Naan Mudhalvan MERN Stack Project

1. Introduction

Project Title: Digital Complaint Management System

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2. Project Overview

Objective: The Digital Complaint Management System allows users to submit grievances online, monitor their progress, and facilitate swift resolution. It replaces conventional processes with a streamlined digital workflow for complaint submission and updates.

Key Features:

- Complaint filing with detailed descriptions and attachments.

- User account creation and authentication.

- Admin interface for complaint administration.

- Complaint progress tracking for users.

3. Architecture

Frontend:
The interface is developed using React, offering a seamless user experience for both users and administrators. Navigation is handled by React Router, and Context API is used for state management.

Backend:
The backend, built with Node.js and Express.js, processes API requests, handles data validation, and manages core business logic.

Database:
MongoDB serves as the data storage system for user profiles, complaint records, and logs, organized into collections for users, complaints, and administrators.

4. Setup Instructions

Requirements

- Node.js (version 14 or later)
- MongoDB (local or hosted)
- Git

Steps to Install:

1. Clone the project repository:

gitclone
https://github.com/KumarP123IT/NM_Online_Complaint_Registration_And_Management_System.git

2. Navigate to the project folder:

cd NM_Online_Complaint_Registration_And_management_System

3. Install dependencies for the frontend and backend:

cd client && npm install

cd ../server && npm install

5. Project Structure

Frontend:

1. React Component:

- SignUp.js
- FoooterC.js
- Other Conponents for user authentication and complaint management

2. Libraries/Tools:

- bootstrap: For Styling
- Axios: For API calls

Backend:

- Config.js
- index.js
- schema.js

6. Running the Application

 Frontend :
 1. Move to the frontend directory:

   cd frontend

 2.Start the frontend server:

   npm start

Backend:
   1. Ensure Node.js is installed.
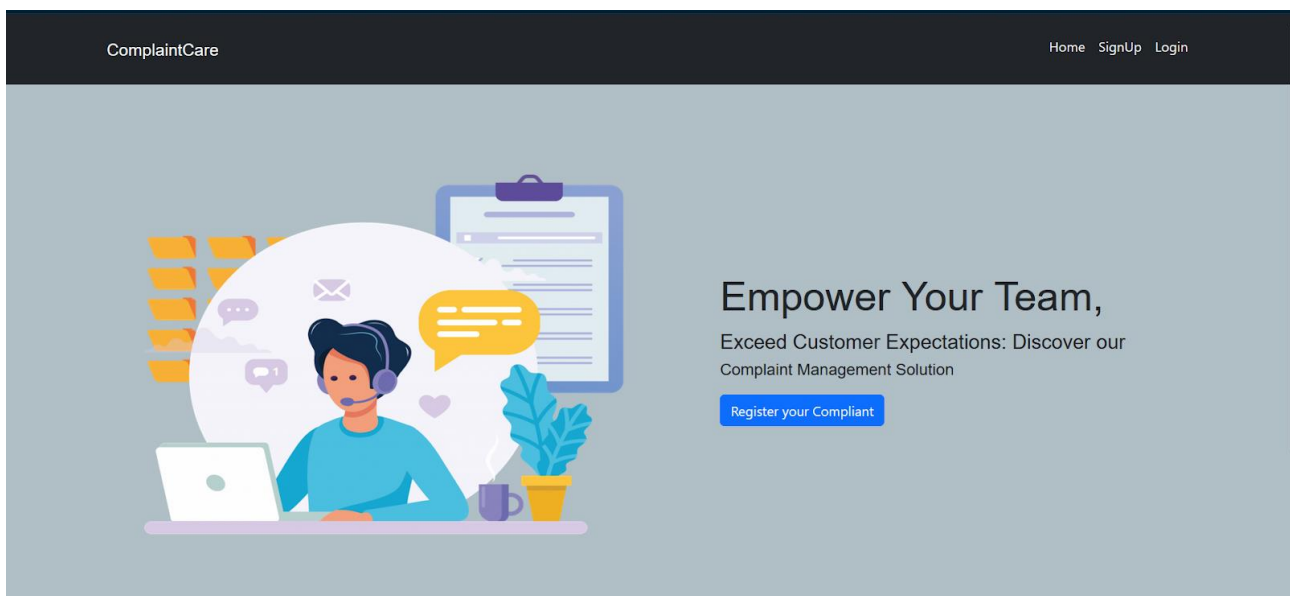   2. Launch the backend server using one of the following:
      npm start (or)
      npm index.js

7. Authentication
   The application uses JWT for secure authentication. Tokens are created during login and stored in local storage for managing user sessions.

8. User Interface

9. Testing
Tool Used: Postman

10. Demo
 Check the Demo ScreenShot/video in github:

https://github.com/KumarP123IT/NM_Online_Complaint_Registration_And_Management_System /tree/master/Demo_video

11. Known Issues

Missing or insufficient error handling in index.js in backend and Invalid data might be submitted causing the backend error

12. Planned Enhancements

- Introduce real-time notifications for complaints using WebSockets.
- Develop AI-driven categorization for complaints.
- Support for multiple languages.