Project Report on

Employee Management System

at

U. V. Patel college of engineering



Internal Guide:

Prof. Prayesh Patel

Prepared By:

Mr. Dhruvesh Panchal (18012011050)

Mr. Anuj Patel (18012011060)

B. Tech Semester VII (Computer Engineering) December 2021

Submitted to,
Department of Computer Engineering
U.V. Patel College of Engineering
Ganpat University, Kherva - 384 012

U.V. Patel College of Engineering



18/12/2021

CERTIFICATE

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Mr. Dhruvesh Panchal** student of **B.Tech. Semester VII** (**Computer Engineering**) has completed his full semester on site project work titled "**Employee Management System**" satisfactorily in partial fulfillment of the requirement of Bachelor of Technology degree of Computer Engineering of Ganpat University, Kherva, Mehsana in the year 2021-2022.

College Project Guide

Sign

Dr. Paresh M. solanki, Head, Computer Engineering

Prof. Pravesh Patel

U.V. Patel College of Engineering



18/12/2021

CERTIFICATE

TO WHOM SO EVER IT MAY CONCERN

This is to certify that Mr. Anuj Patel student of B.Tech. Semester VII (Computer Engineering) has completed his full semester on site project work titled "Employee Management System" satisfactorily in partial fulfillment of the requirement of Bachelor of Technology degree of Computer Engineering of Ganpat University, Kherva, Mehsana in the year 2021-2022.

College Project Guide

Sign

Dr. Paresh M. solanki, Head, Computer Engineering

Prof. Pravesh Patel

Abstract

This project aims at creating an Employee Management System which can be used by admins and their employees. It is a web-based application. This application is developed using HTML, CSS and PHP. It uses SQL database. Firstly, admin has to register employees' details in this application and has to provide id and password individually to the employees. Employee has to provide his personal details such as full name, birth date, email address, phone number and address. After the successful registration, employee will able to login into this application by provided id and password. Admin is able to view and update personal details of every employee. He can also assign any project to his employees directly using this application. In addition, he is also able to manage the leaves of his employees. Either he can approve the request of leave or he can refuse the request of leave. On the other hand, employees can view their personal details and assigned work by their admin. Moreover, they can also apply for leave to their admins by using this web application. They can also update the status of their given project. This project provides high security to Admin and user information. Our personal purpose is to make the procedure of employee management easier and faster.

CONTENTS

Contents

Acknowledgement
1. Introduction
1.1 Purpose
1.2 Scope
1.3 Overview
2. Literature survey
2.1 OrangeHRM3
2.2 SimpleHRM
2.3 Waypoint HR
2.4 Sage HR Africa
3. Functional and Non-Functional Requirements
3.1 Non-Functional Requirements
3.1.1 Availability:
3.1.2 Reliability:
3.1.3 Security:
3.1.4 Usability:
3.1.5 Correctness:
3.1.6 Maintainability:
3.2 Functional Requirements
3.2.1 Admin signup5
3.2.2 Admin login6
3.2.3 Employee login6
3.2.4 Leave application of employees6
3.2.5 Leave approval process
3.2.6 Employee management
3.2.7 Assigning a project
3.2.8 Employee details of each department
4. Hardware and software requirements
4.1 Hardware requirements8
^

4.1.1 Client side
4.1.2 Server side
4.1.3 Peripheral Device8
4.2 Software requirements8
4.2.1 Server side
4.2.2 client side
4.2.3 Tools used
5. Feasibility Analysis
5.1 Technical Feasibility9
5.2 Time Schedule feasibility9
5.3 Operational feasibility9
5.4 Implementation feasibility9
5.5 Economic Feasibility9
6. Diagrams 10
6.1 Use case diagram
6.2 Sequence diagram
6.2.1 Admin section
6.2.2 Employee section
6.3 Class diagram
6.4 Activity diagram
6.5 Data flow diagram14
6.5.1 Level 0 DFD diagram
6.5.2 Level 1 DFD diagram
6.5.3 Level 2 DFD diagram
7. DATA Dictionary
7.1 Employee table
7.2 Project table
7.3 Employee_leave table
7.4 Salary Table
8. SCREENSHOT AND USER MANUAL 18
9. Conclusion and Future work

Table of Figuers

Figure 1 home page	18
Figure 2 Contact us page	18
Figure 3 Admin login page	19
Figure 4 Employee login page	19
Figure 5 Home page (admin section)	20
Figure 6 manage employees section	20
Figure 7 Add employee section	21
Figure 8 Project creation	22
Figure 9 Project status	22
Figure 10 Salary section	23
Figure 11 Leave section	23
Figure 12 Home page (Employee side)	24
Figure 13 Edit profile page	24
Figure 14 My projects	25
Figure 15 Apply leave	25

Acknowledgement

We would like to express our deepest appreciation to all those who have been the pillar of strength during the development of the project.

We are highly indebted to the U. V. Patel College of Engineering, Ganpat University for providing such a wonderful opportunity to work on a live project and support throughout the journey. Special gratitude to our project guide Prof. Pravesh Patel whose contribution to stimulating suggestions, helpful insights, and encouragement at crucial moments, helped us to develop such great software. They have been a constant source of inspiration and motivation to us.

We would like to express our gratitude towards our HOD Prof. Paresh Solanki and members of U.V. PATEL COLLEGE OF ENGINEERING for their kind cooperation and encouragement which help us in the completion of this project.

Lastly, we want to extend our thanks to my families for their support and to our friends who have willingly helped us out with their abilities.

Dhruvesh Panchal [18012011050] Anuj Patel [18012011060]

1. Introduction

Nowadays, the users of the internet are growing at the speed of rocket all over the globe. In extra, internet has made everyone's life more convenient and faster. So, every field in the world is growing faster in online as compare to offline. So, this web-based employee management system will help admins to handle their employees online. Interactive GUI and the ability to manage various activities will make this system very flexible and convenient. Any admin or a manager is a very busy person and does not have the time to sit and manage the entire activities manually on paper. This application gives him the power and flexibility to manage the entire system from a single online system. This system provides various facilities such as managing details, projects, leaves of the employees. Admin has power to manage every professional thing of their employees using this single system.

1.1 Purpose

The purpose of our application is to make faster & simplify the process of employee management. By doing this, Admins or managers can save their time from this one thing and use that time in other activities. Furthermore, admins and employees can directly interact with each other and check their work with the help of this application. It will also make the process of leave management faster and simpler. Lastly, it is an online platform so, employees and admins can check their work from any place.

1.2 Scope

By scope, this project is limited to the service of employee management. This application is useful for industries, companies, hotels, hospitals & many more. Today every field is growing online like shopping, studying, ticket booking etc. Also, all fields are growing online faster than offline. This will also take the whole system online so because of this the process will become easier & faster. People will able to save their time and efforts. The scope of this application is limited but people will get so many benefits because of this.

1.3 Overview

With using of this web-based application our main target is to make the process of employee management easier and more convenient. However, most of the companies who are working in the sectors such as IT, hotel, hospital and many more. It will be so beneficial for them because of the functionalities.

2. Literature survey

2.1 OrangeHRM

OrangeHRM is a powerhouse human resources tool that any small or midsize business can benefit from using. With OrangeHRM, you have options: You can download and install the system on your own hardware, or you can purchase a hosted solution. To get prices for the hosted solution, you have to contact them from their Request a Quote page. OrangeHRM's features include: fully modular, addons (e.g., benefits, employee self-service, training, budget, job and salary history, etc.) for purchase, all standard HR functions (employees, leave, benefits, performance, etc.), and more. The installation is fairly straight-forward. With a self-extracting Windows installer or full-source installations for Windows, Mac, and Linux, you can get OrangeHRM up and running on nearly every platform. If you don't have the hardware or the skills to set up Orange onsite, you can request a quote for a hosted instance of OrangeHRM. You can also purchase support plans and customizations.

2.2 SimpleHRM

SimpleHRM offers an open-source version of its professional platform. This version offers time management, and it can be installed on either a WAMP (Windows Apache MySQL PHP) or LAMP (Linux Apache MySQL PHP) server. Once installed, SimpleHRM offers every feature you need to solidify your HRM department: employee information, leave management, travel management, expense management, benefit management, and task reporting. SimpleHRM allows you to assign a CV to an employee and define eligibility for rehire. Each major module offers plenty of granular control, and the user interface is well laid out.

2.3 Waypoint HR

WaypointHR is the HR software for any small or midsize company looking for a platform that nearly any user, of any experience level, can use. WaypointHR can manage employee data, which include: Personal details, Holiday/sickness/absence history, Employment/contract/job/salary details, Discipline and grievance records, Performance appraisals, exit interviews and termination, A five-step add employee wizard, Export reports to PDF, Multi-site facility layering and many more. WaypointHR also offers an active online support forum, a dedicated support website (which includes developer support), as well as an on-demand solution (for those that do not want to bother with the installation of WaypointHR on a local machine).

2.4 Sage HR Africa

Sage HR Africa offers world-class HR and pay roll software and services to the African continent. We have an African Footprint of 35 countries that includes an extensive network of strategic and Business Partners that cant assit you with installation, training and anyone-site support that your business requires. We are committed to providing robust, innovative and easy-to-use Human Resource and software applications that will make your business life so much easier. We ensure statutory compliance with local authorities and with our software your business is always in line with country-specific payroll and HR rules and regualtions. Our HR and Payroll software is ideal for any size and type of business. Whether you are just starting out, or if you have an existing business that is growing, Sage HR Africas software Solution aim to support the growth of your business and to develop a going partnership with you, our potential customer, for long term.

3. Functional and Non-Functional Requirements

3.1 Non-Functional Requirements

- **3.1.1 Availability:** This management system includes the online components should be available for 24/7. Users can interact with this system whenever they want.
- **3.1.2 Reliability:** As the System provide the right tools for problem solving it is made in such a way that the system is reliable in its operations and for securing the sensitive details. If a situation occurs where user database will be failed then it is not about to worry it will be available in backup storage.
- **3.1.3 Security:** It uses secure database and user verification system. So, the data of all users will be safe anyone is not able to create fake profile because all users have to verify them self before registration.
- **3.1.4 Usability:** The cost of system will be standardized. It will after one time purchase.
- **3.1.5 Correctness:** The details of every employee have to be correct for the future references.
- **3.1.6 Maintainability:** The admin or manager has to maintain the correct records of their Employees. If any admin wants to check the details of the employees than it should be correct every time.

3.2 Functional Requirements

3.2.1 Admin signup

If any admin is using our application for the first time then they have to first register on our application using their professional details such as name, email id, password, department & phone number. It is compulsory to provide this fields for registration.

- ➤ **Input**: For registration user has to provide his name, Email id, password, department & Phone number.
- ➤ **Process**: After providing this detail when user click on sign up button it will take this data to our database. If this data match with our database schema then the data is stored in our database else it will show errors.

Ex. In name field user can only provide characters. In email field user has to provide his/her valid email address. In password field user can enter character & numbers to make password stronger and in last phone number field user has to provide valid phone number.

➤ Output: If all fields are correct then it will show a message like (signup successful) else show error message.

3.2.2 Admin login

After successful completion of signup process it will show login page.

- ➤ **Input:** on admin login page admin has to provide registered email address & password.
- ➤ **Process:** After providing this detail when user click on login button it will take this data to our database and check that this data is available or not.
- ➤ Output: If this data is available in our database, it will show message (login successful) or show error (Enter valid details).

3.2.3 Employee login

If any employee wants to login into this application than he has to collect his id and password from his admin or his manager. Employee is not able to signup into this system by himself.

- ➤ **Input:** on employee login page admin has to provide registered email address & password.
- ➤ **Process:** After providing this detail when user click on login button it will take this data to our database and check that this data is available or not.
- ➤ Output If this data is available in our database, it will show message (login successful) or show error (Enter valid details).

3.2.4 Leave application of employees

Every employee is able to request leave from request leave section which is available on every employee's dashboard. But employee has to provide some details for requesting leave.

- ➤ **Input:** Employee has to provide valid reason, starting date and ending date of the leave.
- ➤ **Process:** Whenever, employee request for leave than the system will check the details of leave and if the details of leave match with our schema than the request will be saved in our database and if not than show popup to enter proper details.

➤ Output: Firstly, by default the status of the leave application will pe pending. If admin accept or reject the leave application than it will show the appropriate status.

3.2.5 Leave approval process

Firstly, the employee has to request their leave from the two major higher authorities if they accept the leave of the employee then afterwards the request will be shown to the admin and he can allow after confirming with the authorities that the employee has sufficient enough to get a leave or not. In addition, after all this process the decision will be made to rather approve the leave or reject it. by default, the status of the leave will be pending, but if admin approve the leave application than it will update the status to approved. On the other side, if admin reject the leave application than it will update the status to rejected or canceled. Firstly, by default the status of the leave application will pe pending. If admin accept or reject the leave application than it will show the appropriate status.

3.2.6 Employee management

Admin or manager can manage the details of their employee directly from this system. They are able to view, add, remove and modify the data of their employees.

3.2.7 Assigning a project

Admin is able to assign a project or any work to his employees. Admin has to provide brief detail of project, deadlines and employee id. After this, he can assign projects to his employees.

3.2.8 Employee details of each department

➤ Every employee is able to view the contact details such as phone number, email id and many more from his dashboard. In addition, employees can also find project members by viewing skills of every employee as per their project requirement.

4. Hardware and software requirements

4.1 Hardware requirements

4.1.1 Client side

- Core i3 or above
- 4GB RAM
- Hard Disk: 300 GB

4.1.2 Server side

- Core i3
- 4GB RAM
- Hard Disk: 300 GB

4.1.3 Peripheral Device

- Laptop
- Computer

4.2 Software requirements

4.2.1 Server side

- Vs code
- xampp
- mysqlphp

4.2.2 client side

- Internet Access
- website domain name

4.2.3 Tools used

• Vs code

5. Feasibility Analysis

5.1 Technical Feasibility

➤ Technical feasibility study is the complete study of the project in terms of input, output, programs etc. It is a very effective tool. This study should most essentially support the information of an organization. We have used MySQL Database and language as HTML, CSS, PHP for backend and for UI We Have Used AdobeXD.

5.2 Time Schedule feasibility

- > Schedule feasibility is the degree to which a plan, project or process is realistic and achievable.
- As per my project definition it is about employee management system so it is possible that in some cases data fetching is slower. Time is very precious so that we have to keep in mind for that.

5.3 Operational feasibility

- ➤ Operation feasibility check, whether the end user will be able to use and work on this Application. If a user is not able to use and work then development of this Application is a waste of time.
- ➤ We have used high Scalability or Efficient Time That our Users will Have Better Use Of our Application.

5.4 Implementation feasibility

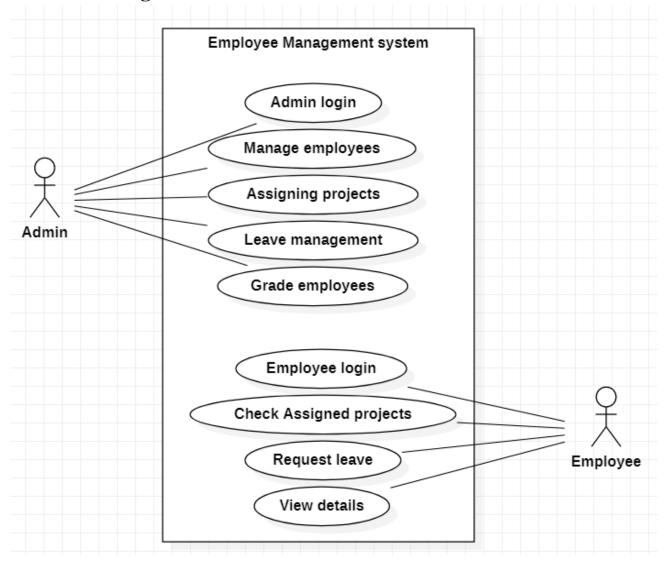
➤ Implementation feasibility is the framework of facilitating the successful implementation of a plan by evaluating whether the plan at hand is fiscally and technologically feasible.

5.5 Economic Feasibility

- Economic feasibility looks at the financial aspect of the project. This feasibility concerns the return from the investment in the project.
- ➤ The cost and benefits associated with the proposed system are compared and the project is economically feasible only if tangible and intangible benefits outweigh the cost.

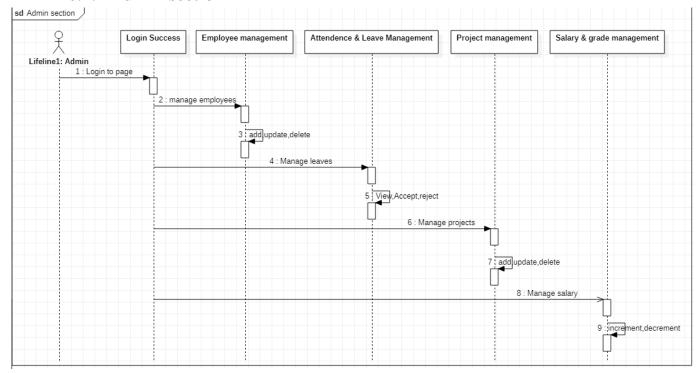
6. Diagrams

6.1 Use case diagram

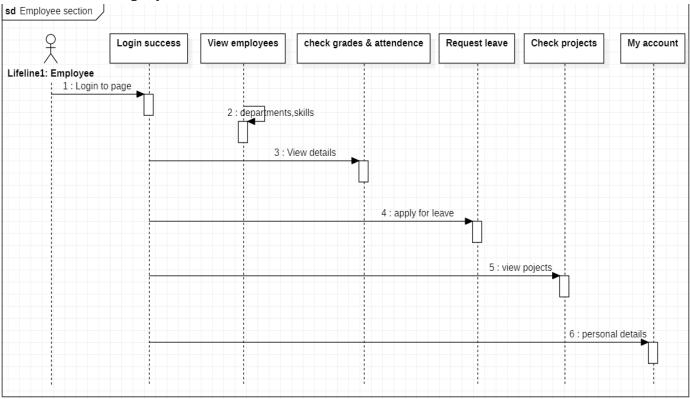


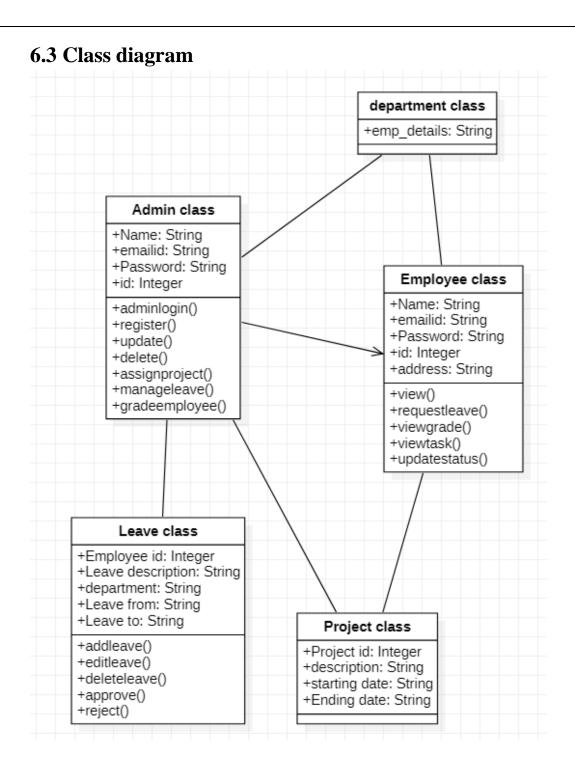
6.2 Sequence diagram

6.2.1 Admin section

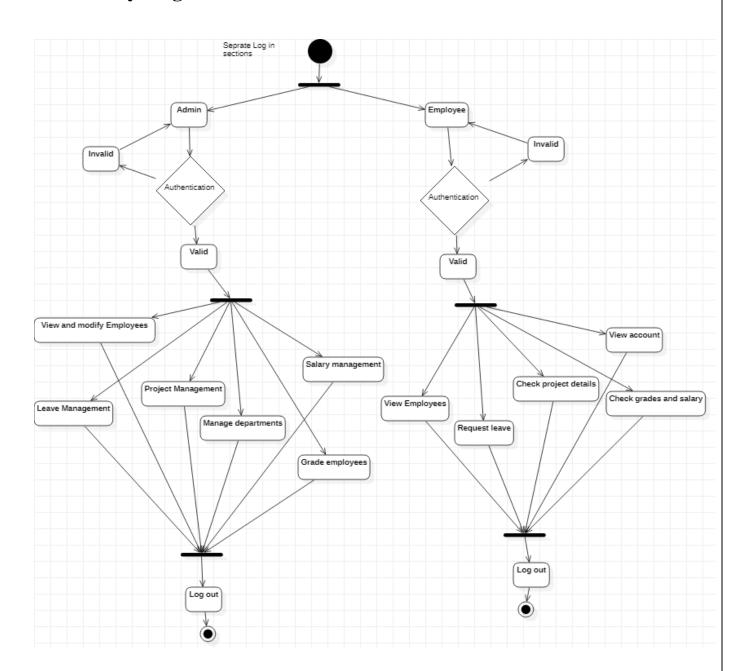


6.2.2 Employee section



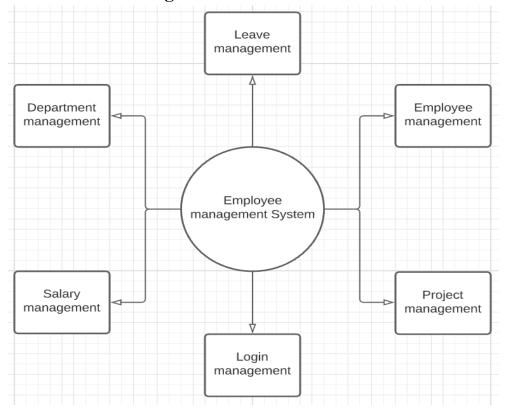


6.4 Activity diagram

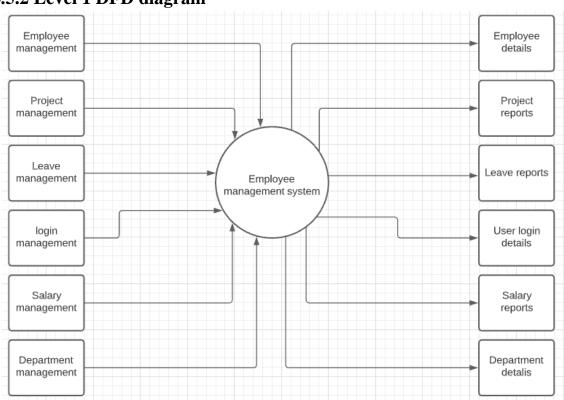


6.5 Data flow diagram

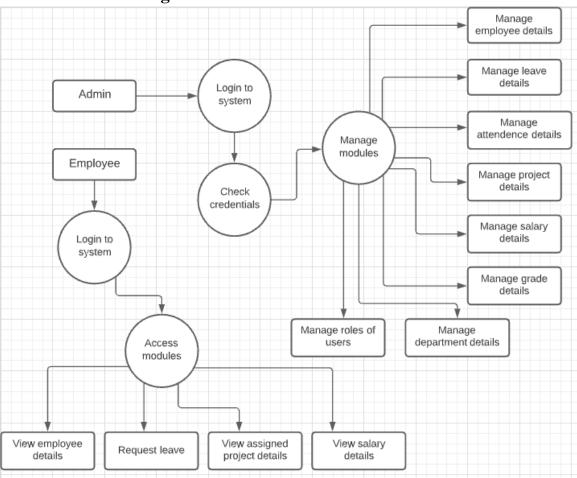
6.5.1 Level 0 DFD diagram



6.5.2 Level 1 DFD diagram



6.5.3 Level 2 DFD diagram



7. DATA Dictionary

Data Dictionary conveys the develop or stakeholders regarding the schema/structure of the database. It contains information regarding the several fields, their data types and also explains regarding the primary key and foreign key concepts (if applied). This chapter contains all the data dictionaries that this project is using. It explains each field of database with some description.

7.1 Employee table

Sr.no	Field name	Datatype	description	Null
1	Id(primary)	Int(11)	Unique employee id	No
2	firstName	Varchar(100)	Employee's first name	No
3	lastName	Varchar(100)	Employee'slast name	No
4	Email	Varchar(100)	Employee's email	No
5	Password	Text	Password	No
6	Birthday	Date	Birth date	No
7	Gender	Varchar(10)	Gendet	No
8	Contact	Varchar(10)	Phone number	No
9	Nid	Int(20)	normal id	No
10	Address	Varchar(100)	Employee's address	No
11	Dept	Varchar(100)	Employee's dept	No
12	Skills	Varchar(100)	Employee's skills	No
13	degree	Varchar(100)	Employee's degree	No
14	pic	text	Employee's pic	No

7.2 Project table

Sr.no	Field name	Datatype	description	Null
1	pid	Int(11)	Unique project id	No
2	Eid	Int(11)	Employee's id	No
3	Emp_role	Varchar(100)	Employee's role	No
4	Pname	Varchar(100)	Project name	No
5	Pdesc	Text	Project description	No
6	Duedate	Date	Due date	No
7	Subdate	Date	Submit date	No
8	Assignedfile	text	Admin's file	No
9	Submitedfile	text	Employee's file	No
10	Mark	Int(11)	Employee's marks	No
11	Status	Varchar(100)	Project status	No

7.3 Employee_leave table

Sr.no	Field name	Datatype	description	Null
1	id	Int(11)	Employee id	No
2	Token(primary)	Int(11)	Unique token	No
3	Start	Date	Start date	No
4	End	Date	End date	No
5	Reason	Varchar(50)	Reason	No
6	status	Varchar(50)	status	No

7.4 Salary Table

Sr.no	Field name	Datatype	description	Null
1	Id(primary)	Int(11)	Employee id	No
2	Base	Int(11)	Base salary	No
3	Bonus	Int(11)	Bonus	No
4	total	Int(11)	Total salary	No

8. SCREENSHOT AND USER MANUAL

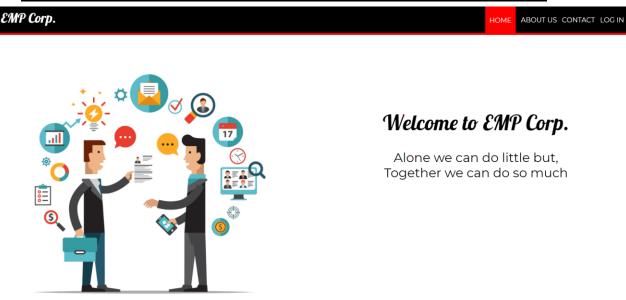


Figure 1 home page

This is a homepage of our application. From this page normal users can find some information about us and also find contact details of us. On right top cornet we have added login sections for admin and employee.



Figure 2 Contact us page

This is a contact us page of out web application. Users can find our address using the given map and we have also added our contact details like phone number and email address

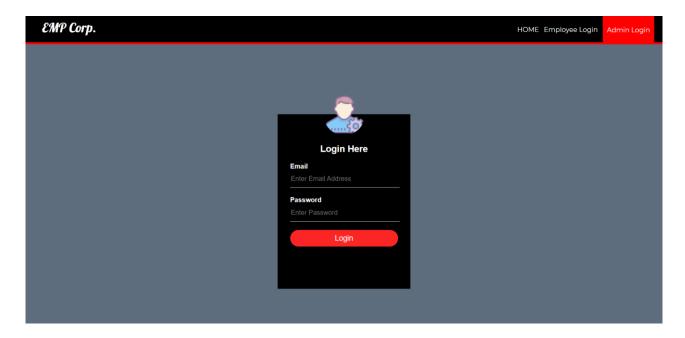


Figure 3 Admin login page

This page represents admin login section. Admin has to enter his id password to login into web application.

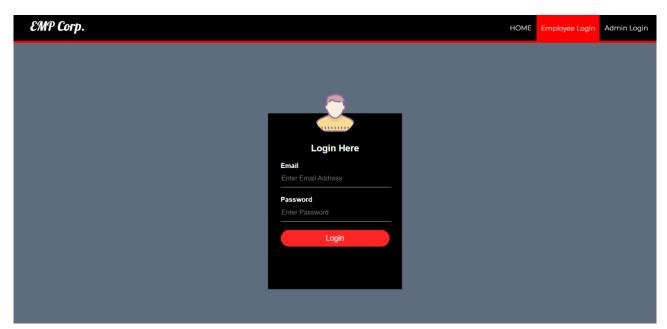


Figure 4 Employee login page

This page represents employee login section. Every employee has to enter his id password to login into web application.

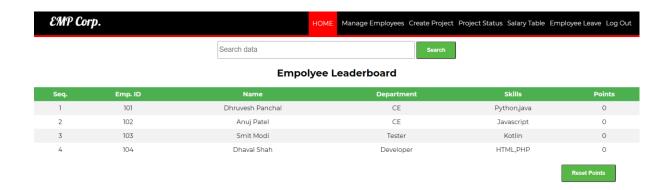


Figure 5 Home page (admin section)

This is a home page on admin section after login. Admin can see brief details of his employees on this page. Also, admin can search out any employee using his name, department, Skills and Emp id.

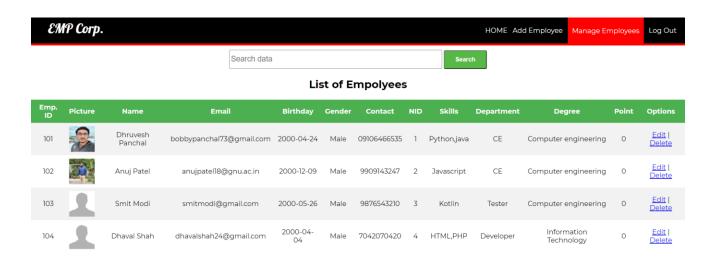


Figure 6 manage employees section

This is a manage employee section on admin side. Admin can edit details of every employee and delete them too. Also, admin can search out any employee using his name, department, Skills and Emp id.

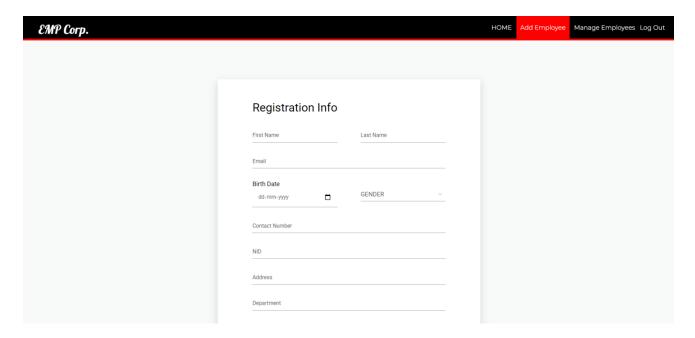


Figure 7 Add employee section

This page is used to add new employee in system. Admin has to provide some details of employee such as full name, email id, gender, degree, skills, department, address etc. After submitting all necessary information admin can add new employee by pressing submit button.

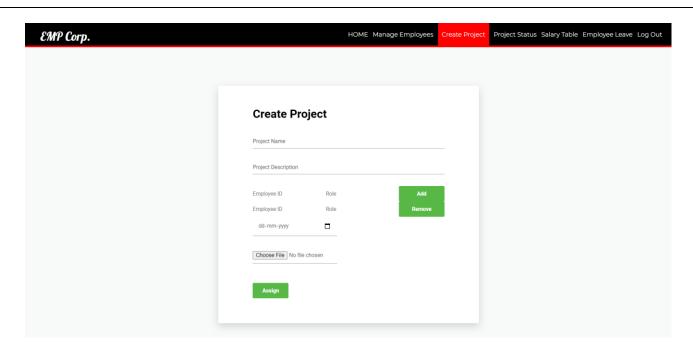


Figure 8 Project creation

This is a create project page. If admin wants to create new project and assign new task than admin has to provide some necessary details such as project name, description employee ids and roles, deadline etc. After pressing assign button tasks will be assigned to selected employees.



Figure 9 Project status

On this page, admin can check tasks assigned to employees and also, mark submitted work by employees.



Figure 10 Salary section

On this page, admin can find base salary, bonus and total of every employee.

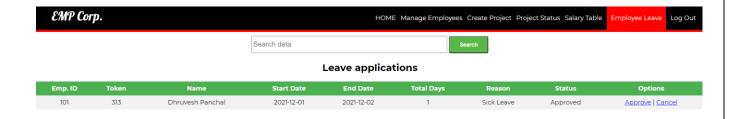


Figure 11 Leave section

On this page, admin can find all the leave application placed by employees. Admin can approve or cancel the leave accordingly

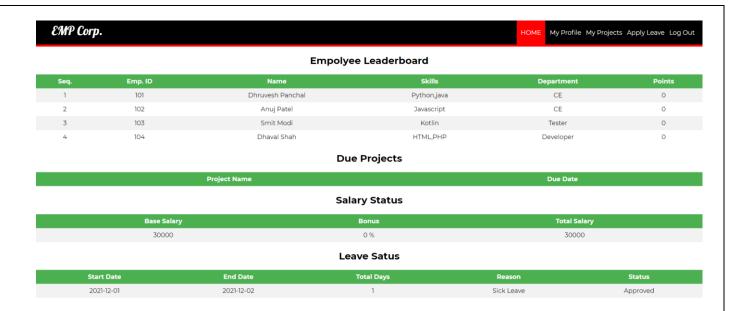


Figure 12 Home page (Employee side)

This is a home page of employee section. Employee can find some information about his peers, due projects, salary status and leave status.

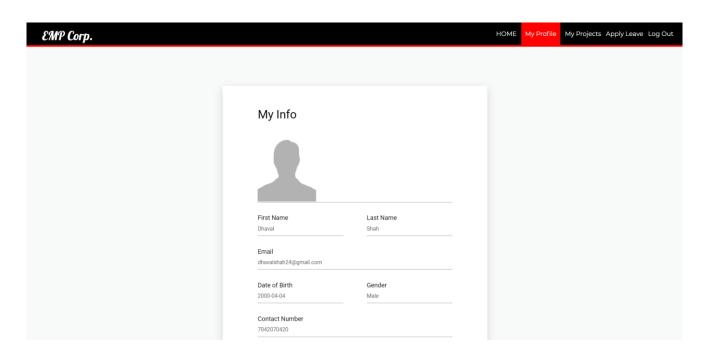


Figure 13 Edit profile page

With the help of this page, employee can edit his personal details such as mobile number, address, email and password.



Figure 14 My projects

Employee can check his remaining and completed task in my project section. Employee can also download project file provided by admin and able to attack his work using submit button.

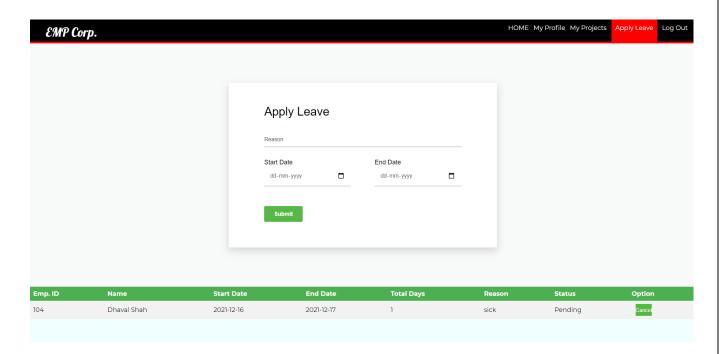


Figure 15 Apply leave

Employee is able to place his leave application using this page. Employee has to provide some necessary details such as reason for leave, starting date, ending date. Employee is able to cancel his leave if status of leave is pending.

9. Conclusion and Future work

This report presents the Online Employee Management Web Application. This web application will help individuals and corporation to manage the records of their employees and will also the work faster and in a convenient & enhanced way. Moreover, it will be easy to distribute project work to employees by their skills. The app will be suitable to all the users as well as admins.

As a future work, some additional stuff could be implemented and integrated into the system code making it much more reliable and flexible. As everything is going digital the employee management and their work like attendance, leave application, projects and many more things will be managed and shown in this application. The main core of these project that differs from ongoing application will be that it offers and work in all aspects regardless of the barriers set by some of the current market application.