AN INTERNSHIP REPORT ON

ONLINE COMPLAINT REGISTRATION AND MANAGEMENT SYSTEM

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OBJECTIVE

The primary objective of the Online Complaint Registration and Management System using the MERN Stack is to design and implement a full-stack web application that enables users to easily register complaints, track their status, and communicate with the appropriate authority for resolution, all in a secure and efficient manner. The system aims to:

- **Provide a user-friendly interface (using React.js) for seamless complaint registration, status tracking, and interaction.**
- **Ensure efficient backend processing (with Node.js and Express.js) of complaints including storage, updates, and user communication.**
- **Use MongoDB to manage and organize complaint-related data in a scalable and flexible way.**
- **Allow administrators and agents to efficiently manage, update, and resolve complaints from a centralized dashboard.**
- **Enable real-time updates and notifications to keep users informed about the progress of their complaint.**
- **Promote transparency, accountability, and speed in handling user grievances.**
- **Support multiple user roles, including users, support agents, and admin, each with distinct access levels and functionalities.**
- **Reduce manual paperwork and delays traditionally associated with complaint redressal processes.**
- **Incorporate authentication and data security to protect sensitive user data and ensure authorized access to system resources.**
- **Lay a scalable foundation for future integration with mobile apps, chatbot assistance, and analytics dashboards.**

INTRODUCTION

Introduction
In an increasingly digital world, the need for efficient, reliable, and transparent grievance redressal mechanisms is paramount. Traditional complaint registration methods often involve long wait times, cumbersome paperwork, and lack of tracking mechanisms, leading to frustration among users and inefficiency within organizations. The Online Complaint Registration and Management System (OCRMS) is designed to solve these challenges by providing a web-based platform for logging, tracking, and managing complaints seamlessly.

This system is suitable for a variety of sectors including healthcare, education, corporate services, government institutions, and more.

OBJECTIVES

To develop a centralized, user-friendly complaint registration system.

To streamline complaint processing through automated workflows.

To enable real-time status tracking and notifications.

To facilitate communication between users, support agents, and administrators.

To provide role-based access for enhanced security and task segregation.

SCOPE OF THE PROJECT

The system supports three types of users:

Customer/User: Registers complaints and checks status.

Agent: Assigned to resolve complaints.

Admin: Oversees complaint lifecycle and manages users.

Functional across desktops and mobile devices, the OCRMS is scalable and can be deployed across different departments or service domains.

SYSTEM FEATURES

4.1 User Registration and Login
Secure sign-up using email and password.

JWT-based session handling.

Forgot password and OTP verification features.

Complaint Submission
Form to enter issue type, description, location, and optional document upload.

Automatically generates a unique complaint ID.

Option to set priority level (High, Medium, Low).

Real-Time Status Updates
Users can view complaint history with status like: Submitted, Assigned, In Progress, Resolved, Closed.

Timeline view with date stamps.

Admin Panel
Admin can view all complaints, assign them to agents.

View analytics dashboard showing pending/resolved complaints.

Add/remove users and agents.

Agent Dashboard
Shows complaints assigned to the agent.

Allows status updates, file uploads, communication with the user.

Logs time of updates for auditing.

Notifications
Email and/or SMS notifications for status changes, agent assignment, and closure.

Push notification support for mobile version.

TECHNOLOGY STACK

Component	Technology
Frontend	React.js, HTML, CSS
Backend	Node.js, Express.js
Database	MongoDB (Mongoose ODM)
Authentication	JWT, Bcrypt
UI Libraries	Bootstrap, Material UI,
Date Management	Moment.js
Notifications	Email API (e.g., Nodemailer)

ARCHITECTURE OVERVIEW

Architecture Overview
Client-Server Model
The frontend communicates with the backend via REST APIs.

Backend connects to MongoDB for data operations.

Entity-Relationship Diagram (ERD)
Users (id, name, email, password, role)

Complaints (id, user_id, issue, priority, status, timestamp)

Agents (id, user_id, assigned_complaints)

Messages (id, complaint_id, sender_id, message, timestamp)

Modular Components
Login Module

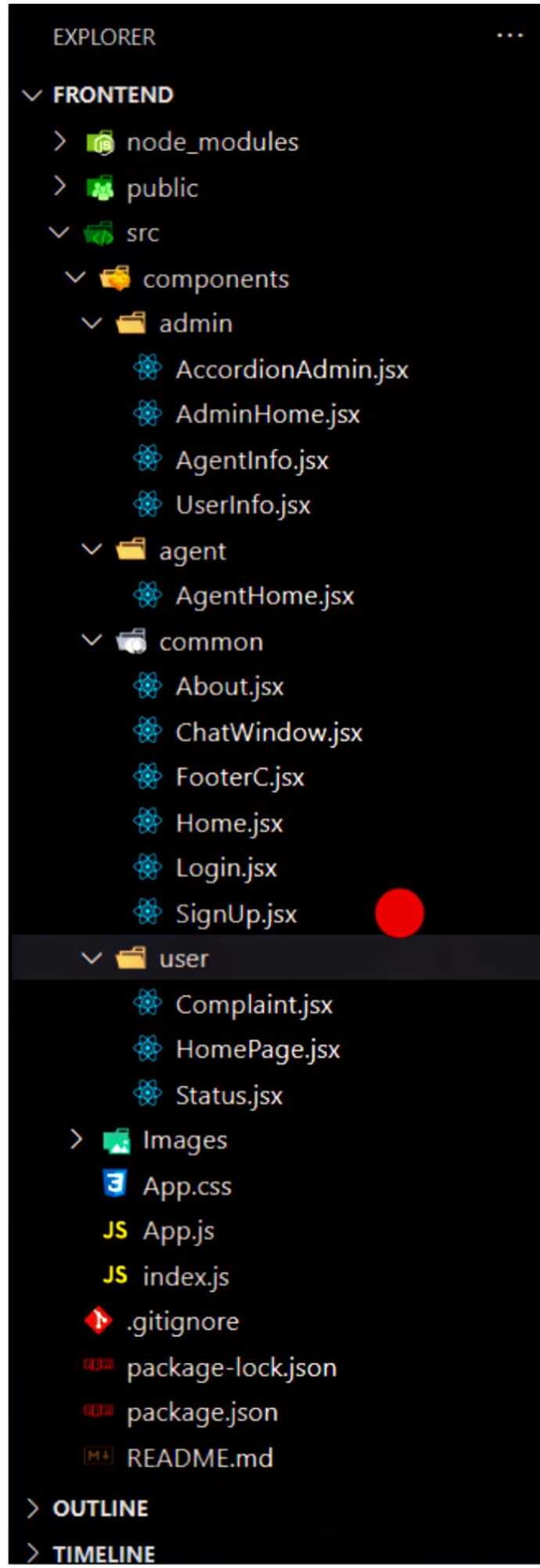
Complaint Module

Admin Module

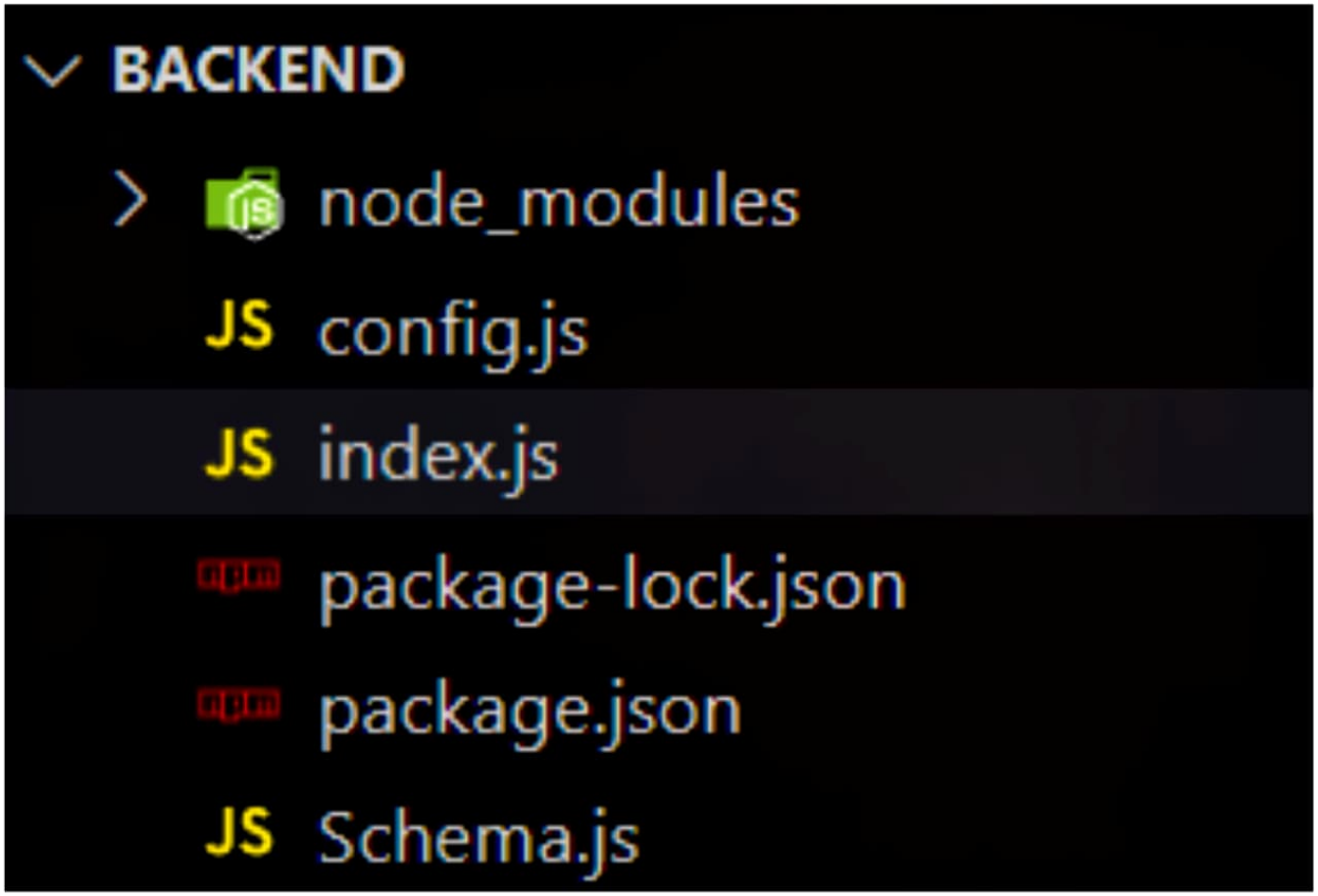
Chat/Message Module

Notification Service

Frontend


EXPLORER
FRONTEND
node_modules
public
src
components
admin
AccordionAdmin.jsx
AdminHome.jsx
AgentInfo.jsx
UserInfo.jsx
agent
AgentHome.jsx
common
About.jsx
ChatWindow.jsx
FooterC.jsx
Home.jsx
Login.jsx
SignUp.jsx
user
Complaint.jsx
HomePage.jsx
Status.jsx
Images
App.css
App.js
index.js
.gitignore
package-lock.json
package.json
README.md
OUTLINE
TIMELINE

BACKEND


BACKEND
node_modules
config.js
index.js
package-lock.json
package.json
Schema.js

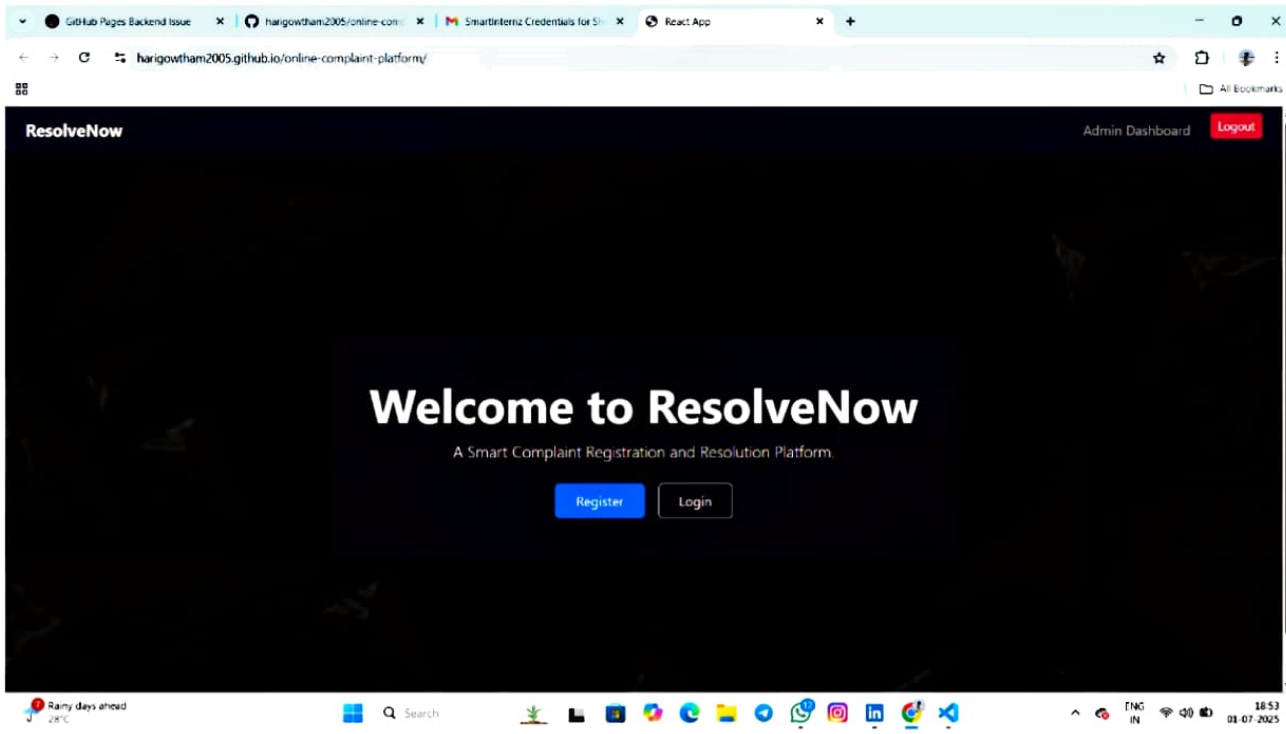
Workflow Diagram

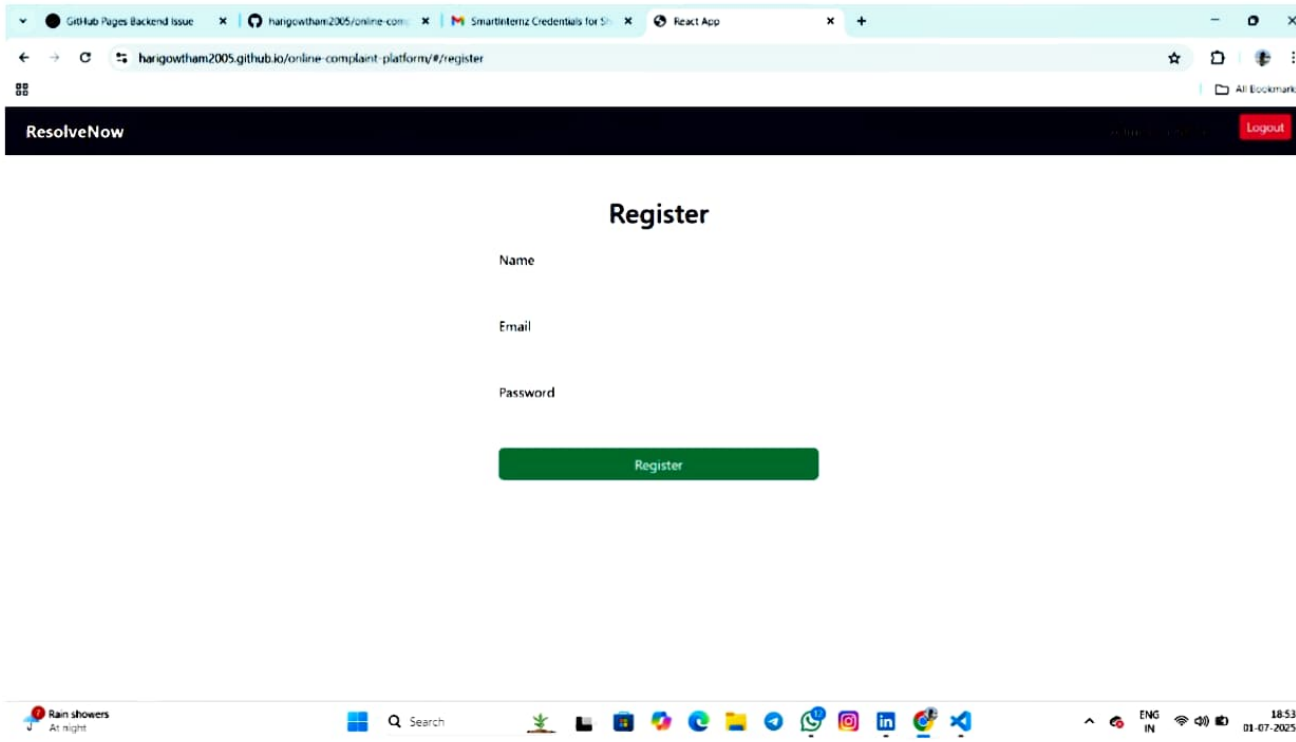
User Flow:
Login/Register → Submit Complaint → Receive Confirmation → Track Status → Get Resolved

Admin Flow:
Login → View Complaints → Assign to Agent → Monitor Progress → Generate Reports

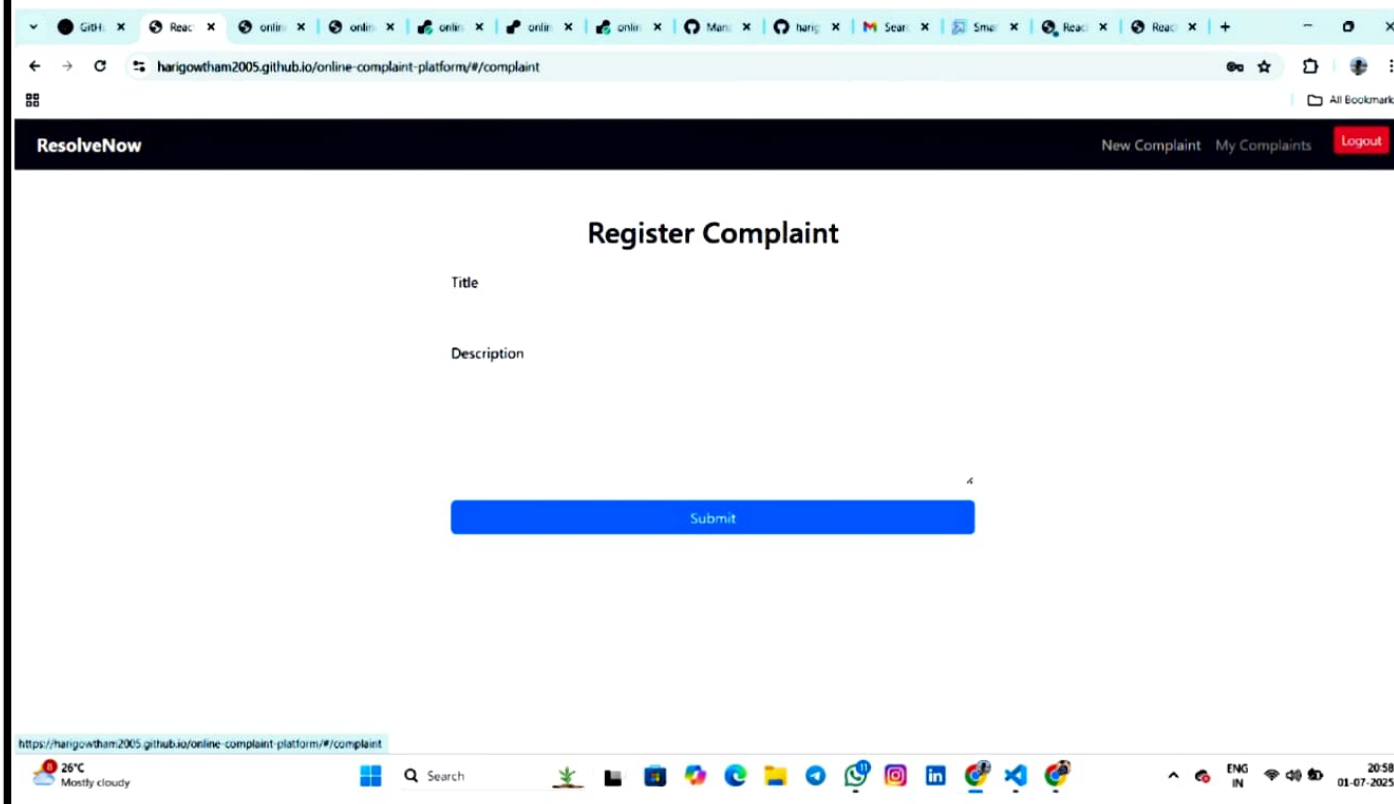
Agent Flow:
Login → View Assigned Complaints → Update Status → Communicate with User → Resolve Complaint

LOGIN PAGE

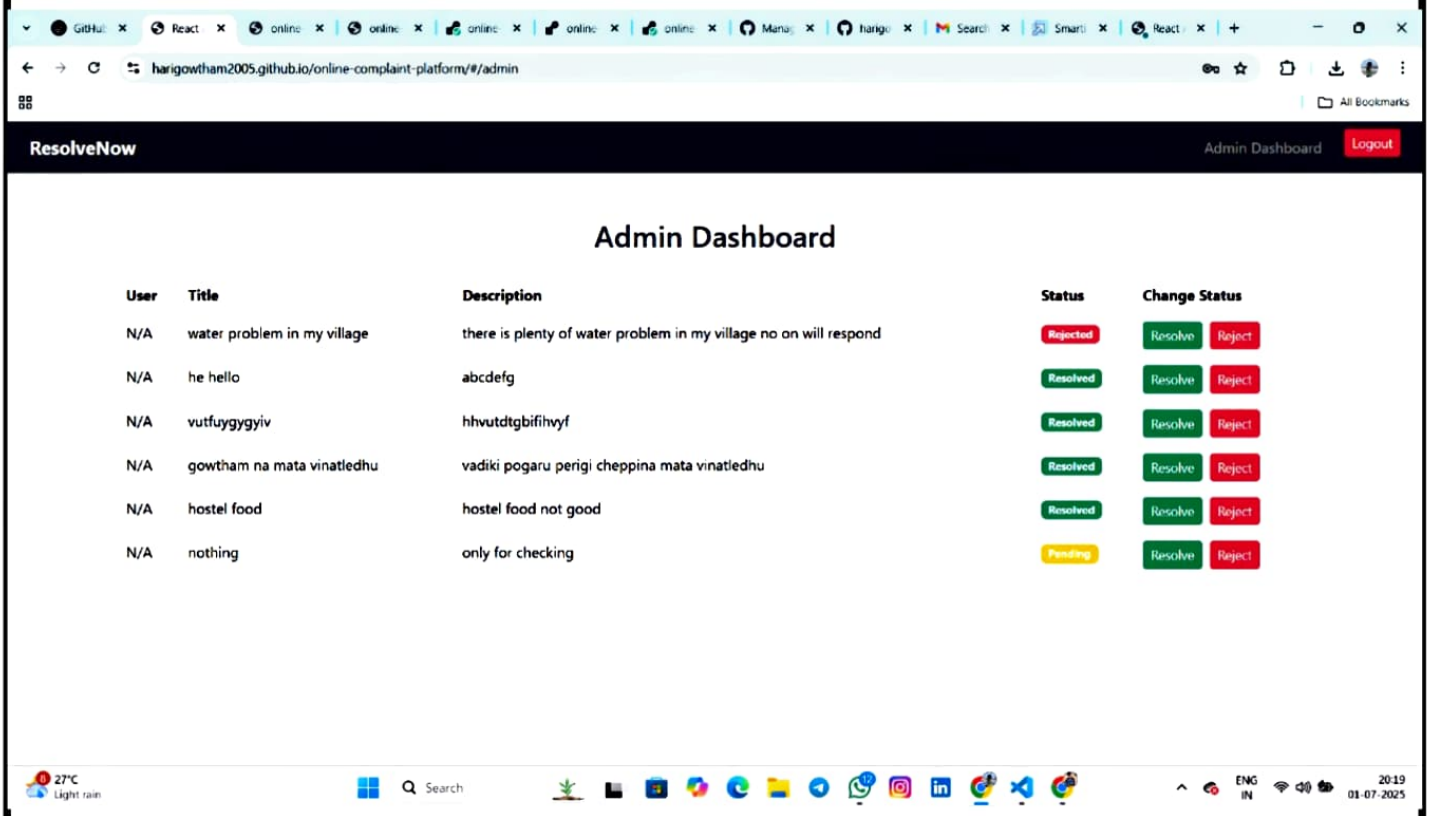

ResolveNow
Admin Dashboard
Logout
Welcome to ResolveNow
A Smart Complaint Registration and Resolution Platform
Register
Login


ResolveNow
Logout
Register
Name
Email
Password
Register

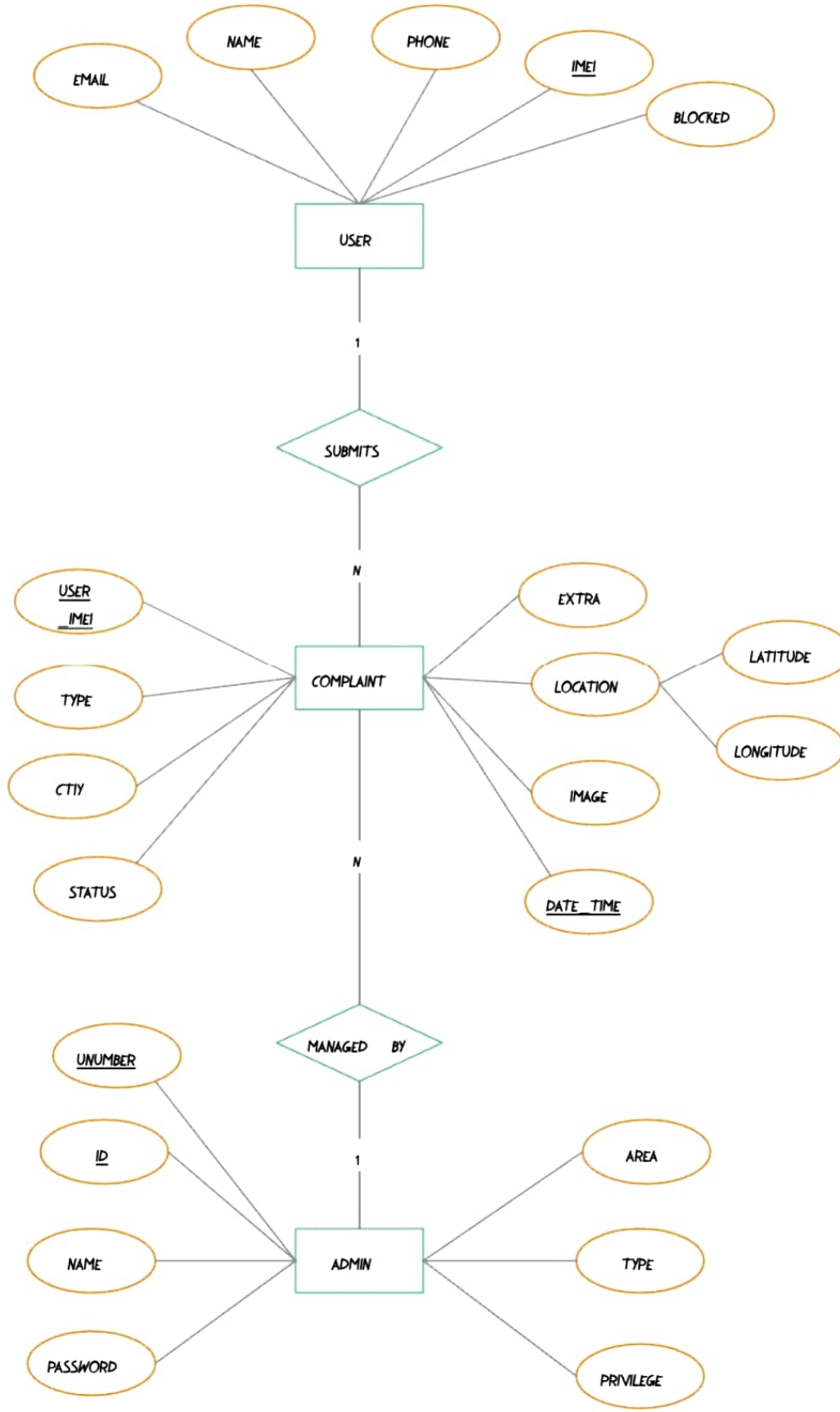
COMPLAINT FORM



ADMIN DASHBOARD



ER DIAGRAM


NAME
PHONE
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IMEI
BLOCKED
USER
1
SUBMITS
N
USER IMEI
EXTRA
TYPE
COMPLAINT
LOCATION
LATITUDE
LONGITUDE
CTIY
IMAGE
STATUS
DATE_TIME
N
MANAGED BY
UNUMBER
ID
1
AREA
NAME
ADMIN
TYPE
PASSWORD
PRIVILEGE

CONCLUSION

The Online Complaint Registration and Management System provides a comprehensive, scalable solution to handle customer grievances efficiently. Through automation, centralized control, and real-time communication, it enhances customer satisfaction and service delivery standards. With proper enhancements, it can be expanded to handle large-scale, multi-departmental operations in corporates and government institutions.

REFERENCES

Node.js

MongoDB Manual

React.js Guide

Material UI

Express.js Docs