SOFTWARE REQUIREMENT SPECIFICATION

Add/Edit Employee (Non-Teaching)
Version 1.0
14th September, 2020

Table of Contents

1. Introduction

The software **Add/Edit Employee (Non-Teaching)** version 1.0 is to be developed for adding/editing details of non-teaching employees. **Add/Edit Employee (Non-Teaching)** provides forms to be filled by the DEO which are then validated by admin er estt.

1.1 Purpose

This SRS defines software requirement specifications of **Add/Edit Employee (Non-Teaching)**. This document is intended for the following group of people:-
- Developers for the purpose of maintenance and new releases of the software.
- Management of the MIS.
- Documentation writers.
- Testers.

1.2 Scope

This document applies to **Add/Edit Employee (Non-Teaching)**. This software facilitates the DEO to add/edit details, the Admin to validate the details entered by the DEO and send approval email.

The software is expected to complete in the duration of 1.5 months.

1.3 Definitions, Acronyms and Abbreviations

SRS: Software Requirements Specification
DEO: Data Entry Operator (Section in-charge)

1.4 References

The references for the above software are as follows:-
    i. www.google.com
    ii. www.reactjs.org
    iii. www.nodejs.org
    iv. www.wikipedia.org
    v. www.stackoverflow.com

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 the requirements needed to design the software.

Section 4.0 discusses the non-functional requirements.

2. The Overall Description

2.1 Product Perspective

- ★ This software allows the DEO to add/edit employee details.
- ★ After successful completion of forms the details are sent for validation.
- ★ The software allows the Admin to validate the details.
- ★ The software allows sending approval emails after successful validation.
- ★ The software allows non-teaching employees to edit some attributes.

2.2 Product Functions

The major functions that **Add/Edit Employee (Non-Teaching)** performs are described as follows:-

- ★ **Employee Id Selection:-** First the DEOs will enter the employee id. If the employee id is available in the database then message "Employee id already available." will be displayed. If the employee id is not available then forms are displayed.
- ★ **Basic Details Form:-** A form with sections Personal Details, Employment Details, Address Details, Salary Details and Bank Details will be displayed to be filled out.
- ★ **Add Previous Employment Details:-** After filling Basic Details form the user will be routed to Previous Employment Details Form. Here the user will fill details related to previous employment. Multiple employment details can be added using the add button.
- ★ **Add Last 5 Year Stay Details:-** After Employment Detail form user will be asked to fill previous 5 year stay details. Multiple details can be added using the add button.
- ★ **Add Educational Qualification:-** Educational Qualification is displayed after Stay Details form. Multiple educational qualifications can be added using the add button.

★ **Add Dependent Family Members Details:-** This form asks details about the dependent family members. Multiple dependent family members can be added using the add button.

★ **Validation Requests:-** This page is visible only to the Admin. This page shows the validation requests and the statuses (Approved, Pending or Rejected) of the above mentioned forms. From here Admin can view all the details of the requests and validate them. Once the requests are approved an email with login details will be sent to the employee. If the request is rejected the control is redirected to the DEO with the reason of rejection. Then the DEO will edit the details and raise the validation request again. This cycle continues till the request is approved.

2.3 User Characteristics

There are 2 types of users. The intended user of the software are as follows:-

- **DEO**: Employee with est_da1 authorization. The DEOs are responsible for filling the data. They will fill the Basic Details, Employment Details, Salary Details, Educational Qualification, Dependent Family Members Detail and request for validation of data.

- **Admin**: Employee with est_ar authorization. Admin is responsible for the validation and approval of the requests generated by the DEOs.

- **Non-Teaching Employee**: After successful login Non-teaching employees can change some attributes of their details.

2.4 Constraints

The software has to be made using MERN Stack. MySQL for Database, React.js for front-end, Node.js and Express.js for back-end. MySQL database is provided. 2 databases have to be used. One as a temporary database and one as a permanent database.

3. External Interface Requirements

3.1 User Interface Requirements

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

1. A screen taking employee id as input from the DEO.
2. If the employee id is available then the screen will display "Employee id already available." message. Else the user will be routed to Basic Details Form.
3. Basic Details Form has sections - Personal Details, Employment Details, Address Details, Salary Details and Bank Details. The user will have to fill all the details. After filling the details the user will press next.
4. The user will be redirected to Add Previous Employment Details form. Here the user will have to add previous employment details. The user can add multiple employment details by pressing the add button. After filling the employment details the user will press next.
5. The user will be redirected to Add Last 5 Year Stay Details form. Here the user will have to add previous 5 year stay details. The user can add multiple details by pressing the add button. After filling the stay details the user will press next.
6. The user will be redirected to Add Educational Qualification form. Here the user will have to add previous educational qualification details. The user can add multiple details by pressing the add button. After filling the educational qualification the user will press next.
7. The user will be redirected to Add Dependent Family Members Details form. Here the user will have to add details of each dependent family member. The user can add multiple dependent family members using the add button. After filling the dependent family members details the user will press next.
8. After filling all the above forms a validation request will be sent to the Admin.
9. Admin can view the requests and the status of each form in a page.
10. On clicking on the status the whole details will be displayed.
11. After successful approval from Admin an approval email will be sent to the non teaching employee with the login credentials. The data is shifted to the permanent database.
12. If a request is rejected then the DEO gets the message with the reason. The DEO then edits the details and raises the validation request again. This cycle continues till the request is approved by the Admin.

13. Once logged in the non-teaching employee can change some attributes of his/her details which are directly updated in the permanent database.

3.2 Software Interface Requirements

In order to perform various different functions, this software needs to interact with MySQL databases.

3.3 Use Case Description

3.3.1 Add an Employee and send details for verification.

- **Primary Actor**: DEO
- **Precondition**: DEO has logged in.
- **Success Scenarios**
    1. The DEO has the option of Add Employee.
    2. On clicking the Add Employee button, a form will appear asking for employee id.
    3. The DEO will enter the employee id and will be directed to the details forms.
    4. On filling the details, the DEO will raise a validation request. The details will be added to the temporary database.
    5. Notification is sent to the Admin.
- **Failure Scenarios**
    Scenario 1: In step 2 DEO enters an existing employee id.
    Solution: DEO will receive the message "Employee id is already available".

3.3.2 Verify Employee

- **Primary Actor**: Admin
- **Precondition**: Admin has logged in.
- **Success Scenarios**
    1. All validation requests in the temporary database will be displayed to the Admin. The admin can select a particular form for a particular employee for validation. All the approved forms will be tagged with "**Approved**". All the rejected forms will be tagged with "**Rejected**" and all pending forms will be tagged with "**Pending**".

2. If the Admin rejects the request, A form will appear asking for "Reason of Rejection". A notification of the rejection will be sent to DEO along with the reason.

3. If the Admin approves the request then the details are shifted to the permanent database and are deleted from the temporary database.

4. An email is sent to the non-teaching employee containing the login credentials.

● **Failure Scenarios**

Scenario 1: The Admin closes the window. There is some technical fault before the permanent database is updated.

Solution: The Admin will be informed when the details have been shifted to the permanent database. Admin will get the notification for the data migration. If the data is successfully shifted then success message, else an error message.

3.3.3 Edit Employee by DEO

● **Primary Actor**: DEO
● **Precondition**: DEO has logged in.
● **Success Scenarios**
    1. DEO selects Edit Employee option.
    2. A form appears asking for employee id.
    3. DEO enter the employee id. All data from the permanent database is displayed.
    4. After editing the details the DEO raises a validation request.
    5. The request is sent to the Admin for validation.
● **Failure Scenarios**

Scenario 1: The DEO fills employee id which is not present in the database.

Solution: The DEO is informed that the employee id is not present in the database.

3.3.4 Edit Employee by Employee (Non-Teaching)

● **Primary Actor**: Non-Teaching Employee
● **Precondition**: Employee has logged in.
● **Success Scenarios**
    1. Employee selects Edit Employee option.
    2. The data corresponding to the employee is fetched from the permanent database and displayed.

3. Non-Teaching Employees can edit only some attributes. After editing the data is directly saved to the permanent database.
4. For editing other attributes, the employee has to go to DEO and follow Edit Employee by DEO steps.

- **Failure Scenarios**

    Scenario 1: Employee tries to submit the details with some empty fields.

    Solution: The submit button will be blocked until the employee fills all the fields.

4. Other Non-Functional Requirements

4.1 Performance Requirements

The following list provides a brief summary of the performance requirements for the software:

4.1.1 Capacity
- ❏ The software shall provide users a 24 hours service.

4.1.2 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 when judging the quality of the software:
1. Consistency: All code will be consistent with respect to the style. The application will be consistent with the device either mobile, tablet or computer.
2. Test cases: All functionality will be thoroughly tested.

4.2 Business Rules

The business rules for the software are as follows:
- The DEOs have the authority to fill in details in the various forms mentioned above.
- Only the Admin has the authority to validate the details.
- On approval the non-teaching employee will be sent an email consisting of login credentials. The data will be shifted from the temporary database to permanent database.
- On rejection the DEO will receive the message with the reason of rejection.
- After successful login the non-teaching employee will be able to edit some attributes.