Employee Management System

Software Requirements Specification

Software Engineering Project

Version 1.0

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1 Introduction

The introduction of the System Requirement Specification (SRS) gives us the complete overview of the scope, summary and technologies to be used. The main purpose of the document is to recognize, examine and complete awareness of Employee Management System (EMS) in detail. It summarizes the targeted audience project, system's user interface, functional and non-functional requirements and needs.

1.1 Scope

Basically, this SRS is associated with all the features that make Employee Management System live. This project is being developed in order to ensure smooth and effective evaluation of functions provided for the benefits of an organization. From administrative to non–administrative management in an organization, this project provides a complete set of well-ordered solutions to all the problems. This SRS is not only related to a specific module or tool of this project but it also identifies the entire Employee Management System.

1.2 Glossary

Term	Definition
Stakeholder	Any person with an interest in the project who is not a developer.
User	All system actors e.g. Admin, Employee.
Manage	Functionalities of the system (View, Add, Delete, Update/Edit)

1.3 Technologies to be used

Technology	Description
Microsoft Project Professional	Microsoft Project is a project management software program, developed and sold by Microsoft, which is designed to assist a project manager in developing a plan, assigning resources to tasks, tracking progress, managing the budget, and analyzing workloads.
Pencil	Pencil is a toll used for people to create mockups of their applications and a visual layout of design process. It is easily accessible as a desktop application.

Visual Studio/ Visual Studio Code	It is used to develop computer programs as well as websites and apps. It combines the simplicity of a source code editor with powerful developer tooling, like IntelliSense code completion and debugging
SQL Server Management Studio	SSMS provides tools to configure, monitor, and administer instances of SQL Server and databases.

2 General Description

2.1 User Characteristics

The users of the system are:
- Admin
- Employees

The users of the system should know the English language basics and basic knowledge of computer and internet. The separate characteristics of each user are given below:

Admin:

Admin should know how to tackle and solve small problems including every error and power failures for the maintenance and smooth running of the system. As the characteristics of admin are concerned, in the aspect of employee, the admin will add a new hired employee and edit/update and delete an existing employee. Admin can calculate the salary of employee i.e calculate loan, dues and allowance etc., manage attendance/leaves and manage work history and promotion of employee.

Employee:

The employee can manage its own database and can view salary, pay slip, allowance and attendances/leaves.

2.2 General Constraints

This project focusses on one branch of organization at a time and there is no functionality for other branches of organization to be interlinked.

2.3 Assumptions & Dependencies

There are many factors that affect the requirements specified in the SRS. These include:

1. Every user of this system should have the good internet speed of 20k or above.
2. To avoid the unauthorized access to this system, the login and passwords will be kept confidential keeping in consideration the security of organization.
3. Ensure the reliability all the time such that any error in the system or system failure does not affect the stored data of the organization.

3 Specific Requirements

3.1 External Interface Requirements:

3.1.1 User Interfaces
Login Page

T1: As Admin, I shall be able to select my role as admin and login the system.
T2: As Employee, I shall be able to choose my role as employee and login the system.

Employee's Record

T1: As an admin, I shall be able to brows the image of employee and select the image.
T2: As an admin, I can save the record of employees.

Employee's Attendance:

T1: As an admin, I can add the attendance of employee. So it can be seen in future that specific employee was present in specific day or not.

Employee Leave Page

T1: As an admin, I can accept employee leave.
T2: As an admin, I can reject employee leave.
Forgot Password Page

T1: As an admin, I can add new employee and assign an I'd and password to that specific employee.

Rest of pages are not included because they have same format.

3.2 Functional Requirements

3.2.1 Admin:

1. Admin shall be able to login.
2. Admin shall be able to manage employee.
3. Admin shall be able to manage working history of employee.
4. Admin shall be able to manage promotion of employee.
5. Admin shall be able to manage attendances of employee.
6. Admin shall be able to manage leaves of employee
7. Admin shall be able to manage salary, loan and allowances of employee.
8. Admin shall be able to add new hired employees.
9. Admin shall be able to update the information of employee.
10. Admin shall be able to delete the specific employee.
11. Admin shall be able to search the specific employee.

3.2.2 Employee
12. Employee shall be able to login.
13. Employee shall review their information.
14. Employee shall be able to add their personal information.
15. Employee shall be able to update their personal information.
16. Employee shall be able to delete their personal information.
17. Employee shall be able to see their salary.
18. Employee shall be able to see their loan and allowances.
19. Employee shall be able to see their attendance.
20. Employee shall be able to see their leaves.

3.3 Use Cases:

<Provide here the usage scenarios of all use cases in table format explaining Use Case title, Use Case Id, Actions, Description, Alternative Paths, Pre and Post Conditions, Author, Exceptions. You are supposed to provide a usage scenario for each use case shown in the use case diagram. Following is an example for a usage scenario>

Use Case Title	Add User
Use Case Id	1
Requirement Id	3
Description: This use case is about adding a new user to an existing system with the privileges defined at time of user account creation.	
Pre Conditions: 1. All must-required information about the new user should be available. 2. Database should be available in online mode.	
Normal Flow	
1. Administrator opts to add a new user account.	
2. System asks for necessary information.	
3. Administrator provides all the required information and opts to complete the operation.	
4. System after confirmation adds the new account.	
5. System sends the account creation email to the administrator's email id and user's email address.	

Alternative Flow
4a. There is a problem in the data provided; some data needs to be corrected.
−   Administrator checks the available information and corrects the error.
Administrator continues from the step 3.
Post Conditions:
−   A new user account is successfully created.
Open issues:
Authority: Administrator

## 3.4 Non-Functional Requirements:

The project will be user-friendly, efficient and maintainable.

4 Methodology

4.1 Adopted Methodology

The adopted methodology for this project is SCRUM. SCRUM is agile methodology. Scrum principle are consistent with Agile Manifesto and use to guide development activities within the process that incorporates with framework activities. Within each framework activity, work task occurs within the process patterns call sprints. SCRUM emphasize the use of set of software process patterns and define a set of development actions like BACKLOG, SPRINT, SCRUM MEETING, DEMOS.

4.2 Diagram of Methodology
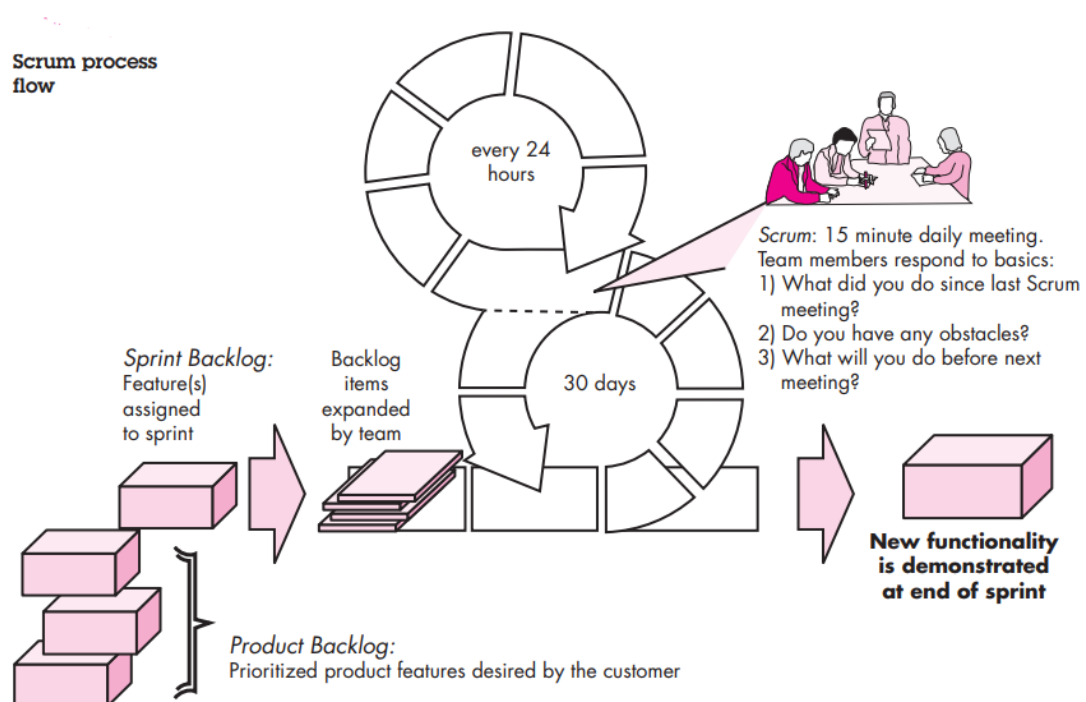
4.3 *Reason of Choosing Methodology*

- It is flexible and adaptable nature throughout the entire process.
- The Daily Scrum is a short meeting that ensure the teams are in the habit of communicating, solving problems, and creating ideas together.
- It focuses on team work.
- Throughout the SPRINTS, there is always visibility on the team's tasks and the progress of each task. In addition, everyone uses the same terminology and understands their role and responsibilities.

5 Project Work Plan

<Provide Gantt chart of your final project, use MS Project to create work plan>