Software Requirements Specification

For

Employee Management System

Version 1.0

Prepared by PseudoMavericks

04/07/2022

Table of Contents

1. Functional Requirements for Phase-2 4

1.1 Login 4

1.2 Registration Page 4

1.3 Dashboard/ Home Page 4

1.4 Database 4

2. UML Design for Phase-2 5

2.1 Class Diagram 6

2.2 UseCase Diagram(Normal Case) 6

2.3 UseCase Diagram(Exception Case) 7

2.4 Sequence Diagram 7

3. Test Cases for Phase-2 8

4. User Manual 9

4.1 Login Page 9

4.2 Dashboard/ Home Page 9

4.3 Registration Page 9

5. How to Compile/Run the Application 9

5.1 List of instructions how to run and minimum requirements 9

5.2 Clear instructions on how to compile/run the program and testcases 9

6. The code inspection review session ………………………………………………….…………………………………………9

7. A brief reflection on what has been accomplished, what went well and could be improved…..9

8. Member Contribution Table.………………………………………………………………10

1. **Functional Requirements for phase 2**
   1. **Login**

* It allows the user to login to the application by entering their credentials.
* There are two fields in it: username and password.
* It verifies the user's credentials and directs them to a certain page.
  1. **Employee registration**
* HR and HR team officials have access to this feature.
* It's also known as the registration page, and it allows users/organizations to add new users to the application on their own.
* First Name, Last Name, Mobile Number, Email Id, and Password Address are all fields on this page.
* If any mandatory fields are missing, the system will check for them and notify users with validation messages.
* The user information will be saved and kept in the database after it is completed.
  1. **Leave Management**
* Users can request leaves based on their billing hours and the consent of their manager.
  1. **Payroll Management**
* It's where you'll find information on employee pay slips.
* It has two dropdown options, one for selecting the month and the other for selecting the year.
* After the user makes the request, the program will send an email to the user's registered email address with the pay slip attached.
  1. **Project Management**
* HR team have access to this feature.
* A HR can add, amend, and delete projects and their associated personnel.
* It displays information about a certain project when it is searched for, as well as the managers and people who work on it.
  1. **Time Sheet Records**
* This tool allows a user to keep track of their billable hours, excluding any applied leaves, public holidays, and other factors.
* According to the time sheet submitted, HR might accept it or reject it.

1. **UML Design for Phase 2:**
   1. **Class Diagram for Phase 2:**

**Diagram

Description automatically generated**

Fig 1. Class Diagram for Phase 2

**2.2 Sequence Diagram for Phase 2:**

**Diagram

Description automatically generated**

Fig 2. Sequence Diagram for Phase 2

**2.3 Use Case Diagram of Phase 2(Normal Case):**

**Diagram

Description automatically generated**

Fig 3. Use case diagram of phase 2(normal case)

**2.4 Use Case Diagram of Phase 2(Error Case):**

**Diagram

Description automatically generated**

Fig 4. Use Case Diagram(error case)

1. **Test Cases for Phase 2:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Test  Scenar  io ID | Test  Scena  rio Des  cription | Test  Case  ID | Test  Case  Descr  iption | Test  Steps | Precon  ditions | Post  Cond  itions | Expec  ted Re  sults | Comments |
| TS\_EMS\_004 | Verify the billing  hours of employee  page | TC\_EMS  \_BH\_  001 | Enter valid  no.of hours,  month,year | 1.Enter valid no.of hours.  2.Enter valid months.  3.Enter valid year.  4.Click on submit. | 1.Valid URL 2.Test Data | Use must be able to submit the request successfully. | Succesfull submission of billing hours |  |
| TS\_EMS\_004 | Verify the billing  hours of employee  page | TC\_EMS  \_BH\_  002 | Enter valid no.of hours,valid month and invalid year | 1.Enter valid no.of hours.  2.Enter valid months.  3.Enter invalid year.  4.Click on submit. | 1.Valid URL 2.Test Data | Error message “Invalid year” | A popup message box to show an error “Invalid year” |  |
| TS\_EMS\_004 | Verify the billing  hours of employee  page | TC\_EMS  \_BH\_  003 | Enter valid no.of hours,invalid month and invalid year | 1.Enter valid no.of hours.  2.Enter Invalid months.  3.Enter invalid year.  4.Click on submit. | 1.Valid URL 2.Test Data | Error message “Invalid months and year” | A popup message box to show an error “Invalid months and year” |  |
| TS\_EMS\_004 | Verify the billing  hours of employee  page | TC\_EMS  \_BH\_  004 | Enter valid no.of hours,invalid month and valid year | 1.Enter valid no.of hours.  2.Enter Invalid months.  3.Enter valid year.  4.Click on submit. | 1.Valid URL 2.Test Data | Error message “Invalid month” | A popup message box to show an error “Invalid month” |  |
| TS\_EMS\_004 | Verify the billing  hours of employee  page | TC\_EMS  \_BH\_  005 | Enter invalid no.of hours,invalid month and invalid year | 1.Enter invalid no.of hours.  2.Enter Invalid months.  3.Enter invalid year.  4.Click on submit. | 1.Valid URL 2.Test Data | Error message “Invalid no.of hours,months and year” | A popup message box to show an error “Invalid no.of hours,months and year” |  |
| TS\_EMS\_005 | Verify the leave  request of empl  oyee page | TC\_EMS  \_LR\_  001 | Enter valid  Leave start  Date,Leave end date,  reason | 1.Enter valid leave start date.  2.Enter valid Leave end date  3.Enter valid reason.  4.Enter Submit. | 1.Valid URL 2.Test Data | User must be able to submit the request | Succesfull submission of leave request |  |
| TS\_EMS\_005 | Verify the leave  request of empl  oyee page | TC\_EMS  \_LR\_  002 | Enter valid  Leave start  Date,invalid Leave end date | 1.Enter valid leave start date.  2.Enter invalid Leave end date  3.Enter reason.  4.Enter Submit. | 1.Valid URL 2.Test Data | Error message “invalid end date” | A popup message box to show an error “Invalid  end date” |  |
| TS\_EMS\_005 | Verify the leave  request of empl  oyee page | TC\_EMS  \_LR\_  003 | Enter invalid  Leave start  Date,valid Leave end date | 1.Enter invalid leave start date.  2.Enter valid Leave end date  3.Enter reason.  4.Enter Submit. | 1.Valid URL 2.Test Data | Error message “invalid start date” | A popup message box to show an error “Invalid  start date” |  |
| TS\_EMS\_005 | Verify the leave  request of empl  oyee page | TC\_EMS  \_LR\_  004 | Enter invalid  Leave start  Date,Leave end date,  reason | 1.Enter invalid leave start date.  2.Enter invalid Leave end date  3.Enter reason.  4.Enter Submit. | 1.Valid URL 2.Test Data | Error message “invalid start and end date” | A popup message box to show an error “Invalid  start and end date” |  |
| TS\_EMS\_006 | Verify the Add  new employee  of hr page | TC\_EMS  \_ANE\_  001 | Enter valid firstname,last  Name,phone  Number and email | 1.Enter valid First Name.  2. Enter valid Last Name.  3.Enter valid Phone Number.  4.Enter valid email. | 1.Valid URL 2.Test Data | Hr must be able to add new employee successfully. | Succesfully added a new employee |  |
| TS\_EMS\_006 | Verify the Add  new employee  of hr page | TC\_EMS  \_ANE\_  002 | Enter valid firstname,last  Name,email  and invalid  phone number | 1.Enter valid First Name.  2. Enter valid Last Name.  3.Enter invalid Phone Number.  4.Enter valid email. | 1.Valid URL 2.Test Data | Error message “invalid phone number” | A popup message box to show an error “Invalid  phone number” |  |

1. **User Manual:**
   1. **Login Screen**

The user gets taken to the login screen when they access the application. There are two options for logging in: HR or Employee. Users must choose the appropriate login screens.

HR Login Screen

Graphical user interface, application, Teams

Description automatically generated

Employee Login Screen

Graphical user interface, application, Teams

Description automatically generated

**4.2 Employee Management:**

Employee management will be viewable exclusively to HR, who will be able to manage all the organization's employees.

Graphical user interface, application, Teams

Description automatically generated

And, HR can create new employees by clicking on add new employee field.

Graphical user interface, application, Teams

Description automatically generated

**4.3 Project Management:**

HR has the ability to create new projects and allocate employees to it. They can also view the list of employees who are already working for it.

**4.3.1 Project creation:**

HR can create a new project, they can provide details like project name, start date, end date, and Description of the project.

Graphical user interface, application, Teams

Description automatically generated

**4.3.2 Assigning employees to the project:**

HR can assign the project to existing employees in the organization by selecting the users from the dropdown list.

Graphical user interface, application, Teams

Description automatically generated

Also, HR can view the list of employees who are already working on the project.

Graphical user interface, application, Teams

Description automatically generated

**4.3 Billing Hours:**

Employees can submit the billing hours and HR can approve them here.

**4.3.1 Employee billing screen:**

Employees can view & submit the billing hours to their manager/HR.

Graphical user interface, application, Teams

Description automatically generated

Once, after submitting the billing request, the user can view them here.

Graphical user interface, application, Teams

Description automatically generated

**4.3.2 HR billing screen:**

Graphical user interface, application, email

Description automatically generatedHere, HR’s have the option to approve billing requests submitted by their employees.

**4.4 Leave Management:**

Employees can submit the leave requests and HR can approve them here.

**4.4.1 Employee leave request screen:**

Employees can view & submit leave requests to their manager/HR.

Graphical user interface, application

Description automatically generated

Once, after submitting the leave request, users can view all the requests made by them.

Graphical user interface, application, Teams

Description automatically generated

**4.4.2 HR Leave Request Screen:**

Here, HR has the option to approve leave requests submitted by their employees.

Graphical user interface, application

Description automatically generated

1. **How to Compile/Run the Application:**
   1. **Requirements/Setup instructions to run the project:**
2. The list of instructions to run the project in their local/computer, the minimum requirements should be:
3. System specifications
4. Minimum of intel 5th generation or higher.
5. RAM: minimum of 4 GB.
6. Around 5GB of hard disk storage.
7. To construct the application, the user must first install an IDE (Integrated Development Environment). We prefer Eclipse or NetBeans.
8. Import the project repository into the IDE and configure the PHP connection.
9. On the local PC, install the PHP libraries.
10. Additionally, they must set up a XAMPP server on their PC.
11. After installation, they need to start the Apache server, and MySQL database admin control panels using XAMPP.
12. After launching, it will navigate the phpMyAdmin console page, where we need to create a database according to the connection file in the project.
13. After the database has been created, we need to import the SQL file to the database from the appropriate folder location.
14. Then the user can access the application using their localhost URL.
    1. **Instructions to run the project:**
15. Download the project zip file.

Can use GitHub to clone the repository using the below URL.

<https://github.com/amarendhar-reddy/project-pseudo-mavericks.git>

1. Extract the zip file.
2. Place the extracted files in XAMPP's htdocs folder.
3. In the IDE, create a workspace and import the project folder into it.
4. Configure the PHP to the workspace using the instructions below.
   1. On the toolbar, go to the preferences area beneath the window section.
   2. Select the Installed PHPs under the PHP section.
   3. Add the name and PHP executable file.

Graphical user interface, table

Description automatically generated

Fig 5. Configuring for PHP to run

1. Create a database in phpMyAdmin with the name “employee\_ms”.
2. In the database, import the "employee\_ms.sql" file.
3. To start as admin, set up the start page in the IDE's run configurations.
   1. /employee\_ms/login.php

Graphical user interface, application

Description automatically generated

1. Run the application and access the application using the localhost URL.
   1. Ex: [http://localhost/employee\_ms/login.php#](http://localhost/employee_ms/login.php)!
2. To run the test cases, we need to configure the PHPUnit in the IDE.
   1. Navigate to the run configurations, Add the PHPUnit properties.
   2. After adding it, run the application as a PHP unit test.

Graphical user interface, text, application, email

Description automatically generated

1. **A section that briefly describes feedback received during the code inspection session and actions taken based on the feedback.**

* During the Code inspection session, our team went through the features and code base and suggested updating a feature such as the Authorization user component as it is not properly specified so we decided to add authorization as a requirement for our application.
* The team also suggested that the indentation for the code is not good as we copied the code to word document, so we have even altered that for the proper presentation.
* We also added the proper description for all the components and connectivity briefly.
* The team also suggested to add the Author details for the coding part so we even updated it in the source code as well.

1. **A brief reflection on what has been accomplished, what went well and could be improved.**
   1. **Accomplished:**

* Until this point, we have created a working login screen for both Employee as well as HR (admin) login screen separately.
* In HR panel, we add a feature where a new employee can be added or we can use this to view the existing employees which is restricted for HR use only.
* We have also created project panel to which only HR have access, in the project panel HR can create new project, allocate employees to projects and the project hierarchy.
* We add another functionality of our project that is billing hour panel for both employee and HR, this is where the billing hours are created and submitted. A list of billing hours and their current status can be seen, employees can submit their billing hours and HR will approve their request.
  1. **What went well:**
* There were no major issues or problems faced while developing the application which saved lot of time and effort.
* We were able to finish the modules and components in time with minimal errors.
* Testing all the modules helped to make the application efficient.
  1. **What could be improved:**
* We are planning to add new features in near future. We are planning to enhance the look and feel of the UI screens and also adding an additional security feature.
* Professional tools such as GitHub Desktop and Agile could be leveraged to better manage the project workflow.

1. **Member Contribution Table:**

|  |  |  |
| --- | --- | --- |
| **Member Name** | **Contribution description** | **Overall contribution** |
| Amarendhar Reddy Chevula | Use Case Design for phase 2, code checkin github | 12.5% |
| Subbarao Sanka | How to Compile/Run the Application, User Manual | 12.5% |
| Vaishnavi Choppalli | Functional Requirements for Phase 2 | 12.5% |
| Kalyani Virivinti | A brief reflection on what has been accomplished, what went well and could be improved | 12.5% |
| Narasimharao Gurram | Updating meeting minutes, Tracking member contribution | 12.5% |
| Aparna Mirapakayala | Test Cases for Phase 2 | 12.5% |
| Kavya Keerthi Tumarada | Notekeeper of code inspection review and resolving those | 12.5% |
| Neha Chowdary Puvvada | Test Cases for Phase-2 | 12.5% |