

ResolveNow – An Online Complaint Management Platform

1. Introduction

- Project Title: ResolveNow – An Online Complaint Management Platform
- Team Members:
 - Siddartha Poral – Full Stack Developer

2. Project Overview

- Purpose:

ResolveNow is designed to allow users to raise and manage complaints related to civic, institutional, or service-related issues. It streamlines the grievance redressal process with a dashboard interface for users and admins.
- Features:
 - User registration and secure login
 - Create, update, and delete complaints
 - Role-based access (User/Admin)
 - Admin dashboard for complaint resolution
 - Status tracking and timestamps
 - Email notifications on complaint updates
 - Mobile responsive UI

3. Architecture

- Frontend (React.js):
 - Developed with React
 - React Router DOM for navigation
 - Axios for API integration
 - Context API for state management
- Backend (Node.js + Express.js):
 - RESTful API architecture
 - Authentication middleware using JWT
 - Controllers for route handling
 - Error handling middleware
- Database (MongoDB):
 - MongoDB with Mongoose ODM

- Collections:
- Users: Name, email, hashed password, role
- Complaints: Title, description, status, timestamps, user reference

4. Setup Instructions

- Prerequisites:

- Node.js (v18+)
- MongoDB (local or Atlas)
- Git
- VS Code / Any IDE

- Installation Steps:

```
git clone https://github.com/yourusername/resolvenow.git
cd resolvenow
```

```
# Setup backend
```

```
cd server
```

```
npm install
```

```
# Setup frontend
```

```
cd ../client
```

```
npm install
```

- Environment Variables (.env in /server):

```
MONGO_URI=mongodb://127.0.0.1:27017/details
```

```
JWT_SECRET=your_jwt_secret
```

5. Folder Structure

- Client (React): Frontend

```
client/
```

```
|— public/
```

```
|— src/
```

```
|   |— components/
```

```
|   |— pages/
```

```
|   |— context/
```

```
|   |— App.js
```

```
|   |— index.js
```

- Server (Node + Express): Backend

```
server/
```

```
|— config/
```

```
|— controllers/
```

```
|— middleware/  
|— models/  
|— routes/  
|— .env  
|— server.js
```

6. Running the Application

- Frontend:

```
cd frontend
```

```
npm start
```

- Backend:

```
cd backend
```

```
npm start
```

7. API Documentation

Endpoint	Method	Description	Body Parameters
/api/auth/register	POST	Register new user	name, email, password
/api/auth/login	POST	Login and get token	email, password
/api/complaints	POST	Add new complaint	title, description
/api/complaints/:id	PUT	Update complaint (admin only)	status
/api/complaints	GET	Get all complaints (admin)	-

Example Response:

```
{  
  "success": true,  
  "message": "Complaint created",  
  "data": { ... }  
}
```

8. Authentication

Method: JWT (JSON Web Tokens)

Flow:

On login, token is issued and stored in localStorage

Protected routes validate token using middleware

Admin role check for sensitive routes

9. User Interface:

- Homepage
- Login/Register
- Complaint Dashboard
- Admin Panel

10. Testing

Manual testing using browser and API tools

Postman used for endpoint validation

(Optional) Jest and React Testing Library for component testing

11. Screenshots / Demo: is in implementation pdf.

12. Known Issues

- Admin role not switchable from frontend (manual DB update needed)
- Responsive layout issues on very small screens
- No complaint image/file upload yet

13. Future Enhancements

- Enable file/image upload for complaints
- Add search/filter/sort functionality
- Push/email notifications for status changes
- Dark mode support
- PWA version or mobile app