

ResolveNow: Online Complaint Management System

Project Overview

ResolveNow is an online complaint registration and management system that allows users to register, track, and resolve complaints. It provides a centralized and secure platform with role-based access for customers, agents, and admins.

Key Features

- User Registration & Login
- Complaint Submission with attachment support
- Complaint Tracking and Notification system
- Real-time Chat between User and Assigned Agent
- Admin Dashboard to Manage and Assign Complaints
- Data Security and Confidentiality

Usage Scenario

Scenario: John registers, submits a complaint about a faulty product, communicates with agent Sarah in real-time, and gets a resolution.

This shows the smooth flow from complaint submission to resolution and feedback collection.

Technical Architecture

The application uses a Client-Server model with the following components:

Frontend:

- HTML, CSS, Bootstrap, Material UI for responsive UI
- JavaScript with Axios for API communication

Backend:

- Node.js with Express.js for server logic
- MongoDB for database management
- RESTful APIs for interaction between frontend and backend

Real-time Communication:

- socket.io for real-time chat
- WebRTC for optional video communication

System Architecture Diagram (Description)

The architecture consists of:

1. Frontend (User Interface):

- Accessible by Customers, Agents, and Admins.
- Communicates with the backend via REST APIs.

2. Backend (Server):

- Handles user authentication, complaint logic, and routing.
- Powered by Node.js + Express.js.

3. Database:

- MongoDB stores user profiles, complaints, messages.

4. Real-time Services:

- socket.io manages chat sessions.
- WebRTC used optionally for live video support.

Each component is modular and can be scaled independently.