

# ResolveNow: Online Complaint Registration and Management System

**Team ID:** LTVIP2025TMID59341

MEMBER	RESPONSIBILITY
1. Konduri Pavithra	Frontend, Documentation
2. Katuru V Venkata Sairama Anirudh	Backend, Database
3. Katari Ashok	Resource Gathering, Implementation
4. Katikala Kiran Mai	Setup and Configuration

## Final Project Report

### 1. Introduction

- **Project Title:** ResolveNow – Online Complaint Registration and Management System
- **Team Members:**
  - **Team ID:** LTVIP2025TMID59341
  - **Team Leader:** Konduri Pavithra
  - **Team Member:** Katuru V Venkata Sairama Anirudh
  - **Team Member:** Katari Ashok
  - **Team Member:** Katikala Kiran Mai

## 2. Project Overview

- **Purpose:**

ResolveNow is a role-based complaint management system that enables Users, Admins, and Engineers to register, track, and resolve complaints in a structured and secure environment. It improves accountability and efficiency in grievance redressal workflows.

- **Features**

- User registration and authentication
- Role-based dashboards for Admins and Engineers
- Complaint submission and assignment
- Real-time status tracking
- In-app messaging system
- Notification via Email
- Clean and responsive UI with Bootstrap

## 3. Architecture

- **Frontend:**

Built with React.js, using React Router for page navigation, Context API for global state management, and styled using Bootstrap 5. Axios is used for communicating with the backend API.

- **Backend:**

Developed using Node.js and Express.js, which expose RESTful API endpoints. Authentication is handled with JWT, password security with bcryptjs, and environment management via dotenv.

- **Database:**

Uses MongoDB, with schemas for Users, Complaints, and Messages. Mongoose ODM is used to define and interact with the database collections.

## 4. Setup Instructions

- **Prerequisites:**

- Node.js
- MongoDB
- Git

- npm (Node Package Manager)

- **Installation Steps:**

```
# Clone the repository
git clone https://github.com/thesocalledhonouredone/ResolveNow-Complaint-Management-System.git

# Navigate to ResolveNow-Complaint-Management-System

Npm install
```

- **Environment Setup:**

Create a `.env` file in the backend folder and define:

```
MONGO_URI = your_mongo_db_connection_string
JWT_SECRET = your_jwt_secret
PORT = 5000
```

## 5. Folder Structure

- **Client (Frontend):** frontend/

```
|— public/
|— src/
|  |— components/
|  |— pages/
|  |— context/
|  |— App.js
|  └— index.js
```

- **Server (Backend):**

```
backend/  
├── controllers/  
├── models/  
├── routes/  
├── middleware/  
├── config/  
└── server.js
```

## 6. Running the Application

- Frontend: `cd frontend npm start`
- Backend: `cd backend npm start`

Application runs on:

- Frontend: `http://localhost:3000`
- Backend API: `http://localhost:5000`

## 7. API Documentation

### User Routes

- POST `/api/register` → Create new user
- POST `/api/login` → Login and receive JWT token
- GET `/api/user/profile` → Get logged-in user profile

### Complaint Routes

- POST `/api/complaints` → Submit complaint
- GET `/api/complaints` → View user complaints

- PATCH /api/complaints/:id → Update complaint status **Admin Routes**
- GET /api/admin/complaints → View all complaints
- PATCH /api/admin/assign/:id → Assign complaint to engineer

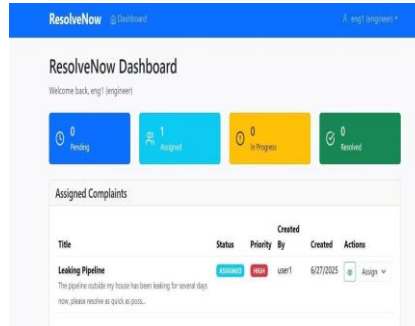
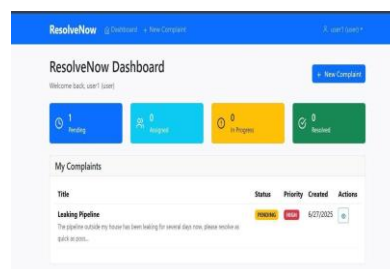
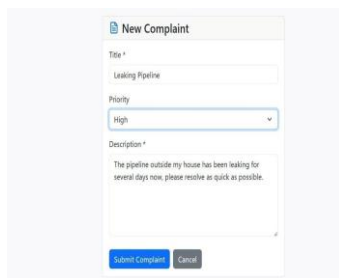
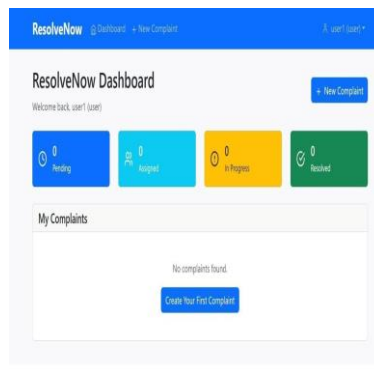
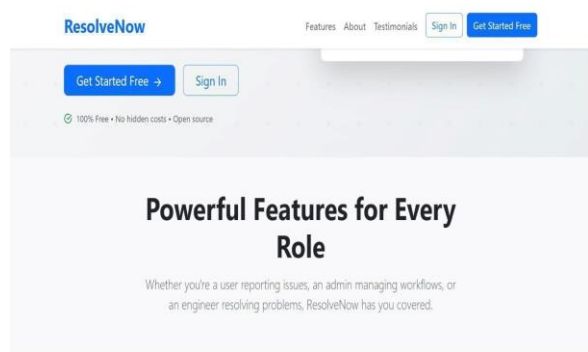
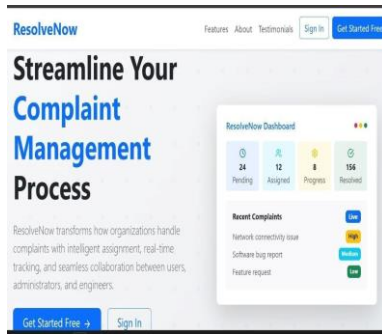
## 8. Authentication

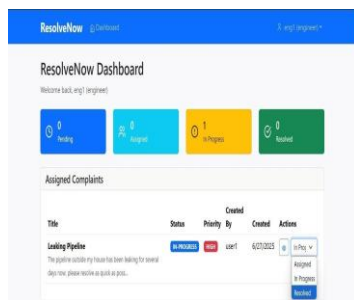
- **Method Used:**  
JSON Web Tokens (JWT)
- **How it Works:**
  - User logs in with email/password
  - Server generates a token using JWT
  - Token is stored in localStorage (frontend)
  - Protected routes are verified using middleware on the backend

## 9. User Interface

- **UI Technology:**  
React + Bootstrap 5
- **Features:**
  - Responsive Dashboard
  - Complaint Submission Form
  - Admin Panel to assign complaints
  - Chat window for engineer-user interaction

**Output:**





## 10. Testing

- **Tools Used:**

- Postman / Thunder Client (API Testing)
- Chrome DevTools (UI testing)
- Manual Testing for User/Engineer/Admin roles

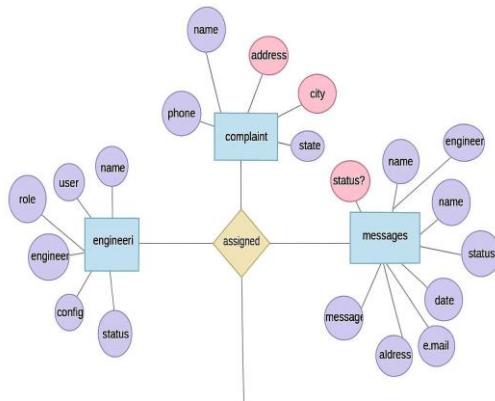
- **Scenarios Tested:**

- Multiple users submitting complaints
- Role-based access restrictions
- Chat system functionality
- Data integrity on MongoDB updates

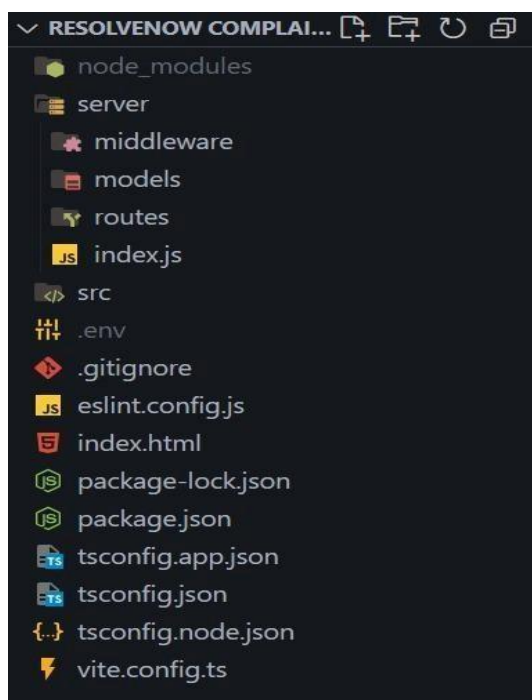
## 11. Screenshots or Demo

- **screenshots**  
:

### ER Diagram

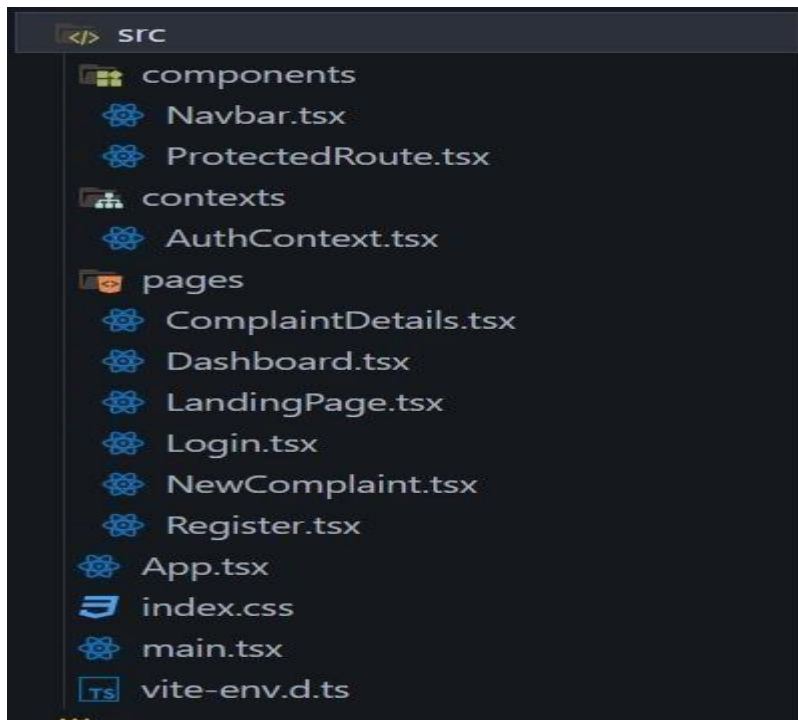


## 1. Overall Project Structure

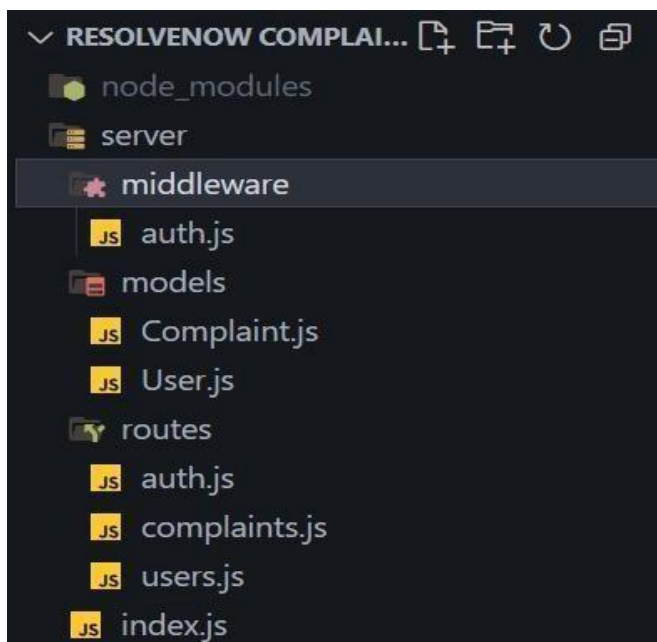


## 2. Frontend





### 3. Backend



- GitHub Repo: [ResolveNow GitHub](#)
- Localhost Demo: <http://localhost:5173>

## **12. Known Issues**

- No mobile app version yet
- Chat feature doesn't support file/image attachments
- No dark mode theme included

## **13. Future Enhancements**

- Native mobile app support
- AI chatbot for FAQs and issue categorization
- Real-time push notifications using WebSockets
- Multi-language interface support
- Admin Analytics Dashboard (Complaint trends, resolution time)