

Project Complaint Registry - Documentation

1. Project Overview

A web-based complaint management system designed to streamline how users raise issues and how admins/agents resolve them. Built using MERN stack (MongoDB, Express, React, Node.js).

2. System Architecture

```
[User Interface (React.js)]
      |
[Axios for API Calls]
      |
[Backend API (Express.js)]
      |
[MongoDB Database via Mongoose]
```

3. Technology Stack

Layer	Tools Used
Frontend	React.js, Bootstrap
Backend	Node.js, Express.js
Database	MongoDB, Mongoose
API Comm	REST API using Axios

4. Folder Structure

```
Project-Complaint-registry/
├── backend/           # Express server and APIs
├── frontend/          # React client app
├── Documentation/     # This documentation folder
├── Video demo/        # Demo videos (UI/UX walkthroughs)
├── README.md
├── package.json
└── .gitignore
```

5. 📄 API Endpoints Summary

🔗 Complaint Endpoints

Method	Endpoint	Description
GET	/complaints	Get all complaints
POST	/complaints	Add new complaint
PUT	/complaints/:id	Update complaint (assign/resolve)
DELETE	/complaints/:id	Delete complaint

🔗 Agent Endpoints

Method	Endpoint	Description
GET	/agents	Get all agents
POST	/agents	Add new agent
PUT	/agents/:id	Update agent details
DELETE	/agents/:id	Delete agent

6. 🛠️ Database Schema Overview

Complaint Schema

```
{
  "title": String,
  "description": String,
  "status": "Pending" | "Assigned" | "Resolved",
  "createdAt": Date,
  "agentId": ObjectId (reference to agent)
}
```

Agent Schema

```
{
  "name": String,
  "email": String,
  "assignedComplaints": [ObjectId]
}
```

7. Setup Instructions

Backend Setup

```
cd backend
npm install
npm start
```

Frontend Setup

```
cd frontend
npm install
npm start
```

Ensure MongoDB is running and environment variables are set properly in `.env`

8. Testing the API

You can import the Postman collection from the `Documentation/` folder (to be added) and test endpoints:

- Base URL: `http://localhost:5000/`
-

9. Demo Videos

Check the `Video demo/` folder for screen recordings of:

- User submitting complaints
 - Admin assigning complaints
 - Agent resolving complaints
-

10. Future Enhancements

- User authentication (JWT)
 - File uploads with complaints
 - Email notifications
 - Filtering/sorting of complaints
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11. Author

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