Resolve Now – Online Complaints Platform

Scalable 3-Tier Architecture Documentation
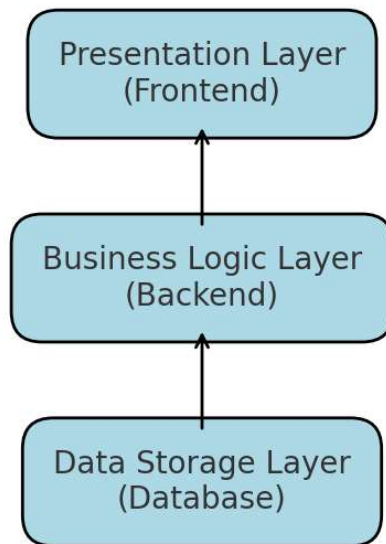
Prepared by: [M.RESHMA]

Date: June26-06 2025

Abstract

Resolve Now is a web-based platform designed to handle online complaints efficiently. The solution is structured around a scalable 3-tier architecture consisting of a presentation layer (frontend), a business logic layer (backend), and a data storage layer (database). The system ensures performance, security, and easy integration with third-party APIs such as Stripe for payments.

System Architecture Diagram

```
        ┌─────────────────────────┐
        │   Presentation Layer     │
        │      (Frontend)          │
        └─────────────────────────┘
                    ▲
                    │
        ┌─────────────────────────┐
        │   Business Logic Layer   │
        │        (Backend)         │
        └─────────────────────────┘
                    ▲
                    │
        ┌─────────────────────────┐
        │    Data Storage Layer    │
        │       (Database)         │
        └─────────────────────────┘
```

3-Tier Architecture Overview

S.No	Component	Description	Technology Stack
1	User Interface	Web-based interface for clients and freelancers	HTML, CSS, JavaScript, React.js
2	Application Logic-1	Handles complaint posting functionality	Node.js, Express.js
3	Application Logic-2	Admin panel to manage users, view complaints, analytics	React.js, Node.js
4	Authentication Module	Secure login/signup with JWT and role-based access control	JWT, Bcrypt, Node.js, Express.js
5	Payment Integration	Enables payment collection (e.g., premium support features)	Stripe API, Node.js
6	Database Layer	Manages persistent data like user info, complaints, payments	MongoDB / Mongoose
7	File Storage	Handles file uploads for complaint evidence	Multer, Cloudinary / Local file system
8	API Layer	RESTful APIs for communication between frontend & backend	Express.js
9	Third-party Services	Integration with external services like emails or payments	Nodemailer, Stripe API, Twilio (optional)

Conclusion

The Resolve Now platform is structured to support a secure, efficient, and scalable system for online complaint registration and management. With modular components and third-party API integrations, it offers a flexible foundation for future enhancements and growth.