**SOFTWARE REQUIREMENT SPECIFICATION**

ON

**EMPLOYEE PAYROLL MANAGEMENT SYSTEM**

Training Group

JAVA 187 DS Batch

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MPHASIS

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Table of contents

1.Introduction:

1.1 Purpose

1.2 Scope

1.3 Benefits

1.4 Definitions, Acronyms, Abbreviations

1.5 References

1.6 Overview

2.Overall Description:

2.1 Product Perspectives

2.2 Product Functions

2.3 User Characteristics

2.4 Assumptions and Dependencies

3.Specific Description:

3.1 External interface requirements

4. Functional requirements

5. Other Non-functional requirements

1. **Introduction:**

The payroll management process refers to the process of administration of financial records of employees of a company in respect of salary and associated payments. This would include details of the employee’s salaries, incentives, bonuses, insurance-claim and also consideration of various deductions like income-tax, provident fund etc. providing gross and net pay.

The software has to take care of the calculation of salary as per rules of the company for different posts and pay-scales, allowances, income tax calculation and various deductions to be done from the salary including statutory deductions like Income tax and provident fund deductions. It has to generate employee details and pay-slip.

It is understood that we are out of limits of managing thousands of odd papers, pay slip, payroll reports, and salary details and so on. Imagine that we have a payroll processing system which will generate our pay slips and payroll reports within seconds. We can help others automated your payroll system by developing a customized payroll application that suits your specific requirements.

1.1 **Purpose:**

Main aim of developing Employee Payroll Management System is to provide an easy way not only to automate all functionalities involved and Payroll for the employees of Company, but also to provide full functional reports to management of Company.

We have worked to bring the best way of management in the various forms of EPM.

We understand that EPM in not a product to be sold, it is a tool to manage the inner operation of Company related to employee Payroll.

1.2 **Scope:**

This PC-based application need to work in Multiple PC’s installed on multiple Computers.

By further up gradation, this application may be developed when the database will be hosted in order to manage the all departments which will be located in different places and by keeping domain of Application as Online.

1.3 **Benefits:**

To improve the efficiency.

Quickly find out information of an employee details.

To provide easy and faster access information.

To provide a user friendly environment.

Process of up-gradation, updating, deletion in salary calculation

1.4 **Definitions, Acronyms, Abbreviations**:

Angular is a development platform, built on TypeScript. As a platform, Angular includes:

* A component-based framework for building scalable web applications.
* A collection of well-integrated libraries that cover a wide variety of features, including routing, forms management, client-server communication, and more.
* A suite of developer tools to help you develop, build, test, and update your code

Spring : Spring is the most popular application development framework for enterprise Java. Millions of developers around the world use Spring Framework to create high performing, easily testable, and reusable code.Spring framework is an open source Java platform.

Hibernate: Hibernate is a Java framework that simplifies the development of Java application to interact with the database. It is an open source, lightweight, ORM (Object Relational Mapping) tool. Hibernate implements the specifications of JPA (Java Persistence API) for data persistence

Oracle SQL Developer:

Oracle SQL Developer is a free, integrated development environment that simplifies the development and management of Oracle Database in both traditional and Cloud deployments.

SRS - Software Requirements Specification.

EPMS - Employee Payroll Management System.

ER Diagram : Entity Relationship Diagram

DFD : Data Flow Diagram

1.5 **References:**

SRS format from IEEE website ([www.ieee.org/format](http://www.ieee.org/format)).

1.6 **Project Overview:**

The following subsections provide the complete overview of the software specifications requirements documentation for the product Employee Payroll Management. 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.

1. **Overall description**:

2.1 **Product perspective:**

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

2.2 **Product functions:**

2.2.1 **Employee module:**

Employee details: This module contains the whole detail of employees of any system and employee designation.

2.2.3 **Salary module**:

Allowance: This module is for calculating the allowance given to employee by the company.

Deduction: This module calculates the amount for income tax and provident fund on the basis of the gross and basic pay and deduct these amount from salary.

Pay Slip: This module is for generating the final pay slip.

2.3 **User Characteristics:**

2.3.1 **End Users:**

a) No specialized knowledge or skills on computer software are required from the end user except basic working knowledge on website operation.

b) Administration 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.

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 concerned management staff before entering it into the computerized system.

2.4 **Assumptions and Dependencies:**

2.4.1 **Assumptions:**

The code should be free with compilation errors/syntax errors.

The product must have an interface which is simple enough to understand.

The product would be validated and tested software for safe operation correct result output.

Avoiding the use of pirated software and ensuring that any removable storage media are scanned for viruses before use could minimize the possibility of viral infection

2.4.2 **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. **Specific requirements**:

3.1 **External interface requirements:**

3.1.1 **User interfaces:**

The software provides good graphical interface to the user in PC with internet connectivity.

3.1.2 **Hardware interfaces:**

* + - Personal Computer with internet connectivity
    - Mouse
    - Keyboard
    - Hard disk
    - RAM

3.1.3 **Software interfaces:**

Operating system : Windows 7 or above/ any main stream OS

Front end : Angular (version 6 and above)

Backend : Oracle SQL Developer and SpringREST and

Hibernate

4. **Functional requirements:**

4.1 **Admin:**

This module should help the administrator to set/Update the Salary ID of the Employee first. Then Admin should set/update the Post-held and pay scale and the related description. Salary with all individual components would be generated automatically.

4.2 **Employee:**

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

Newly joined employees should have facility to register for first time and then utilise the received employee-id and salary-id towards next operations.

Employee records should have capability to create, read, update and delete facilities.

This module helps to search the employee details list- wise.

4.3 **Password management:**

These functionalities help users to change password, recover forgotten password in Employee module.

4.4 Salary:

This module helps to calculate the salary by adding the allowances and the basic salary and by deducting the deductions of income tax and based on gross pay and also the PF based on basic pay. It also helps to generate the employee pay slip and shall allow employee to view pay details.

5. **Other Non-functional requirements**:

5.1 **Performance Requirements:**

1) The overall system should be fast and error free.

2) It should have built in error checking and correction facilities.

3) The system should be able to handle large amount of data comfortably.

5.2 **Reliability:**

In order to ensure reliability, this system is being designed using software that is established to be stable and easy to use. Proper validation and testing should be performed before release of the software.

5.3 **Availability:**

This system is designed to run 24/7 and be readily available to the user.

5.4 **Security:**

The access to the software is given only to valid operators. There shall be a specific ID and password for both the employee and admin to get access to the software.