PROJECT REPORT – RESOLVENOW

Online Complaint Registration and Management System

1. INTRODUCTION

1.1 Project Overview

ResolveNow is a full-stack web-based Online Complaint Registration and Management System developed to digitize and streamline the process of complaint submission, tracking, assignment, and resolution.

The platform provides a centralized environment where users can securely register complaints, monitor their progress in real time, and communicate with assigned agents.

The system is implemented using the MERN stack architecture:

Frontend – React.js

Backend – Node.js & Express.js

Database – MongoDB

This architecture ensures scalability, fast performance, modular development, and secure data handling.

1.2 Purpose

The primary objectives of ResolveNow include:

- Simplifying complaint registration and tracking
- Improving transparency in complaint handling
- Enabling communication between users and agents
- Ensuring faster resolution and customer satisfaction

- Maintaining data privacy and security

2. IDEATION PHASE

2.1 Problem Statement

Traditional complaint handling methods such as manual registers, emails, or phone calls lead to

delays, miscommunication, and lack of transparency. Customers often remain unaware of complaint

status, causing dissatisfaction. Therefore, an automated and centralized complaint management

platform is required.

2.2 Empathy Map

Think – Need quick resolution

Feel – Frustrated when ignored

Say – Want proper response and updates

Do – Register complaint and wait for action

2.3 Brainstorming

- Secure authentication system
- Complaint submission interface
- Real-time complaint tracking
- Chat communication with agents
- Admin-based complaint assignment
- Notification system

- Dashboard analytics

3. REQUIREMENT ANALYSIS

3.1 Customer Journey Map

Register → Login → Submit Complaint → Admin Assignment → Agent Interaction → Resolution → Feedback

3.2 Functional Requirements

- User registration and login
- Complaint submission and editing
- Complaint tracking dashboard
- Admin complaint assignment
- Agent status updates
- Real-time messaging system

3.3 Non-Functional Requirements

- Secure JWT authentication
- Encrypted data handling
- Responsive UI
- High availability and scalability
- Efficient database queries

3.4 Data Flow Diagram

User → React Frontend → Express API → MongoDB → Response → Dashboard Display

3.5 Technology Stack

Frontend – React.js, Bootstrap, Material UI

Backend – Node.js, Express.js

Database – MongoDB, Mongoose

Authentication – JWT

Communication – Socket.io

HTTP Client – Axios

4. PROJECT DESIGN

4.1 System Architecture

ResolveNow follows a three-tier architecture:

Presentation Layer – React UI

Application Layer – Express REST APIs

Data Layer – MongoDB Database

4.2 Database Design

Collections used:

- Users Collection
- Complaints Collection
- Assigned Complaints Collection
- Messages Collection

Relationships ensure structured complaint handling and chat communication.

4.3 Security Design

- Password hashing using bcrypt
- JWT-based authentication
- Role-based access control (User, Agent, Admin)
- Protected API routes
- Data validation and sanitization

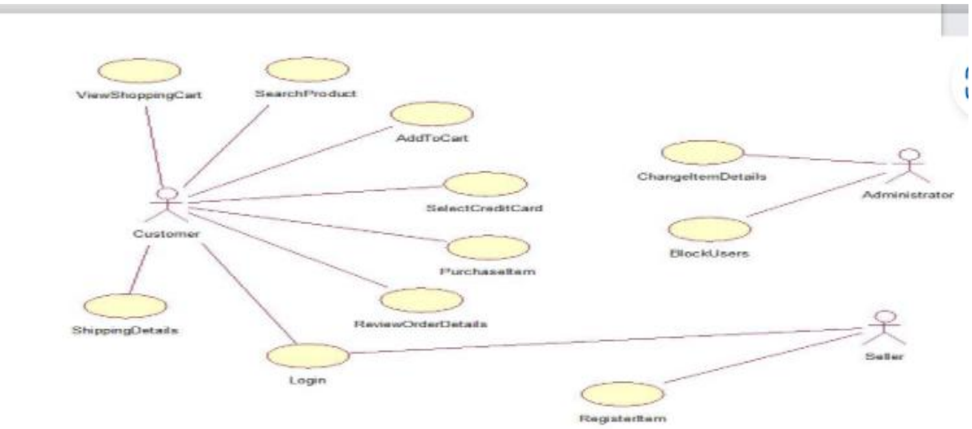


Figure 1: ER diagram

5. PROJECT PLANNING

Day 1–3 – Requirement analysis and system design

Day 4–8 – Backend API and database schema development

Day 9–15 – Frontend UI and integration

Day 16–18 – Real-time chat and assignment module

Day 19–20 – Testing and documentation

6. IMPLEMENTATION DETAILS

6.1 Backend Implementation

- Express server configuration
- REST API route creation
- MongoDB connection via Mongoose
- CRUD operations for complaints
- Authentication middleware
- Error handling middleware

6.2 Frontend Implementation

- React component-based UI
- Form validation and state management
- API integration using Axios
- Dashboard navigation and routing
- Chat interface implementation

7. TESTING AND VALIDATION

7.1 Functional Testing

- Login and registration validation
- Complaint submission verification

- Status update correctness
- Chat message delivery

7.2 Performance Testing

- API response timing
- Database query efficiency
- Concurrent user handling

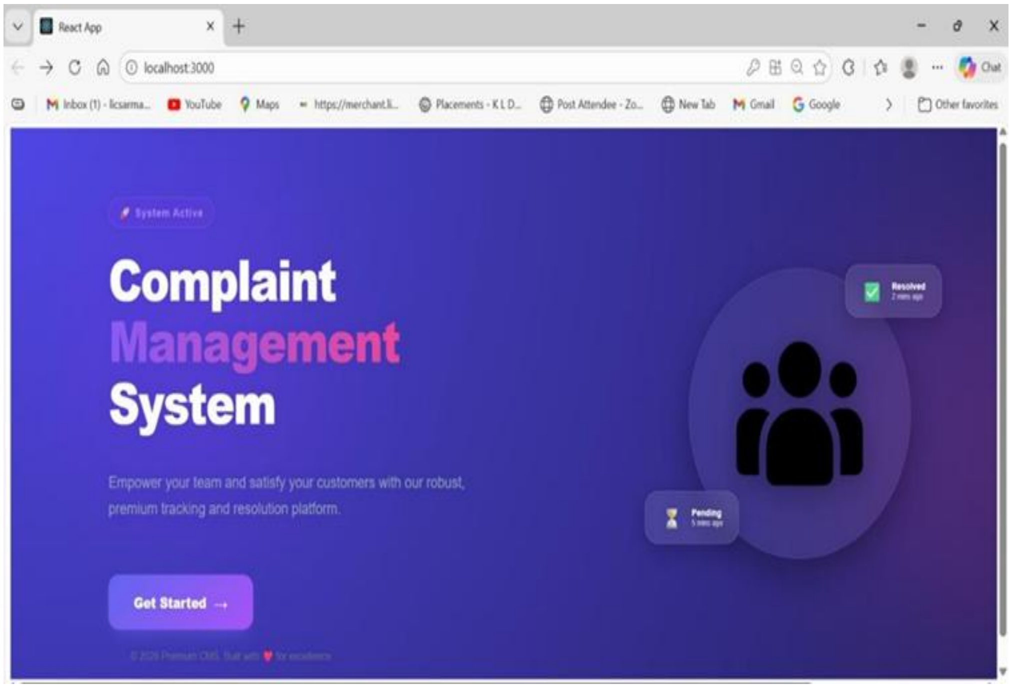
Results confirm stable and reliable performance.

8. RESULTS AND DISCUSSION

The ResolveNow system successfully demonstrates:

- Secure complaint registration
- Efficient admin assignment
- Real-time agent communication
- Transparent status tracking
- Reliable database storage

The implementation improves complaint resolution time and user satisfaction.

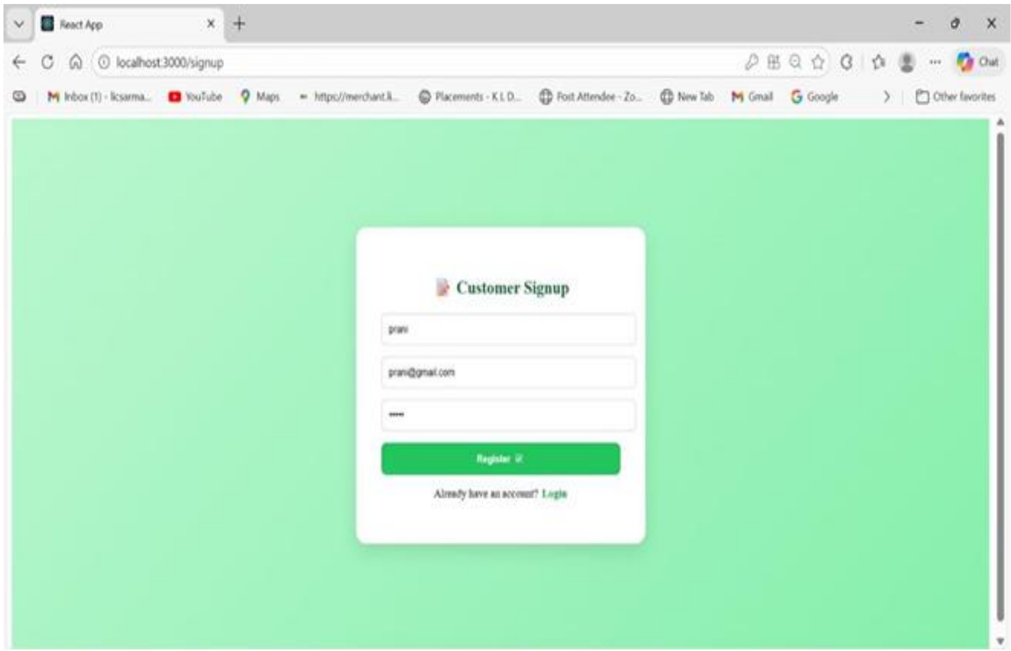


Complaint Management System

Empower your team and satisfy your customers with our robust, premium tracking and resolution platform.

© 2026 Premium CMS. Built with ♥ for excellence

Figure 2: Home page of the system



Customer Signup

prani

prani@gmail.com

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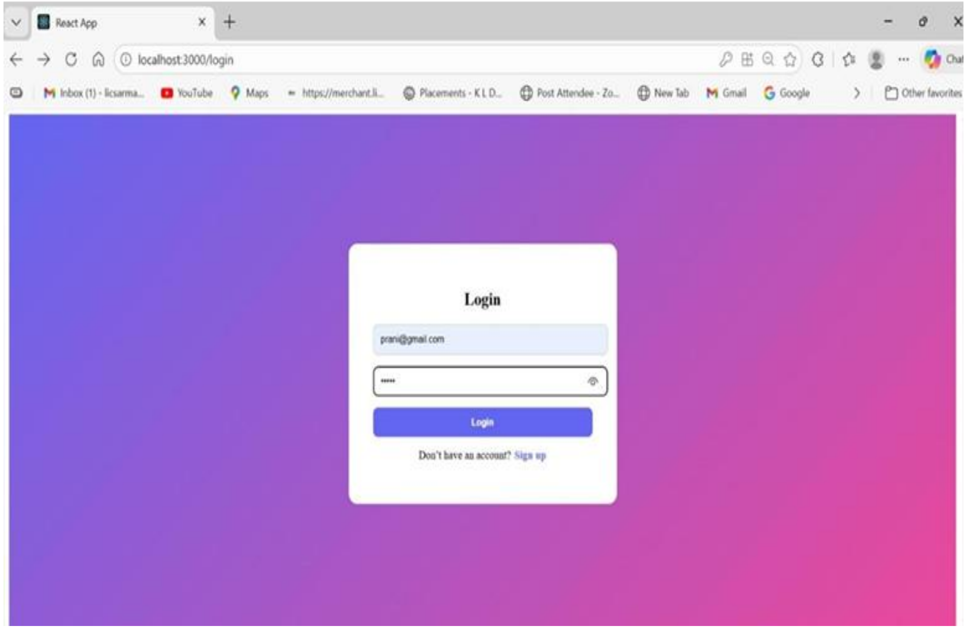
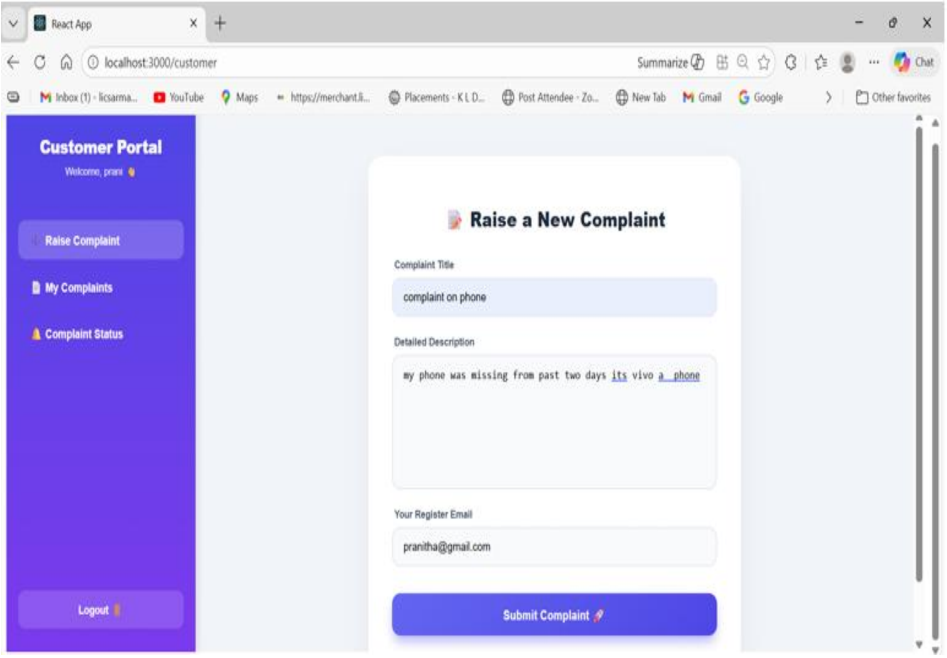
Already have an account? Login

Figure 3: Customer sign up page



prani@gmail.com

Figure 4: Customer sign in page

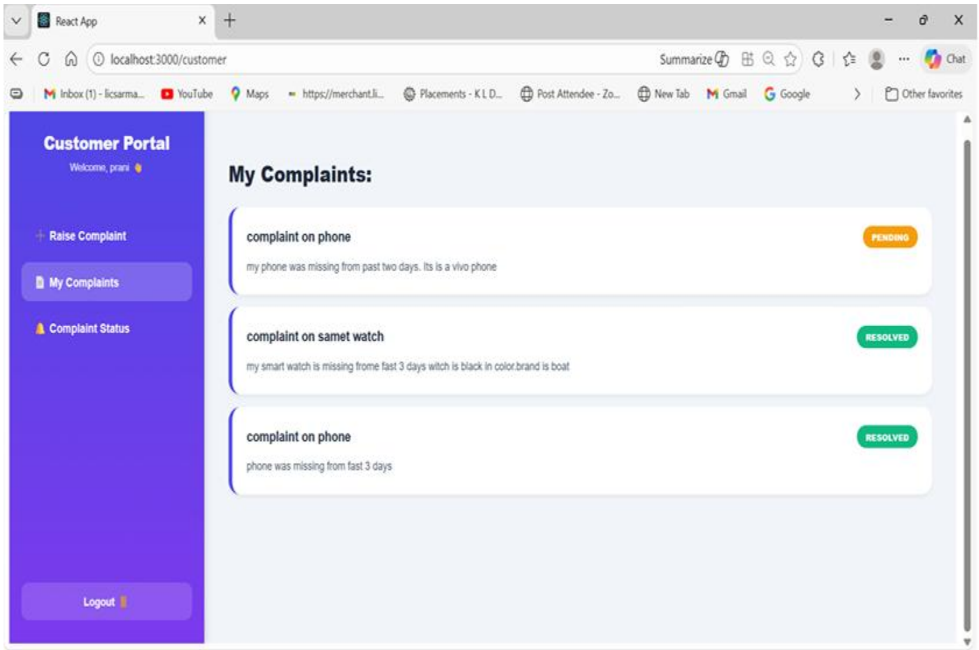


Complaint Title: complaint on phone

Detailed Description: my phone was missing from past two days its vivo a phone

Your Register Email: pranitha@gmail.com

Figure 5: Customer complaint page



Customer Portal

Welcome, prani

My Complaints:

complaint on phone PENDING

my phone was missing from past two days. Its is a vivo phone

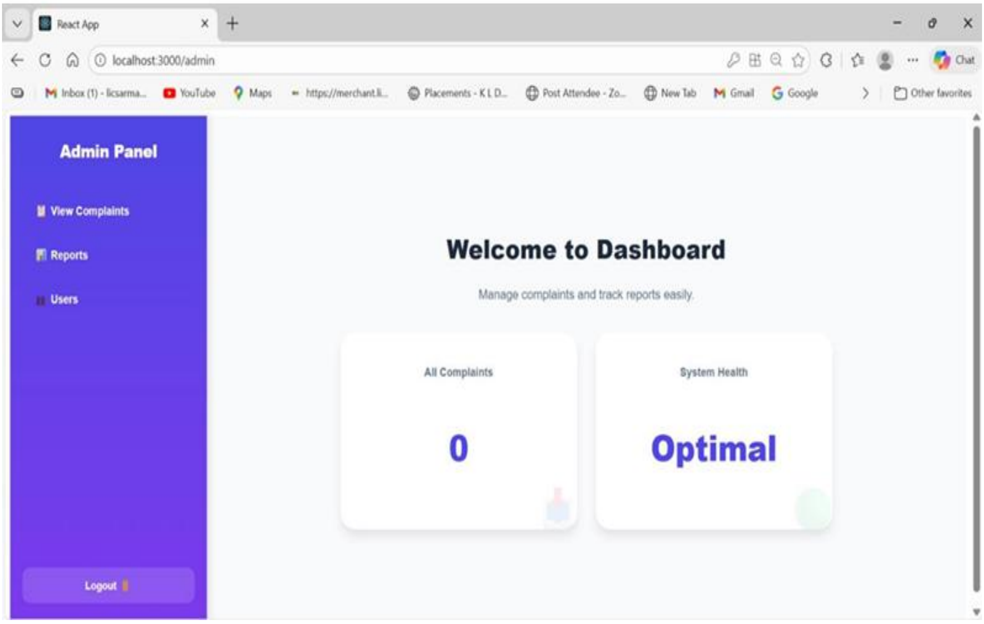
complaint on samet watch RESOLVED

my smart watch is missing frome fast 3 days witch is black in color.brand is boat

complaint on phone RESOLVED

phone was missing from fast 3 days

Figure 6: complaints in customer panel



Admin Panel

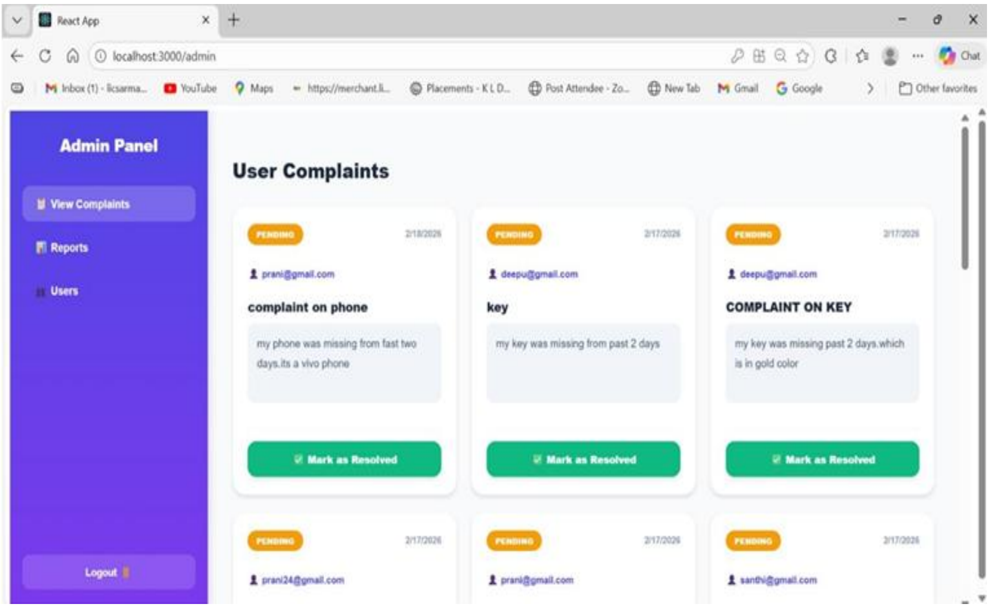
Welcome to Dashboard

Manage complaints and track reports easily.

All Complaints: 0

System Health: Optimal

Figure 7: Admin dashboard



User Complaints

PENDING 2/18/2026
prani@gmail.com
complaint on phone
my phone was missing from fast two days.its a vivo phone

PENDING 2/17/2026
deepu@gmail.com
key
my key was missing from past 2 days

PENDING 2/17/2026
deepu@gmail.com
COMPLAINT ON KEY
my key was missing past 2 days.which is in gold color

PENDING 2/17/2026
prani24@gmail.com

PENDING 2/17/2026
prani@gmail.com

PENDING 2/17/2026
santhi@gmail.com

Figure 8: Admin panel

9. ADVANTAGES AND LIMITATIONS

Advantages:

- Centralized complaint system
- Real-time communication
- Secure authentication
- Scalable MERN architecture
- Improved transparency

Limitations:

- Requires continuous internet access
- SMS notification not implemented
- Limited analytics in current version

10. CONCLUSION

ResolveNow effectively digitizes complaint management using modern web technologies.

The system enhances transparency, accelerates resolution, and improves user experience.

It demonstrates practical implementation of full-stack MERN development in a real-world scenario.

11. FUTURE SCOPE

- SMS and email automation
- AI-based complaint prioritization
- Advanced analytics dashboard
- Mobile application support
- Multi-language interface

12. APPENDIX

Source Code – https://github.com/NagaManjusha/ResolveNow-Your-Platform-for-Online-Complaints.git

Dataset – MongoDB user and complaint records

Project Demo – https://youtu.be/N5UUzmuS1HA?si=Wcid5ROuHblA1hm1