

## **Project Report Format**

1. **INTRODUCTION**
  - 1.1 Project Overview
  - 1.2 Purpose
2. **IDEATION PHASE**
  - 2.1 Problem Statement
  - 2.2 Empathy Map Canvas
  - 2.3 Brainstorming
3. **REQUIREMENT ANALYSIS**
  - 3.1 Customer Journey map
  - 3.2 Solution Requirement
  - 3.3 Data Flow Diagram
  - 3.4 Technology Stack
4. **PROJECT DESIGN**
  - 4.1 Problem Solution Fit
  - 4.2 Proposed Solution
  - 4.3 Solution Architecture
5. **PROJECT PLANNING & SCHEDULING**
  - 5.1 Project Planning
6. **FUNCTIONAL AND PERFORMANCE TESTING**
  - 6.1 Performance Testing
7. **RESULTS**
  - 7.1 Output Screenshots
8. **ADVANTAGES & DISADVANTAGES**
9. **CONCLUSION**
10. **FUTURE SCOPE**

# ResolveNow: Online Complaint Registration and Management System

## 1. INTRODUCTION

### 1.1 Project Overview

ResolveNow is an online complaint registration and management system that enables individuals and organizations to submit, track, and resolve complaints efficiently. It streamlines the complaint-handling process, offers real-time tracking, and fosters communication between users, agents, and admins.

### 1.2 Purpose

The purpose of this project is to provide a centralized and secure platform for managing complaints, reducing resolution time, improving customer satisfaction, and ensuring transparency in handling user concerns.

---

## 2. IDEATION PHASE

### 2.1 Problem Statement

Traditional complaint-handling methods are inefficient, lack transparency, and lead to user dissatisfaction due to delayed responses and poor communication. There is a need for a reliable system where users can register complaints, track progress, and receive timely resolutions.

### 2.2 Empathy Map Canvas

- **Users:** Customers, agents, and admins.
- **Needs:** Easy registration, complaint submission, real-time tracking, direct communication with agents.
- **Pains:** Unclear complaint status, delayed resolutions, no direct communication.
- **Gains:** Transparent tracking, prompt resolutions, better service experience.

### 2.3 Brainstorming

Identified key features: user authentication, complaint submission, live status updates, chat with agents, admin management, and secure data handling.

---

## 3. REQUIREMENT ANALYSIS

### 3.1 Customer Journey Map

- **Sign Up/Login > Submit Complaint > Track Status > Chat with Agent > Resolution > Feedback**

### 3.2 Solution Requirements

- **Functional:** Registration, login, complaint submission, tracking, chat.
- **Non-Functional:** Security, scalability, user-friendliness.

### 3.3 Data Flow Diagram

- **User > Frontend > Backend (Express.js) > Database (MongoDB)**
- Bi-directional flow for complaint updates and chat.

### 3.4 Technology Stack

- **Frontend:** React, Material UI, Bootstrap
- **Backend:** Node.js, Express.js
- **Database:** MongoDB
- **Other:** GitHub, Railway (deployment), Socket.io (for chat)

---

## 4. PROJECT DESIGN

### 4.1 Problem Solution Fit

The system addresses inefficient manual complaint processes by providing automated tracking, easy submission, and real-time updates.

### 4.2 Proposed Solution

A web-based application with three user roles—Customer, Agent, and Admin—where each can perform designated actions like registering complaints, assigning them, and resolving them collaboratively.

### 4.3 Solution Architecture

- **Frontend:** React + Material UI + Bootstrap
- **Backend:** Node.js + Express.js
- **Database:** MongoDB
- RESTful APIs for communication between frontend and backend.

---

## 5. PROJECT PLANNING & SCHEDULING

### 5.1 Project Planning

Phase	Duration
Requirement Analysis	1 Week
Design Phase	1 Week
Development Phase	3 Weeks
Testing	1 Week
Deployment	3 Days
Documentation	Ongoing

---

## 6. FUNCTIONAL AND PERFORMANCE TESTING

### 6.1 Performance Testing

- Load testing performed to ensure the system handles multiple concurrent users.
- API response time maintained under 2 seconds.
- Database optimized for fast CRUD operations.

---

## 7. RESULTS

### 7.1 Output Screenshots

- **User Dashboard:** Complaint registration and tracking.
- **Agent Dashboard:** Assigned complaints list and chat window.
- **Admin Dashboard:** Manage users, agents, and complaints.

---

## 8. ADVANTAGES & DISADVANTAGES

### Advantages:

- Real-time tracking of complaints.
- User-friendly UI with seamless chat support.
- Scalable backend using Node.js and MongoDB.

### Disadvantages:

- Requires stable internet.
- Limited to web; no mobile app yet.

---

## 9. CONCLUSION

ResolveNow is a comprehensive solution for managing complaints online. It bridges the communication gap between users and service providers, ensures data security, and delivers an efficient complaint-handling experience.

---

## 10. FUTURE SCOPE

- Mobile application development.
- AI-based complaint routing.
- Automated feedback analysis.
- Multi-language support for wider reach.

---

## 11. GIT HUB ACTIONS

Code link: