

ResolveNow: Your Platform for Online Complaints

ADITYA COLLEGE OF ENGINEERING AND TECHNOLOGY

An AUTONOMOUS Institution

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DECLARATION

I, **KARRI VIJAY**, student of B.Tech in Computer Science & Engineering at Aditya College of Engineering and Technology, hereby declare that I have completed the project work titled "ResolveNow: Your Platform for Online Complaints" under the guidance of Anji Babu .

ACKNOWLEDGEMENT

I would like to express my deepest thanks to **KARRI VIJAY** (Team Leader) and my team **members Chukka Charan Kumar, Thirupati Yuva Jaya Satya, Chitturo Purna Veera Shanmu** for their valuable inputs and support throughout the project. Special thanks to the faculty of CSE department and the management of Aditya College for providing all necessary resources and support.

1. ABSTRACT

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. 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.

2. INTRODUCTION

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.

SCENARIO

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.

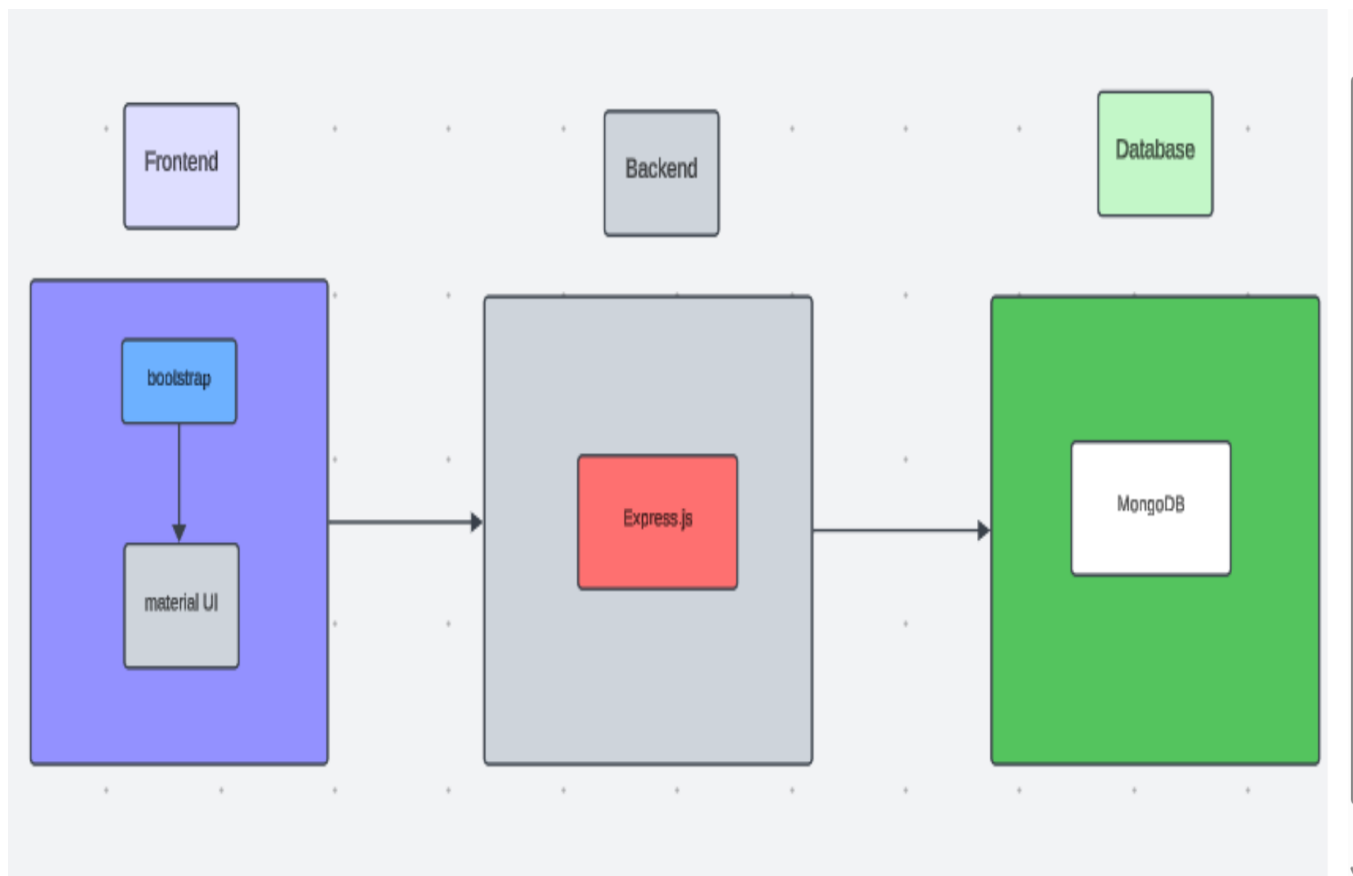
- They oversee the overall operation of the complaint management system, ensuring compliance with platform policies and regulations.

3. FEATURES

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 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. User can interact with the agent who has assigned the complaint.
4. 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.
5. 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.

4. TECHNICAL ARCHITECTURE



5. TECHNOLOGIES USED

- **React.js** is used for building the frontend interface of the application, allowing for a dynamic and responsive user experience.
- **Express.js** serves as the backend framework, handling server-side logic, routing, and API communication.
- **MongoDB** is utilized as a NoSQL database to efficiently store and manage user data, complaint details, and conversation logs.
- **Node.js** acts as the JavaScript runtime environment, enabling backend code execution and integration with various modules.
- **Socket.IO** is implemented to facilitate real-time communication between users and agents, allowing instant updates and chat functionality.
- **Material UI** provides a set of pre-designed responsive UI components, enhancing the visual appeal and usability of the interface.
- **Axios** is used to send and receive HTTP requests between the frontend and backend, enabling seamless data exchange through RESTful APIs.

7. WEEKLY PROGRESS

Week 1: Requirement Gathering and Design

Week 2: Frontend Development

Week 3: Backend Development

Week 4: Integration and Testing

8. CHALLENGES FACED

In a multi-role system like *ResolveNow*, managing authentication sessions for different user types—such as **Admin**, **Agent**, and **User**—poses several complexities.

Each role has distinct permissions and access levels:

- **Users** can register, log in, file complaints, and view their own submissions and status updates.
- **Agents** are assigned specific complaints and can interact with users via real-time messaging.
- **Admins** oversee the entire system, assign complaints, manage users and agents, and view system-wide analytics.

Handling authentication across these roles involves:

1. **Role-Based Access Control (RBAC):**
Ensuring that each API endpoint or frontend route is accessible only by the roles authorized to use them. This requires checking user roles in middleware functions and guarding both server routes and React components.
2. **Session Token Management:**
Tokens (such as JWT - JSON Web Tokens) are generated upon successful login and

must contain encoded role information. These tokens must be securely stored (e.g., in httpOnly cookies or secure local storage) and validated on each request.

3. **Maintaining Session State:**

Preserving the user's authenticated state across page refreshes or route changes is essential. This often requires syncing local token storage with React context, Redux, or state hooks.

4. **Token Expiry & Renewal:**

Expired tokens must be handled gracefully, possibly by using refresh tokens or redirecting users to the login page. Each role may also have different session timeout policies.

5. **Frontend Role Awareness:**

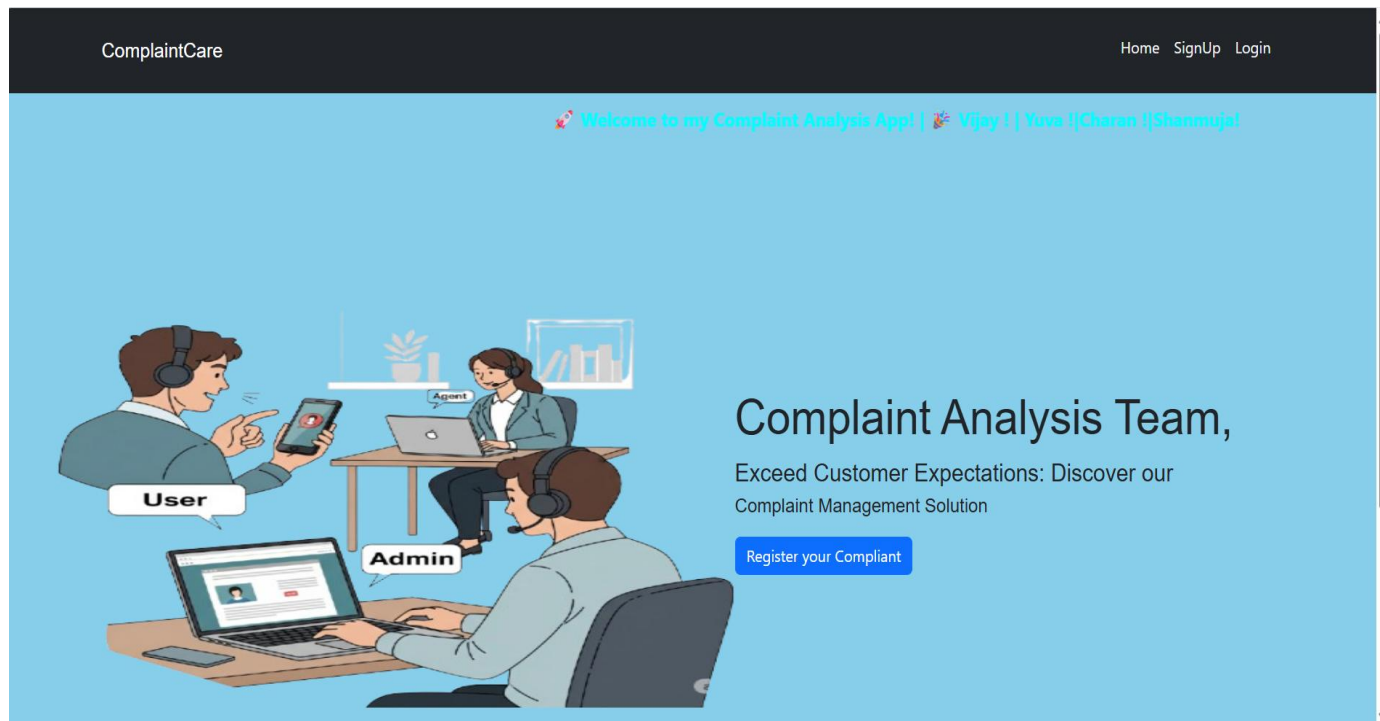
The frontend must render different dashboards and features based on the authenticated user's role. This requires decoding the token or retrieving role information upon login and storing it securely in client-side state.

6. **Security Considerations:**

Preventing session hijacking, cross-site scripting (XSS), and ensuring that an agent or user cannot spoof an admin role is critical. Secure token generation, encryption, and validation routines must be applied on the backend.

9. SCREENSHOTS & OUTPUT

HOME PAGE:



REGISTRATION PAGE

ComplaintCare

HomeSignUpLogin

SignUp For Registering the Complaint

Please enter your Details

Full Name

Email

Password

Mobile No.

Select User

localhost:3000/signup28°C CloudySearch27-06-202522:44

LOGIN PAGE:

ComplaintCare

HomeSignUpLogin

Login For Registering the Complaint

Please enter your Credentials!

vijaykarri220910125@gmail.com

Email

....

Password

Login

ADMIN PAGE:

Hi Admin KARRI VIJAYDashboardUserAgentLog out

Users Complaints

Name: loki

Address: kakinada

City: kakinada

State: ap

Pincode: 533005

Comment: loss mobile

Status: completed

Name: ramesh

Address: kakinada

City: kakinada

State: ap

Pincode: 533005

Comment: i lost my mobile at temple

Status: completed

Agents

Name: Kondala Ramu

Email: ramu@gmail.com

AGENT PAGE:

Hi Agent Kondala Ramu

View Complaints

Log out

Name: loki

Address: kakinada

City: kakinada

State: ap

Pincode: 533005

Comment: loss mobile

Status: completed

Status Change

Message

Message Box

loki: where is my mobile
04:10 pm, 20/6/2025

Kondala Ramu: u will
recived in nearest police
station
04:13 pm, 20/6/2025

Name: ramesh

Address: kakinada

City: kakinada

State: ap

Pincode: 533005

Comment: i lost my mobile at
temple

Status: completed

Status Change

Message

Message Box

Message

Send

USER PAGE:

Hi, vijay

Complaint Register

Status

LogOut

Name: loki

Address: kakinada

City: kakinada

State: ap

Pincode: 533005

Comment: loss mobile

Status: completed

Message

Name: ramesh

Address: kakinada

City: kakinada

State: ap

Pincode: 533005

Comment: i lost my mobile at temple

Status: completed

Message

10. CONCLUSION & FUTURE SCOPE

ResolveNow provides a powerful platform to streamline grievance handling...

The project successfully provides an efficient and transparent system for complaint registration and analysis.

Add AI-based complaint categorization

- Integrate SMS/Email alerts
- Add multilingual support

11. LINKS

- GitHub Repository: [VijayGit-code/Complaint Analysis](#)