

ResolveNow – Online Complaint Registration and Management System

1. Introduction

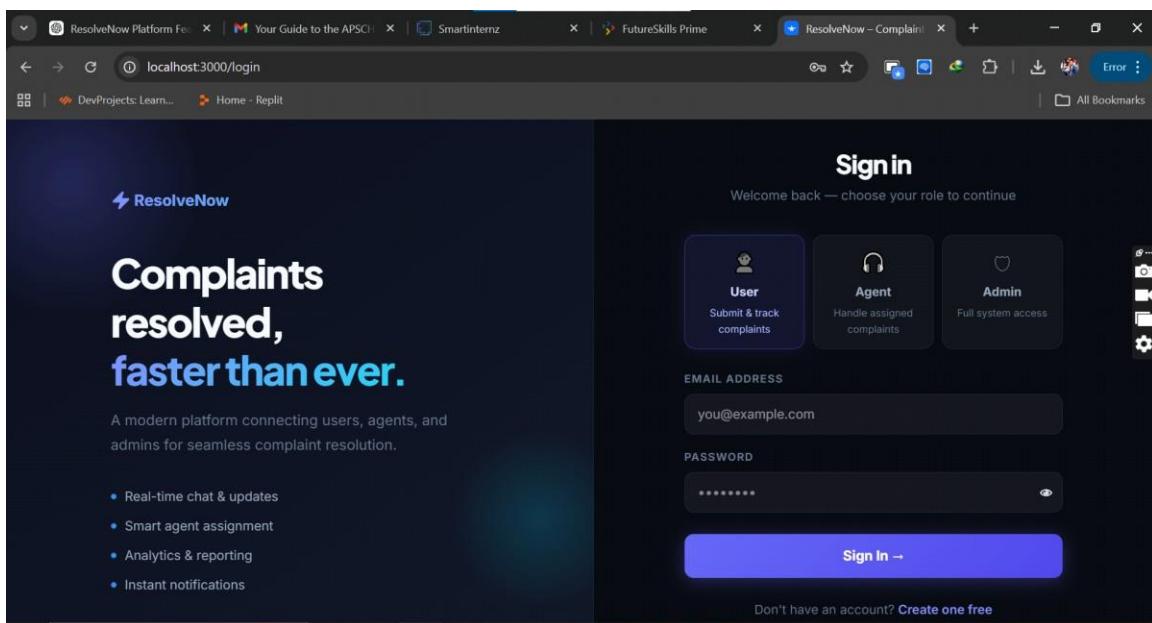
Project Title: ResolveNow – Online Complaint Registration and Management System

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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.

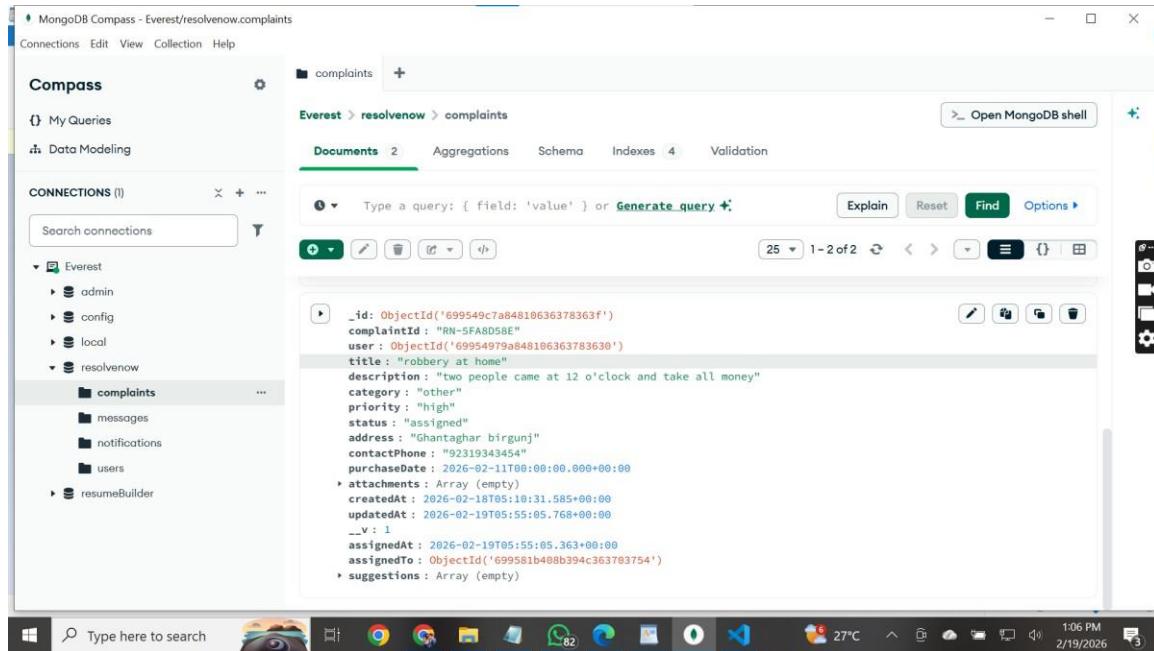
4. Database Design

User Collection:

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

Complaint Collection:

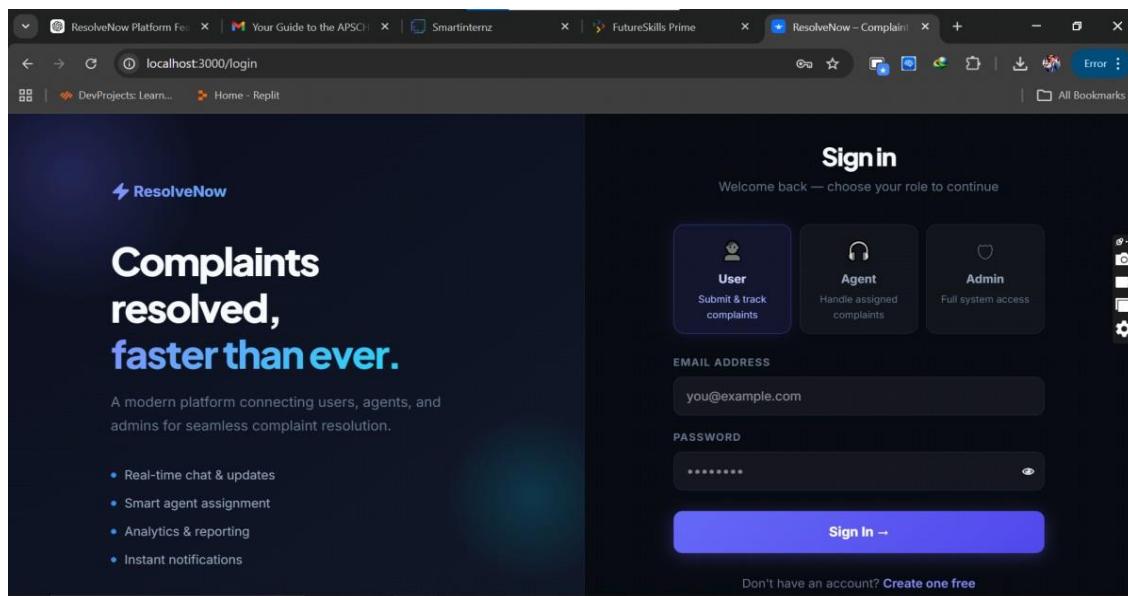
- _id
- complaintId (Unique Ticket ID)
- title
- description
- status
- user (Reference)
- assignedTo (Reference)
- attachments
- createdAt
- updatedAt

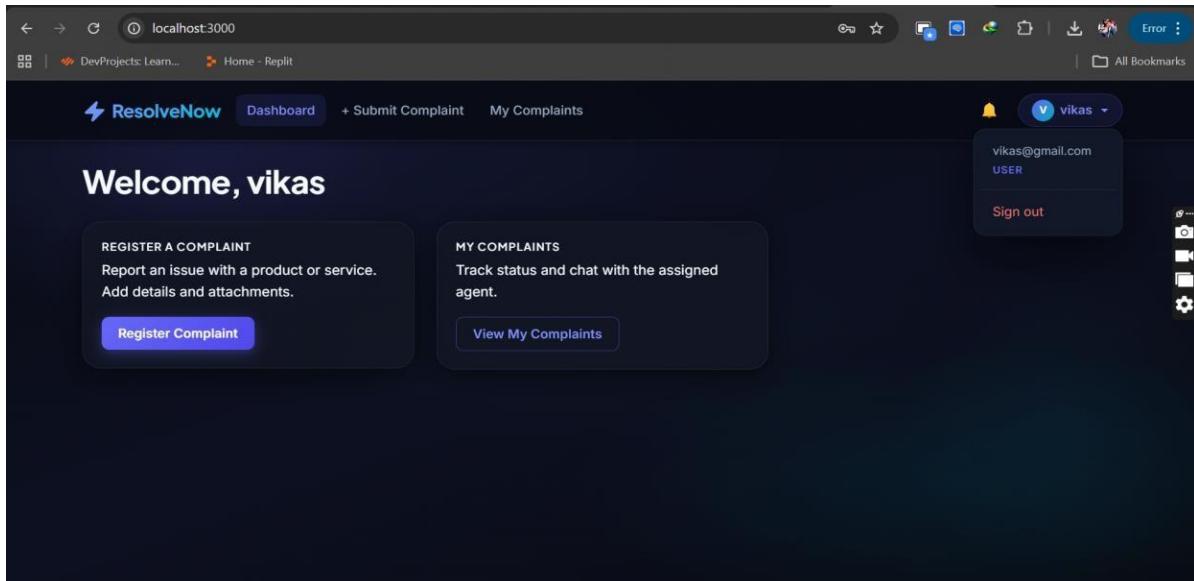


5. Functional Modules

User Module

- Register and login





- Submit complaint

This screenshot shows the 'Submit a Complaint' form page. The URL in the address bar is 'localhost:3000/submit'. The page has a dark background. On the left, there's a form with two main sections: 'Basic Information' (containing 'TITLE *' and 'DESCRIPTION *' fields) and a larger area for a detailed description. On the right, there's a sidebar titled 'Tips for faster resolution' with four items: 'Be specific' (with a note about including dates, order numbers, and exact error messages), 'Add screenshots' (noting that visual evidence helps agents resolve issues faster), 'Add contact info' (mentioning that agents may need to reach you directly), and 'Set correct priority' (stating that urgent issues get assigned first). The sidebar also includes icons for camera, video, file, and settings.

The screenshot shows the second step of a complaint submission process titled "Category & Priority". On the left, there are two sections: "CATEGORY" with options like product, service, billing, delivery, technical, and other; and "PRIORITY" with options Low, Medium (which is selected), High, and Urgent. On the right, a sidebar titled "Tips for faster resolution" provides four tips: 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 sidebar also includes icons for file attachments, camera, video, and settings.

The screenshot shows the fourth step of the complaint submission process titled "Attachments (optional)". It features a large dashed rectangular area with a paperclip icon and the text "Click to upload files. Images, PDF, DOC — up to 5 files". Below this is a "Submit Complaint" button with a lightning bolt icon and the text "We'll assign an agent within 24 hours". To the right of the attachment field is the same "Tips for faster resolution" sidebar as in the previous screenshot.

- Track complaint status

The screenshot shows a web browser window with the URL `localhost:3000/my-complaints`. The page title is "My Complaints". A table displays one complaint entry:

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

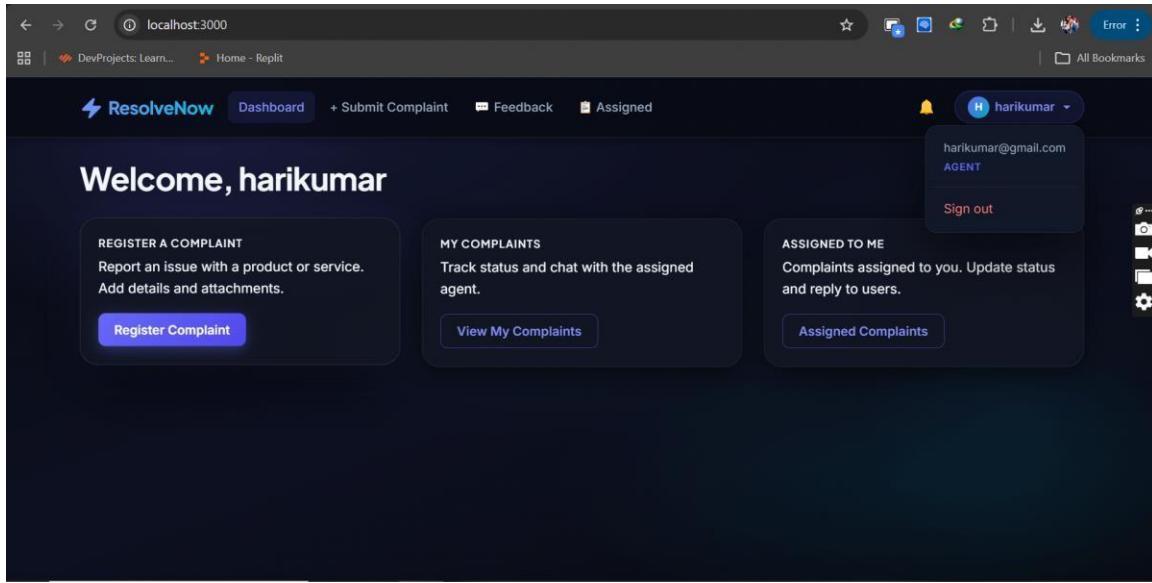
A blue button labeled "+ New Complaint" is visible at the top right of the table area. The browser interface includes a navigation bar with back, forward, and search icons, and a toolbar with various browser-specific buttons.

The screenshot shows a web browser window with the URL `localhost:3000/notifications`. The page title is "Notifications". Two notifications are listed:

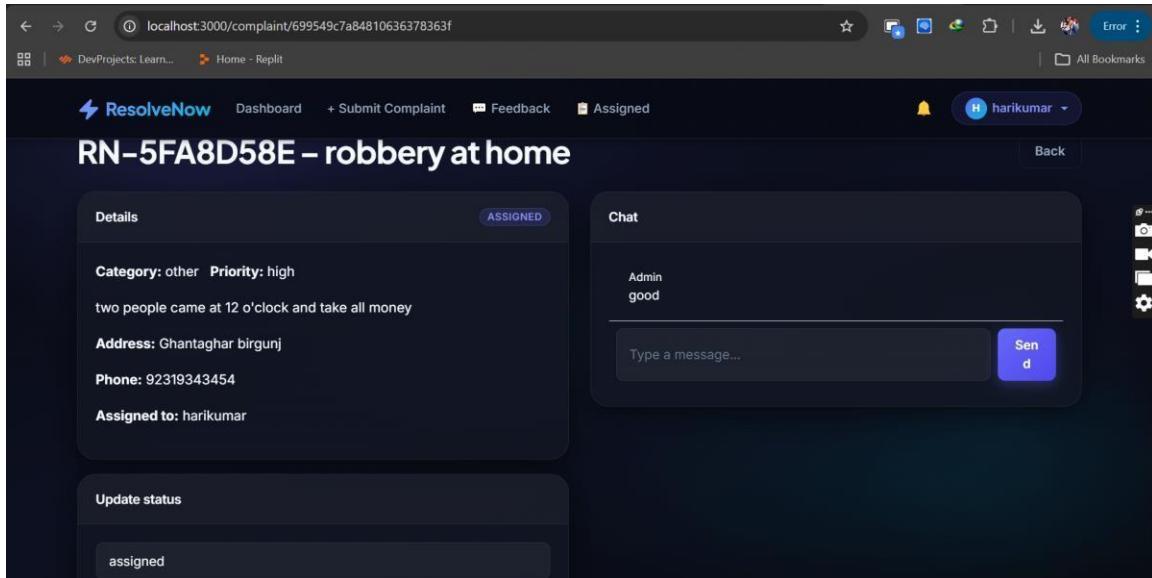
- Agent assigned**
Complaint RN-F6225329 has been assigned to an agent.
RN-F6225329
2/18/2026, 2:52:26 PM
- Complaint registered**
Your complaint RN-F6225329 has been submitted.
RN-F6225329
2/16/2026, 9:13:14 PM

- Chat with agent

Agent Module



- View assigned complaints



- Update complaint status

The screenshot shows the 'Assigned Complaints' section of the ResolveNow platform. At the top, there's a header 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-SFAB058E | robbery at home | ram kumar | other | HIGH | ASSIGNED | assigned | 2/18/2026 |

On the right side of the table, there are several small icons for actions like edit, delete, and view.

- Respond to users
- Feedback and BroadCast

The screenshot shows the 'User Feedback & Suggestions' section of the ResolveNow platform. At the top, there's a header with the 'ResolveNow' logo, navigation links for 'Dashboard', 'Broadcast', 'Feedback', and 'Assigned', and a user profile for 'Admin'. Below the header, the title 'User Feedback & Suggestions' is displayed. The page features three main summary boxes:

- TOTAL FEEDBACK**: Shows a value of **0**.
- AVERAGE RATING**: Shows a value of **-/5**.
- RATING BREAKDOWN**: A chart showing the count of feedback for each rating category:
 - 5+: 0
 - 4+: 0
 - 3+: 0
 - 2+: 0
 - 1+: 0

Below these summary boxes, a section titled 'All Feedback & Suggestions' displays 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, broadcast, feedback, assigned complaints, and settings. The main content area has two input fields: "Notification Title" and "Message to all users and agents...". A blue "Send Broadcast" button is at the bottom.

Admin Module

The screenshot shows a web browser window with the URL localhost:3000. The page title is "Welcome, Admin". The dashboard includes sections for "Broadcast", "Feedback", and "Assigned To Me", each with a corresponding button ("Go to Broadcast", "View Feedback", "Assigned Complaints"). On the left, there's a "ADMIN" section with a "Admin Dashboard" button. The top right corner shows the admin profile "admin@resolvenow.com" and "ADMIN" status, with a "Sign out" link. The sidebar on the right is identical to the one in the broadcast form screenshot.

- View all complaints

The screenshot shows the Admin Dashboard of the ResolveNow platform. At the top, there are navigation links for Analytics & Reporting, Complaints Management, User Management, and Complaint Box. The Complaint Box tab is active. Below it, a section titled "All Complaints — Users & Agents" displays two complaints. The first complaint is "robbery at home" (ID: RN-SFA8058E), assigned to "ram kumar" (Agent: harikumar) with a priority of HIGH and category OTHER. The second complaint is "jkjh" (ID: RN-F6225329), assigned to "vikas" (Agent: hari) with a priority of HIGH and category TECHNICAL. Both complaints have a status of ASSIGNED. A search bar and a button for "All statuses" are also present.

- Assign complaints to agents

The screenshot shows the Assigned Complaints page. The heading is "Assigned Complaints" and the sub-section is "Assigned to you (2)". A table lists two complaints: "robbery at home" assigned to "ram kumar" and "jkjh" assigned to "vikas". For the "jkjh" complaint, a dropdown menu is open over the "Status" column, showing options: assigned, submitted, assigned, in_progress, resolved, and closed. The "assigned" option is highlighted. The table columns include ID, TITLE, USER, CATEGORY, PRIORITY, STATUS, UPDATE STATUS, and DATE.

| ID | TITLE | USER | CATEGORY | PRIORITY | STATUS | UPDATE STATUS | DATE |
|-------------|-----------------|-----------|-----------|----------|----------|--|-----------|
| RN-SFA8058E | robbery at home | ram kumar | other | HIGH | ASSIGNED | assigned | 2/18/2026 |
| RN-F6225329 | jkjh | vikas | technical | HIGH | ASSIGNED | submitted assigned in_progress resolved closed | 2/16/2026 |

- Create agent accounts

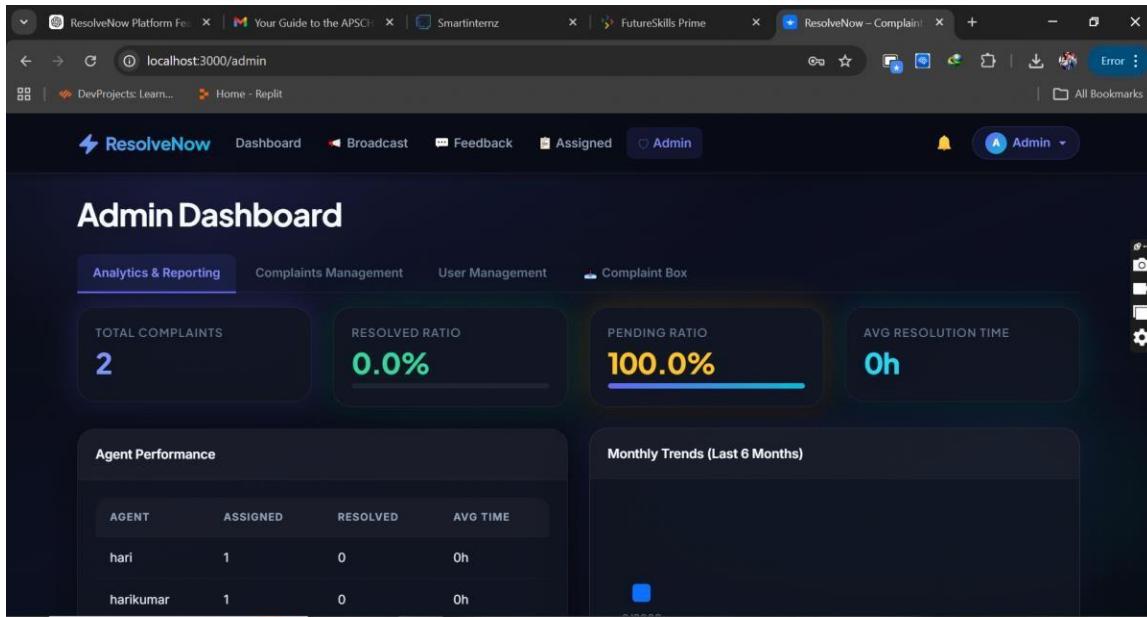
The screenshot shows the Admin Dashboard with the 'Complaint Box' tab selected. The main area displays two complaints under the heading 'All Complaints — Users & Agents'. Each complaint card includes the ID, title, status, priority, and technical details, along with a 'View' button.

| ID | Title | User | Status | Assigned To |
|-------------|-----------------|-----------|----------|-------------|
| RN-5FABD58E | robbery at home | ram kumar | ASSIGNED | harikumar |
| RN-F6225329 | jkjh | vikas | ASSIGNED | hari |

The screenshot shows the Admin Dashboard with the 'Complaint Management' tab selected. The main area displays a table of all complaints. In the 'ASSIGNED TO' column for the first row, a dropdown menu is open, showing 'Change agent' and 'hari' as options, with 'hari' currently selected.

| ID | Title | User | Status | Assigned To |
|-------------|-----------------|-----------|----------|-------------|
| RN-5FABD58E | robbery at home | ram kumar | ASSIGNED | hari |
| RN-F6225329 | jkjh | vikas | ASSIGNED | hari |

- 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.