**EMPLOYEE LEAVE MANAGEMENT SYSTEM**

**DOCUMENTATION**

**Team Members:**

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* **Description:**

The Leave Management System provides users with an interface through which they can request leave directly from the portal, eliminating the need for any manual intervention by human personnel.

This application can be used from University to the IT Companies to get with best user experience.

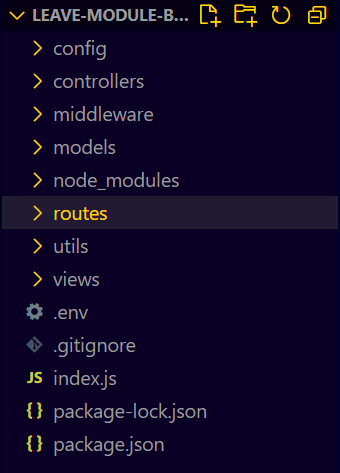
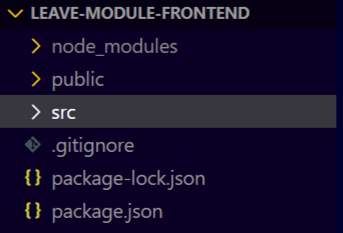
* **Software/ Packages used:**
* Backend Packages

1. Express
2. Nodemon
3. Mongoose
4. Cors
5. Dotenv
6. Jsonwebtoken
7. Bcrypt
8. Nodemailer

* Frontend Packages

1. Axios
2. Material UI
3. React
4. React-router-dom
5. React-hot-toast.

* **Directory Structure:**
* **Frontend & Backend Directory Structure:**

* **Types of Leaves provided in E.L.M.S Portal:**

So, types of leaves provided in E.L.M.S portal are:

* Casual
* Sick
* Earned
* Special
* **Endpoint - Login and Forgot Password Backend - Frontend Implementation:**
* The initial Login details are given to the Employee from the Organization (Admin creates users from authorized dashboard), where we give them access to use the portal and can change their password.
* So, for more secure to their password we implemented the encryption and decryption to their password using the package called bcrypt. We can install this by using command “npm install bcrypt” in the terminal.
* For their retrieval of data, we send a JWT Token when they login. So, whenever they access any Endpoint from user interface, we decode the JWT Token and verify the user.
* Login Requirements:

1. User EmpId.
2. Password.

* To access JWT packages we need to install it from terminal using command “npm install jsonwebtoken”.
* Forgot Password Requirements:

1. EmpID,
2. Email.

* When User provides this fields, he will be getting a link to his registered email address to provide the new password. With that Server sends a “\_id” and “token” to verify again for his new password.
* When the password is validated, he get the status code 200.
* For Logging into the portal there are four dashboards to enter according to the user mentioned empID.
* So, its basically the user is navigated according to his designation.
* **Types of User Models in E.L.M.S:**

In this portal, there are four different types of users to navigate:

1. Admin
2. Manager
3. Team Lead
4. Employee

**Admin Roles and Responsibilities:**

* Admins are responsible for creating users directly from their dashboard, ensuring the integrity of the Employee Leave Management System by preventing unauthorized third-party access.
* Admins have full control over CRUD operations on employee data. They act as a final authority for accepting or rejecting leave requests, stepping in when higher roles decline to do so.

**Manager Roles and Responsibilities:**

* Managers are equipped with a dedicated dashboard granting them the ability to accept or reject leave requests submitted by Team Leads or Employees.
* Managers also have the option to apply for their own leaves through their dashboard and can monitor the status of leaves they've applied for in the Leave Status section.
* They possess visibility into leave requests made by both Team Leads and Employees.

**Team Lead Roles and Responsibilities:**

* Team Leads have access to a dashboard akin to that of Managers, with the primary distinction being that they only see leave requests submitted by Employees.

**Employee Roles and Responsibilities:**

* Employees have a simplified dashboard focused solely on applying for leaves and

checking the status of their applications in the Leave Status section.

* **How Leave Functionality Works in Every Dashboard:**
* We have three distinct dashboards designated for leave applications: Manager, Team Lead, and Employee.
* The mapping of applied leaves varies based on the dashboard used. Thus, leave applications must adhere to certain conditions upon submission:

1. All fields in the leave application must be completed before submission.
2. The start and end dates of the leave must be within the correct range, with the start date preceding the end date.
3. Overlapping leaves are not permitted.
4. Each type of leave has predefined limits to prevent overload. For instance, if an employee has already reached their limit for a particular type of leave, any additional applications for that type will be rejected at the submission stage, accompanied by a notification.
5. With the exception of Sick leave, no more than three leaves can be applied for in a single month.

* The leave hierarchy dictates which dashboard corresponds to each user designation. For instance:
  + When an Employee applies for leave, it is mapped to both their Team Lead and Manager.
  + When a Team Lead applies for leave, it is mapped only to their Manager.
  + Leaves applied by a Manager are mapped to the Admin.
* The Admin dashboard has visibility over all leave applications submitted by Managers, Team Leads, and Employees.
* **Leave Limits:**

|  |  |
| --- | --- |
| **Leave Type** | **Limit** |
| Sick | 7 |
| Earned | 10 |
| Casual | 3 |
| Special | 7 |

* **Frontend Images:**
* **Landing Page:**



A close up of a sign

Description automatically generated

A screenshot of a group of men

Description automatically generated

**For More Images you can view in the below link:**[EMPLOYEE LEAVE MANAGEMENT USING MERN (improveyourlifestyle1.blogspot.com)](https://improveyourlifestyle1.blogspot.com/2024/04/employee-leave-management-using-mern.html)

Github Link: <https://github.com/SDP-Project-MSWD/Y22-SDP2-P39-ELMS.git>

Vercel Link: <https://elms-frontend-beta.vercel.app/>

Additional Features :

1. Multer: We implemented multer to add the Employee Details with credentials using CSV file.
2. JWT Token: Json Web Token is passed when Employee logins into portal to get secure connection and user validation for every request which is kept from frontend to backend server.
3. Bcrypting Password: We have encrypted the password using Bcrypt Slat Algorithm.
4. Reset Password Via Gmail link: So, if user forgets or wants to reset the password then our portal send the reset password link to their registered email.
5. View Leave Status
6. Filter Option to see the Employee based on designation in Admin Dashboard.

**Future Implementation:**

We can send email status on the applied leave like live tracking.

Captcha Implementation for more Authentication.

User Flexibility to edit or delete the Leave till Accepted/Rejected.