

Project Report: ResolveNow - Online Complaint Registration and Management System

1. Title: ResolveNow - Online Complaint Registration and Management System

2. Objective: To develop a centralized platform that allows users to submit, track, and resolve complaints efficiently, ensuring transparency, accountability, and enhanced customer satisfaction.

3. Introduction: In many organizations, managing complaints manually is inefficient and time-consuming. ResolveNow provides an automated, secure, and user-friendly solution for complaint handling. It empowers users to register grievances and track them in real time while allowing administrators and agents to handle complaints systematically.

4. Scope: ResolveNow serves users, agents, and administrators. It enables:

- Secure registration and login for users
- Complaint filing with supporting documents
- Tracking of complaint status
- Real-time messaging between users and agents
- Admin panel for monitoring and assignment

5. Features:

- User registration and authentication
- Secure complaint submission
- Email/SMS notifications
- Real-time chat with assigned agents
- Admin dashboard
- Complaint status tracking

6. Tools & Technologies Used:

- **Frontend:** React.js, Bootstrap, Material UI
- **Backend:** Node.js, Express.js
- **Database:** MongoDB Atlas
- **Other Libraries:** Axios, React-Router, Socket.io (optional for real-time chat)
- **Hosting:** Localhost for development, GitHub for version control

7. System Architecture: The application follows a client-server architecture:

- The **client (frontend)** handles UI and sends HTTP requests to the server.
- The **server (backend)** processes the logic, interacts with MongoDB Atlas, and sends responses.
- **MongoDB Atlas** stores user, complaint, and message data.

8. Modules Description:

- **User Module:** Handles sign-up, login, complaint submission, and status tracking.
 - **Agent Module:** Manages assigned complaints and interacts with users.
 - **Admin Module:** Assigns complaints, monitors status, and manages users/agents.
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- **Complaint Module:** Stores and retrieves complaint data.
- **Chat Module:** Enables communication between users and agents.

9. ER Diagram Overview:

- Entities: User, Complaint, Agent, Admin, Message
- Relationships: One-to-many (User-Complaint), One-to-one (Complaint-Agent), One-to-many (Complaint-Messages)

10. Scenario Illustration: John faces a product issue, registers on ResolveNow, submits a complaint, chats with the agent, and gets resolution. Admin monitors and assigns the complaint to the appropriate agent.

11. Security Measures:

- Password hashing
- JWT-based authentication (optional for advanced security)
- HTTPS for data encryption (in deployment)
- Role-based access control

12. Conclusion: ResolveNow is a robust platform that automates and simplifies complaint handling, promoting transparency, accountability, and faster resolutions. It can be extended with advanced features like analytics, escalation workflows, and multilingual support.

13. Future Enhancements:

- Add voice/video chat support
- Mobile app integration
- Complaint categorization and priority tags
- Advanced admin analytics dashboard

14. Screenshots:

- Home page with dark/light mode toggle
- Complaint submission form
- Real-time chat window
- Admin dashboard
- Complaint status tracker

15. References:

- ReactJS Documentation
 - Node.js Official Docs
 - MongoDB Atlas
 - Bootstrap & Material UI
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