Software Requirements Specification

for

BUP Leave Register

Version 1.0 approved

Prepared by:

Md Sadiqul Islam (2054901063)

Spondon Haider (2054901069)

Tamanna Tasnim (2054901086)

Md Sajiduzzaman Khan (2054901088)

Tamzid Omor Bhuiyan (2054901090)

16.08.2022

Table of Contents

Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

The purpose of this document is to describe the BUP Leave Register Management Software, which is a web-based software.

1.2 Document Conventions

The SRS document is created by following the IEEE documentation conventions. The 'Times New Roman' font is used through out the document. The font size for headings is 14 and the sub-headings are 12. All the headings and sub-headings are written in bold text.

1.3 Product Scope

The BUP Leave Register Management system will help in automating the manual process of registering leaves of different categories. This system will be accessible as a website.

The design and features of this system will be focused on faculty members and other employees at BUP.

1.4 References

- IEEE 830-1998 standard for writing SRS document.

2. Overall Description

2.1 Product Perspective

The BUP Leave Register Management system is an automated version of the traditional manual leave register. The automated system would be easier to maintain and more secured than the manual one, as it would not require manual track keeping of leaves and no paper applications. This will keep track of leaves taken by and also leaves available to the employees.

2.2 Product Functions

2.2.1 Administrators

- The admins will have access to the records of all the user accounts, excluding other admin accounts.
- Admins will be able to modify the academic calendar.
- They can make changes to the rules and regulations for taking leaves.
- They can cancel or reduce the period of leave for any employee in certain circumstances.

2.2.2 Normal Users

- The users should be provided with their own record of leaves taken and remaining leaves.
- Users will be able to apply for leaves.
- Some specific types of users will be able to approve leaves for other users.
- Users will be able to extend their leaves as per the rules provided by the authority.
- The users should get notified about government holidays, optional holidays and other significant dates in the academic calendar.

2.3 User Classes and Characteristics

- The users of this Leave Register System are the faculty members, other employees at BUP and the administrators who will maintain the overall system.
- All the normal users are assumed to have a basic understanding of operating computers and browsing the internet.
- The administrators must have good knowledge of the internal mechanism of the system. They should be able to maintain the system and rectify small problems caused by various factors.

2.4 Operating Environment

The BUP Leave Register management system is a website which should operate in all major browsers such as Google Chrome, Microsoft Edge etc.

2.5 Design and Implementation Constraints

- The information of all users, leaves taken by the users, and information of the academic calendar of each year must be stored in a database which will be accessible by the website.
- Primarily the data would be stored in our local machine.
- The website will be hosted on a live server.
- Users should access their accounts through providing the correct username and password.

2.6 Norms and Dependencies

- MySQL will be used to store and retrieve information from the database in the local machine.
- PHP Laravel will be used to develop the product.

3. External Interface Requirements

3.1 User Interfaces

Login Interface:

All users should be logged in first to use the system. If the user is not logged in, there will be a login interface which will ask for the user's login name or employee id and password.

Dashboard view:

Each individual user will have their own information in a dashboard. The dashboard view would be such that the users will be able to keep track of their leaves and other personal information.

Application for leave:

This interface would provide the user with a form where the user can optionally write an application. There would be options for selecting which type of leave the user wants, and there should be an option where the user can select if the application is for taking a leave

or extending an existing leave. There would be an apply button which will send the application to the authority.

Inbox:

For those users who have the authority to approve other users' requests, there will be an inbox which will show all the pending requests. The user can then choose to view the application in detail and whether to approve or deny the request.

Rules and Regulations page:

There should be rules and regulations page which will guide the users through with the different types of leaves and how the leaves are available. This will also be provided with detailed calculations for leaves such as 'earned leaves' if the user wishes to know more.

Admin Control Panel:

The admins would have a control panel to maintain the overall system and user accounts.

3.2 Hardware Interfaces

No specific hardware other than a basic computer system is needed to run the software.

3.3 Software Interfaces

- A browser to access and load the website
- An operating system (Windows, MacOS, Linux etc.)

3.4 Communications Interfaces

The system depends on the HTTP protocol to provide the users with the website through any major web browser. Also, SMTP protocol should be used to communicate through email.

4. System Features

4.1 Admin:

Admin-dashboard:

The admins will have access to their own information as well as other users' information through dashboards. The dashboards will be easy to navigate through so that others' information is easily accessible to the admins.

Control Panel:

Admins will have access to a control panel that enables them to change the settings of the whole system, monitor any changes or errors and access the database.

4.2 Normal User:

Register:

A new user will have to provide necessary information to create an account to use the system.

Applying for leaves:

A user can apply for different categories of leaves. Such as sick leave, earned leave etc. The application from a user will be sent to be approved by another user with authority of approval.

Extending leaves:

The users will have the option to apply for extending their leaves. This extension will be according to the rules provided by the authority or emergency.

Approve for leaves:

Some specific types of users will be able to approve for other users' leaves. Such as the Chairman of a department, Dean of a faculty and some other users.

Dashboard:

Each user will have a dashboard that will enable them to view their own information. In this way users will be able to track leaves taken and remaining leaves.

Notification:

Users should be notified the state of their approval request. Once their leave is accepted or denied for any reason, the users should get an SMS so that they get notified even without having to access the internet. Detailed notifications will be provided to their email accounts.

4.3 Common Features:

Login:

Both admin and normal users must be logged in before they can use any features of the system. The login requires a username or employee id and a password.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

The system should be scalable and be able to handle many users at once. It must be able to accommodate all the existing employees and should scale up to handle new employees.

5.2 Safety Requirements

The use of this system should not be a cause of harm to any human users.

5.3 Security Requirements

- The system's database should be secured and reliable, so that only the authorized persons would have access to the data.
- Normal users should be able to only view their own information. Users can only modify their personal information and not other data associated to them.

5.4 Software Quality Attributes

- The system should be easily maintainable and should provide decent benefits in comparison to the manual track keeping approach.
- The system should be accessible by any modern web browser, in any kind of device.
- The development of the system should be such that the components of the system is accurately testable.
- The system should be flexible and robust, so that errors in any individual component doesn't force the whole system to halt.

6. Behavioral Requirements

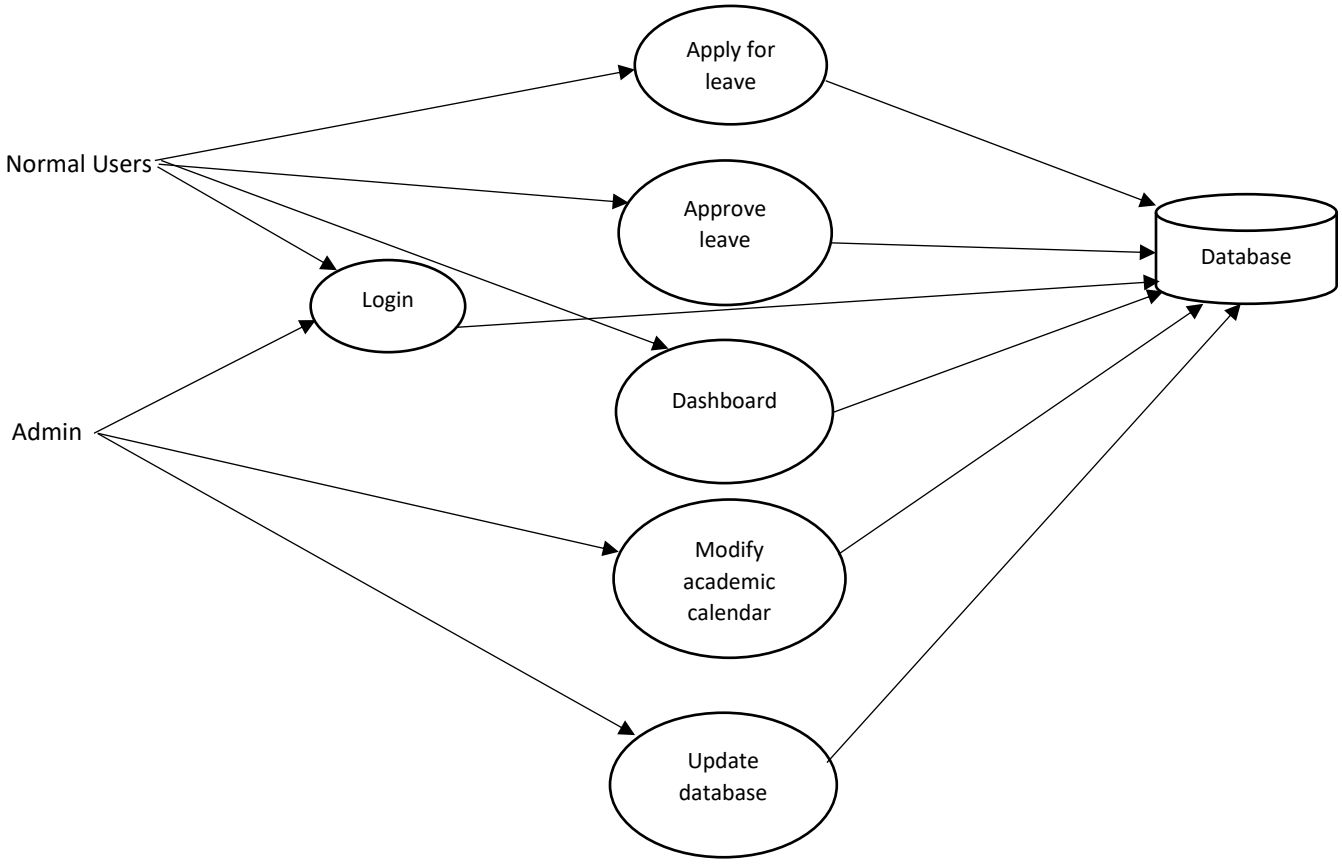

Fig: Leave Register Management system diagram