Software Requirements Specification

for

Payroll Management System

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Software Engineering Mini Project-||

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

Main aim of developing Payroll Management System is to provide an easy way not only to automate all functionalities involved managing leaves and Payroll for the employees of Company, but also to provide full functional reports to management of Company with the details about usage of leave facility.
We are committed to bringing the best way of management into the various forms of PMS. We understand that PMS is not a product to be sold, it is a tool to manage the inner operation of Company related to employee leave and Payroll.

1.2 Document Conventions

- SRS – Software Requirements Specification.
- PMS – Payroll Management System.

1.3 Intended Audience and Reading Suggestions

This project is a prototype for the PMS, and it is restricted within the college premises. This has been implemented under the guidance of college professors. This project is useful for the Payroll Management Team working in a company and as well as to the Employees.

1.4 Product Scope

This Application works in Multiple PC's installed on multiple Computers but sharing same database by which users of different department can use it sitting at different locations simultaneously.
But in future we can make the Application where the database will be hosted in order to manage all departments which will be located in different places and by keeping domain of Application as Online.

1.5 References

- SRS format from IEEE website(www.ieee.org/format).
- PMS tool by allinterview.com

1.6 Project Overview

The following subsections provide the complete overview of the software specifications requirements documentation for the tool Payroll Management System. The entire SRS is documented in view of User and the following sub sections are arranged to give a complete outlook of the software, its perspective, features, system requirements and users know how it is.

2. Overall Description

2.1 Product Perspective

This software is developed specifically to cater for the company employees leave management, it is totally self-contained and works efficiently. It provides a simple database rather than complex ones for high requirements and it provides a good and easy graphical user interface to both new as well as experienced users of the computer.

2.2 Product Functions

2.2.1 Master module

- Designation: Contains the position or status of employees in departments.
- Department: Contains information about different departments in any company.

2.2.2 Employee module

- Employee details: This module contains the whole detail of employees of any system.

2.2.3 Attendance module

- Leave: This module is for keeping the records of leave taken by any employee.
- Attendance: This module is for keeping the records of employees' presence.

2.2.4 Salary module

- Allowance: This module is for calculating the allowance given to employees by intuition.
- Deduction: This module calculates the amount from number of days taken as leave and deducts these amounts from salary.
- Pay Slip: This module is for generating the final pay slip.

2.3 User Classes and Characteristics

2.3.1 End Users

➢ No specific knowledge or skills are required from the end user.
➢ End user should have basic idea about computer operations and database.

2.3.2 Administrator

➢ Administrator must be having good knowledge of database management system.
➢ Administrator to manage user rights.
➢ If the network connection does not work properly than our system should not work as intended.
➢ Also that is assumed that the product is installed properly at web server.
➢ This system will not take care of any virus problem, which might occur either on the client or the server system. Avoiding the use of pirated software and ensuring that floppies and other removable media are scanned for viruses before use could minimize the possibility of viral infection
➢ Recovery of data after a system crash will be possible only if backups are taken at regular intervals.

➢ Manual interfaces cannot be fully avoided. Documented proofs like data entry of employees etc. will have to be verified by the management staff concerned before entering it into the computerized system.

2.4 Operating Environment

Operating environment for the payroll management system is as listed below.
- distributed database
- admin/user system
- Operating system: Ubuntu.
- database: sql + database
- platform: Django/Python/HTML.

2.5 Design and Implementation Constraints

- The Database Schema, Payroll, Leave, Salary/Bonus, etc.
- SQL commands for above queries/applications.
- How to repond for above application generated, assuming they are global queries.
- Implement the database at least using a centralized database management system.

2.6 Assumptions and Dependencies

2.6.1 Assumptions:

- The code should be free with compilation errors/syntax errors.
- The product must have an interface which is simple enough to understand.

2.6.2 Dependencies:

- All necessary hardware and software are available for implementing and use of the tool.
- The proposed system would be designed, developed and implemented based on the software requirements specifications document.
- End users should have basic knowledge of computer and we also assure that the users will be given software training documentation and reference material.
- The system is not required to save generated reports.

3. External Interface Requirements

3.1 User Interfaces

- The System provides a good graphical interface to the user.
- Frond end Software – Django webserver, HTML
- Backend Software – Python, MySQL

3.2 Hardware Interfaces

- Keypad touch
- Keyboard
- Hard Disk
- Ram with memory 256GB or more.
- Ubuntu 20.04
- Browser which supports HTML.

3.3 Software Interfaces

- Operating System – Ubuntu 20.04
- Database – To save the employee record, we have used sql + database.

3.4 Communications Interfaces

- Communications interfaces can be provided through e-mail, web browser, network server communications protocols, electronic forms, and so on.
- For this we can use communication standards such as FTP or HTTP to provide security using encryption algorithms and synchronization mechanisms.

4. System Features

4.1 Description and Priority

The payroll management system is a set of processes that helps you streamline salaries, bonuses, deductions, taxes, and other necessary aspects of the net pay of all the employees in your organization. This project is of high priority because it is difficult to manage the financial details of each employee by HR.

4.2 Stimulus/Response Sequences

- o Establish your employee identification number (EID).
- o Collect relevant employee tax information.
- o Choose a payroll schedule.
- o Calculate gross pay.
- o Determine each employee's deductions.
- o Calculate net pay and pay the employees.
- o Keep payroll records and make any necessary connections.

4.3 Functional Requirements

4.3.1 Masters:

- This module helps the administrator to enter the designation and the related description. It also helps to add the department.

4.3.2 Employee:

- This module helps to add the details of the employee like the personal detail and the employee detail.

4.3.3 Search:

- This module helps to search the employee details department wise and designation wise.

- This module helps to different types of leave for different year. It also helps the employee to enter their entry and exit time. Using the attendance module, the employee can also check their remaining leaves and apply for the leave.

4.4.4 Salary:

- This module helps to calculate the salary by adding the allowances and the basic salary and by deducting the deductions based on the leaves and the PF. It also helps to generate the employee pay slip.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

- The overall system should be fast and error free.
- It should have built-in error checking and correction facilities.
- The system should be able to handle large amounts of data comfortably.
- System can withstand even though many number of users requested the desired service.
- Access is given to the only registered users of office who require the services of viewing, Updating etc.

5.2 Safety Requirements

- By incorporating a robust and proven SQL into the system, reliable performance and integrity of data is ensured. There must be a power backup for the server system.
- In orfer to ensure reliability, this system is being designed using software that is established to be stable and easy to use.

5.3 Security Requirements

- The access to the system is given only to valid operators. We need a specific ID and password to get access to the system.
- Communication needs to be restricted when the application is validating the user of license.
- Sensitive data is protected from unwanted access by users' appropriate technology and implementing strict user- access criteria.

5.4 Software Quality Attributes

- Menu-driven programs with user friendly interface with simple hyperlinks. It is very easy to use.
- Backup mechanisms are considered for maintainability of software as well as database.
- As it is object-oriented reusability exists.
- As the project is based on MVC architecture, testability exists.