

ResolveNow: Online Complaint Management System Project Report

1. INTRODUCTION

1.1 Project Overview

ResolveNow is a comprehensive online complaint registration and resolution platform designed to empower citizens to lodge, track, and resolve their grievances seamlessly. The application streamlines essential processes such as user registration, complaint submission, real-time status tracking, role-based dashboards for users, agents, and administrators, and effective communication.

1.2 Purpose

The goal of ResolveNow is to provide a digital, accessible, and transparent medium for grievance redressal. It eliminates the need for physical complaint registration, improves efficiency, and enhances accountability using technologies like React.js, Node.js, MongoDB, and JWT authentication.

2. IDEATION PHASE

2.1 Problem Statement

Conventional grievance resolution methods are often slow, opaque, and involve excessive paperwork. Citizens face difficulty accessing the appropriate authorities and tracking their complaint progress. A centralized, efficient, and digital platform is needed to bridge this gap.

2.2 Empathy Map Canvas

An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviours and attitudes.

It is a useful tool to help teams better understand their users. Creating an effective solution requires understanding the true problem and the person who is experiencing it. The exercise of creating the map helps participants consider things from the user's perspective along with his or her goals and challenges.

Example: Resolve Now

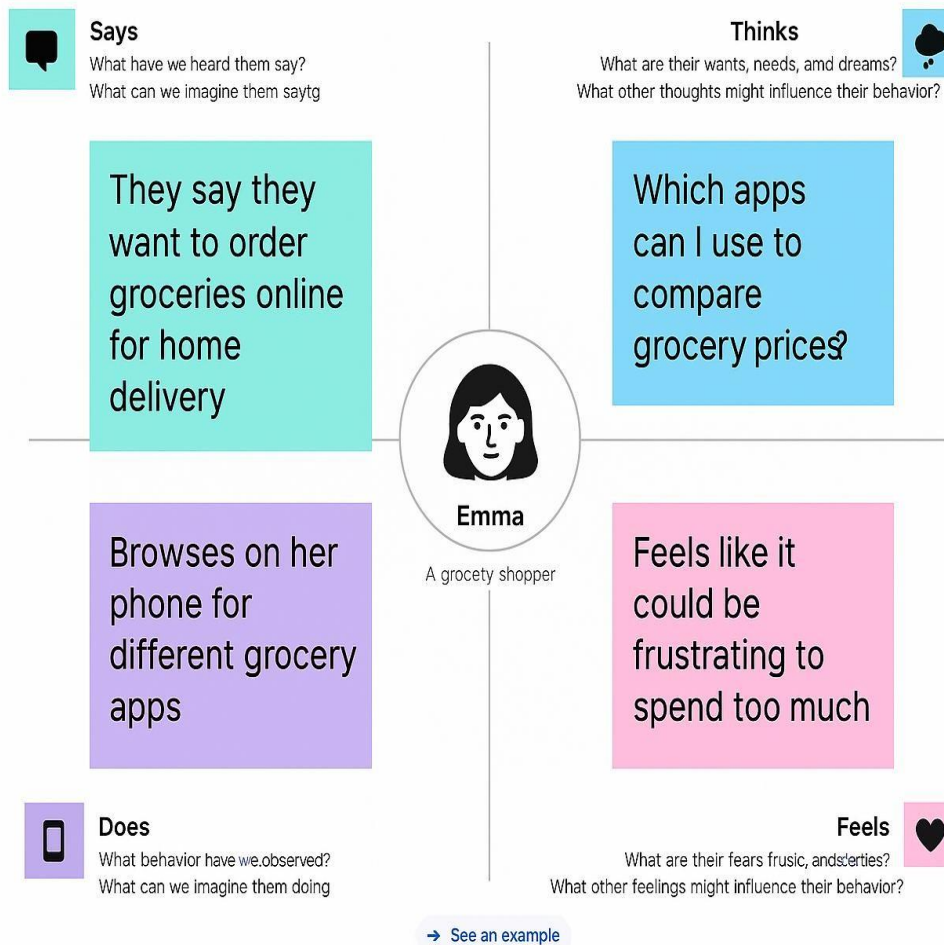


Fig: Empathy Map Canvas for ResolveNow

2.3 Brainstorming

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

- Encourages collaborative idea generation across technical and non-technical team members.
- Helps identify innovative features and pain points that may not surface in structured meetings.

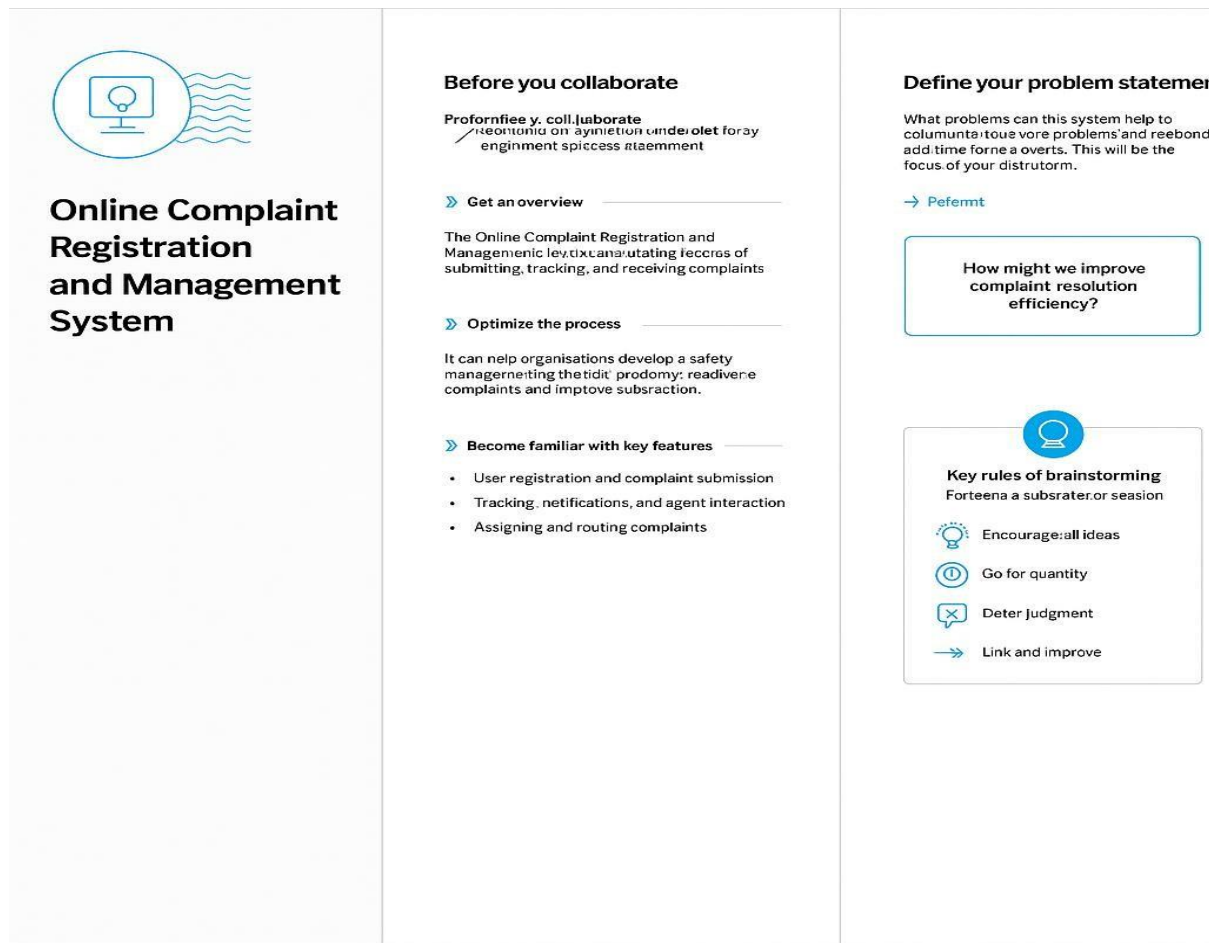


Fig: Brainstorming

- Builds team synergy and ownership of the product design and direction.
- Fosters creativity and encourages participants to think beyond their usual scope.
- Allows for rapid exploration of potential user-centric improvements and technical possibilities.
- Results from brainstorming sessions were used to finalize complaint categories, dashboard features, user roles, and notification flows.
- Sparks diverse perspectives: Including users, developers, and domain experts in brainstorming sessions helps uncover use-cases from various angles.
- Drives early risk identification: By voicing all ideas early, the team can anticipate potential roadblocks or implementation constraints.

3. REQUIREMENT ANALYSIS

3.1 Customer Journey Map

Platform for Online Complaints







	Enter	Browse	Start complaint	Checkout	Payment & Confirmation	Experience Resolution
Customer journey						
Steps	Visit the website or app	Select category for issue by issue	Fill out and submit detailed complaint	Status tracking UI	Receive acknowledgment of complaint form	View outcome of their complaint
Interactions	Home page UI	Complaint form UI	Simple form submission	Reliable status visibility	Simple form submission	Reward for relieving process
Interactions	Helps to navigate easily	Simple form user-friendly	Simplify categorization	Simplifies in complaint	Simplify complaint registration	Should attract attention for resolution
Positive moments	Helps customer feel heard	Expressing complaint in process	Simplify complaint registration	Clearer status displays	Simplify faster status displays	Reward for satisfaction and peace of mind
Opportunities	Help a customer's self-esteem	Provide quick access	Simplify complaint registration	Reward for clearer directions	Feedback for better handling	Reward for satisfaction
Goals & Motivations	Help customer feel heard	Provide quick access	Anticipation for better handling	Feedback for better handling	Reward satisfaction and peace of mind	Reward satisfaction and peace of mind

Fig: Customer Journey Map for ResolveNow

3.2 Solution Requirements

Functional Requirements – Resolve Now

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Authentication	Sign up, Login, Password Reset OAuth login using Google / GitHub
FR-2	Crime Posting	Posting complaints
FR-3	Job Application & Management	User will log complaints , Agent will Resolve

Non-functional Requirements:

NFR No.	Non-Functional Requirement	Description
NFR-1	Usability	The platform should offer a clean, intuitive UI for users of all skill levels.
NFR-2	Security	All data transfers must be encrypted. Implement role-based access and token auth.

NFR-3	Performance	Pages should load within 2 seconds. Chat and job posting actions should be near-instant.
NFR-4	Availability	The system should maintain 99.9% uptime across all services.
NFR-5	Scalability	Should support high concurrency and rapid feature scaling through microservices.

3.3 Data Flow Diagram (DFD)

- Level 0: User → Login/Register → Dashboard → Complaint Form → Status Tracking
- Level 1: Admin → Manage Users & Agents → Assign Complaints Agent → Update Complaint Status



Fig: Data Flow Diagram of ResolveNow

3.4 Technology Stack

- Frontend: React.js, Bootstrap, Material UI
- Backend: Node.js, Express.js

- Database: MongoDB, Mongoose ODM
- Authentication: JSON Web Tokens (JWT)
- Tools: Postman, GitHub, VSCode

4. PROJECT DESIGN

4.1 Problem-Solution Fit

The Problem–Solution Fit ensures that the *ResolveNow* platform effectively addresses the inefficiencies in traditional complaint handling systems and meets the real-world needs of both citizens and administrative authorities. This validation is crucial before scaling the system across departments or regions.

Purpose:

- Create a transparent, accountable channel for citizens and organizations to report complaints or issues.
- Centralize complaint management—submission, tracking, resolution—on one platform.
- Provide real-time status updates and automated notifications for better engagement.
- Empower administrators with analytics and case tracking for better governance.
- Build trust through timely responses, escalation mechanisms, and feedback collection.

Problem Statement:

Many institutions and public services face challenges like:

- Complaints getting lost or ignored due to manual systems
- No transparency or updates provided to complainants
- Delayed responses and unclear resolution timelines
- Poor tracking of repeated or high-priority issues
- Lack of data-driven insights for improving service quality

Solution:

ResolveNow, a full-stack complaint registration and management system, offers:

- Online complaint submission with unique tracking ID
- Role-based dashboards for complainants, staff, and admins
- Real-time status updates, email/SMS alerts, and escalation paths
- Complaint categorization, prioritization, and automated assignment

- Performance metrics and reports for timely resolution tracking

4.2 Proposed Solution

Proposed Solution for Resolve Now is as follows:

S. No.	Parameter	Description
1	Problem Statement (Problem to be solved)	An online complaint registration and management system is a software application or platform that allows individuals or organizations to submit and track complaints or issues they have encountered.
2	Idea / Solution Description	The Resolve Now platform is a full-stack web application (React frontend + Node.js backend) that enables clients to post jobs, freelancers to apply, and both parties to collaborate through realtime messaging and secure payments. Admin controls help manage disputes and community standards.
3	Novelty / Uniqueness	<ul style="list-style-type: none"> - Online Reporting System -The agent will receive the reports - Admin dispute resolution system
4	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"> - Impact on crime rate. - Ease of living without fear. - Transparent ratings & reviews enhance platform trust - Reduces hiring friction and supports the gig economy.
5	Business Model (Revenue Model)	<ul style="list-style-type: none"> - Freemium access for users.

4.3 Solution Architecture

The solution architecture for **Resolve Now** ensures a robust, user-friendly, and scalable platform that connects clients with skilled freelancers. The architecture focuses on responsive design, secure transactions, intelligent matching, and real-time messaging to ensure smooth project workflows and high user satisfaction.

- Seamless Crime posting on the application
- End-to-end project lifecycle management
- Scalable user authentication and authorization
- Secure and trackable payment transactions

Example - Solution Architecture Diagram:

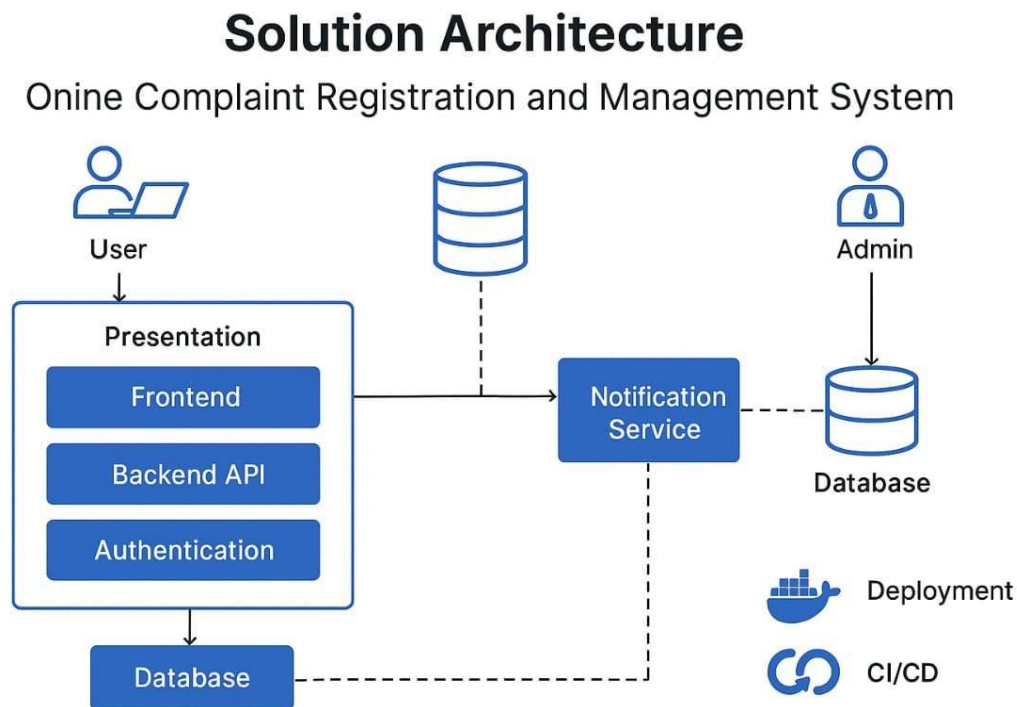


Fig: Solution Architecture for ResolveNow

5. PROJECT PLANNING & SCHEDULING

5.1 Project Phases

- Requirement Analysis
- UI/UX Design
- Module-wise Development
- Integration and Testing
- Deployment

Product Backlog & Sprint Schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	User Authentication	USN-1	As a user, I can sign up and log in securely.	3	High	Gummadi Karthik
		USN-2	As a user, I can reset my password.	2	Medium	Gummadi Karthik
Sprint-2	Crime Posting	USN-3	As a client, I can post a Complaint.	2	High	Doppalapudi Jyothika
Sprint-3	Application	USN-4	As a Agent, I can take care of queries.	3	High	Dhulipalla Mrudula
		USN-5		2	High	Dhulipalla Mrudula
		USN-6	As a user, I can complaint.	2	Medium	Doppalapudi Jyothika
Sprint-4	Payment Integration & Reviews	USN-7		3	High	Dungala Lova Raja
		USN-8	As a user, I can leave a re after project completion.	2 v	Medium	Dungala Lova Raja

		USN-9		2	Medium	Dungala Lova Raja
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Project Tracker, Velocity & Burndown Chart

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	8 Days	16 June 2025	23 june 2025	20	23 june 2025
Sprint-2	20	8 Days	17 June 2025	24 june 2025	20	24 june 2025
Sprint-3	20	8 Days	18 June 2025	25 june 2025	20	25 june 2025
Sprint-4	20	8 Days	19 June 2025	26 june 2025	20	26 june 2025

6. FUNCTIONAL AND PERFORMANCE TESTING

Testing Scope:

- User registration and login
- Complaint Submission
- Status Tracking
- Agent Communication **Requirements to be Tested:**
- As a Client of ResolveNow, I want to Post the complaints easily.
- As a user, I want secure login and Post complaints.
- As an admin, I want to manage reported users and disputes.

Testing Environment:

- **URL:** <https://reslovenow.example.com>

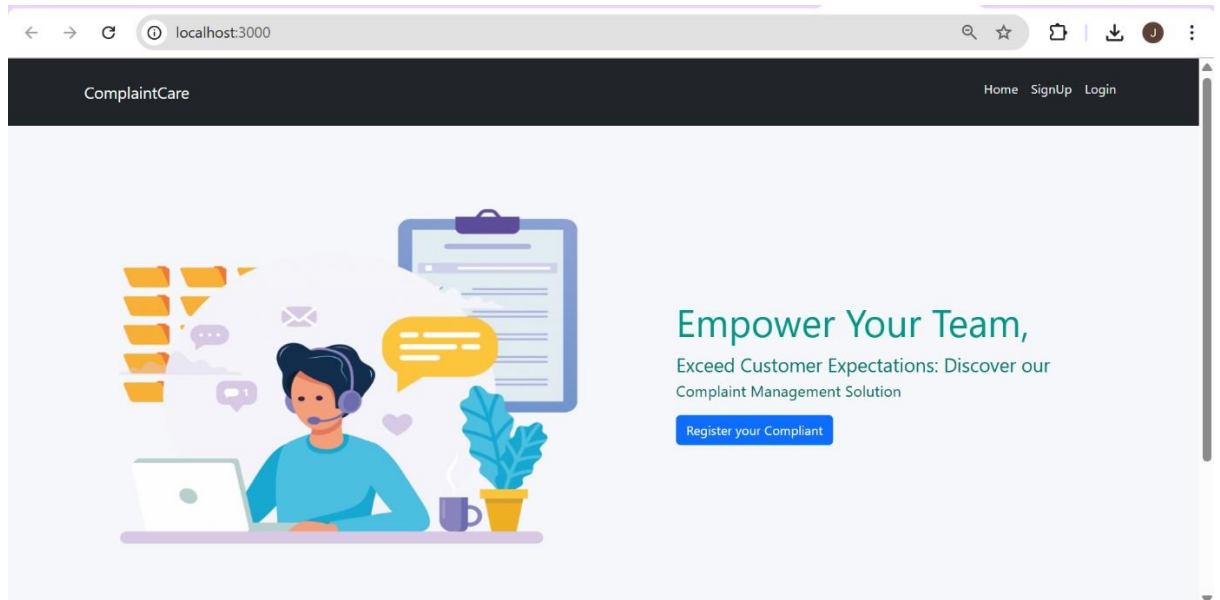
Test Cases:

Test Case ID	Test Scenario	Test Steps	Expected Result	Actual Result	Pass/Fail
TC-001	User Registration	1. Visit site 2. Click "Sign Up" 3. Fill & submit form	[Describe the expected outcome]	Account created, redirected to dashboard	[Pass/Fail]
... TC002	... Post a Job (Client)	... 1. Login as client 2. Go to "Post Job" 3. Submit form	...Job appears on homepage

7. RESULTS

Screenshots:

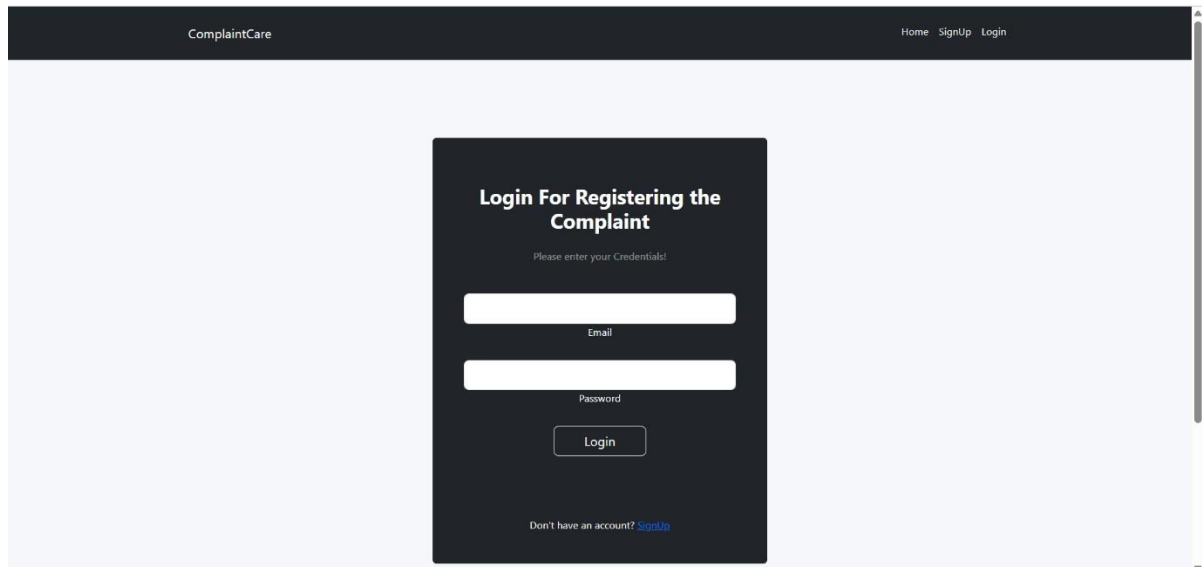
- **Home Page**



- **SignUp page**

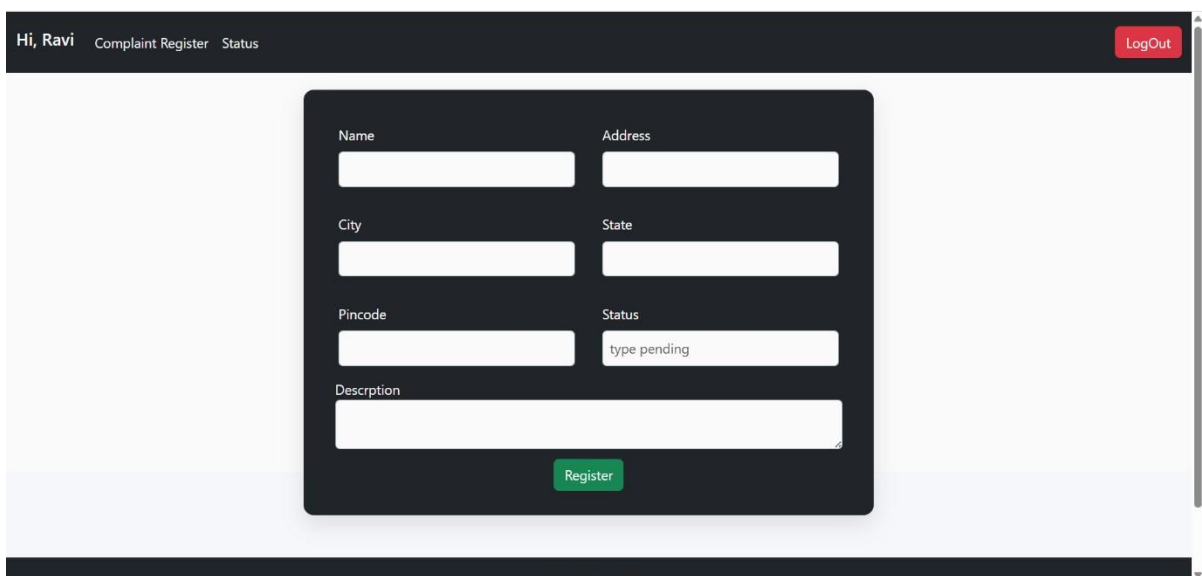
A screenshot of the 'ComplaintCare' sign-up page. The browser's address bar shows 'localhost:3000'. The page has a dark header with 'ComplaintCare' on the left and 'Home', 'SignUp', and 'Login' on the right. The main content area is a dark gray box with the title 'SignUp For Registering the Complaint' and the subtitle 'Please enter your Details'. Below the subtitle are four white input fields labeled 'Full Name', 'Email', 'Password', and 'Mobile No.'. Below these fields is a 'Select User' button with a dropdown arrow, and below that is a 'Select User Type' label. At the bottom of the box is a 'Register' button.

- **Login Page**



The screenshot shows the login page of a web application. At the top, a dark header bar contains the text "ComplaintCare" on the left and "Home", "SignUp", and "Login" on the right. The main content area is light gray. In the center, there is a dark gray rectangular box with the title "Login For Registering the Complaint" in bold white text. Below the title, in smaller white text, it says "Please enter your Credentials:". There are two white input fields: the first is labeled "Email" and the second is labeled "Password". Below these fields is a white "Login" button. At the bottom of the box, it says "Don't have an account? [SignUp](#)" in white text.

- **Complaint Registration Page**



The screenshot shows the complaint registration page. At the top, a dark header bar contains "Hi, Ravi" on the left, "Complaint Register" and "Status" in the center, and a red "Logout" button on the right. The main content area is light gray. In the center, there is a dark gray rectangular box with a registration form. The form has the following fields: "Name" (input), "Address" (input), "City" (input), "State" (input), "Pincode" (input), and "Status" (input with the value "type pending"). Below these is a "Description" field (text area). At the bottom of the box is a green "Register" button.

- **Status Check Page**

Hi, Ravi

Complaint Register

Status

LogOut

Name: Ravi

Address: 12, AS Street, Kothapet

City: Guntur

State: AP

Pincode: 522223

Comment: No water supply in our area

Status: completed

Message

Message Box

Ravi: Kindly look into this issue
11:20 AM, 6/21/2025

Name: Ravi

Address: 12, AS Street, Kothapet

City: Guntur

State: AP

Pincode: 522223

Comment: Sewage is not cleaned regularly in our area

Status: completed

Message

Message Box

Ravi: sir..please look into this issue.
03:47 PM, 6/26/2025

- **Admin Dashboard**

Hi Admin keerthi

Dashboard

User

Agent

Log out

Users Complaints

Name: Ravi

Address: 12, AS Street, Kothapet

City: Guntur

State: AP

Pincode: 522223

Comment: No water supply in our area

Status: completed

Name: Ravi

Address: 12, AS Street, Kothapet

City: Guntur

State: AP

Pincode: 522223

Comment: Sewage is not cleaned regularly in our area

Status: completed

Name: Ramu

Address: 5-2, KVR colony

City: Guntur

State: Andhra Pradesh

Pincode: 522202

Comment: There is no electricity constantly in our area.

Status: completed

Name: regina

Address: 5-12

City: Guntur

State: AP

Pincode: 522223

Comment: I have ordered a product online and received wrong answer.

Status: completed

Agents

Name: ramu

Email: ramu@gmail.com

Name: Priya

Email: priya@gmail.com

Name: renu

Email: renu@gmail.com

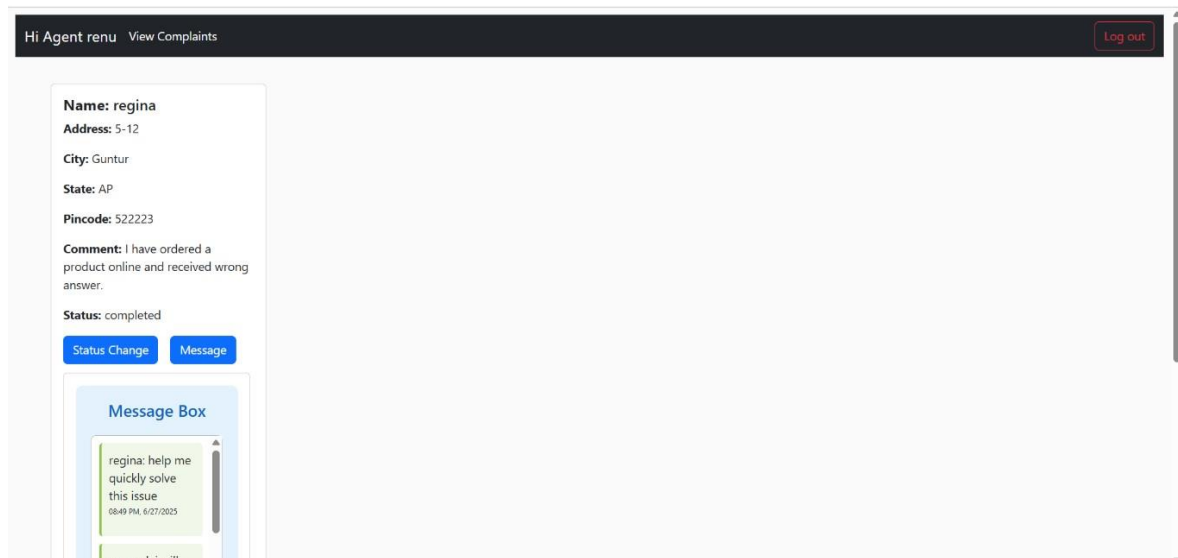
- **View Users as an Admin**

Hi Admin keerthi Dashboard User Agent				Log out
Name	Email	Phone	Action	
Ravi	ravi@gmail.com	8989898989	Update	Delete
Ramu	ramu@gmail.com	8989898989	Update	Delete
regina	regina@gmail.com	8989898989	Update	Delete

- **View Agents as an Admin**

Hi Admin keerthi Dashboard User Agent				Log out
Name	Email	Phone	Action	
ramu	ramu@gmail.com	8787878787	Update	Delete
Priya	priya@gmail.com	7878787878	Update	Delete
renu	renu@gmail.com	8989898989	Update	Delete

- **Agent Dashboard**



8. ADVANTAGES & DISADVANTAGES

Advantages

- **Simplifies Complaint Management:** Streamlines the process of lodging complaints, tracking status, and receiving resolutions online.
- **Improved Accessibility:** Citizens can raise issues from anywhere without needing to physically visit a service office.
- **Role-based Dashboard:** Provides tailored dashboards for users, agents, and admins, improving clarity and task delegation.
- **Real-time Updates:** Users are kept informed with real-time updates on complaint progress.
- **Secure Login & Authentication:** Secure authentication using JWT ensures safe access for all roles.
- **Scalable System:** Built using Node.js and MongoDB, the platform can scale to handle large user bases and growing datasets.

Disadvantages

- **Internet Dependency:** Requires a stable internet connection for full functionality.
- **Learning Curve for Admins/Agents:** Some training might be required for backend users (admins and agents) to use the dashboard effectively.
- **Initial Development & Hosting Cost:** Hosting, backend setup, and third-party services (like MongoDB Atlas or cloud deployment) may involve costs.
- **Limited Offline Support:** Users cannot submit complaints or check status offline (unless a mobile app with offline caching is developed in future scope).

9. CONCLUSION

ResolveNow successfully addresses the need for a transparent, efficient, and user-friendly complaint management system. By digitizing the entire complaint lifecycle, it ensures timely redressal, transparency in progress tracking, and enhanced user satisfaction. The use of modern technologies like React, Node.js, and MongoDB makes the system scalable, secure, and maintainable.

10. FUTURE SCOPE

- Integration of SMS/email notification system for complaint updates.
- Support for multilingual interfaces to improve accessibility.
- Mobile app development with offline mode and push notifications.
- AI-based priority classification of complaints.
- Detailed analytics and visualization dashboard for administrators.

11. APPENDIX

Source Code (if any):

- Complete source code is available in the GitHub repository.

GitHub & Project Demo Link:

- GitHub Repository:
<https://github.com/mrudula7679/ResolveNow>
- Live Demo:
https://drive.google.com/file/d/1UEEkg6hFJXybON-vDF3TK8Wzl1djjIsH/view?usp=drive_link