

# ResolveNow – Online Complaint Registration and Management System

## 1. Introduction

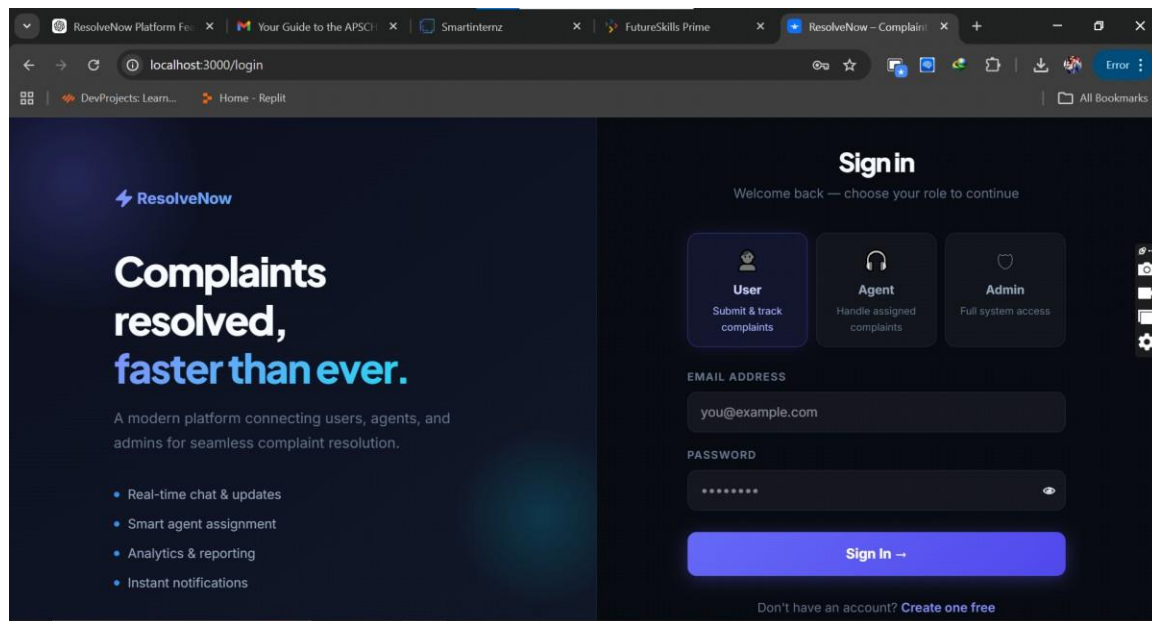
Project Title: ResolveNow – Online Complaint Registration and Management System

Developed By: **SUJAL SOURAV**

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.

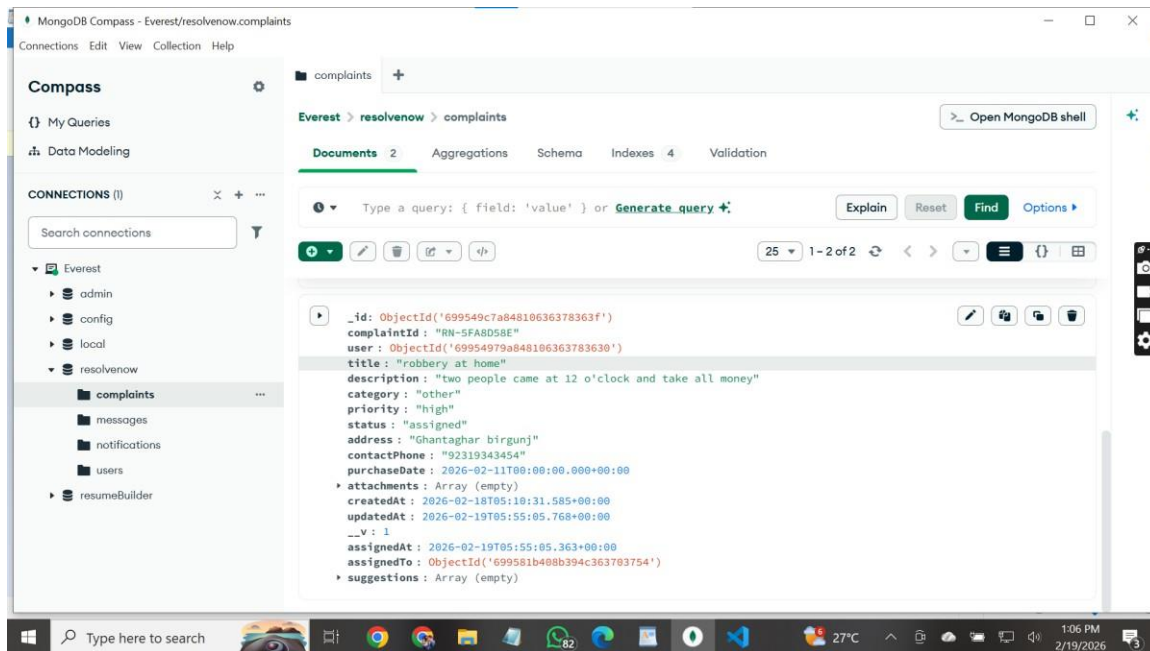
### 4. Database Design

#### User Collection:

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

#### Complaint Collection:

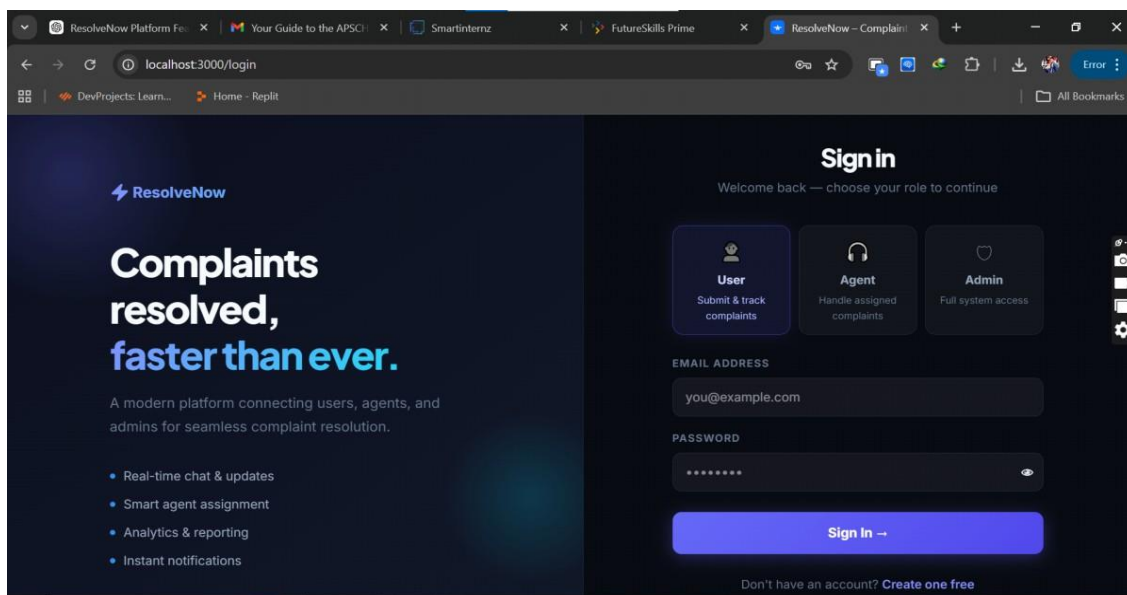
- `_id`
- `complaintId` (Unique Ticket ID)
- `title`
- `description`
- `status`
- `user` (Reference)
- `assignedTo` (Reference)
- `attachments`
- `createdAt`
- `updatedAt`

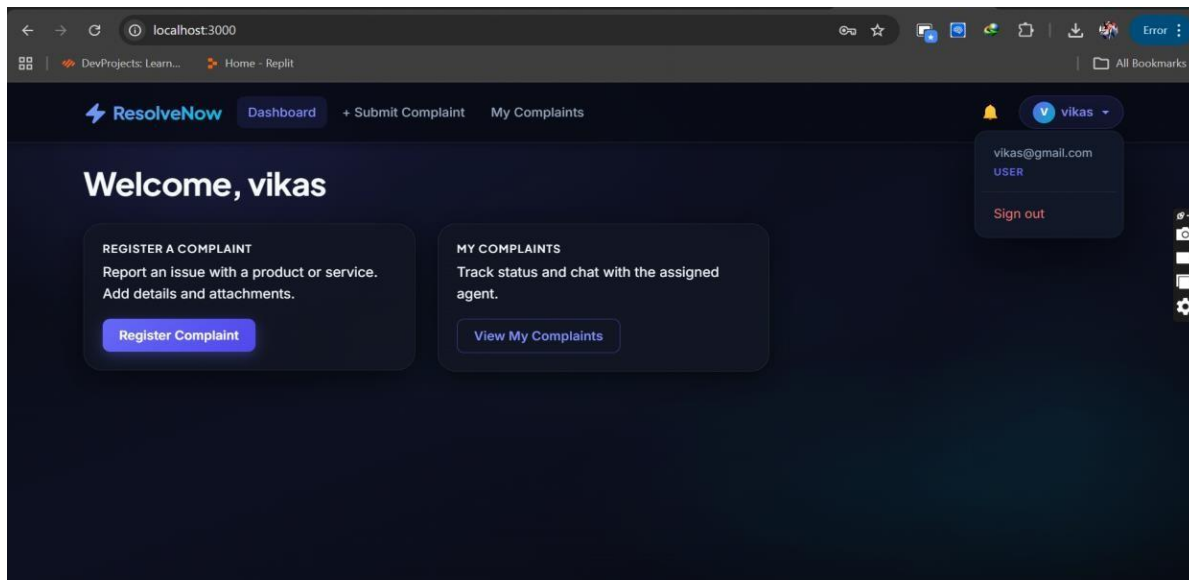


## 5. Functional Modules

### User Module

- Register and login





- Submit complaint

A screenshot of the 'Submit a Complaint' form in the ResolveNow application. The browser address bar shows 'localhost:3000/submit'. The page title is 'Submit a Complaint' with a subtitle 'Fill in the details below and we'll assign an agent to resolve your issue.' The form is divided into two main sections. The left section, titled '1 Basic Information', contains a 'TITLE' field with the placeholder 'Brief title of the issue' and a 'DESCRIPTION' field with the placeholder 'Describe the issue in detail — what happened, when, and what you expected...'. The right section, titled 'Tips for faster resolution', lists four guidelines: '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 navigation bar at the top shows 'Dashboard', '+ Submit Complaint', and 'My Complaints', with the user 'vikas' logged in.

localhost:3000/submit

ResolveNow Dashboard + Submit Complaint My Complaints vikas

### 2 Category & Priority

CATEGORY

product service billing delivery technical other

PRIORITY

Low Medium High Urgent

### 3 Contact Details (optional)

ADDRESS PHONE NUMBER

Your address +1 234 567 8900

PURCHASE DATE

mm/dd/yyyy

**Tips for faster resolution**

- 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.
- Set correct priority**  
Urgent issues get assigned first.

localhost:3000/submit

ResolveNow Dashboard + Submit Complaint My Complaints vikas

PURCHASE DATE

mm/dd/yyyy

### 4 Attachments (optional)

Click to upload files

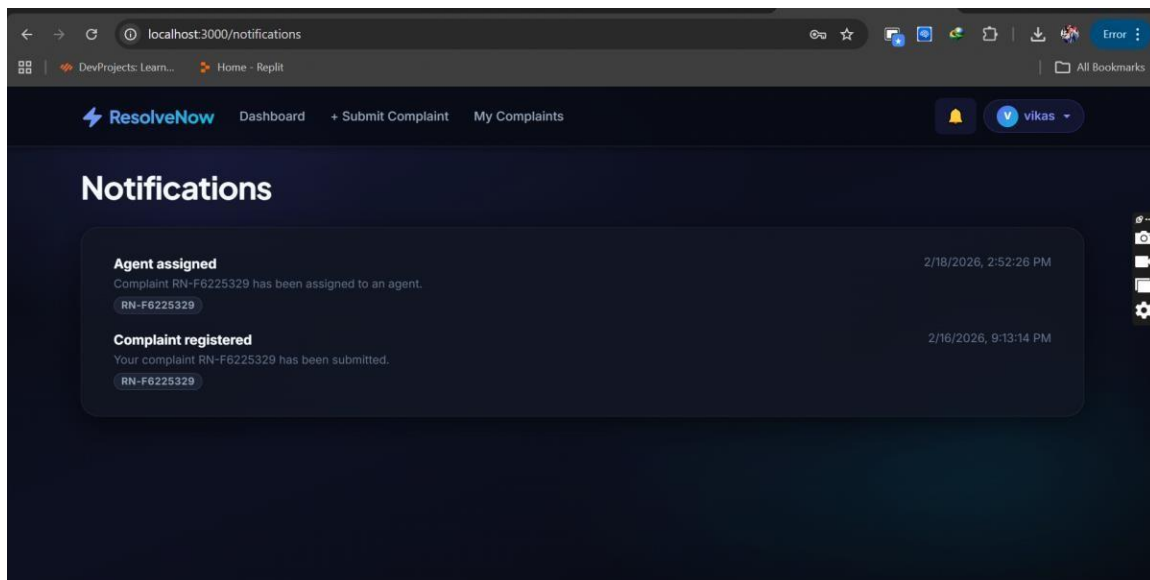
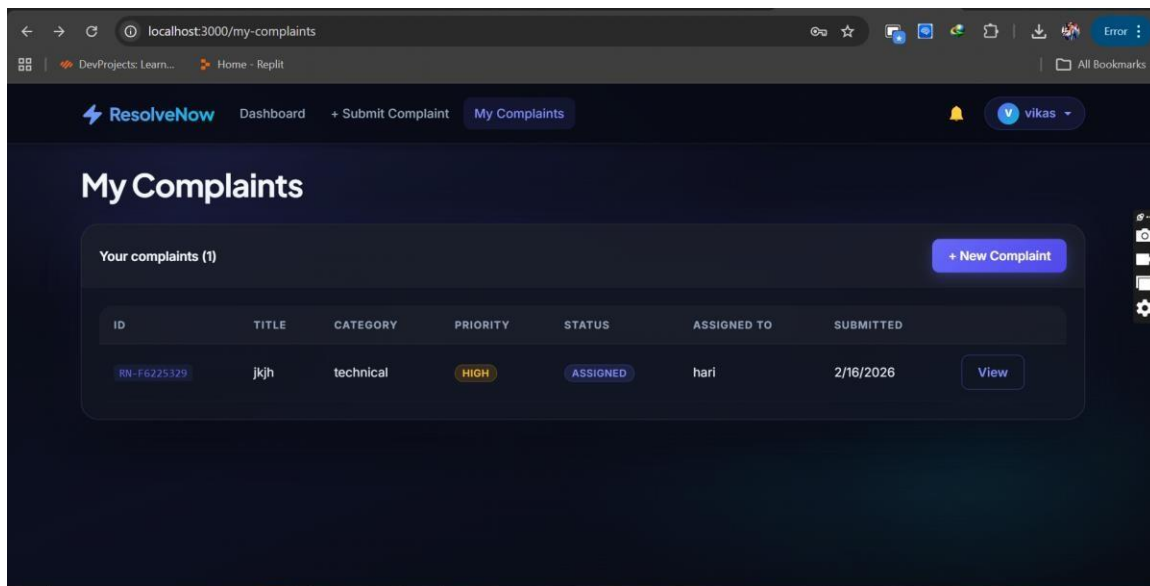
Images, PDF, DOC — up to 5 files

**Submit Complaint** We'll assign an agent within 24 hours

**Tips for faster resolution**

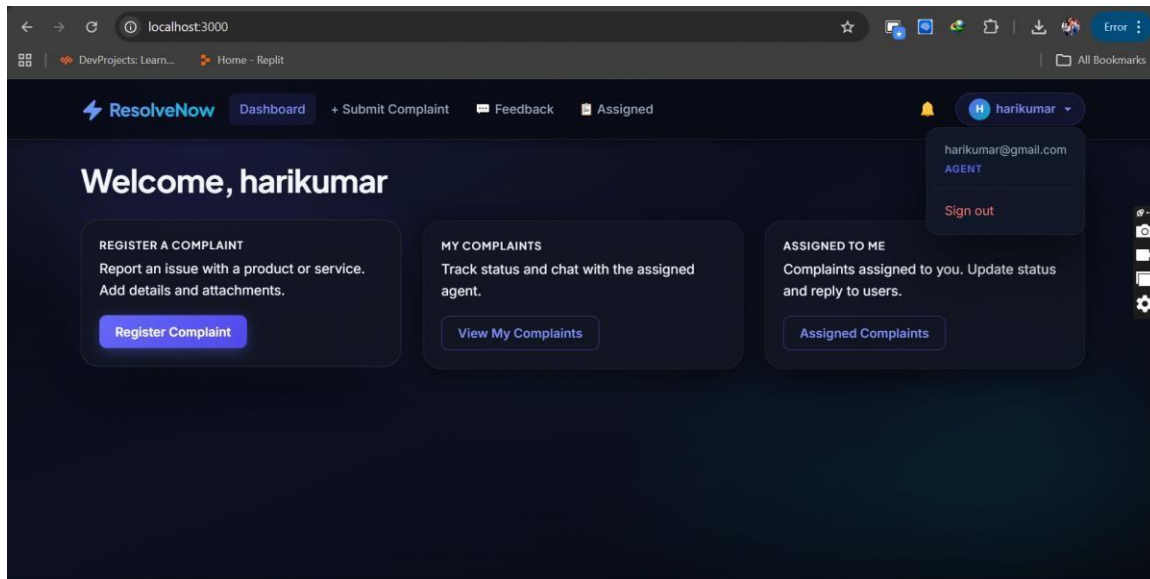
- Be specific**  
Include dates, order numbers, and exact error messages.
- Add screenshots**  
Visual evidence helps agents resolve issues faster.
- Add contact info**  
Agents may need to reach you directly.
- Set correct priority**  
Urgent issues get assigned first.

- Track complaint status

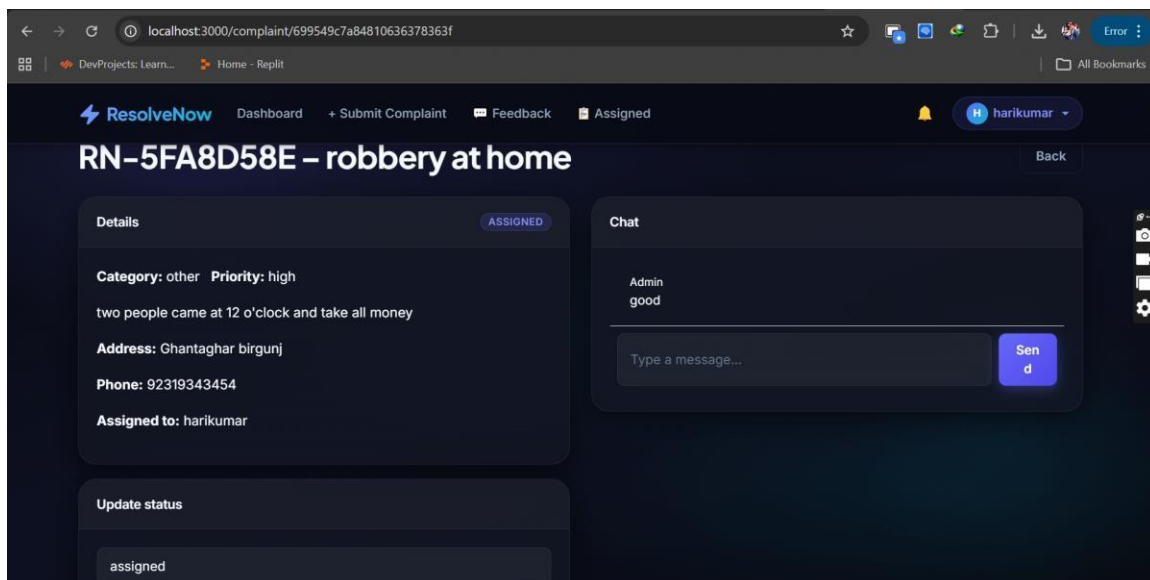


- Chat with agent

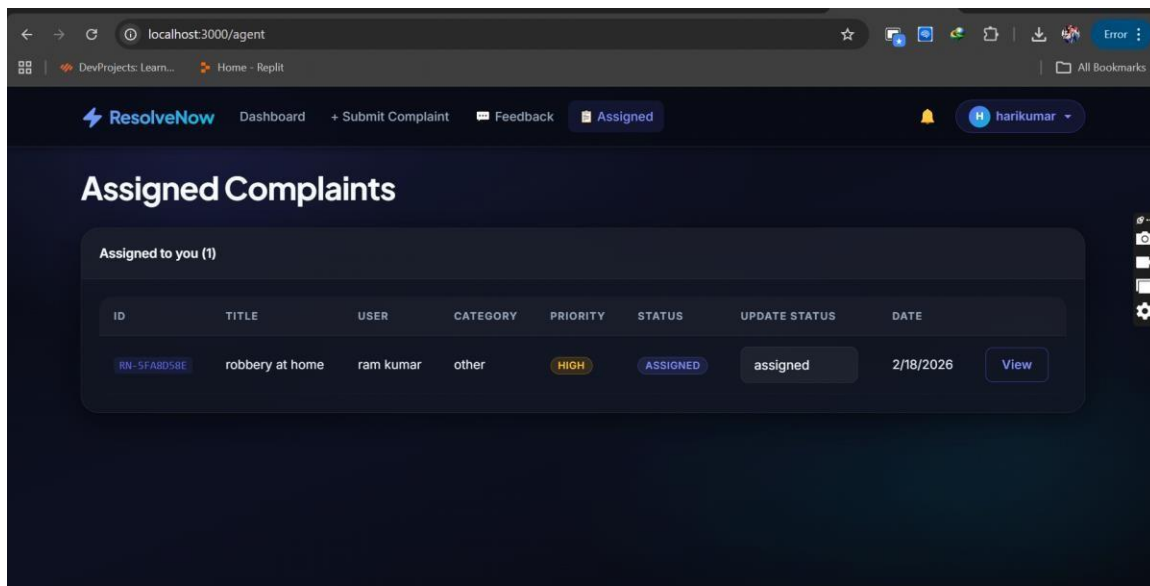
## Agent Module



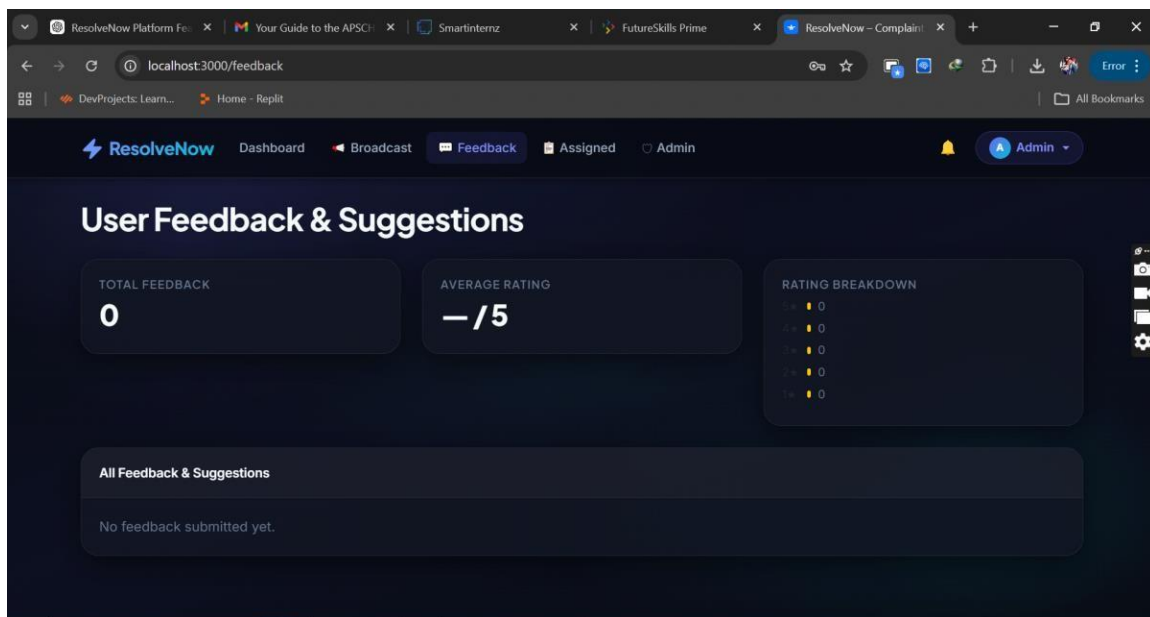
- View assigned complaints



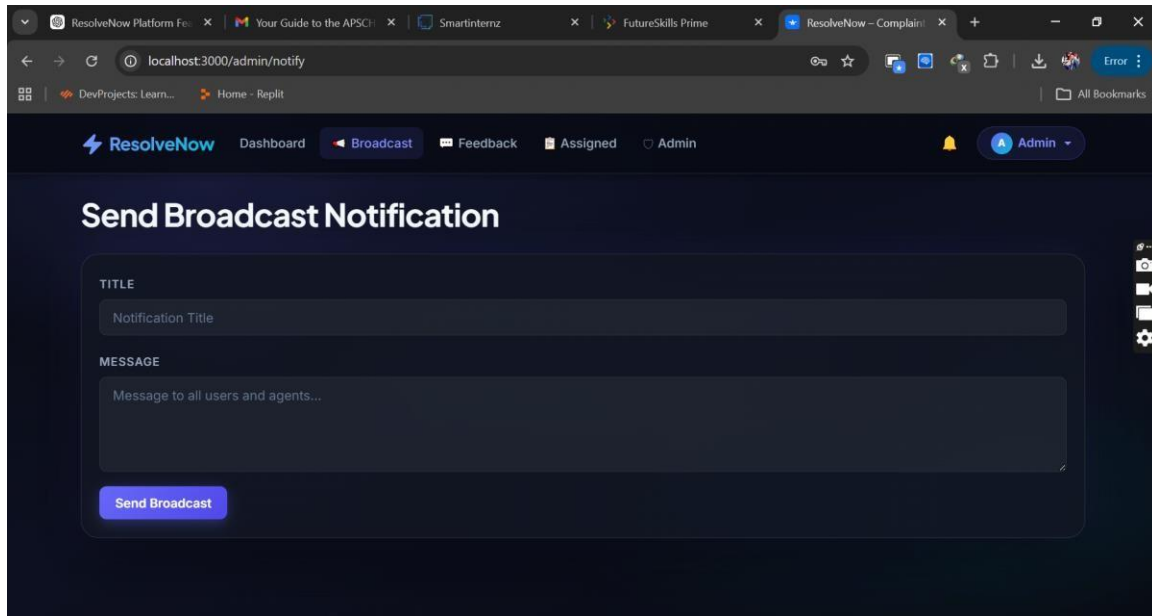
- Update complaint status



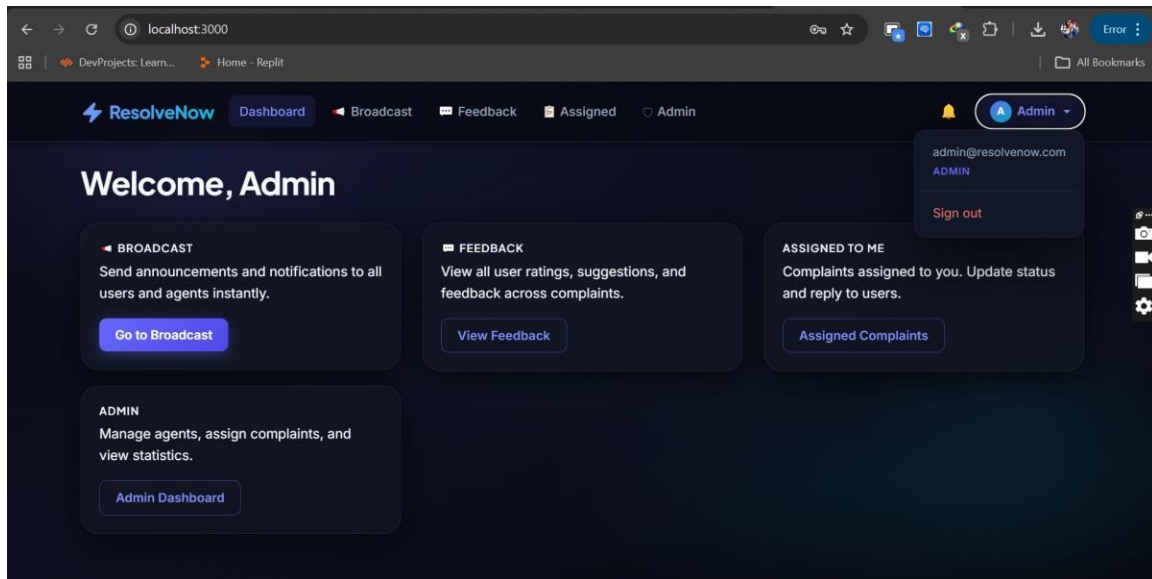
- Respond to users
- Feedback and BroadCast



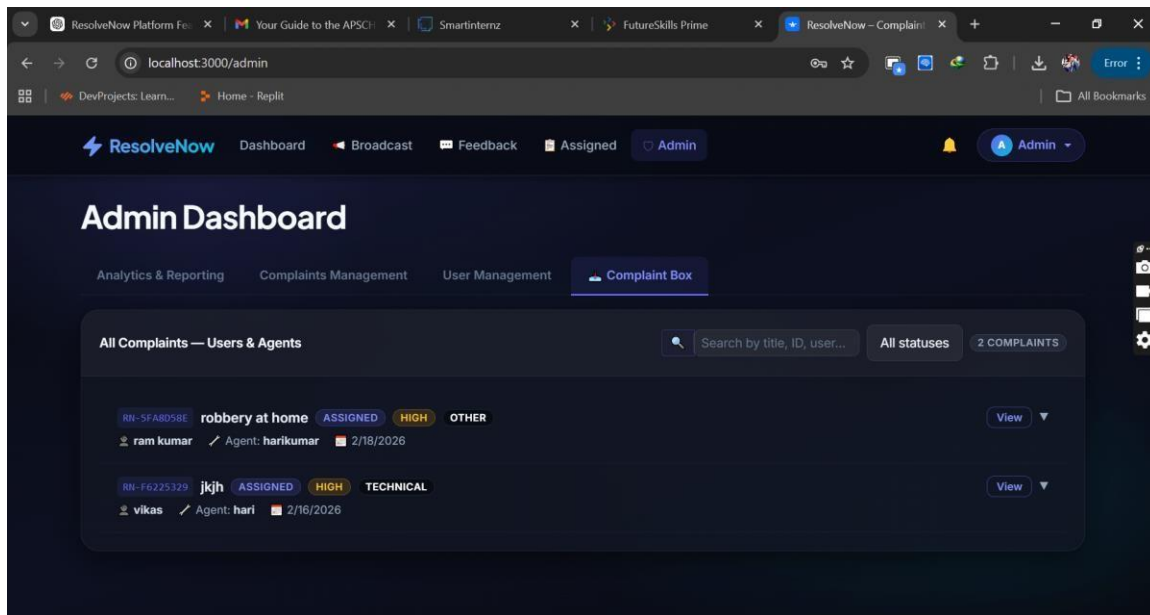




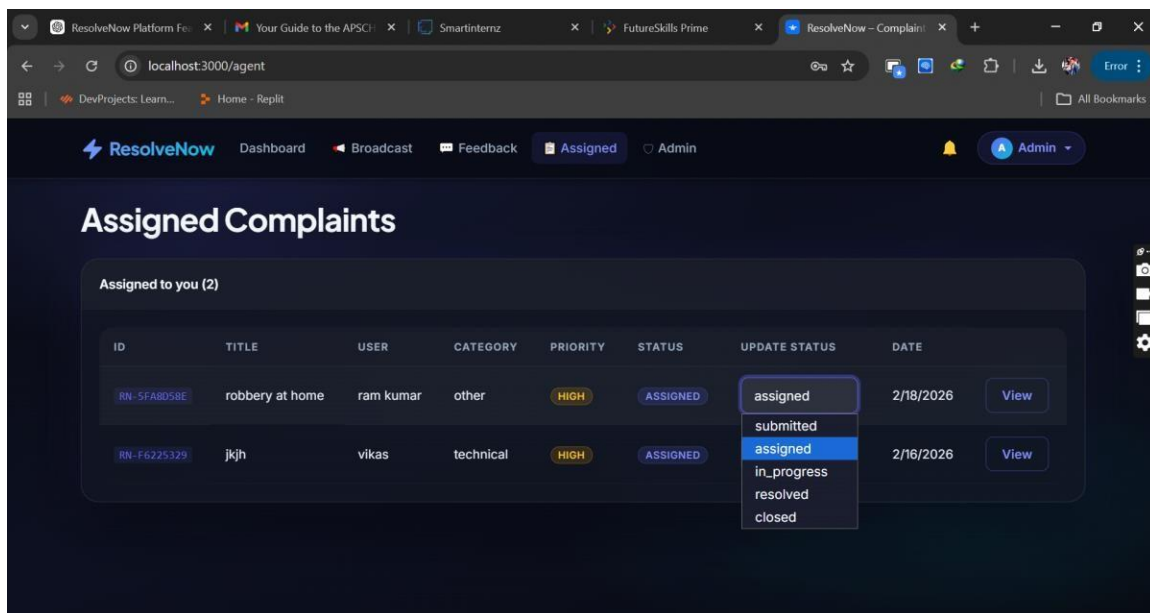
## Admin Module



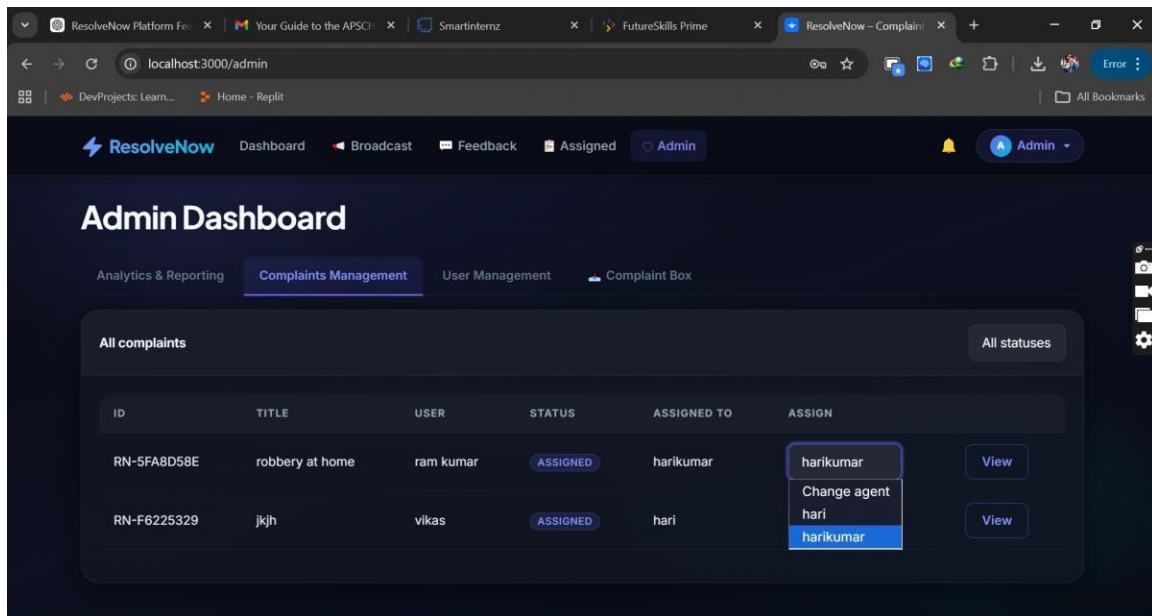
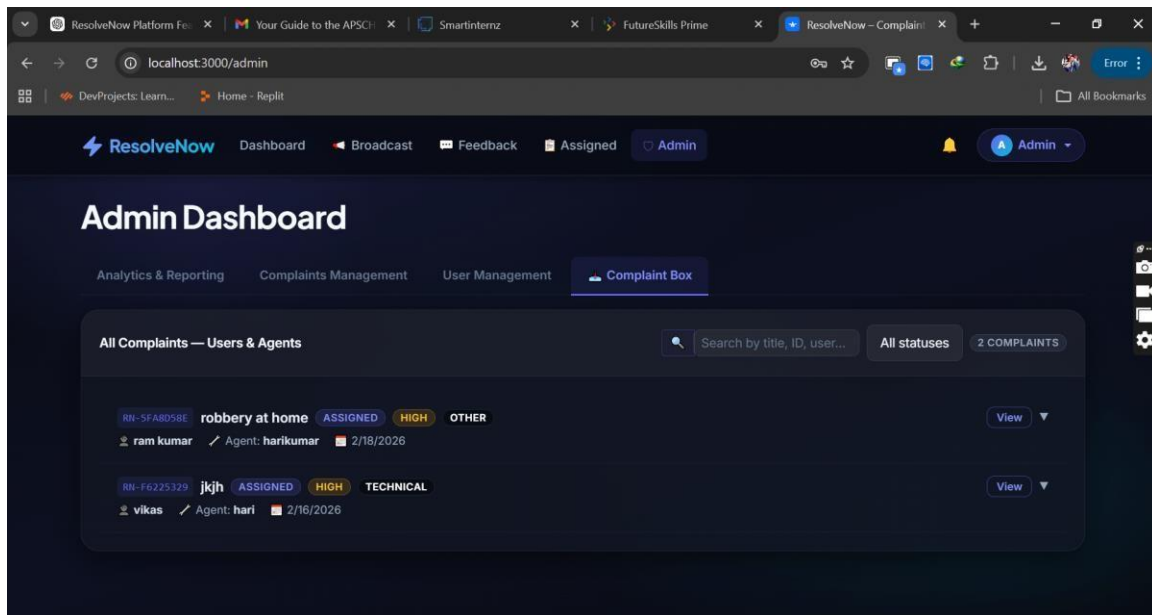
- View all complaints



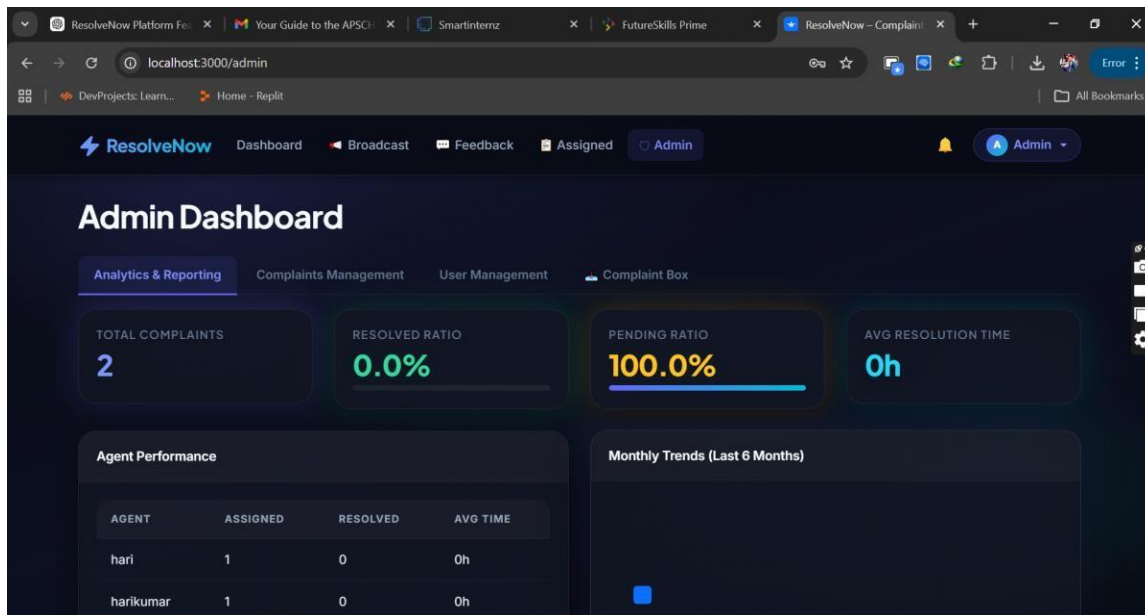
- Assign complaints to agents



- Create agent accounts



- 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.