Software Requirements Specification

for

Leave Management System

Version 1.0 approved

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17 Jan , 2019

Table of Contents

Revision History

Name	Date	Reason For Changes	Version
Yogesh V	15-02-19	Updating the third version of SRS	
I Ravindra	06-02-19	Updating the first version of SRS	

1. Introduction

1.1 Purpose

The leave management system is an web based application that can be accessed throughout the organization or a specified group/Dept. This system can be used to automate the workflow of leave applications and their approvals. The periodic crediting of leave is also automated. There are features like email notifications, cancellation of leave, automatic approval of leave, report generators etc in this Tool.

1.2 Document Conventions

The format of this document is referred from the standard IEEE guidelines:

- Font face : Arial
- Font size
  - Heading : 18
  - Subheading : 14
  - Description : 11
- Bold face and indentation is used on general topics and or specific points of interest including the heading and sub-heading.

1.3 Intended Audience and Reading Suggestions

This document is mainly intended for project guides, developers and module coordinator (OOSP). The sequence for reading the document begins with the overview sections and proceeding through the sections that are most pertaining to each reader type.

1.4 Product Scope

This project is aimed at developing a web based Leave Management Tool, which is of importance to either an organization or a college. This is an Intranet based application that can be accessed throughout the organization or a specified group/Dept. This system can be used to automate the workflow of leave applications and their approvals. The periodic crediting of leave is also automated. There are features like email notifications, cancellation of leave, automatic approval of leave, report generators etc in this Tool.

2. Overall Description

2.1 Product Perspective

The project has been planned to be having the view of distributed architecture, with centralized storage of the database. The application for the storage of the data has been planned. Using the constructs of mysql Server and all the user interfaces have been designed using the php,css languages. The database connectivity is planned using the xampp server. The standards of security and data protective mechanism have been given a big choice for proper usage. The application takes care of different modules and their associated reports, which are produced as per the applicable strategies and standards that are put forwarded by the administrative staff.

2.2 Product Functions

There are registered people in the system. Some are approvers. An approver can also be a requestor. In an organization, the hierarchy could be Engineers/Managers/Business Managers/Managing Director etc. In a college, it could be Lecturer/Professor/Head of the Department/Dean/Principal etc.

Following is a list of functionalities of the system:

1. A person should be able to
    - login to the system through the first page of the application
    - change the password after logging into the system
    - see his/her eligibility details (like how many days of leave he/she is eligible for etc)
    - query the leave balance
    - see his/her leave history since the time he/she joined the company/college
    - apply for leave, specifying the from and to dates, reason for taking leave, address for communication while on leave and his/her superior's email id
    - see his/her current leave applications and the leave applications that are submitted to him/her for approval or cancellation
    - approve/reject the leave applications that are submitted to him/her
    - withdraw his/her leave application (which has not been approved yet)

- Cancel his/her leave (which has been already approved). This will need to be approved by his/her Superior
- get help about the leave system on how to use the different features of the system

2. As soon as a leave application /cancellation request /withdrawal /approval /rejection /password-change is made by the person, an automatic email should be sent to the person and his superior giving details about the action
3. The number of days of leave (as per the assumed leave policy) should be automatically credited to everybody and a notification regarding the same be sent to them automatically
4. An automatic leave-approval facility for leave applications which are older than 2 weeks should be there. Notification about the automatic leave approval should be sent to the person as well as his superior
5. A summary report of the leave details of his/her subordinates should be sent to every manager periodically

2.3 User Classes and Characteristics

The admin user interface concentrates on the consistent information that is practically, part of the organizational activities and which needs proper authentication for the data collection. The interfaces help the administrations with all the transactional states like Data insertion, Data deletion and Date updation along with the extensive data search capabilities.

The modules involved are:

- Admin
- Employee
- Search
- Report
- Authentication

Admin:-

In this module the Admin has the privileges to add all the Employees and register them in the organization and check the information of the Employee and check the status of the leave when they have taken and what type of leave they have taken and search is done based on the employee and report is generated based on employee.

Search:-

This module contain complete search like Leave search, Type of Leave, Employee based on the leave and starting and ending day of leave.

Employee:-

In this module employee has the privileges to use his username and password for login and he can see the request given by the customer and he can pass the process to the Business Manager and maintain the record of the customers.

Reports:-

This module contains all the information about the reports generated by the Employees based on the Performance and by the leave status.

Authentication:-

This module contains all the information about the authenticated user. User without his username and password can't enter into the login if he is only the authenticated user then he can enter to his login.

INPUT / OUTPUT

The main inputs, outputs and major functions of the system are as follows

Inputs:

- Admin enters his or her user id and password.
- Employee enter his or her user id and password.
- Employee send request for Leave.
- Employee can check for status for Leave.
- Admin can edit the employee details and so on..

Outputs:

- Admin gets his homepage.
- Employee get his homepage.
- Employee leave request data will be stored in database..
- Displays leave Status.

- Admin get employee details.

2.4 Operating Environment

Hardware Requirements

- Computer Machine with at least 2GB RAM and 32GB ROM
- External Disk
- Database at least 10 GB large for long run use of this application
- Reliable web server

Software Requirements

- Xampp
- Operating system : Windows XP or above,Ubuntu
- Frontend : HTML,Javascript,CSS
- Backend : PHP
- Database : Mysql
- Editor : Sublime text

2.5 Assumptions and Dependencies

- Each Employee must have a User ID and password.
- There must be an Administrator.
- Internet connection is a must.
- Proper browsers should be installed in the user's system.

3. External Interface Requirements

3.1 User Interfaces

- Login or Signup page
- An employee can view and edit his personal details
- Employee can change his password
  - Employee can apply for a leave
- Admin can add and delete employees
- Admin can approve,cancel the employee's leave request

3.2 Hardware Interfaces

Since the application must run over the internet, all the hardware requires is to connect to the internet. As for e.g. Modem, WAN – LAN, Ethernet Cross- Cable. The system requires Database,like MYSql to store any transaction. System also requires DNS (domain name space) for naming on the internet. The user needs web browser to interact with the system.

3.3 Software Interfaces

- PHP
- MySQL
- Browser (Google Chrome, Mozilla Firefox, Safari etc.)
- Operating System supporting the above browsers.

3.4 Communications Interfaces

The leave management system shall use the HTTPS protocol for communication over the internet and for the intranet communication will be through TCP/IP protocol suite. The user must have SSL certificate licensing registered web browse

4. System Features

4.1.Secure login to the interface

4.1.1 Description and Priority

Secure login to the interface is a primary system feature which enables the privacy and security to the data of the pharmacy.It is of high priority.

4.1.2 Stimulus/Response Sequences

The pharmacy employee provides his unique username and password for which we verify the correctness of the data from database.To ensure secure login,the password is encrypted and stored.Use of CSRF token enables high security so that the same url cannot be opened in private browsing etc.

4.1.3 Functional Requirements

The login screen allows registered users to login to the site to access all of the features that their account gives them access to. If they type in their username and password and click submit the users credentials are validated and if correct they are logged in.If they are incorrect they get an error message.If the user has forgotten their password they click "Forgot Password?" which takes them to a password recovery screen. If the user does not have an account then they click the register button.Some of the functional requirements for secure login are

Cryptographic Support (FCS) : What operations use cryptography, what algorithms and key sizes are you using, and how are you managing their keys (including distribution and destruction)?

Privacy (FPR) : Need to support anonymity, pseudonymity, unlinkability, or unobservability. There conditions where you want or don't want these (e.g., should an administrator be able to determine the real identity of someone hiding behind a pseudonym?). Note that these can seriously conflict with non-repudiation, if you want those too. If you're worried about sophisticated threats, these functions can be hard to provide.

4.1 System Feature 2 (and so on)

5. Other Nonfunctional Requirements

5.1 Performance Requirements

● The product will be based on web and has to be run from a web server.
● The product will take initial load time depending on internet connection strength which also depends on the media from which the product is running.
● The performance will depend upon hardware components of the client/customer

5.2 Security Requirements

● The customer's web browser will never display a customer's password. It shall always be echoed with special characters representing typed characters.
● The system's back-end servers shall never display a customer's password. The customer's password may be reset but never shown.
● Password of the user is never misused by the administrator.
● The system's back-end servers will only be accessible to authenticated administrators.(A password existence to access the database)

5.3 Software Quality Attributes

● It should be equipped with current and active database.
● All records can easily be updated.
● It should have its personal firewall

5.4 Business Rules

<List any operating principles about the product, such as which individuals or roles can perform which functions under specific circumstances. These are not functional requirements in themselves, but they may imply certain functional requirements to enforce the rules.>

6. Other Requirements

<Define any other requirements not covered elsewhere in the SRS. This might include database requirements, internationalization requirements, legal requirements, reuse objectives for the project, and so on. Add any new sections that are pertinent to the project.>

Appendix A: Glossary

<Define all the terms necessary to properly interpret the SRS, including acronyms and abbreviations. You may wish to build a separate glossary that spans multiple projects or the entire organization, and just include terms specific to a single project in each SRS.>

Appendix B: Analysis Models

<Optionally, include any pertinent analysis models, such as data flow diagrams, class diagrams, state-transition diagrams, or entity-relationship diagrams.>

Appendix C: To Be Determined List

<Collect a numbered list of the TBD (to be determined) references that remain in the SRS so they can be tracked to closure.>