiple admins creating the project, all of them will have the right to create changes to the system. But the members or other users cannot do changes
    - The project should be open source
    - The Quality of the database is maintained in such a way so that it can be very user friendly to all the users of the database
    - The user be able to easily download and install the system

## Business Rules

A business rule is anything that captures and implements business policies and practices. A rule can enforce business policy, make a decision, or infer new data from existing data.This includes the rules and regulations that the System users should abide by. This includes the cost of the project and the discount offers provided. The users should avoid illegal rules and protocols. Neither admin nor member should cross the rules and regulations.

## User Requirement

The users of the system are members who act as administrator to maintain the system. The members are assumed to have basic knowledge of the computers and internet browsing. The administrators of the system should have more knowledge of the internals of the system and is able to rectify the small problems that may arise due to disk crashes, power failures and other catastrophes to maintain the system. The proper user interface, user manual, online help and the guide to install and maintain the system must be sufficient to educate the users on how to use the system without any problems.

The admin provides certain facilities to the users in the form of:-

* + - Backup and Recovery
    - Forgot Password
    - Data migration i.e. whenever user registers for the first time then the data is stored in the server
    - Data replication i.e. if the data is lost in one branch, it is still stored with the server
    - Auto Recovery i.e. frequently auto saving the information
    - Maintaining files i.e. File Organization
    - The server must be maintained regularly and it has to be updated from time to time

# Other Requirements

## Data and Category Requirement

There are different categories of users .It means if the user is an administrator then he can be able to modify the data,delete, append etc. A blog can be an effective way to attract potential customers or clients to a business or service by providing valuable information that addresses their needs or pain points. According to the blog, data should be displayed. The categories and the data related to each category should be coded in the particular format.

## Appendix

A: Admin, Abbreviation, Acronym, Assumptions; B: Blog, Business rules; C: Class, Client, Conventions; D: Data requirement, Dependencies; G: GUI; K: Key; N: Non-functional Requirement; O: Operating environment; P: Performance, Perspective, Purpose; R: Requirement, Requirement attributes; S: Safety, Scope, Security, System features; U: User, User class and characteristics, User requirement;

## Glossary

The following are the list of conventions and acronyms used in this document and the project as well:

* + - Administrator: A login id representing a user with user administration privileges to the software
    - User: A general login id assigned to most users
    - Client: Intended users for the software
    - SQL: Structured Query Language; used to retrieve information from a database
    - SQL Server: A server used to store data in an organized format
    - Layer: Represents a section of the project
    - User Interface Layer: The section of the assignment referring to what the user interacts with directly
    - Application Logic Layer: The section of the assignment referring to the Web Server. This is where all computations are completed
    - Data Storage Layer: The section of the assignment referring to where all data is recorded
    - Use Case: A broad level diagram of the project showing a basic overview
    - Class diagram: It is a type of static structure diagram that describes the structure of a system by showing the system’s cases, their attributes, and the relationships between the classes
    - Interface: Something used to communicate across different mediums
    - Unique Key: Used to differentiate entries in a database

## Class Diagram

A class is an abstract, user-defined description of a type of data. It identifies the attributes of the data and the operations that can be performed on instances (i.e. objects) of the data. A class of data has a name, a set of attributes that describes its characteristics, and a set of operations that can be performed on the objects of that class. The classes’ structure and their relationships to each other frozen in time represent the static model. In this project there are certain main classes

which are related to other classes required for their working. There are different kinds of relationships between the classes as shown in the diagram like normal association, aggregation, and generalization. The relationships are depicted using a role name and multiplicities. Here ‘Librarian’, ‘Member’ and ‘Books’ are the most important classes which are related to other classes.