SOFTWARE REQUIREMENT SPECIFICATION FOR

ADD/EDIT EMPLOYEE DETAILS

VERSION 1.0

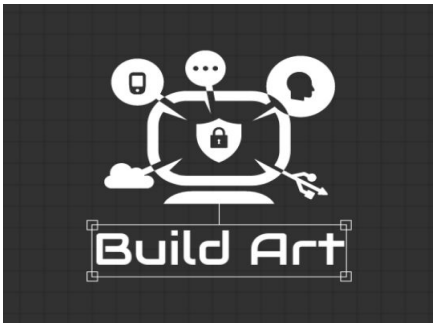

TABLE OF CONTENTS

1.Introduction

The software **ADD/EDIT Employee** version 1.0 is to be developed **.**Through this software , the users will interact with a user-friendly interface that will enable them to add/edit details of employees .

1.1 Purpose

This SRS defines External Interface, Performance and Software System Attributes requirements of the software **ADD/EDIT Employee** . This document is intended for the following group of people:-

- Developers for the purpose of creation and maintenance of the software.
- Management of complete process.
- Testers.

1.2 Scope

This software facilitates the process of adding or editing employee details via an interactive display of all the available options . The process also has validation which reduces a lot of error which may happen.

For addition of an employee it needs a unique ID of the employee as input along with all the details of the employee which needs to be filled by section in-charge. Once validated it produces unique login details of the employee through which the employee can login and view/edit details .The employee can also view the status of these details either they are approved or rejected or are pending.

The software is expected to be completed by 1.5 months.

1.3 Definitions , Acronyms And Abbreviations

SRS	Software Requirements Specification.
EMP.	Employee
REQ.	Requirement
Internet	An interconnected system of networks that connects computers around the world via the TCP/IP protocol
TCP/IP	Transmission Control Protocol / Internet

1.4 References

The references for the above software are as follows :-

- www.google.com
- www.wikipedia.com
- www.stackoverflow.com
- IEEE. Software Requirements Specification Std. 830-1993.

1.5 Overview

- Section 1.0 discusses the purpose and scope of the software.
- Section 2.0 describes the overall functionalities and constraints of the software and user characteristics.
- Section 3.0 details all the requirements needed to design the software.

2.The Overall Description

2.1 Product Perspective

- This software allows the section incharge to add employee detail.
- This software also allows users to edit these details.
- The hardware component for this software is a computer.
- The computer needs to communicate with the database server via the internet.

2.2 Product Functions

The major functions that **ADD/EDIT Employee** performs are described as follows:-

- **Add Employee Details:** After the section in-charge has logged in, the display provides him an option to add employees.
- **Edit Employee Details:** Employee details can be edited using this function.
- **Verify Employee Details :** This provides the functionality to verify if the information is correct/not .This function is further divided into two parts : Approve Employee Field / Reject Employee Field.

2.3 User Characteristics:

There are different kind of users that will be interacting with the system.The intended user of the software are as follows:

- **Section In-Charge:** Person who can enter data.This user will have a login screen and will be provided auth for adding or editing employee details.
- **Section Admin** : Person who can review and verify the data. This user will verify the details filled by section in-charge for a particular employee.
- **Employee** : Person whose data is added. He can also edit certain specific details according to predefined rules.

2.4 Constraints:

The major constraints that the project has are as follows:-

- Employee details of an employee can be added one at a time.
- The stack used for developing this software must include MySQL,Express,Node JS and React i.e. MERN stack.
- Front End :
    1. For HTTP requests use the axios library.
    2. For UI a core HTML file is provided and all React UI will be created using this core HTML file.
- Back End :
    1. Database : All database queries will be done using Sequelize.
    2. Use of Controller and Model Concepts.

2.5 Assumption and Dependency :

The requirements in the SRS could be affected by the following factors:

- Dependency on MERN(MySQL,Express,Node and React) stack.
- The database schema and structure have been already defined and provided.
- The rows used for details of employees have been already assumed.
- At this stage no quantitative measures are imposed on the software in terms of speed and memory although it is implied that all functions will be optimized with respect to speed and memory.
- The project is assuming that the employee and section in-charge cannot edit the details at the same time.

It is furthermore assumed that the scope of this package will increase considerably in the future.

3. Specific Requirements

3.1 External Interface Requirements

3.1.1 User Interface Requirements

The interface provided to the user should be very user-friendly one and it should provide an optimal interactive help for each service listed.The following screens will be provided:

- In case of section in-charge a screen containing options for adding employee details and editing those details will be provided.
- Once the section in-charge clicks on add employee a screen containing a box to add a unique Employee ID will be provided.
- Once the section incharge provides Employee ID a series of screens containing fields for entering specific employee details will be provided.
- In the last page for filling details there will be an option to send these details for verification.
- There will be a screen for admin personnel where he can see all the validation requests where for each part of details whether the part is **Approved , Pending or Rejected.**
- Once the admin reports an error that is "**Rejected**" there will be a screen asking in which field error is there and the reason.
- A login screen for employees where they have options to view and edit these details . They can also view which details are approved ,pending or rejected

3.1.2 Hardware Interface Requirements

Various hardware interface requirements that need to be fulfilled for successful functioning of the software are as follows:

- A computer each for employee , section in-charge and admin, supporting a browser which can load all components of MERN stack .
- A database server computer .
- The software should be supported in laptop,pc,mobile and tablet.

3.1.3 Software Interface Requirements

In order to perform different functions, the software needs to interact with various other software. So there are certain interface requirements that need to be fulfilled which are listed as follows:

- The database used to keep records shall be MySQL.
- There will be two databases one will be temporary and other permanent.

- All other softwares used are Express , Node JS(backend) and React (for front end).
- For Front End :
    1. React Front End Library.
    2. Third Party Library to be used are :
        - React-router-dom : For routing.
        - React-Redux : For managing Global State Application.
        - React-Session-API : For session management.
- For Back End :
    1. Sequelize library is to be used for all database queries.

3.1.3 Communication Interface Requirements

- Internet for sending messages and E-mails.

3.2 Use Case Description

3.2.1 Use Case 1 : Add an Employee and send details for verification.

- **Primary Actor:** Section In-Charge
- **Precondition :** Section In-Charge has logged in.
- **Main Success Scenarios**
    1. Section In-Charge is displayed a screen having the option of Add Employee.
    2. After he clicks on Add Employee a screen having a box to fill a unique Employee ID.
    3. After filling employee ID another screen opens, having all details to be filled for that employee .
    4. After filling all the details he clicks on send details for verification and the temporary database is updated .
    5. Also a notification is sent to admin.
    6. One database will be updated containing the date ,time and name of the section incharge who added the details of a particular employee.

- **Exception Scenarios**

  Point 2 :

  a. Exception : The Section In-charge fills employee ID that is already existing or fills data type that is not supported.

     Solution :The section in-charge should be informed which type of error has occurred either the Employee ID already exists or he has entered an incorrect format.

Point 4 :

  a. Exception : The Section In-charge clicks on send for verification before all the details have been filled.

     Solution :The section in-charge should be informed that these boxes are empty and are required for successful sending of details for verification.

3.2.2 Use Case 2 : Verify Employee

- **Primary Actor:** Section Admin
- **Precondition :** Section Admin has logged in.
- **Main Success Scenarios**
  1. Section admin is displayed a screen having a queue of all the validation requests for all the employees for whom the request has come and has status **Pending/Approved/Rejected**.
  2. After he clicks on a particular field for a particular employee a screen containing all the details of that employee specific to that field are mentioned.
  3. If he finds that some detail is incorrect there is an option to report error (status turns to **Rejected**)and then a notification is sent to Section In-charge at this time data remains in a temporary database .
  4. After he checks all details are correct i.e. the status of all the fields turn to **Approved** , the data of the Employee is shifted from temporary database to permanent database and then data from temporary database is deleted.
  5. Once data is successfully shifted to permanent database and data deleted from temporary database an email is sent to employee

mentioning the username same as EmployeeID and a system generated password along with a pdf.

6. Once Verified a database will be updated containing the date ,time and name of admin who verified the particular employee details.

- **Exception Scenarios**

  Point 3 :

  a. Exception : The Section admin closes the window/ there is some technical fault before the permanent database is updated.

     Solution : The section admin should be informed when the details have been shifted to a permanent database and is successfully done by sending a notification for the same . If there is some error during the process the type of error should be mentioned to section-admin.

3.2.3 Use Case 3 : Edit Employee by Section Incharge

- **Primary Actor:** Section In-Charge.
- **Precondition :** Section Incharge has logged in.
- **Main Success Scenarios**
  1. Section In-Charge is displayed on a screen having the option of Edit Employee.
  2. After he clicks on Edit Employee a screen having a box to fill the unique Employee ID.
  3. After filling employee ID another screen opens having all details for that employee which can be edited the data is collected from a permanent database.
  4. After filling all the details he clicks on send details for verification and the temporary database is updated.
  5. A notification is sent to the admin for verification and a notification is sent to employee mentioning which field of data is being changed .
  6. Once data is edited another database will be updated mentioning date,time and name of section incharge who edited the details of particular employee.

- **Exception Scenarios**

  Point 2 :

  b. Exception : The Section In-charge fills employee ID which is not present in the database.

     Solution : The section In-charge should be informed that this ID does not exist please check the ID before filling again.

3.2.4 Use Case 4 : Edit -Employee by Employee

- **Primary Actor:** Employee.
- **Precondition :** Employee has logged in.
- **Main Success Scenarios**
  1. Employee is displayed on a screen having the option of Edit Employee.
  2. There is a screen where all fields of the employee is shown along with the status whether the details of this field have been Approved ,Pending Or Rejected.
  3. After he clicks on Edit Employee a screen has all details of the employee where data is fetched from the permanent database.
  4. There are some rows for which an employee has been given authorization to edit and he can edit only those rows.
  5. After editing the required details he clicks on finalize details and the permanent database is directly updated.
  6. For those details he is not authorised to edit he has to go to the section incharge for editing those details. Once section incharge puts some detail for verification a notification is received to the employee that these details are Pending and the status whether Verified or Rejected is notified to the employee.
  7. Once data is edited the date,time and name of employee will be updated in a database.

- **Exception Scenarios**

  Point 4 :

c. Exception : Employee clicks on finalize details but there are some empty rows.

   Solution : The employee should be informed that these rows are not filled so you cannot finalize.

3.2.5 Use Case 0 :

- **Primary Actor :** Add/Edit Employee System
- **Scope :** Adding or Editing Employee details.

3.3 Performance Requirements :

3.3.1 Dynamic Requirements :

- The load time for software should not be more than 5sec.
- The login verification should not be more than 1 sec.
- Notification for add details should not take more than 1sec.
- Notification for error in verification should not take more than 1sec.
- Response time for each functionality should not be more than 1sec.

3.3.2 Quality :

The primary objective is to produce quality software. As the quality of a piece of software is difficult to measure quantitatively, the following guidelines will be used while judging the quality of software:

- Consistency - All code will be consistent with respect to the style.
- Test Cases - All functionality will be thoroughly tested.

3.4 Other Requirements :None.