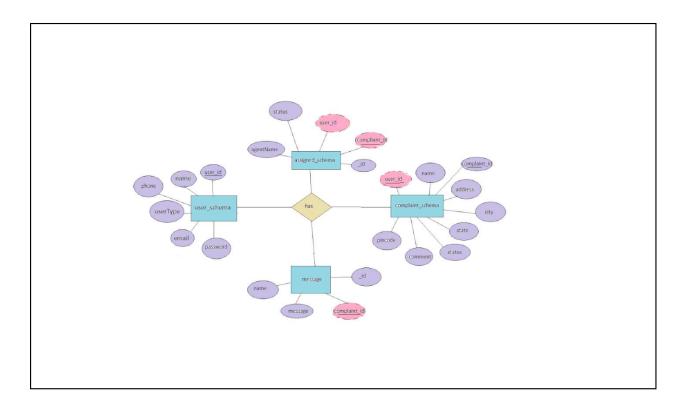
ER DIAGRAM

This is the er diagram of the project which shows the relationship between user and agent It shows how users which have required fields can raise a complaint by filling required fields. It illustrates how these entities relate to each other, helping us understand the underlying database structure and the flow of information within the app. He / She can also communicate with the agent with chat window which follows the message schema which uses userId and complaintId from other schemas



PRE-REQUISITES

Here are the key prerequisites for developing a full-stack application using Node.js, Express.js, MongoDB, React.js:

Node.js and npm:

Node.js is a powerful JavaScript runtime environment that allows you to run JavaScript code on the server-side. It provides a scalable and efficient platform for building network applications.

Install Node.js and npm on your development machine, as they are required to run JavaScript on the server-side.

Download: https://nodejs.org/en/download/

Installation instructions: https://nodejs.org/en/download/package-manager/

Express.js:

development.

Express.js is a fast and minimalist web application framework for Node.js. It simplifies the process of creating robust APIs and web applications, offering features like routing, middleware support, and modular architecture. Install Express.js, a web application framework for Node.js, which handles server-side routing, middleware, and API

Installation: Open your command prompt or terminal and run the following command:

npm install express

MongoDB:

MongoDB is a flexible and scalable NoSQL database that stores data in a JSON-like format. It provides high performance, horizontal scalability, and seamless integration with Node.js, making it ideal for handling large amounts of structured and unstructured data.

Set up a MongoDB database to store your application's data.

Download: https://www.mongodb.com/try/download/community

Installation instructions: https://docs.mongodb.com/manual/installation/

React.js:

React.js is a popular JavaScript library for building user interfaces. It enables developers to create interactive and reusable UI components, making it easier to build dynamic and responsive web applications. Install React.js, a JavaScript library for building user interfaces.

Follow the installation guide: https://reactjs.org/docs/create-a-new-react-app.html

HTML, CSS, and JavaScript: Basic knowledge of HTML for creating the structure of your app, CSS for styling, and JavaScript for client-side interactivity is essential.

Database Connectivity: Use a MongoDB driver or an Object-Document Mapping (ODM) library like Mongoose to connect your Node.js server with the MongoDB database and perform CRUD (Create, Read, Update, Delete) operations. To Connect the Database with Node JS go through the below provided link: https://www.section.io/engineering-education/nodejs-mongoosejs-mongodb/

Front-end Framework: Utilize Reactjs to build the user-facing part of the application, including entering complaints, status of the complaints, and user interfaces for the admin dashboard.

For making better UI we have also used some libraries like material UI and boostrap.

Version Control: Use Git for version control, enabling collaboration and tracking changes throughout the development process. Platforms like GitHub or Bitbucket can host your repository.

Git: Download and installation instructions can be found at: https://git-scm.com/downloads

Development Environment: Choose a code editor or Integrated Development Environment (IDE) that suits your preferences, such as Visual Studio Code, Sublime Text, or WebStorm.

Visual Studio Code: Download from https://code.visualstudio.com/download

Install Dependencies:

Navigate into the cloned repository directory:

cd complaint-registery

• Install the required dependencies by running the following commands:

cd frontend

npm install

cd ../backend

npm install

Start the Development Server:

• To start the development server, execute the following command:

npm start

• The online complaint registration and management app will be accessible at http://localhost:3000

You have successfully installed and set up the online complaint registration and management app on your local machine. You can now proceed with further customization, development, and testing as needed.

PROJECT STRUCTURE:

APPLICATION FLOW:

Online Complaint Registration and Management System

- 1. Customer/Ordinary User:
 - Role: Create and manage complaints, interact with agents, and manage profile information.
 - Flow:
 - 1. Registration and Login:
 - Create an account by providing necessary information such as email and password.
 - Log in using the registered credentials.
- 2. Complaint Submission:
 - Fill out the complaint form with details of the issue, including description, contact information, and relevant attachments.

Submit the complaint for processing.

3. Status Tracking:

- View the status of submitted complaints in the dashboard or status section.
- Receive real-time updates on the progress of complaints.

4. Interaction with Agents:

- Connect with assigned agents directly using the built-in messaging feature.
- Discuss complaints further and provide additional information or clarification.

5. Profile Management:

Manage personal profile information, including details and addresses.

2. Agent:

- Role: Manage complaints assigned by the admin, communicate with customers, and update complaint statuses.
- Flow:

1. Registration and Login:

- Create an account using email and password.
- Log in using the registered credentials.

2. Complaint Management:

- Access the dashboard to view and manage complaints assigned by the admin.
- Communicate with customers regarding their complaints through the chat window.

3. Status Update:

- Change the status of complaints based on resolution or progress.
- Provide updates to customers regarding the status of their complaints.

4. Customer Interaction:

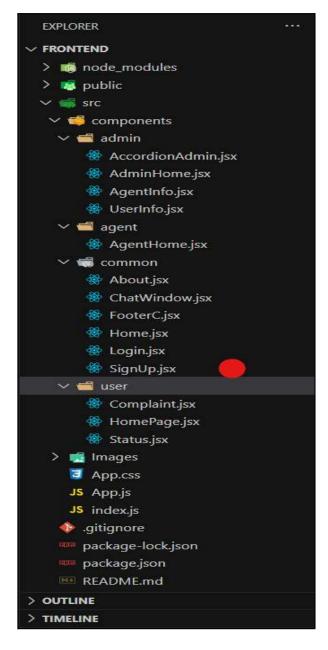
 Respond to inquiries, resolve issues, and address feedback from customers.

3. Admin:

- Role: Oversee the overall operation of the complaint registration platform, manage complaints, users, and agents, and enforce platform policies.
- Flow:

1. Management and Monitoring:

- Monitor and moderate all complaints submitted by users.
- Assign complaints to agents based on workload and expertise.



2. Complaint Assignment:

- Assign complaints to the desired agents for resolution.
- Ensure timely and efficient handling of complaints.

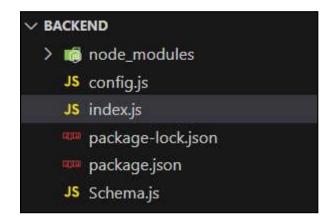
3. User and Agent Management:

- Manage user and agent accounts, including registration, login, and profile information.
- Enforce platform policies, terms of service, and privacy regulations.

4. Continuous Improvement:

• Implement measures to improve the platform's functionality, user experience, and security measures.

Address any issues or concerns raised by users or agents for better service delivery.



The first image is of frontend part which is showing all the files and folders that have been used in UI development

The second image is of the Backend part which is showing all the files and folders that have been used in backend development.