

1. INTRODUCTION

1.1 Project Overview

Right Voice is a web-based complaint registration and management system that allows users to lodge complaints, interact with assigned agents, and track the resolution process in real-time. It supports secure data handling, automated workflows, and multi-role user access (user, agent, admin).

1.2 Purpose

The purpose is to streamline the complaint handling process for businesses and organizations by providing a centralized, efficient, and secure platform for issue resolution and tracking.

2.IDEATION PHASE

2.1 Problem Statement

Customers often face delays and confusion while registering and tracking complaints, with little transparency or communication. Right Voice solves this by offering a transparent, interactive complaint system.

2.2 Empathy Map Canvas

Think: "Will my complaint even be looked at?"

See: No feedback after complaint submission.

Feel: Frustrated, neglected, unheard.

Say: "I want someone to respond to my complaint!"

Do: Submit complaints on random portals, follow up repeatedly.

Gain: Peace of mind through transparency and resolution.

Pain: Inaccessible platforms, no real-time tracking, poor response.

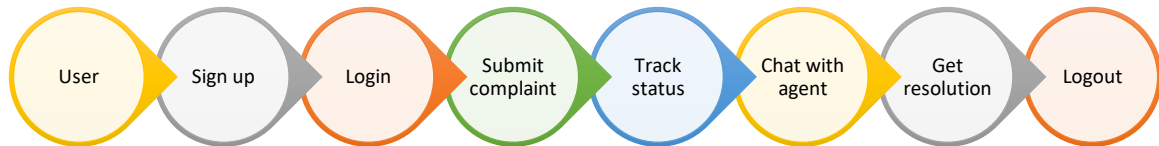
2.3 Brainstorming

Ideas generated:

- Complaint submission with image/document upload
- Agent-user live chat
- Role-based dashboards
- Automatic status notifications
- Complaint escalation
- Mobile responsive design

3.REQUIREMENT ANALYSIS

3.1 Customer Journey Map



3.2 Solution Requirements

Functional:

- User registration/login
- Complaint submission and management
- Agent assignment and interaction
- Notifications
- Admin dashboard

Non-Functional:

- Secure data handling
- Responsive UI
- Real-time chat
- Fast complaint assignment

3.3 Data Flow Diagram

Level 0:

User → Web Interface → Backend → Database

Backend ↔ Agent/Admin

Level 1:

User Login/Register → Complaint Submit → Assignment Logic → Agent Interaction → Resolution → Notification/Feedback

3.4 Technology Stack

Frontend: React.js, Material UI, Bootstrap

Backend: Node.js, Express.js

Database: MongoDB

4.PROJECT DESIGN

4.1 Problem-Solution Fit

The solution provides transparency, real-time updates, and agent-user communication—solving key gaps in traditional complaint systems.

4.2 Proposed Solution

A responsive web platform where users can register complaints, receive updates, and chat with agents, while admins assign and track issues.

4.3 Solution Architecture

Client–Server Architecture

React Frontend ↔ REST APIs (Node.js + Express) ↔ MongoDB

5.PROJECT PLANNING & SCHEDULING

5.1 Project Planning

Week Activities

- 1 Requirement gathering, UI planning
- 2 Frontend components & routing
- 3 Backend API setup & database schema
- 4 Complaint submission & admin logic
- 5 Chat integration, testing, optimization
- 6 Final testing, documentation, deployment

6.FUNCTIONAL AND PERFORMANCE TESTING

6.1 Performance Testing

- API Load Testing: Apache JMeter
- Frontend Rendering Speed: Lighthouse
- Database Stress Test: MongoDB Benchmarks
- Real-Time Chat Latency: < 1 second average

7.RESULTS

7.1 Output Screenshots

The screenshot shows the login interface of the RightVoice application. At the top, there is a dark header bar with the 'RightVoice' logo on the left and navigation links 'Home', 'SignUp', and 'Login' on the right. The main content area is dark gray and features a central white box with a yellow border. Inside this box, the title 'Login For Registering the Complaint' is displayed in bold yellow text. Below the title, a subtitle 'Please enter your Credentials!' is shown. There are two input fields: 'Email' and 'Password', both with yellow borders. A yellow 'Login' button is positioned below the password field. At the bottom of the white box, a link 'Don't have an account? [SignUp](#)' is provided.

The screenshot shows the sign-up interface of the RightVoice application. The header is identical to the login page, with 'RightVoice' on the left and 'Home', 'SignUp', and 'Login' on the right. The main content area is dark gray and features a central white box with a gray border. Inside this box, the title 'SignUp For Registering the Complaint' is displayed in bold white text. Below the title, a subtitle 'Please enter your Details' is shown. There are four input fields: 'Full Name', 'Email', 'Password', and 'Mobile No.', all with white borders. Below the 'Mobile No.' field, there is a 'Select User' dropdown menu and a 'Select User Type' label. A white 'Register' button is positioned at the bottom of the white box.

hi, user

Complaint Register

Status

Name

Address

City

State

Pincode

Status

Type 'Pending'

Description

Register

Admin admin

Dashboard

Users

Agents

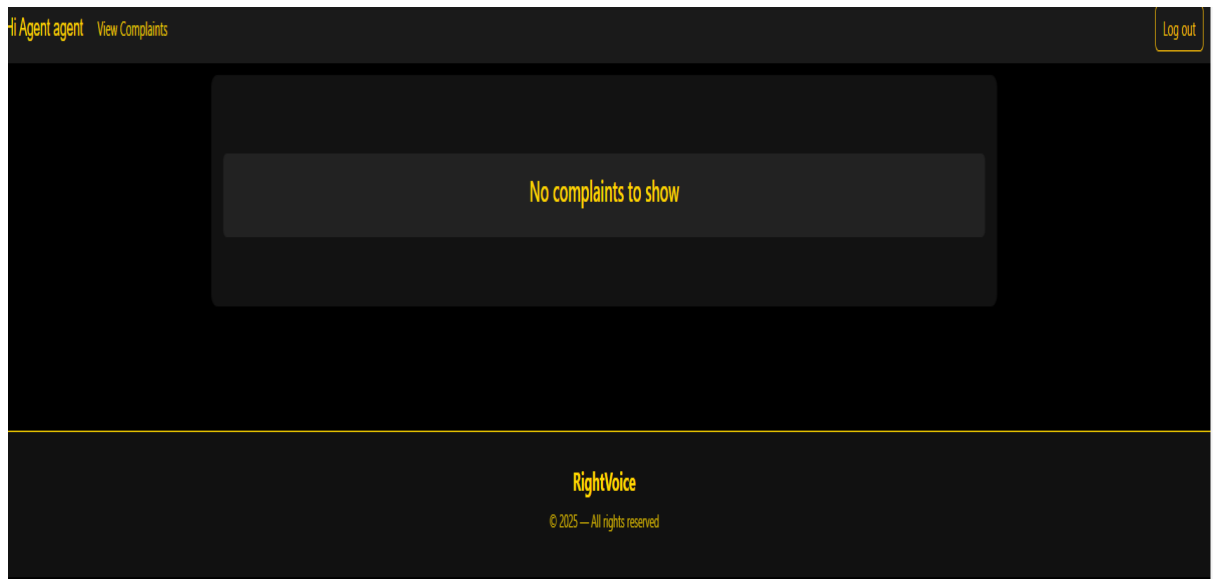
Log out

Users Complaints

Agents

RightVoice

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8.ADVANTAGES & DISADVANTAGES

Advantages:

- Centralized complaint tracking
- Real-time updates & communication
- Easy-to-use interface
- Secure & scalable backend

Disadvantages:

- Requires stable internet connection
- Currently web-only (no mobile app yet)
- Admin needs to actively assign complaints

9.CONCLUSION

Right Voice improves customer satisfaction by offering a transparent, interactive platform for complaint resolution. It modernizes support workflows and simplifies backend handling.

10.FUTURE SCOPE

- AI-powered complaint classification
- Mobile App (React Native)
- Multi-language support
- SLA-based escalation management
- Analytics dashboard for admins

11.APPENDIX

- Source Code: Provided on GitHub

- GitHub Repo: <https://github.com/BalusuSamhitha/RightVoice.git>
- Demo Video: <https://youtu.be/hqyw5ibwM1o?si=OfDA8w9a4Iyj44xx>