Software Requirement Specification

Employee Module of an ERP System

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1. Introduction

This section gives a brief scope description and overview of everything included in this SRS document. Also, the purpose for this document is described and a list of abbreviations and definitions is provided.

1.1 Purpose

The purpose of this document is to give a detailed description of the requirements for the "Employee Module for an ERP System" software. It will illustrate the purpose and complete declaration for the development of system. It will also explain functional & non-functional requirements, interface, what the system will do, the constraints under which it must operate and how the system will react to external stimuli. This document is primarily intended to be proposed to a customer for its approval and a reference for developing the first version of the system for the development team.
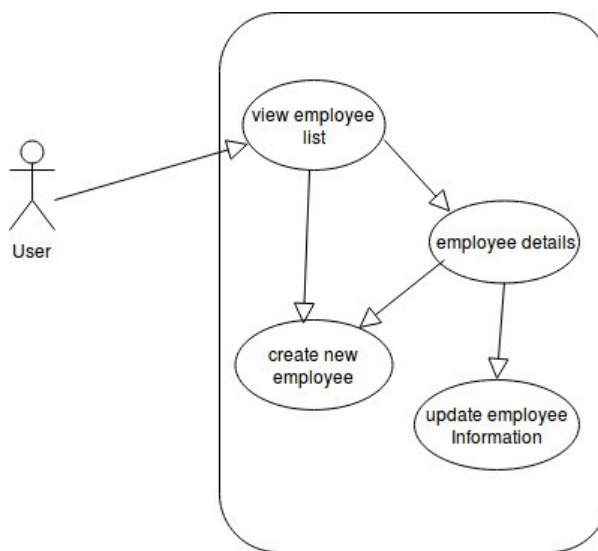
1.2 Scope

The "Employee Module for ERP System" allows administrator to manage employees and their individual roles. Administrator can add employees with specific role and title in different departments. There will be a list of all employees with employee details.

2. Overall description

This section will give an overview of the whole system. The system "Employee Module " will be explained in its context to show how the system interacts with other systems and introduce the basic functionality of it. It will also describe what type of stakeholders that will use the system and what functionality is available for each type. At last, the constraints and assumptions for the system will be presented.
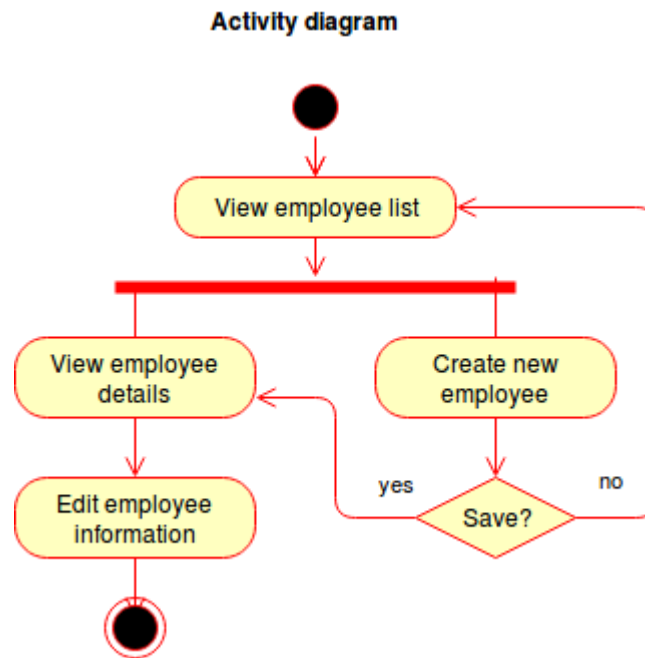
2.1 Product perspective

This system will have a list of employees retrieved from database. Each employee will have name, address, mobile, position, department, location, email, profile photo, job title as its public information. There will also be identification no, passport no, nationality, bank account, birthday, gender, marital status and home address as personal information. Employee detail will have edit & create navigation. This system is web based application, so to use this system the only requirements are Internet connection and a latest web browser.

Diagram 1: Use Case Diagram

2.2 Product function

With this system "Employee Module" users will be able to see the employee list. They can also see the individual employee details. Employee details consists of both public and personal information. User can add new employee with new title and assign the employee in different positions. Users will be allowed to update employee information. There will have page navigation path in the page which will make easier to use the system.

Activity diagram

Diagram 2: Activity Diagram

2.3 User characteristics

This system will have only one type of user which is the administrator. Only administrator will be able to view, create, update the employee informations.

2.4 Constraints

Latest version of web browser is a part of constraints as system will be built using latest technologies like HTML 5, CSS3 etc. The Internet connection is also a constraint for the application. Since the application fetches data from the database over the Internet, it is crucial that there is an Internet connection for the application to function. This system doesn't need any special requirements from the users.

3. Functional requirements

Serial	Id	Main features
1	FR1	Employee details view
2	FR2	Creating new employee
3	FR3	Updating employee information

3.1 Employee details view

User will be able to select an employee and see the respective employee details. Initially user will see a employee list containing employee brief information. Then user will be able to click on employee name to view all information which will be loaded from database immediately.

3.2 Creating new employee

User will be able to create new employee. There will have a create button and clicking on the button will redirect to a form page. User can either fill up the form by employee information and submit the form or discard to save the new employee. There will have field validation system in the employee form like range, format/pattern, uniqueness, mandatory, multiplicity etc to ensure that the input data are valid to save. There will have some drop-down list like departments, positions etc. The profile photo of the employee will have to be in .PNG, .jpg or .jpeg format.

3.3 Updating employee information

User can update an existing employee information. There will have a edit button and when the edit button is clicked, the same form should become editable & edit should become "Save" & create should become "Discard" button. User can either save the changes or can choose to discard the changes here.

4. Non-functional requirement

In this section, last group of the requirements which is non-functional requirements will be explained in detail. Non-functional requirements include performance requirements and safety requirements for future module integration.

4.1 Performance requirements

Since this software is going to be web based, it does require a minimum level of Internet speed to browse the application. Also, updated device or browsers are expected to get the full features of the application as it will be built on latest technologies. Server machine should have a powerful CPU and high speed Internet access so that it can handle multiple users at the same time. Another performance requirement is the storage space. Higher storage space means more user and bigger workspace per user so higher the storage, better the performance.

4.2 Safety requirements

This system is a module of an ERP system. So, it is recommended that the system will have the ability to integrate with other module of the ERP system in future without any trouble.

5. Design constraints

The system will be built using a standard web page development tool which confirms the standard design processes.

5.1 Tools & technologies

Component	Tool
View	JSP, HTML5, CSS3, JS, jQuery2, AJAX
Backend	Spring boot, Spring-REST
ORM	Spring data JPA
Database	MySQL5
Build tool	Maven

6. Software quality attributes

The application will be composed of Spring boot control layer and JSP pages which serve as strong web functionality with security. All the code will be documented using current standards and documentation will be provide to the user to make use of the application. Added documentation will include the System Delivery Document which will document the installation procedure. Remote availability will depend on an active Internet connection. Testing for the application will be followed as a continuous process followed in parallel to the requirements, design and implementation phase. Thus the product will be thoroughly tested for each functional requirement and documented for its reliability.

7. External interface requirements

This section provides a detailed description of the hardware and software interfaces and provides basic prototypes of the user interface supported by this system. The protocol used here will be HTTP. The Port number used will be 80. There shall be logical address of the system in IPv4 format.

7. 1 User interface

The user interface of the system will be compatible with updated version of any browsers like IE, Firefox, Chrome etc. The interface will be user friendly and responsive designed which can be viewed from any devices like computers, mobiles, tabs etc. Interface and design won't vary from device to device.

There will be first page containing employee list. Another page is the employee details page which shows all the information of individual employee. This page will be also used as employee update page. That means clicking on edit will turn the same page info form. Third one is the employee form page to create new employee.

Figure 1: Employee list

Figure 2: Create page 1

Figure 3: Create page 2

Figure 4: Employee details

Figure 5: Edit information

7.2 Software and hardware interface

The communication between database and the application is managed by the Operating System and Controller API where there is concern for both reading and modifying data from database. Data will be sent or retrieved using secure API.