**Employee Management System (EMS)- Group 11**

**Problem Definition:**

Employee Management system is designed to keep employee’s information like Attendance, Finance, Leave, Performance and Training record.

Employee can update and view the personal information but cannot update finance.

Admin is not allowed to update the personal information of the employee but can update the finance related to employee.

**Employee Management System (EMS) has two types of login.**

1. **Employee Login**
2. **Admin Login**

Employee Login

The system asks employee to enter their login ID and password. It helps to manage personal information, salary status, Attendance, View events and leave.

Admin Login

The system asks administrator to enter login ID and password. It is used to add new employees, manage employee’s Personal information, Finance, Attendance, Events, Leave, Training Record and Performance.

**Problem Decomposition:**

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| --- | --- | --- |
| S. No | Sub problem Name | Description |
| 1 | Levels | Split the management system into 2 levels |
| 2 | Login | An interface to login to the employee management system |
| 3 | User Panel features | Features that only ‘Users’ can access |
| 4 | Admin Panel features | Features that only ‘Admins’ can access |
| 5 | Logout | An interface to logout from the employee management system |

Sub problem 1: Levels

Split the interface in two levels, i.e., such a way that it asks whether the employee is a ‘User’ or an ‘Admin’.

Sub problem 2: Login

Allow the employee to login to the system. If the employee is a ‘User’ display the ‘User login Interface’ or if he/she is an ‘Admin’, display the ‘Admin login Interface’.

Sub problem 3: User Panel Features

Include features like login, update password, manage personal information, View salary, Manage Attendance, View Events, Manage Leave, Logout.

Sub problem 4: Admin Panel Features

Include features like login, add new user, manage employee personal information, manage employee finance, manage employee attendance, manage employee events, manage employee leave, manage employee training record, manage employee performance, Logout.

Sub problem 5: Logout

Provide an interface for all Users and Admins to logout from the system. Employees must logout to end their session.

**Abstraction:**

There are many thing that the user doesn’t need to know:

1. Male-Female ratio

The company uses this record for some data analysis on employee efficiency. User need not know about the record.

2. Total number of employee including every department:

A record of total number of people working for the company is kept to further analyze whether to extend the firm with existing employees or by recruiting new employees.

3. Database server

The user doesn’t know where his personal details and all other details regarding him are stored. He doesn’t have the right to access the database server. He won’t know anything about the data in the servers.

4. Employee Performance

Employee Performance record is maintained by the company and the employee doesn’t even know about this record. The record contains information on his contribution to company, attitude and character.

5. Training record

Whether the employee should be trained more? Or can he be made a team leader? The answers to these questions are based on the content in training record.

**Pattern Recognition:**

* The system follows specific pattern for both employee and admin login.
* Only the administrative panel has the access to remove, add and edit employee information.
* Whereas the employees has only access to view and edit.
* The user also have permission to request leave and admin has permission to grant leave to the employees
* The following are common in both the panels:

1. login
2. manage personal information
3. manage attendance (entry and exit)
4. log out

**ALGORITHM:**

* **LEVELS-**
* The management system interface is divided into two major levels namely the Employee level and the Admin level.
* The system displays both the levels such that it allows the user to choose between them.
* **LOGIN-**
* The interface requires the user to choose how he has to login i.e., ‘The User’ or ‘The Admin’.
* If ‘The User’ is chosen the User Login page opens allowing the user to enter his/her user ID and password.
* Else if ‘The Admin is chosen the Admin Login page opens allowing the user to enter his/her user ID and password.
* For the User Login the employee Id will be the user Id and a password that is pre-set for that particular ID has to be used.
* For the Admin Login the respective admin ID will be the user ID and a password that is pre-set for that particular ID has to be used.
* All the set of IDs and password will be unique to each accessor and is checked with the existing database to allow the user to login to the system.
* If the ID and password does not match, interface shows a “wrong user id and password” message.
* **USER PANEL FEATURES-**

1. The system displays a menu with many features of the user interface allowing the user to choose among them to access and update information and also to raise request.

1.1 **UPDATE PASSWORD-**

1.1.1. The interface askes the user to enter the existing password.

1.1.2. Allows the user to enter the new password.

1.1.3. Askes the user to confirm the new password by re-entering it.

1.1.4. The new password is updated and shows a message as “Password updated”

1.1.5. Back to menu

1.2 **MANAGE PERSONAL DETAILS-**

1.2.1. The system displays all the details of the user which is already registered.

1.2.2. The interface allows the user to update any change in the personal details like name, address, contact no. etc., in the respective box/space given.

1.2.3. An icon named ‘Update’ will be displayed at the end of the page.

1.2.4. Once the changes are made the details will get updated upon clicking on the update icon and displays a message as “Details Updated”.

1.2.5. Back to menu.

1.3. **VIEW SALARY-Abhinav**

1.3.1. Shows sub features like Payments and Deduction, Net salary a Duration.

1.3.2. Payment and deduction show the salary payment and deductions made in the salary along with the date, time and stating the reason for deduction in payment if any.

1.3.3. Net salary shows the users salary details including his/her net salary amount and allowance like HRA and DA.

1.3.4. Duration shows the working hours of the person.

1.3.5. Back to menu

1.4. **MANAGE ATTENDENCE-sujith**

1.4.1. Displays the attendance details month wise in a tabular form indicating date, day, Entry Time and Exit time.

1.4.2. Back to menu

1.5. **VIEW EVENTS-deva**

1.5.1. Displays the calendar showing details like time, date and description on official events like meetings, training programs, product launch events, get-togethers etc.,

1.5.2. Back to menu.

1.6. **MANAGE LEAVE-sujith**

1.6.1. Displays the details in calendar format showing holidays, On Duty and leaves taken month wise.

1.6.2. Shows an option to request for a leave and allows the user to state the reason and duration of leave.

1.6.3. Once the request is raised, the interface also shows a data on number of leaves allowed per year, number of leave taken so far, remaining number of leaves and also shows a warning message if the leaves allotted per year was already used.

1.6.4. Back to menu.

* **ADMIN PANEL FEATURES-**

1. The system displays a menu with many features of the admin interface allowing the admin to manage and support various information of the employees.

1.1. **ADD NEW USER-**

1.1.1. The system allows the admin to fill in details of new user (employee) to create a new login.

1.1.2. once the profile is created message is shown that ‘new user added’.

1.1.3. Back to menu

1.2. **MANGE EMPLOYEE PERSONAL DETAILS-kausalyaa**

1.2.1. Displays three sub features like Add, Remove or Edit details.

1.2.2. allows the admin to make any changes in the employee details if required.

1.2.3. Back to menu.

1.3. **MANAGE EMPLOYEE FINANCE-**

1.3.1. Displays features like Allowance, Advance/Due and Loan.

1.3.2. in Allowance the admin is allowed to update or make changes in the different allowance amounts allotted to any employee.

1.3.3. Advance/due feature displays the details of any advance or due amount of each employee and allows admin to change or cancel any dues paid.

1.3.4. Loan feature displays the details on the loans availed by an employee that contains the amount, duration, interest rate, bank/organisation details etc., in a sequential order.

1.3.5. A check box feature is given in the interface that allows the admin to check or manage all the financial features of one particular employee by entering the employee id.

1.3.6. The interface also allows the admin to send any alert messages to an employee in case of any nearing due dates.

1.3.7. Back to menu.

1.4. **MANAGE EMPLOYEE ATTENDANCE**-

1.4.1. Allows the admin to enter and change the entry and exit timings date wise for each employee.

1.4.2. Back to menu.

1.5. **MANAGE EMPLOYEE EVENTS-**

1.5.1. allows the admin to change or update any official event timing, date and description in the scheduled calendar.

1.5.2. Back to menu.

1.6. **MANAGE EMPLOYEE LEAVE-**

1.6.1. It displays all the leave request raised by the employees allowing the admin to either grant or decline the request stating the reason for the same.

1.6.2. Interface also allows the admin to allot the total number of leaves allowed per year for a particular employee and calculate the number of leaves used and remaining.

1.6.3. An alert message can be raised to the employee if he/she has used all the allotted leaves or has reached a particular limit.

1.6.4. Back to menu.

1.7. **MANAGE EMPLOYEE TRAINING RECORD-**

1.7.1. displays the duration of training period of each employee and their performance during the training period.

1.7.2. new training records can be added, removed and modified.

1.7.3. Back to menu.

1.8. **MANAGE EMPLOYEE PERFORMANCE**

1.8.1. displays work history and performance remarks of each employee.

1.8.2. admin can analyse and calculate promotion dates based on work history and performance

1.8.3. messages can be sent to employees as a token of appreciation for better performances and also to warn them in case of decline in performance.

1.8.4. Back to menu

* ***LOGOUT-***

1. A logout icon will be displayed on the interface for both the user and the admin.

2. upon clicking it the session ends.

Done by:

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| --- | --- | --- |
| **S. No** | **Name** | **Section** |
| 1 | ABHINAV S | CSE-D |
| 2 | DEVA SUNDER S J | CSE-D |
| 3 | KAUSALYAA SRI | CSE-D |
| 4 | KISHORE KUMAR V S | CSE-D |
| 4 | SUJITH ROSHAN N | CSE-D |