

# ONLINE COMPLAINT REGISTRATION AND MANAGEMENT SYSTEM

## INTRODUCTION

An online complaint registration and management system is a software application or platform that allows individuals or organizations to submit and track complaints or issues they have encountered.

## DESCRIPTION

The Online Complaint Registration and Management System is a user-friendly software solution designed to streamline the process of submitting, tracking, and resolving complaints or issues encountered by individuals or organizations. It provides a centralized platform for efficient complaint management, allowing users to securely register complaints, track their progress in real time, and interact with assigned agents for issue resolution. With features such as automatic notifications, intelligent complaint routing, and robust security measures, this system ensures timely and effective handling of complaints while prioritizing user Details.

It can help optimize the complaint-handling process and empower organizations to develop a safety management system to efficiently resolve customer complaints while staying in line with industry guidelines and regulatory compliance obligations. It provides a centralized platform for managing complaints, streamlining the complaint resolution process, and improving customer satisfaction.

It consists of some key features which include:

1. User registration: Users can create accounts to submit complaints and track their progress.
2. Complaint submission: Users can enter details of their complaints, including relevant information such as name, description of the issue, address, etc.
3. Tracking and notifications: Users can track the progress of their complaints, view updates, and receive notifications via email or SMS when there are any changes or resolutions.
4. Users can interact with the agent who has assigned the complaint.
5. Assigning and routing complaints: The system assigns complaints to the appropriate department or personnel responsible for handling them. It may use intelligent routing algorithms to ensure efficient allocation of resources.

6. **Security and confidentiality:** The system ensures the security and confidentiality of user data and complaint information through measures such as user authentication, data encryption, access controls, and compliance with relevant data protection regulations.

## SCENARIO-BASED CASE STUDY

Scenario: John, a customer, recently encountered a problem with a product he purchased online. He notices a defect in the item and decides to file a complaint using the Online Complaint Registration and Management System.

### 1. **User Registration and Login:**

- John visits the complaint management system's website and clicks on the "Sign Up" button to create a new account.
- He fills out the registration form, providing his full name, email address, and a secure password.
- After submitting the form, John receives a verification email and confirms his account.
- He then logs into the system using his email and password.

### 2. **Complaint Submission:**

- Upon logging in, John is redirected to the dashboard where he sees options to register a new complaint.
- He clicks on the "Submit Complaint" button and fills out the complaint form.
- John describes the issue in detail, attaches relevant documents or images showcasing the defect, and provides additional information such as his contact details and the product's purchase date.
- After reviewing the information, John submits the complaint.

### 3. **Tracking and Notifications:**

- After submitting the complaint, John receives a confirmation message indicating that his complaint has been successfully registered.
- He navigates to the "My Complaints" section of the dashboard, where he can track the status of his complaint in real time.
- John receives email notifications whenever there is an update on his complaint, such as it being assigned to an agent or its resolution status.

### 4. **Interaction with Agent:**

- A customer service agent, Sarah, is assigned to handle John's complaint.
- Sarah reviews the details provided by John and contacts him through the system's built-in messaging feature.
- John receives a notification about Sarah's message and accesses the chat window to communicate with her.

- They discuss the issue further, and Sarah assures John that the company will investigate and resolve the problem promptly.

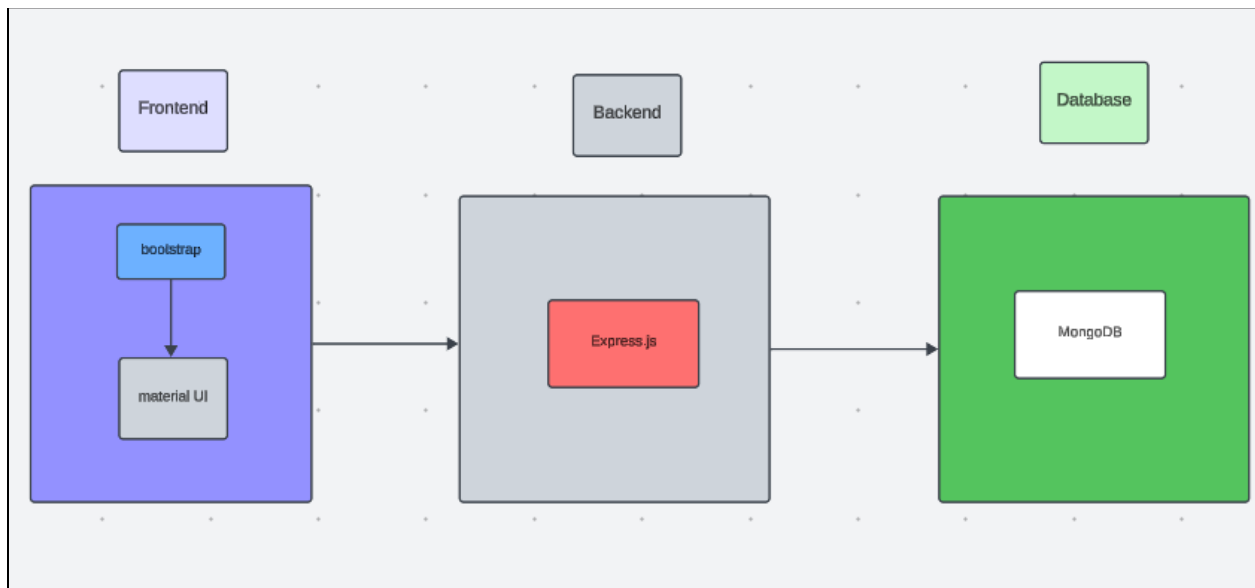
#### 5. **Resolution and Feedback:**

- After investigating the complaint, the company identifies the defect in the product and offers John a replacement or refund.
- John receives a notification informing him of the resolution, along with instructions on how to proceed.
- He provides feedback on his experience with the complaint handling process, expressing his satisfaction with the prompt resolution and courteous service provided by Sarah.

#### 6. **Admin Management:**

- Meanwhile, the system administrator monitors all complaints registered on the platform.
- The admin assigns complaints to agents based on their workload and expertise.
- They oversee the overall operation of the complaint management system, ensuring compliance with platform policies and regulations.

## TECHNICAL ARCHITECTURE



The technical architecture of our online complaint registration and management app follows a client-server model, where the front end serves as the client and the back end acts as the server. The front end encompasses the user interface and presentation and incorporates the Axios library to connect with the backend easily by using RESTful Apis.

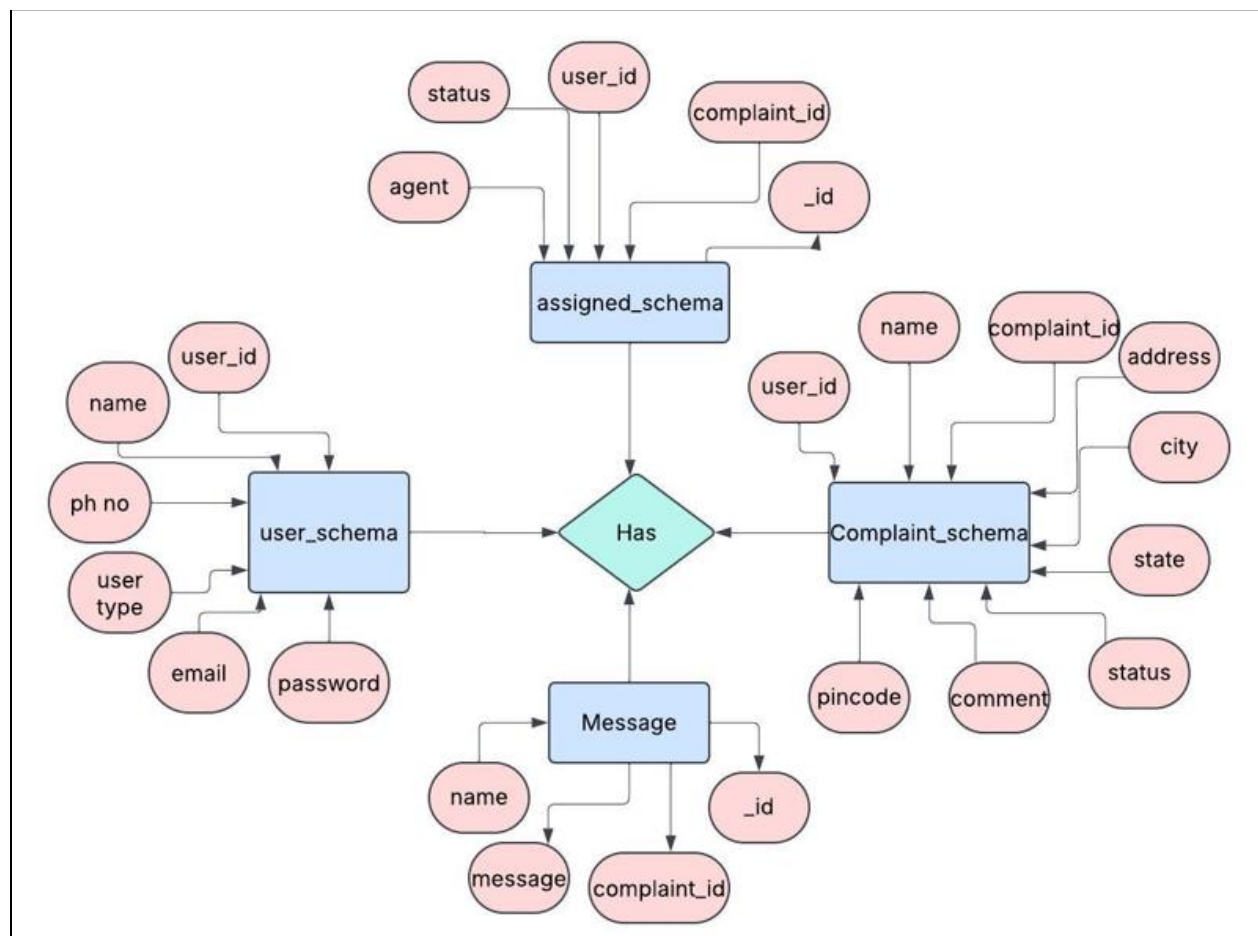
The front end utilizes the bootstrap and material UI library to establish a real-time and better UI experience for any user whether it is an agent, admin, or ordinary user working on it.

On the backend side, we employ Express.js frameworks to handle the server-side logic and communication.

For data storage and retrieval, our backend relies on MongoDB. MongoDB allows for efficient and scalable storage of user data, including user profiles, complaints registration, etc. It ensures reliable and quick access to the necessary information during registration of users or any complaints.

Together, the frontend and backend components, along with socket.io, Express.js, WebRTC API, and MongoDB, form a comprehensive technical architecture for our video conference app. This architecture enables real-time communication, efficient data exchange, and seamless integration, ensuring a smooth and immersive video conferencing experience for all users.

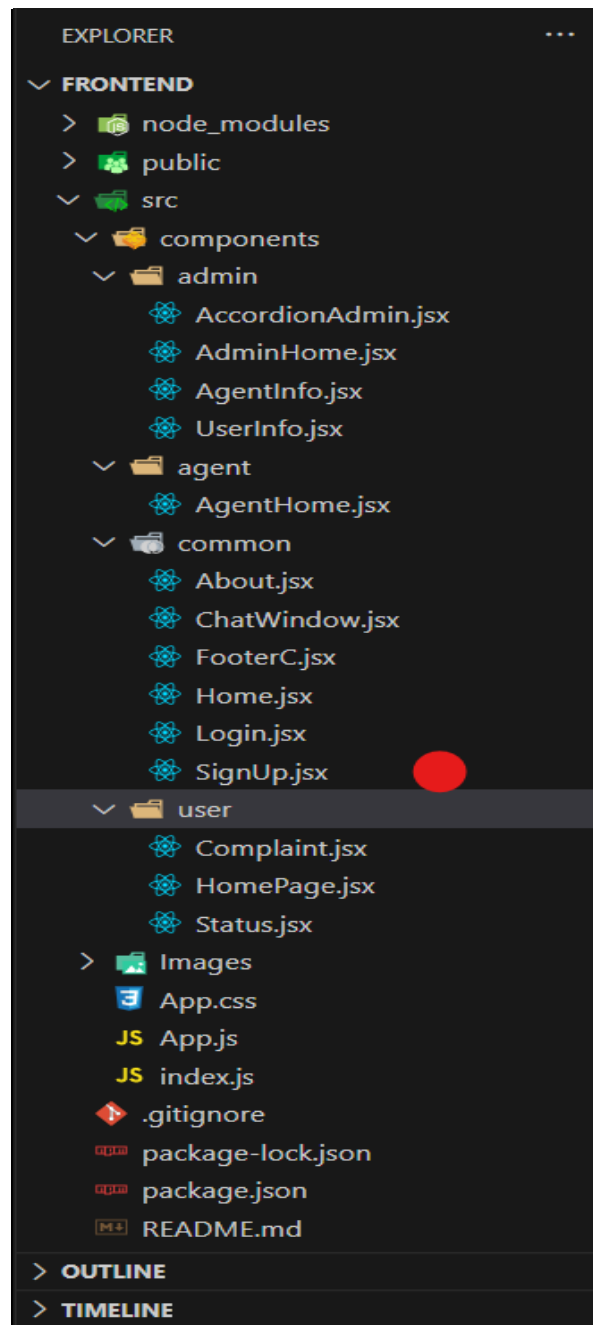
## ER DIAGRAM

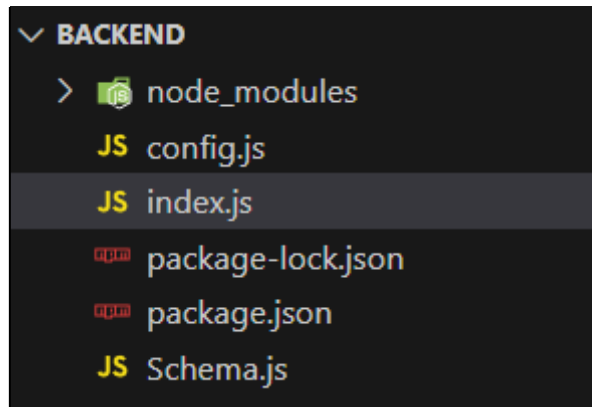


This is the ER diagram of the project which shows the relationship between the user and the agent. It shows how users who have required fields can raise a complaint by filling required fields.

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 a chat window that follows the message schema which uses userId and complaintId from other schemas.

## PROJECT STRUCTURE:





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

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

## 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 the 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.

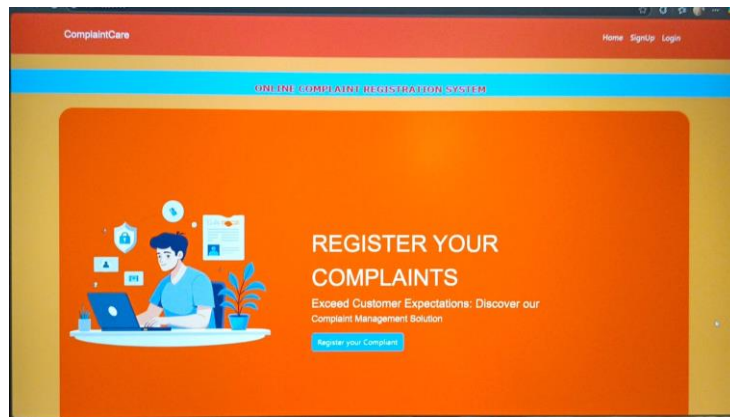
## Milestone 5:



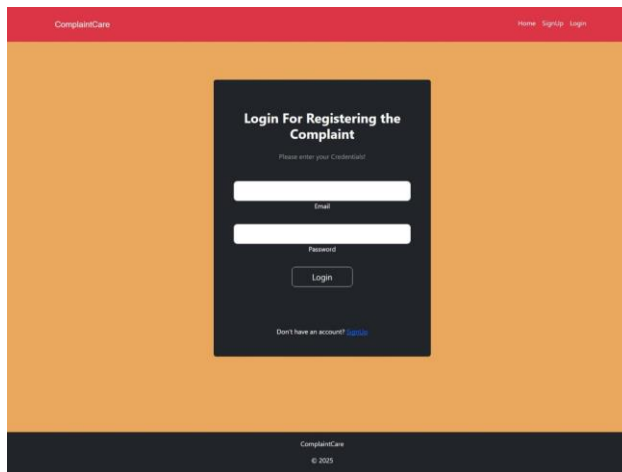
## Project Implementation:

On completing the development part, we then ran the application one last time to verify all the functionalities and look for any bugs in it. The user interface of the application looks a bit like the one provided below.

- Landing Page



- Login Page



- Registration Page

ComplaintCare Home SignUp login

### SignUp For Registering the Complaint

Full Name

Email

Password

Mobile No.

Select User Type

Register

Had an account? [login](#)

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- Common Dashboard For Complaint

Hi, hafeez Complaint Register Status Logout

Name

Address

City

State

Pincode

Status

Description

Register

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- Admin Dashboard

Hi Admin shashavali Dashboard User Agent Logout

Users Complaints

Name: shashavali	Name: shashavali
Address: 8/756	Address: 8/756
City: Indrapuri	City: Indrapuri
State: Andhra Pradesh	State: Andhra Pradesh
Pincode: 515411	Pincode: 515411
Comment: Clean the surroundings of our area	Comment: CLEAN THE SURROUNDINGS OF OUR AREA
Status: pending	Status: pending
Assign	Assign

Agents

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- Agent Dashboard

Name: shashavali

Address: 8/166

City: tadipatri

State: Andhra Pradesh

Pincode: 515411

**Comment:** clean the surroundings of our area

Status: pending

Status Change

Message

Message Box

Message

50