



Human Resource Management System



Dharmsinh Desai University, Nadiad

Faculty of Technology, Department of Computer Engineering

B. Tech. CE Semester – VI

Subject: (CE – 619) Service Oriented Computing

Project Title:

Human Resource Management System

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CERTIFICATE

This is to certify that Service Oriented Computing Project entitled “**Human Resource Management System**” is the bonafide report of work carried out by SHAH DARSH (17CEUOS091) & SHAH DIVYA (18CEUOD003) Of Department of Computer Engineering, Semester VI, academic year 2019-2020, under our supervision and guidance.

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ABSTRACT

Decision in assigning proper skillful hands for the project is an important issue in HR Module. The HR Administrator should report with the person holding the necessary skills required for the project assignment. The decision in making analysis about the employee's skills is a prime important before booting in. The proposed system of HR Module is the right software to be incorporated into the Automation of HR Software for helping the organization needs with respect to skillful Human Resource.

INTRODUCTION

The aim of HR management system is to ease and computerize the work of HR Department of an organization. Our platform provides 2 modules to use each having different functionalities. It contains facilities such as employee management, leave management and project management. It also provides functionalities such as to assign a project as well as to apply for leave and approve/reject the leave by the HR staff.

Technology Used

- C#
- Windows Form
- SQL
- WCF

Platform Used

- Windows

Tools Used

- Visual Studio 2019
- ERD plus
- UMLET
- SQL SERVER 2017

Software Requirements Specification

R-1) HR Person:

R-1.1) Login:

Description: If the Credentials are validated successfully then the HR Person is logged in successful.

Input: Login Credentials.

Output: Redirect to Home Page and Display Notification of Successful Login.

R-1.2) Manage Employees:

R-1.2.1) Add Employee:

Description: HR Person can add the Employee for the Company record by entering the required details.

Input: Required Form Fields.

Output: Redirects To Employees List Page and Display notification of Employee Added Successfully.

R-1.2.2) Edit Employee:

Description: HR Person is allowed to change any of the Employee information.

Input: Data to be updated.

Output: Display Notification of Successful Employee Profile Update.

R-1.2.3) Delete Employee:

Description: HR Person can delete any Employee as per the requirement.

Input: Click on Delete Button of a Particular Employee.

Output: Delete that Employee from the Database.

R-1.3) Manage Projects:

R-1.3.1) Add Project:

Description: HR Person can add the Project Details for the Company record by entering the required details.

Input: Required Form Fields.

Output: Redirects To Projects List Page and Display notification of Project Added Successfully.

R-1.3.2) Edit Project:

Description: HR Person is allowed to change any of the Project information.

Input: Data to be updated.

Output: Display Notification of Successful Project Details Update.

R-1.3.3) Delete Project:

Description: HR Person can delete any Project as per the requirement.

Input: Click on Delete Button of a Particular Project.

Output: Delete that Project from the Database.

R-1.4) Manage Employee Leave:

R-1.4.1) Approve Leave:

Description: HR Person can check the Employee Remaining Leave and if valid reason then HR Person Approve the Leave.

Input: Click on Approve Button of a Particular Employee Leave Request.

Output: Notification to Employee Your Leave Request Approved.

R-1.4.2) Reject Leave:

Description: HR Person can check the Employee Remaining Leave and if is not remaining then HR person reject the Leave.

Input: Click on Reject Button of a Particular Employee Leave Request.

Output: Notification to Employee Your Leave Request Rejected.

R-2) Employee:

R-2.1) Login:

Description: If the Credentials are validated successfully then the Employee is logged in successful.

Input: Login Credentials.

Output: Redirect to Home Page and Display Notification of Successful Login.

R-2.2) Manage Leave:

R-2.2.1) Apply Leave:

Description: Employee can apply the Leave request by entering the required details.

Input: Required Form Fields.

Output: Redirects To Employee Personal Leave Request List and default status is waiting and Display notification of Leave Request Added Successfully.

R-2.2.2) Delete Leave:

Description: Employee can delete any Leave Request as per the requirement.

Input: Click on Delete Button of a Particular Leave Request.

Output: Delete that Leave request from the Database.

R-2.3) Show Employee Details):

Description: Employee can show Personal Details but Employee cannot edit that Personal Details.

Input: Click on Show Personal Details.

Output: Open New Window and Display the Personal Information.

Design

1. Use Case Diagram

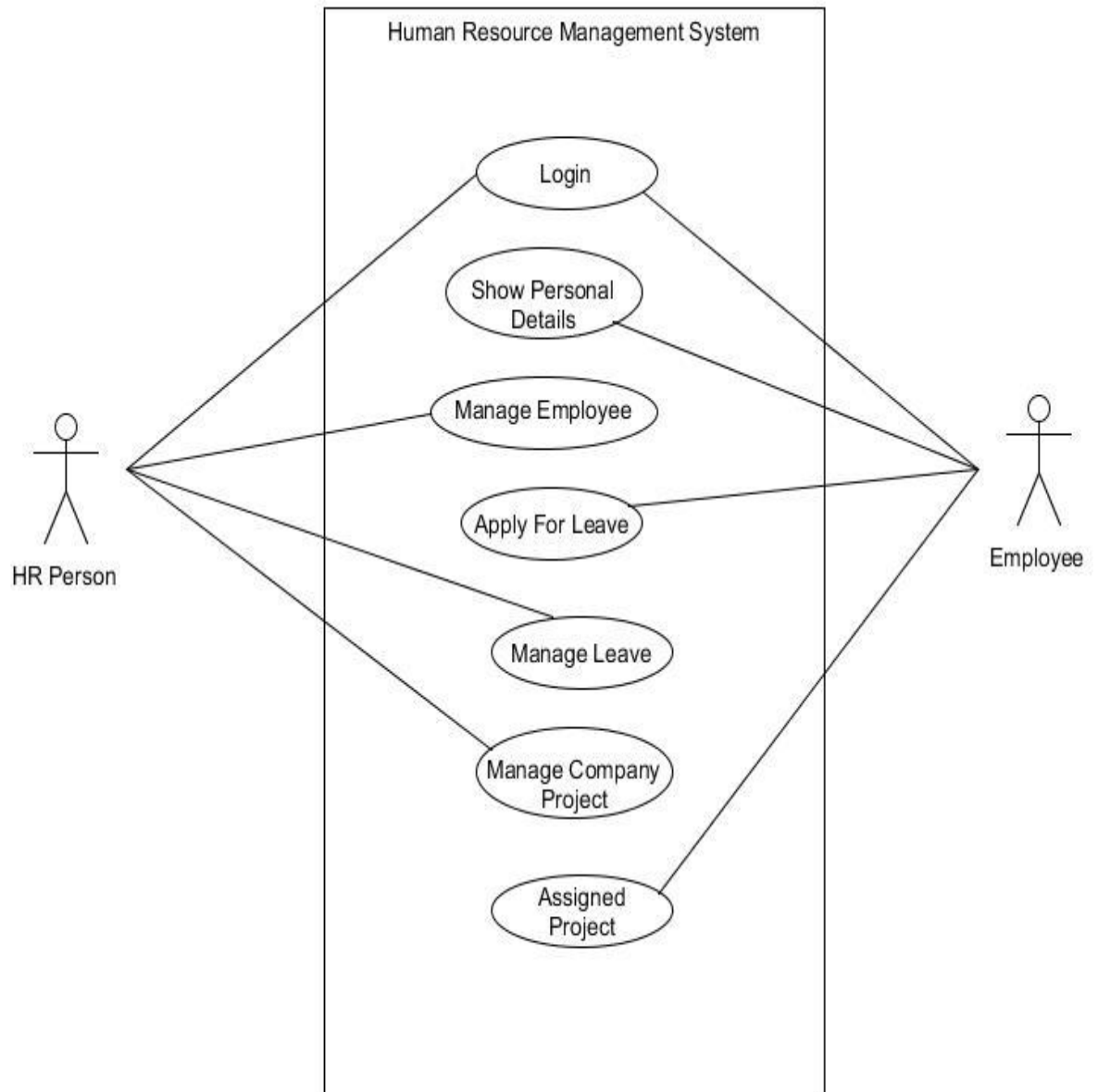


Fig.4.1 Use case Diagram of Human Resource Management System

2. Class Diagram

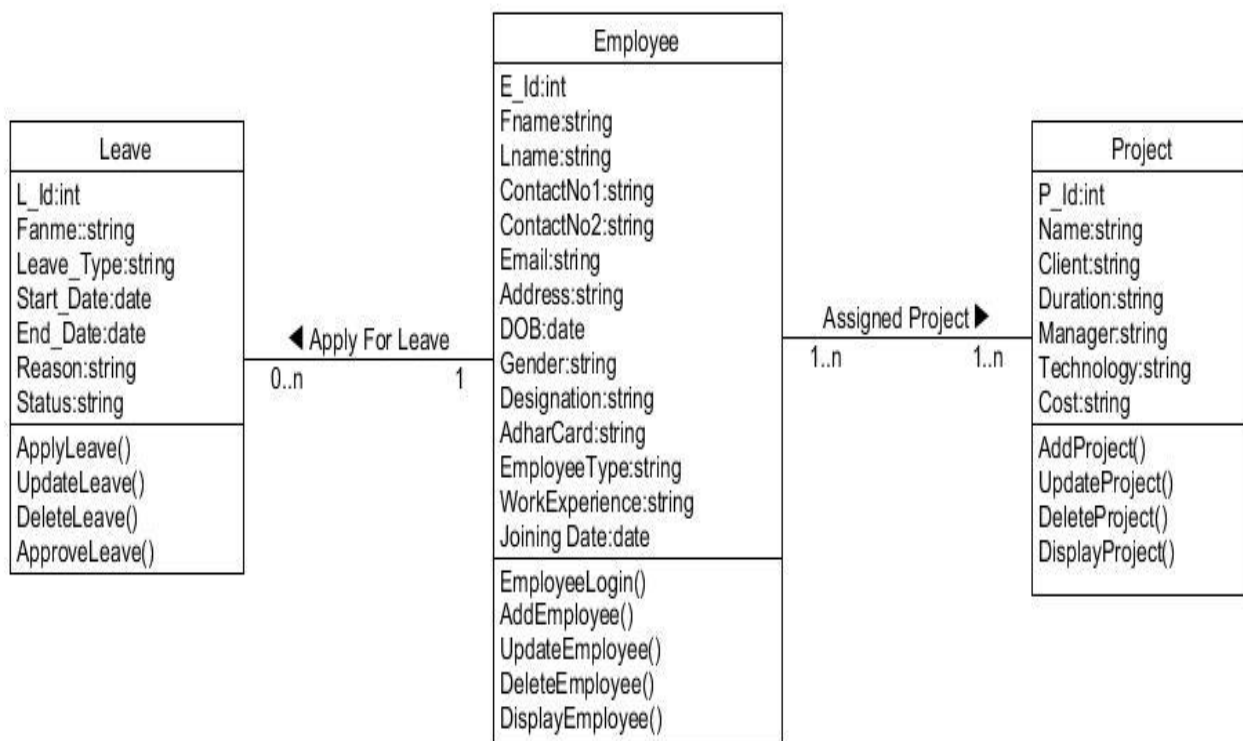


Fig 4.2 Class Diagram of Human Resource Management System

3. Sequence Diagram

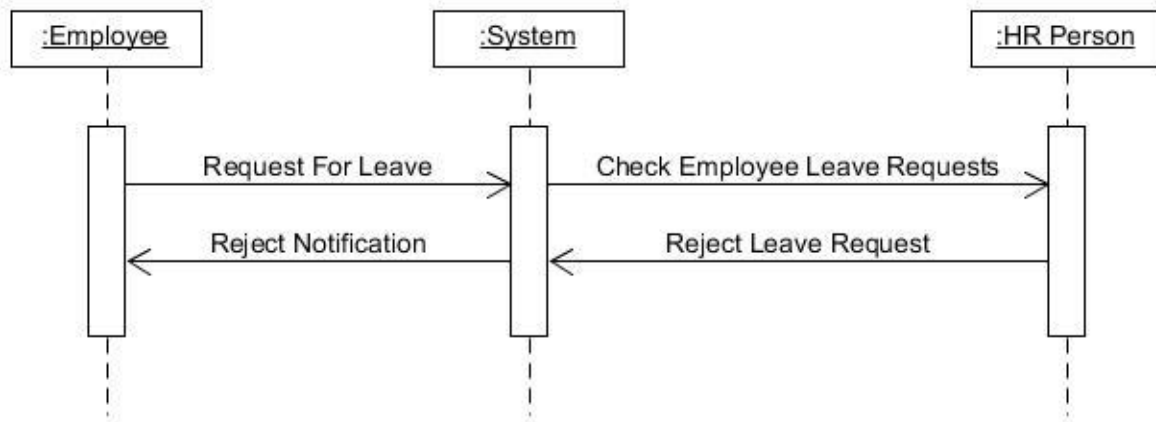
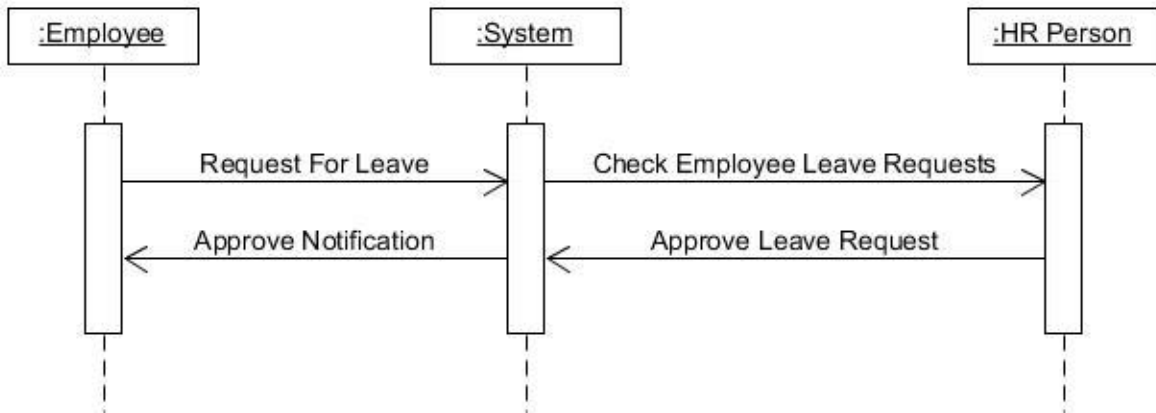


Fig 4.3 Sequence Diagram of Approve & Reject Employee Leave Request

4. Activity Diagram

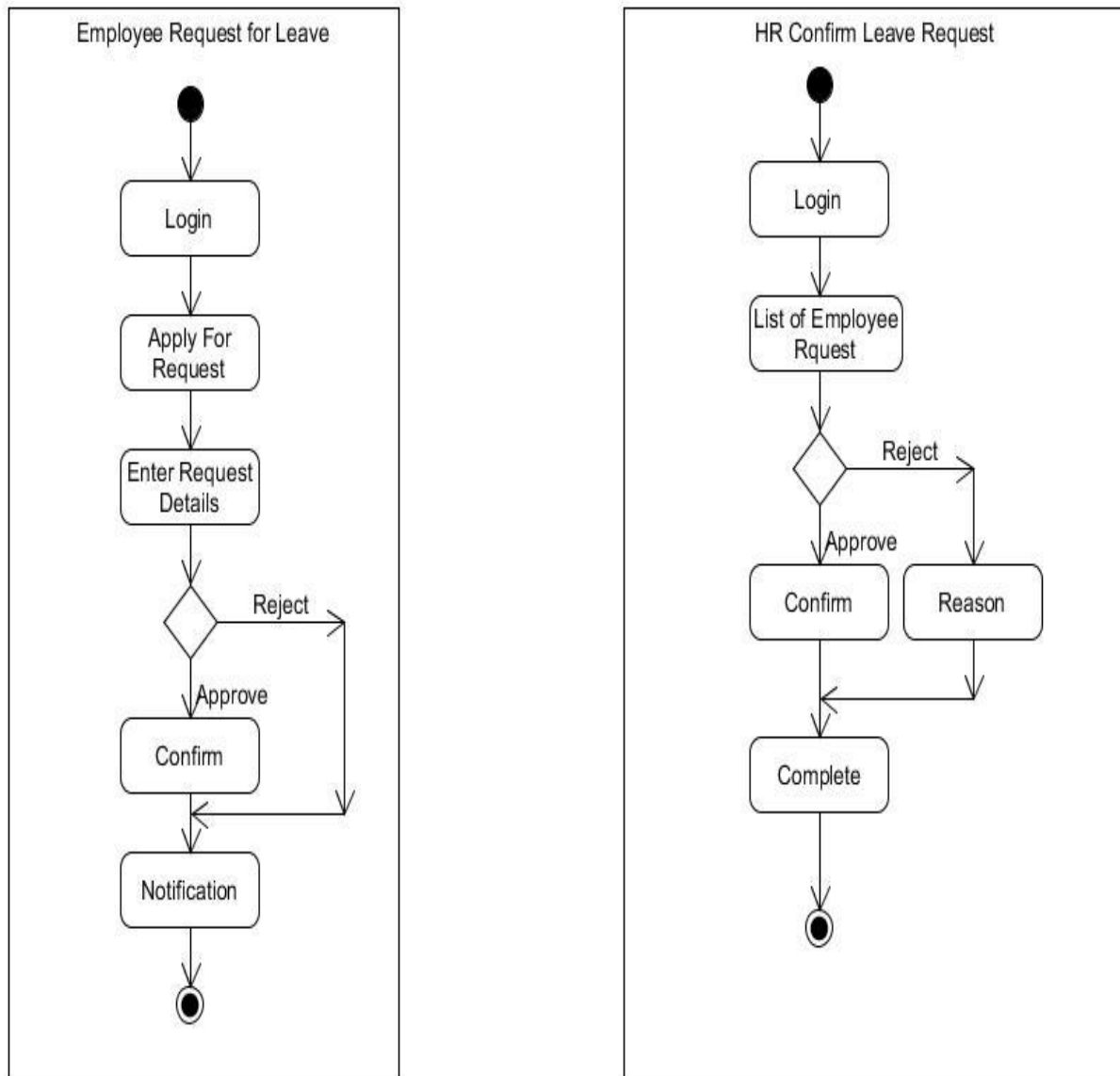


Fig 4.4 Activity Diagram of Approve & Reject Employee Leave Request

5. State Diagram

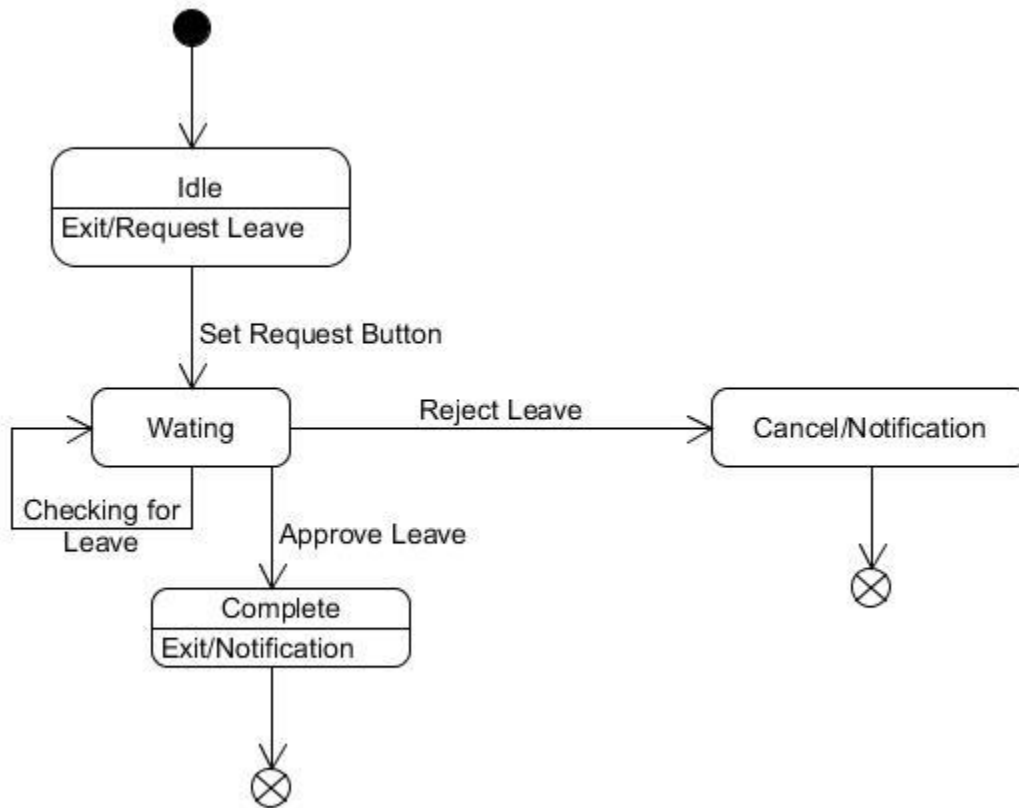


Fig 4.5 State Diagram of Employee Leave Request

6. E-R Diagram

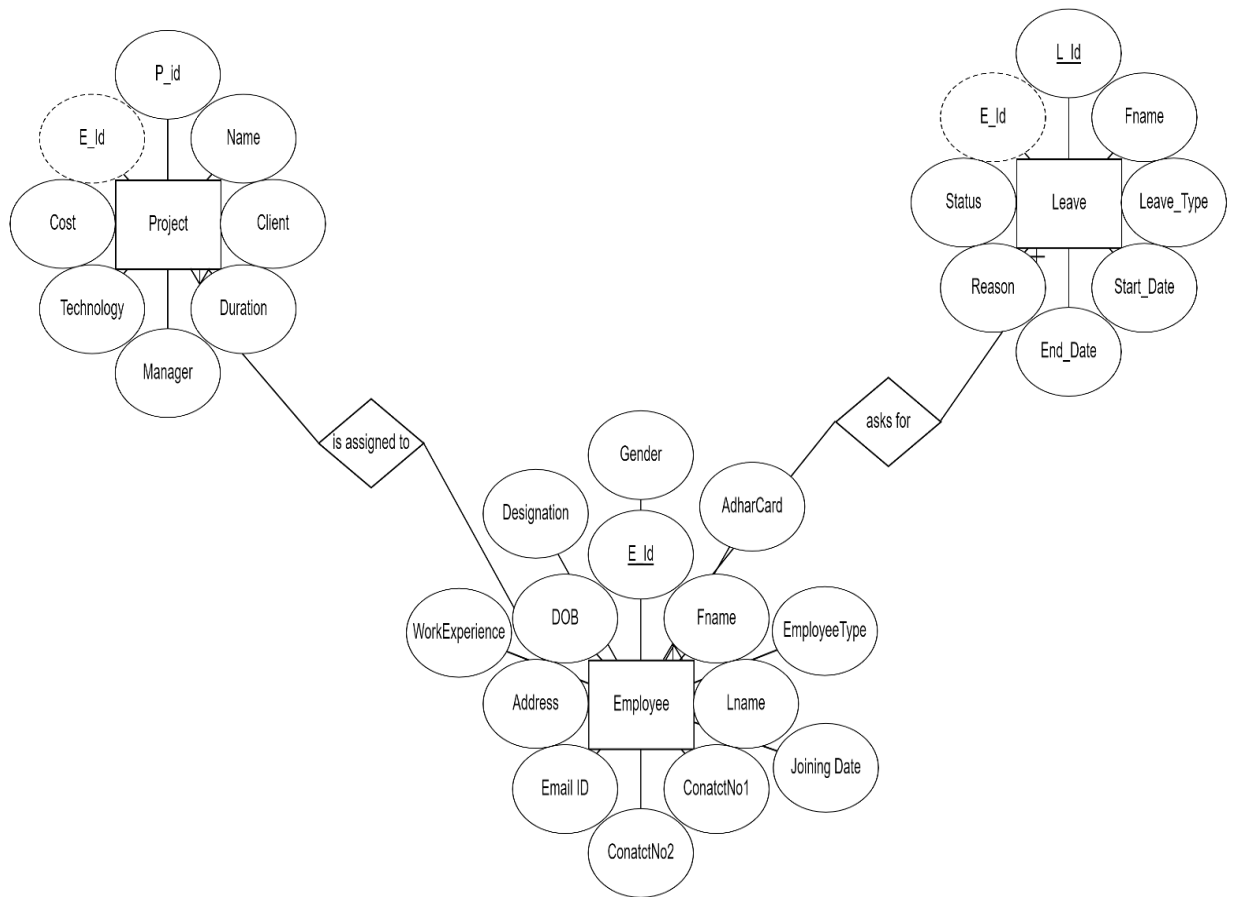


Fig 4.6 E-R Diagram of Human Resource Management System

7. Data Dictionary

Employee								
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table	Description
1.	E_Id	Int		Yes	Yes	PK		autoincrement
2.	Fname	nChar	20	Yes	Yes			
3.	Lname	nChar	20	Yes	No			
4.	ConatctNo1	Varchar	10	Yes	No			
5.	ContactNo2	Varchar	10	Yes	No			
6.	Email ID	nChar	50	Yes	No			
7.	Address	nChar	90	Yes	No			
8.	DOB	Date		Yes	No			
9.	Gender	nChar	6	Yes	No			
10.	Designation	nChar	17	Yes	No			
11.	AdharCard	nChar	16	Yes	No			
12.	EmployeeType	nChar	16					
13.	WorkExperience	nChar	17					
14.	JoiningDate	Date						

Leave								
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table	Description
1.	I_Id	Int		Yes	Yes	PK		auto increment
2.	E_Id	Int		Yes	Yes	FK	Employee	
2.	Fname	nChar	30	Yes	Yes			
3.	Leave_Type	nChar	2	Yes	No			
4.	Start_Date	Date		Yes	No			
5.	End_Date	Date		Yes	No			
6.	Reason	nChar	50	Yes	No			
7.	Status	Varchar	15	Yes	No			Default 'Waiting'

Project								
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table	Description
1.	P_Id	Int		Yes	Yes	PK		auto increment
2.	E_Id	Int		Yes	Yes	FK	Employee	
3.	Name	nChar	30	Yes	Yes			
4.	Client	nChar	30	Yes	No			
5.	Duration	nChar	10	Yes	No			
6.	Manager	nChar	30	Yes	No			
7.	Technology	nChar	10	Yes	No			
8.	Cost	nChar	10	Yes	No			

Implementation Details

Modules

1) HR Module

HR can add new Employee, update and delete employee records. HR Staff assigns new project to employees, and update as well delete project records. HR Staff can Approve/Reject Leave of employee according to the need.

2) Employee Module

Employee can see his/her Personal Details anytime. May request to change any information if needed to HR staff. Employee can apply for Leave, and then can check for the response of the application.

TESTING

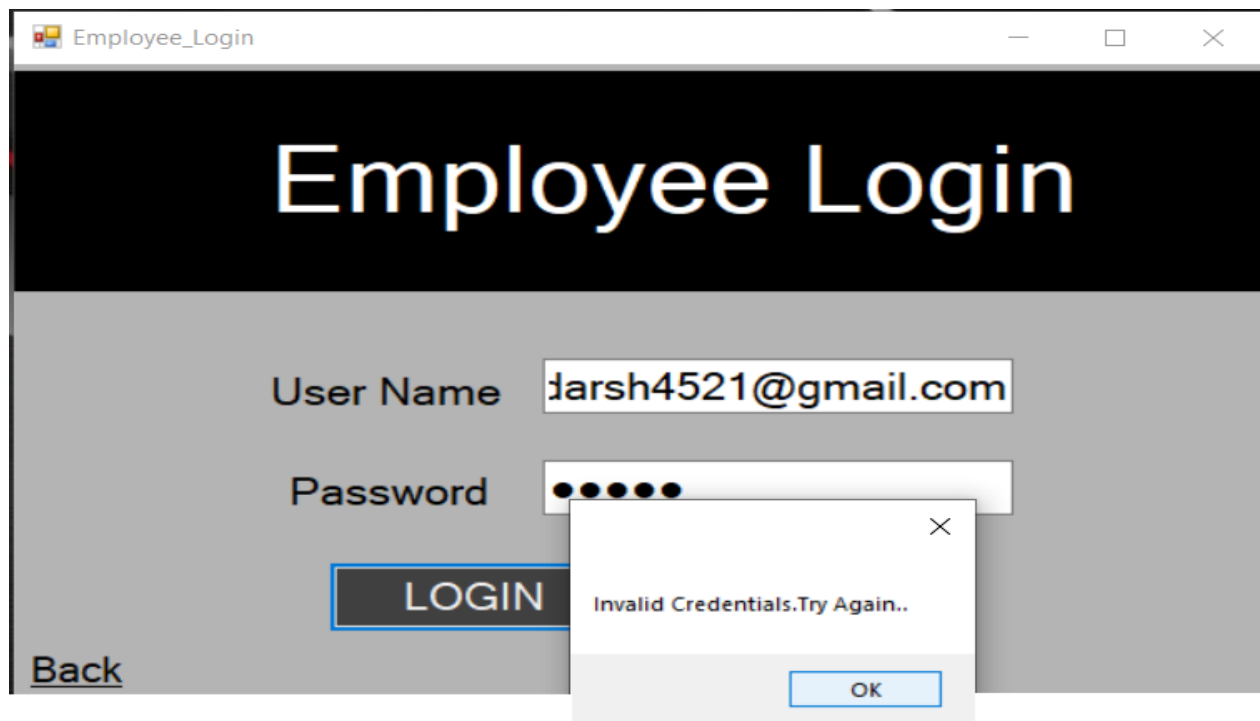


Fig. 6.1 If Employee Enter Invalid Credentials show Message Box.

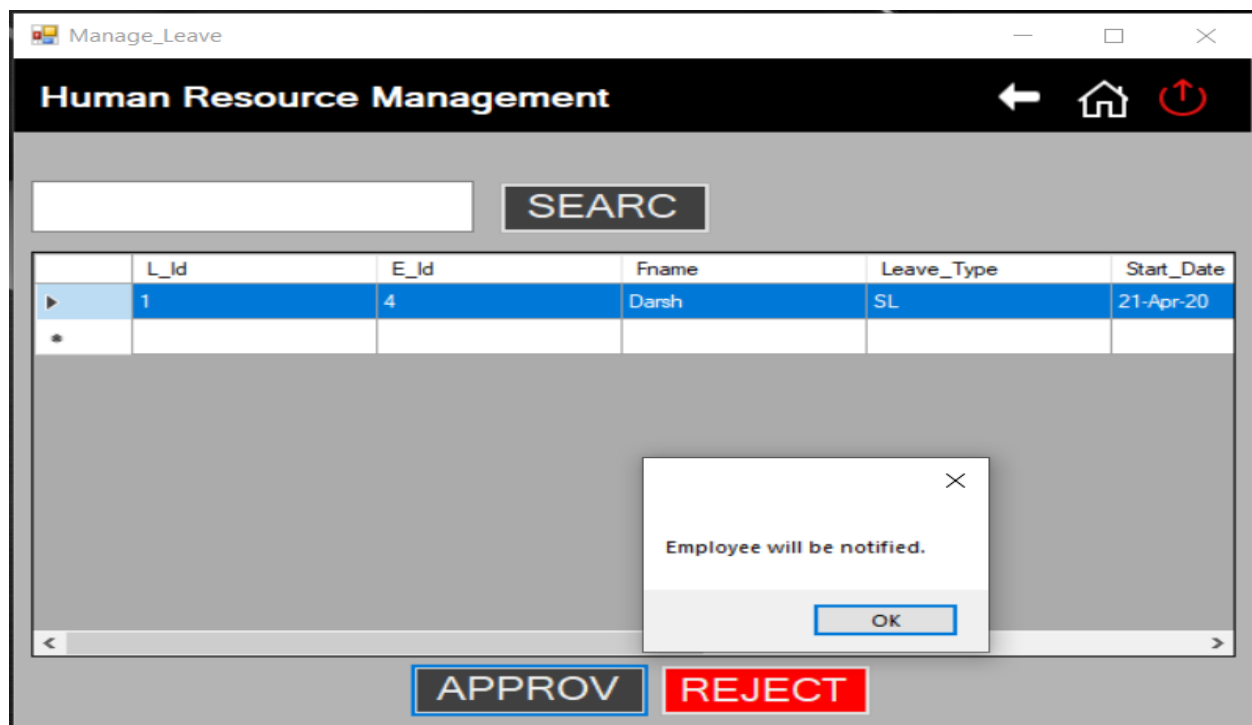


Fig 6.2 HR Person Manage Employee Leave (Approve / Reject)

SCREENSHOT



Fig 7.1 HR Dashboard

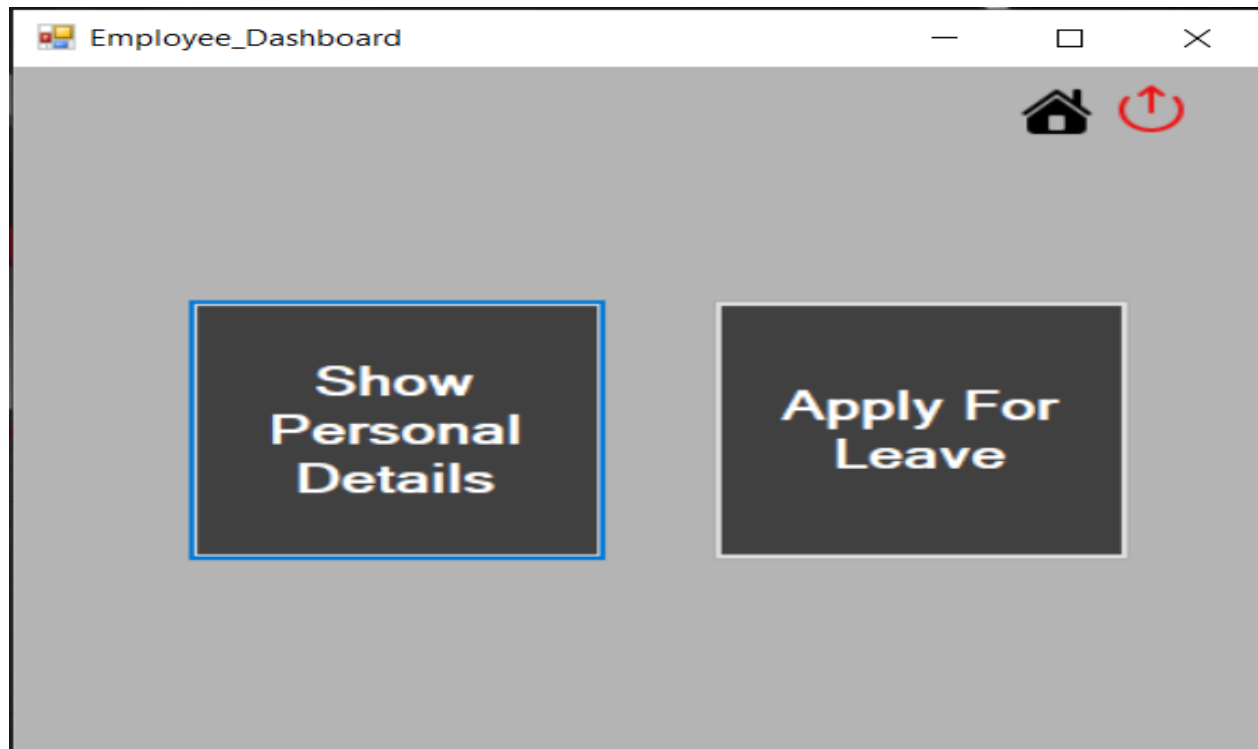


Fig 7.2 Employee Dashboard

Employee

Human Resource Management

Fname

DOB 03- Apr -20

Lname

Gender

Contact No.1

Designation

Contact No.2

Adhar Card

Email ID

Employee Type

Address

Work Experience (In Years)

SAVE

Fig 7.3 Add Employee Form

Project

Human Resource Management

Project Name

Client Name

Duration

Project Manager 4

Technology

Project Cost

SAVE

Fig 7.4 Add Project Form For Company

The screenshot shows a web application window titled 'Apply_Leave'. The main header is 'Human Resource Management' with navigation icons (back, home, refresh). The form contains the following fields:

- Fname**: A text input field.
- Leave Type**: A dropdown menu.
- Date Start**: A date picker showing '03- Apr -20'.
- Date End**: A date picker showing '03- Apr -20'.
- Reason**: A text area.
- APPLY**: A green button.

Fig 7.5 Apply For Leave Form

Conclusion

Development of project was after gathering all requirements. After gathering requirements overall flow control was defined, all modules were developed separately and then they were integrated. All modules are tested separately as well as after integration. All Functionalities mentioned above are implemented successfully in our project

Limitation and Future Extension

Limitation

- Application lacks some security aspects.
- Cannot maximize the application window.
- Salary Management is not implemented.
- Desktop application so it is hardware dependent.

Future Enhancement

- Increasing the security of application.
- Implementation of Salary Management.
- Email and SMS notification.
- Improving UI for better user experience.
- Make application responsive.
- Make a cloud based application.

Bibliography

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