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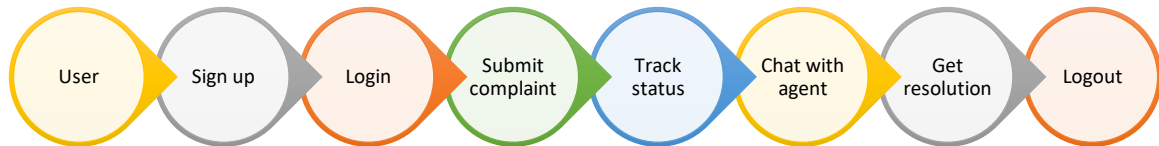Pain: Inaccessible platforms, no real-time tracking, poor response.

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 $\longleftrightarrow$ REST APIs (Node.js + Express) $\longleftrightarrow$ 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

Hi, user   Complaint Register   Status

Name   Address

City   State

Pincode   Status
                                  Type 'Pending'

Description

Register

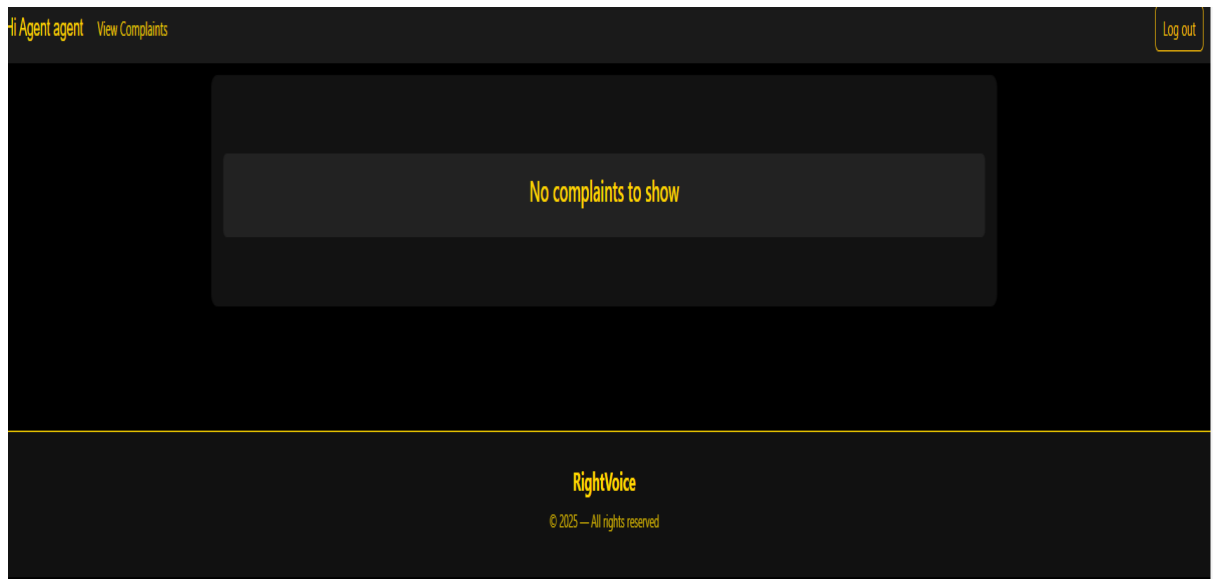👑 Admin admin   📋 Dashboard   👤 Users   🔧 Agents   ▌ Log out

Users Complaints   ⌄

Agents   ⌄

RightVoice

Hi Agent agent   View Complaints   Log out

No complaints to show

RightVoice

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=0fDA8w9a4Iyj44xx