

ResolveNow – Online Complaint Registration and Management System

1. Introduction

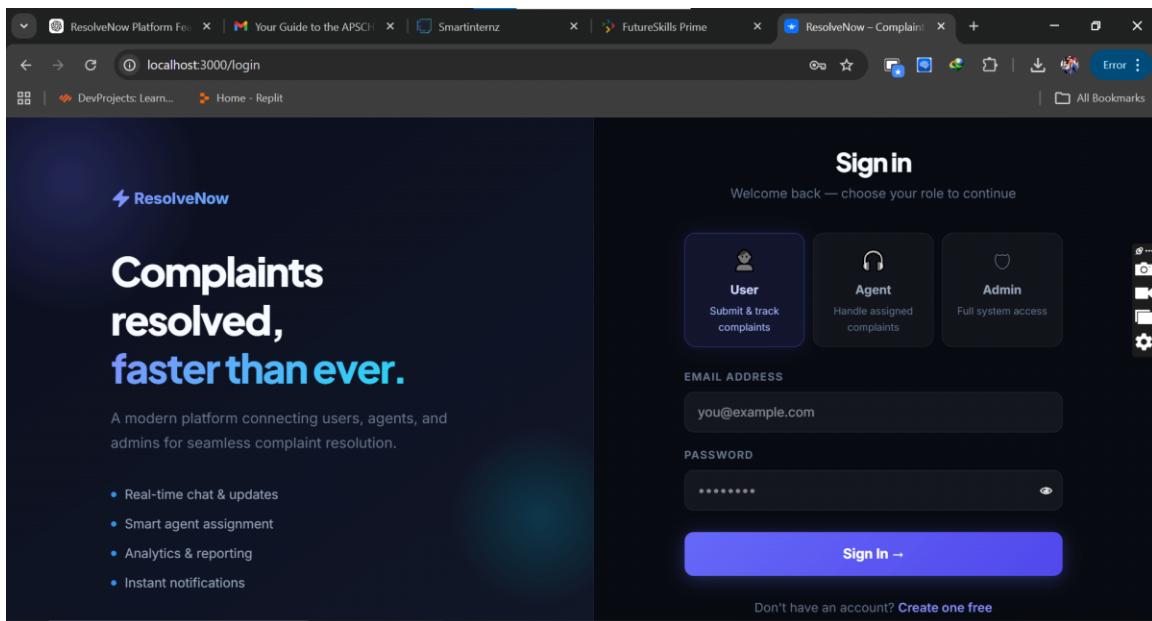
Project Title: ResolveNow – Online Complaint Registration and Management System

Developed By: Vikas Prasad Koiri

Technology Stack: MERN Stack (MongoDB, Express.js, React.js, Node.js)

2. Project Overview

ResolveNow is a web-based complaint registration and management system designed to streamline the process of submitting, tracking, assigning, and resolving customer complaints.



Key Features:

- User registration and login with JWT authentication
- Submit complaint with detailed description and attachments
- Real-time status tracking
- Chat system between user and agent
- Admin dashboard with statistics
- Complaint assignment to agents
- Role-based access control (User, Agent, Admin)

- Secure password hashing using bcrypt

3. System Architecture

ResolveNow follows a client-server architecture using the MERN stack. The frontend is developed in React.js and communicates with the backend via REST APIs. The backend is built using Node.js and Express.js, and MongoDB is used as the database.

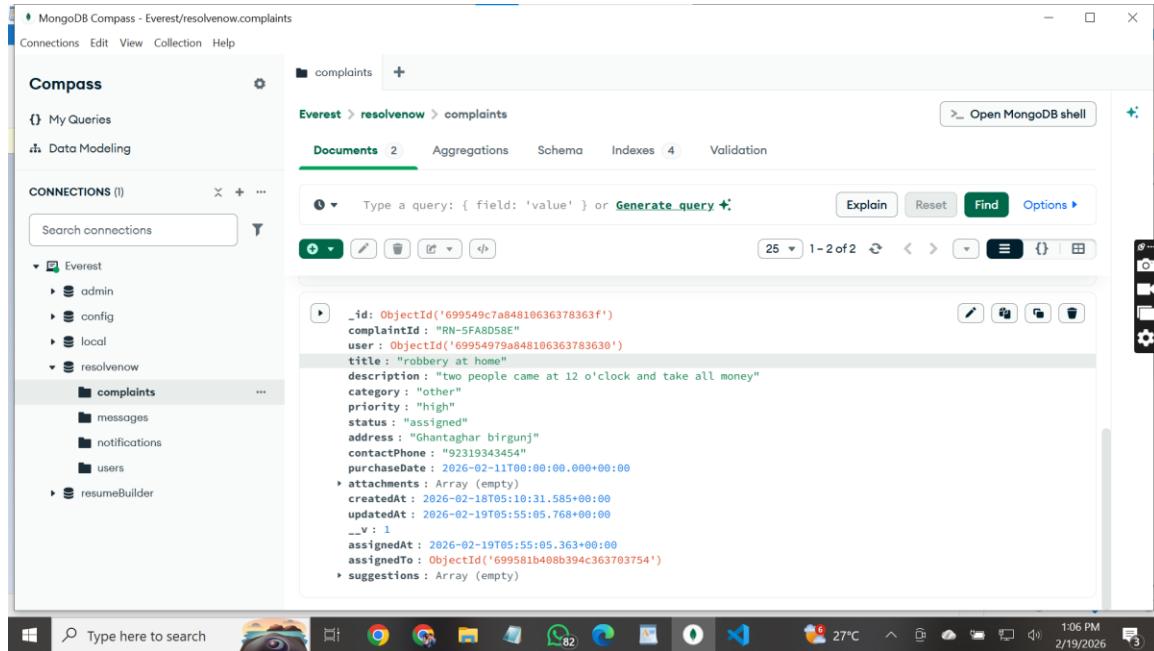
4. Database Design

User Collection:

- _id
- fullName
- email
- password (hashed)
- role (user / agent / admin)
- createdAt

Complaint Collection:

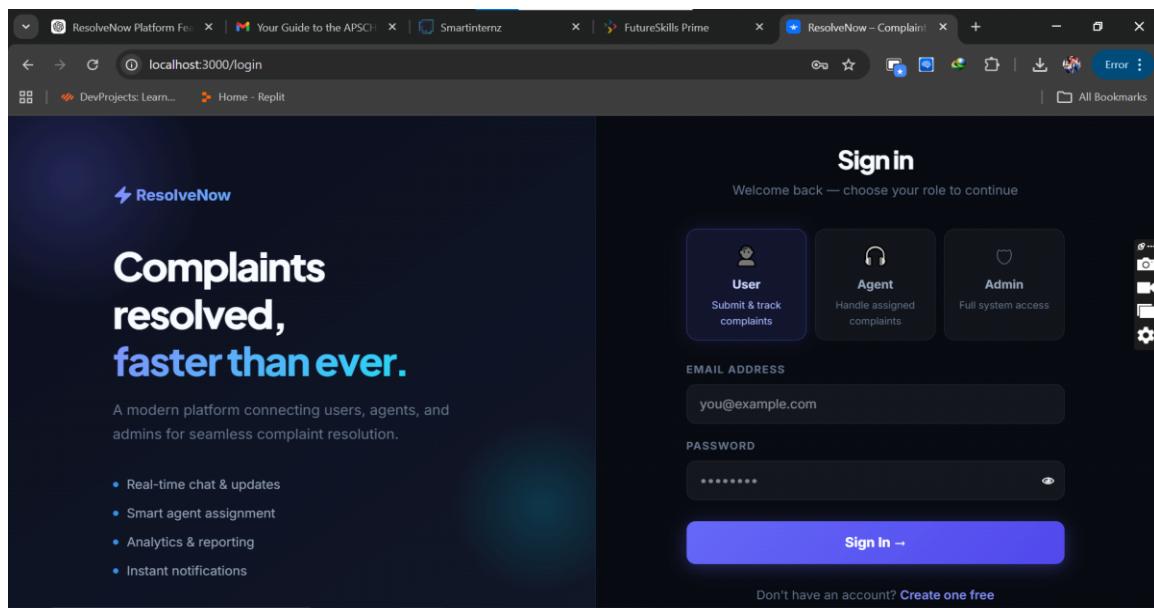
- _id
- complaintId (Unique Ticket ID)
- title
- description
- status
- user (Reference)
- assignedTo (Reference)
- attachments
- createdAt
- updatedAt

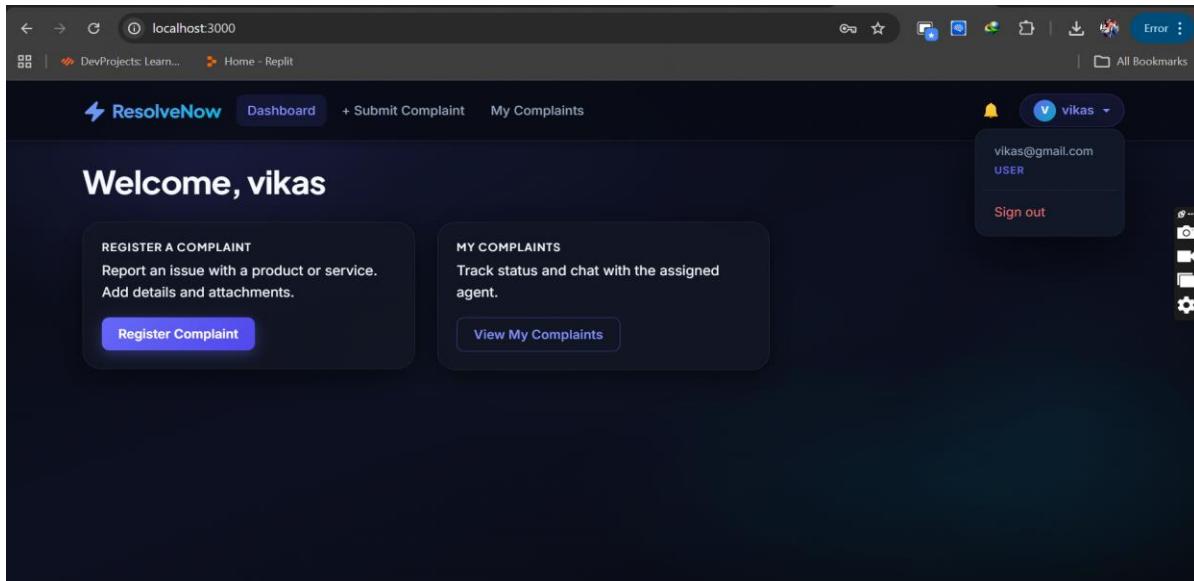


5. Functional Modules

User Module

- Register and login





- Submit complaint

A screenshot of the 'Submit a Complaint' form at localhost:3000/submit. The page title is 'Submit a Complaint' and it says 'Fill in the details below and we'll assign an agent to resolve your issue.' On the left, there's a 'Basic Information' section with fields for 'TITLE' (containing 'Brief title of the issue') and 'DESCRIPTION' (containing 'Describe the issue in detail — what happened, when, and what you expected...'). On the right, there's a 'Tips for faster resolution' sidebar with four items: 'Be specific' (Include dates, order numbers, and exact error messages.), 'Add screenshots' (Visual evidence helps agents resolve issues faster.), 'Add contact info' (Agents may need to reach you directly.), and 'Set correct priority' (Urgent issues get assigned first.). The top navigation bar is identical to the dashboard, including 'ResolveNow', 'Dashboard', '+ Submit Complaint', and 'My Complaints'.

The screenshot shows the 'ResolveNow' web application interface. At the top, there's a navigation bar with links for 'Dashboard', '+ Submit Complaint', and 'My Complaints'. A user profile 'vikas' is visible on the right. The main area is titled 'Category & Priority'. It includes sections for 'CATEGORY' (with options like product, service, billing, delivery, technical, other) and 'PRIORITY' (with options Low, Medium, High, Urgent). To the right, a sidebar titled 'Tips for faster resolution' lists four items: 'Be specific' (Include dates, order numbers, and exact error messages), 'Add screenshots' (Visual evidence helps agents resolve issues faster), 'Add contact info' (Agents may need to reach you directly), and 'Set correct priority' (Urgent issues get assigned first). There are also icons for camera, video, file, and settings.

This screenshot shows the next step in the complaint submission process. The title 'Purchase Date' is at the top, followed by a date input field 'mm/dd/yyyy'. Below it is a section titled 'Attachments (optional)' with a large dashed box for uploading files, accompanied by the text 'Click to upload files' and 'Images, PDF, DOC — up to 5 files'. On the right, the 'Tips for faster resolution' sidebar remains the same. At the bottom, there's a prominent blue 'Submit Complaint' button with a lightning bolt icon, and a note below it stating 'We'll assign an agent within 24 hours'.

- Track complaint status

The screenshot shows a web application interface titled "My Complaints". At the top, there is a header with the "ResolveNow" logo, navigation links for "Dashboard" and "+ Submit Complaint", and a user profile for "vikas". Below the header, the main title "My Complaints" is displayed. A sub-section titled "Your complaints (1)" shows a single entry with the following details:

ID	TITLE	CATEGORY	PRIORITY	STATUS	ASSIGNED TO	SUBMITTED
RN-F6225329	jkjh	technical	HIGH	ASSIGNED	hari	2/16/2026

A blue button labeled "+ New Complaint" is located in the top right corner of the list area. To the right of the table, there is a vertical sidebar with icons for search, camera, file, and settings.

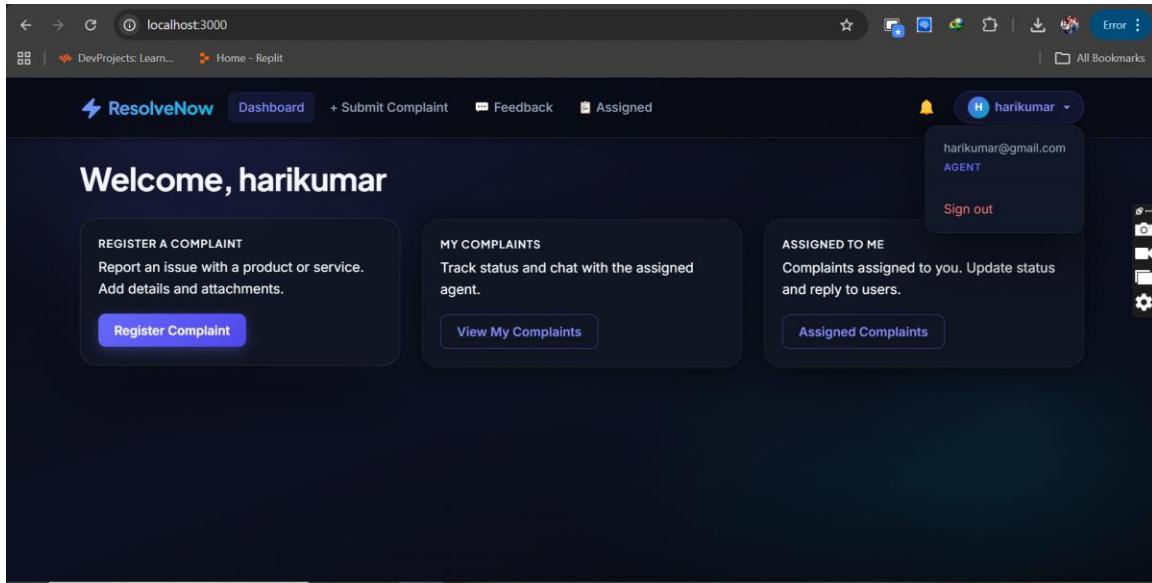
The screenshot shows a web application interface titled "Notifications". At the top, there is a header with the "ResolveNow" logo, navigation links for "Dashboard" and "+ Submit Complaint", and a user profile for "vikas". Below the header, the main title "Notifications" is displayed. Two notifications are listed:

- Agent assigned**
Complaint RN-F6225329 has been assigned to an agent.
RN-F6225329
2/18/2026, 2:52:26 PM
- Complaint registered**
Your complaint RN-F6225329 has been submitted.
RN-F6225329
2/16/2026, 9:13:14 PM

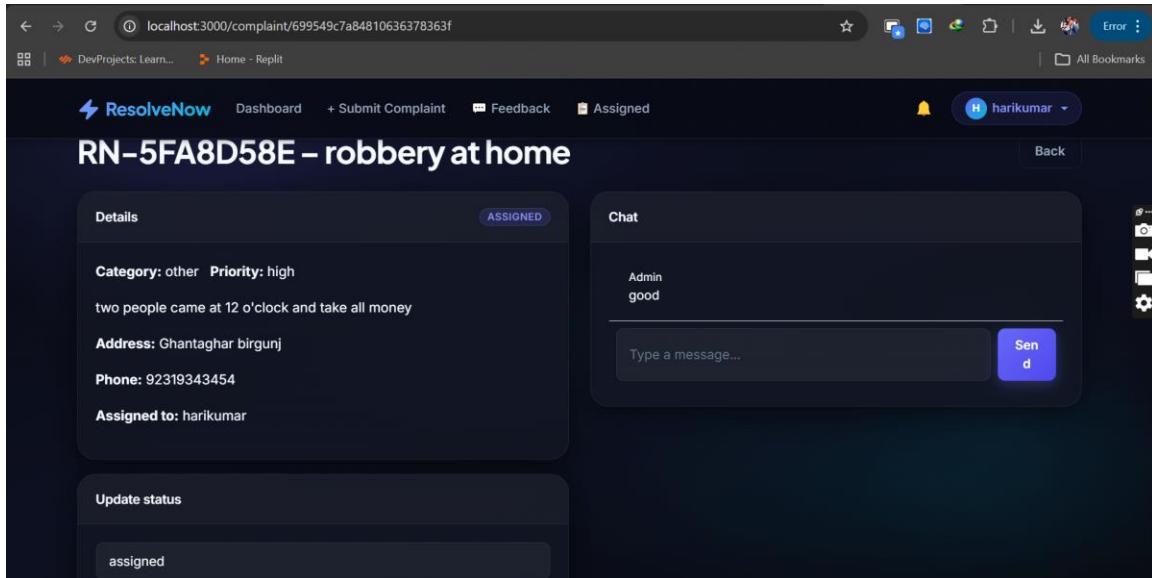
To the right of the notifications, there is a vertical sidebar with icons for search, camera, file, and settings.

- Chat with agent

Agent Module



- View assigned complaints



- Update complaint status

The screenshot shows the 'Assigned Complaints' section of the ResolveNow application. At the top, there's a header bar with the 'ResolveNow' logo, navigation links for 'Dashboard', '+ Submit Complaint', 'Feedback', and 'Assigned', and a user profile for 'harikumar'. Below the header, the title 'Assigned Complaints' is displayed. A sub-header 'Assigned to you (1)' indicates one item. A table lists the assigned complaint details:

ID	TITLE	USER	CATEGORY	PRIORITY	STATUS	UPDATE STATUS	DATE
RN-SFA8D58E	robbery at home	ram kumar	other	HIGH	ASSIGNED	assigned	2/18/2026

On the right side of the table, there's a 'View' button and a vertical toolbar with icons for camera, video, file, and settings.

- Respond to users
- Feedback and BroadCast

The screenshot shows the 'User Feedback & Suggestions' section of the ResolveNow application. The top navigation bar includes the 'ResolveNow' logo, 'Broadcast', 'Feedback' (which is selected), 'Assigned', and 'Admin' status. The user profile 'Admin' is also present. The main heading is 'User Feedback & Suggestions'. Key statistics are displayed in cards: 'TOTAL FEEDBACK' (0), 'AVERAGE RATING' (-/5), and 'RATING BREAKDOWN' (0 for each rating category from 1 to 5). Below these, a section titled 'All Feedback & Suggestions' shows a message: 'No feedback submitted yet.'

The screenshot shows a web browser window with the URL localhost:3000/admin/notify. The page title is "Send Broadcast Notification". It features a dark-themed interface with a sidebar on the right containing icons for user management, feedback, assigned complaints, and settings. The main content area has two input fields: "TITLE" (placeholder: "Notification Title") and "MESSAGE" (placeholder: "Message to all users and agents..."). A blue "Send Broadcast" button is at the bottom.

Admin Module

The screenshot shows the "Welcome, Admin" dashboard. The top navigation bar includes links for Broadcast, Feedback, Assigned, and Admin. The Admin dropdown menu shows the user's email (admin@resolvenow.com) and role (ADMIN), with a "Sign out" option. The dashboard features three main cards: "BROADCAST" (Send announcements and notifications to all users and agents instantly, with a "Go to Broadcast" button), "FEEDBACK" (View all user ratings, suggestions, and feedback across complaints, with a "View Feedback" button), and "ASSIGNED TO ME" (Complaints assigned to you. Update status and reply to users, with a "Assigned Complaints" button). A fourth card, "ADMIN", is partially visible at the bottom left.

- View all complaints

The screenshot shows the Admin Dashboard of the ResolveNow platform. At the top, there are tabs for Analytics & Reporting, Complaints Management, User Management, and Complaint Box (which is currently selected). Below this, a section titled "All Complaints — Users & Agents" displays two entries:

- RN-SFAB058E: robbery at home (ASSIGNED, HIGH, OTHER) - Assigned to ram kumar, Agent: harikumar, Date: 2/18/2026. A "View" button is shown.
- RN-F6225329: jkjh (ASSIGNED, HIGH, TECHNICAL) - Assigned to vikas, Agent: hari, Date: 2/16/2026. A "View" button is shown.

- Assign complaints to agents

The screenshot shows the Assigned Complaints page. It lists two complaints assigned to the user:

ID	TITLE	USER	CATEGORY	PRIORITY	STATUS	UPDATE STATUS	DATE	Actions
RN-SFAB058E	robbery at home	ram kumar	other	HIGH	ASSIGNED	assigned submitted assigned in_progress resolved closed	2/18/2026	<button>View</button>
RN-F6225329	jkjh	vikas	technical	HIGH	ASSIGNED	assigned submitted assigned in_progress resolved closed	2/16/2026	<button>View</button>

- Create agent accounts

The screenshot shows the Admin Dashboard with the 'Complaint Box' tab selected. The main area displays two complaints:

- RN-5FA8D58E**: robbery at home (ASSIGNED, HIGH, OTHER). Assigned to harikumar. Created by ram kumar on 2/18/2026.
- RN-F6225329**: jkjh (ASSIGNED, HIGH, TECHNICAL). Assigned to hari. Created by vikas on 2/16/2026.

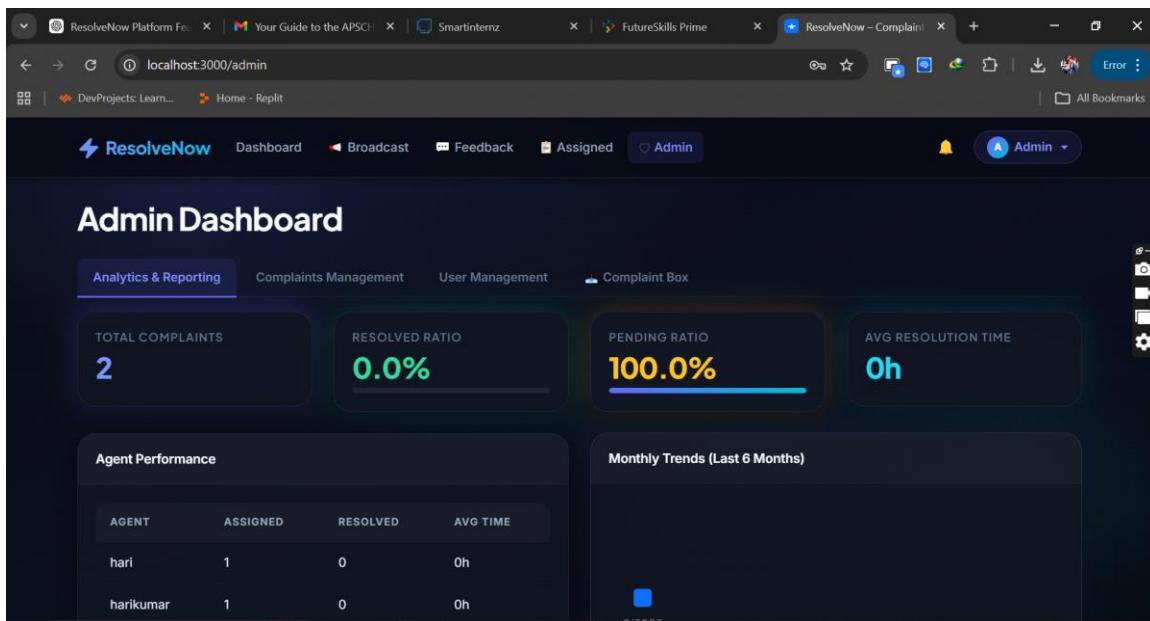
At the top right, there are icons for search, camera, video, file, and settings.

The screenshot shows the Admin Dashboard with the 'Complaint Management' tab selected. The main area displays a table of complaints:

ID	TITLE	USER	STATUS	ASSIGNED TO	ASSIGN
RN-5FA8D58E	robbery at home	ram kumar	ASSIGNED	harikumar	harikumar Change agent hari harikumar
RN-F6225329	jkjh	vikas	ASSIGNED	hari	View

A context menu is open over the third complaint row, showing options: 'Change agent', 'hari', and 'harikumar'. At the top right, there are icons for search, camera, video, file, and settings.

- Monitor system statistics



6. Security Measures

- JWT-based authentication
- Password hashing using bcrypt
- Role-based authorization
- Protected API routes
- Environment variables for sensitive data

7. Future Enhancements

- AI-based complaint categorization
- Automatic complaint routing
- SLA-based escalation system
- Email notifications
- Analytics dashboard with charts
- Cloud deployment

8. Conclusion

ResolveNow demonstrates the practical implementation of a full-stack MERN application for complaint management. The system ensures structured complaint handling, secure authentication,

and improved customer satisfaction. It is scalable and suitable as a major academic or portfolio project.