Solution Architecture

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Date: 28/06/2025

Project Name: Resolve Now: Your Platform for Online Complaints

Marks: 4 Marks

1. Overview

The solution architecture of Resolve Now outlines the end-to-end system structure that supports the complaint lifecycle-from registration to resolution-ensuring scalability, reliability, and security.

2. Architectural Layers

a. Presentation Layer (Frontend):

- User Interface for complainants and authorities

- Built with ReactJS for responsive design

- Accessible via web and mobile platforms

b. Application Layer (Backend):

- Built using Node.js with Express.js

- Handles user requests, business logic, and API routing

- Implements complaint categorization, assignment, and tracking

c. Data Layer (Database):

- MongoDB or MySQL for storing user data, complaint logs, authority responses, and feedback

- Secure and scalable database design

d. Notification & Integration Layer:

- Email/SMS APIs for sending alerts

- Third-party API integrations for identity verification or case references

e. Admin & Analytics Dashboard:

- Built-in dashboard for authorities to view statistics, complaints by category, and resolution timelines

- Charts and reports generated for operational insights

3. Workflow Architecture

User --> Frontend UI --> Backend API --> Complaint Database

     (up)   (down)

   Notification System <- Admin Panel

- Step 1: User registers/logs in

- Step 2: Complaint is submitted and stored

- Step 3: Backend routes complaint to respective authority

- Step 4: Authority updates status

- Step 5: System notifies user and logs feedback

4. Security and Performance

- Authentication: JWT-based user sessions

- Authorization: Role-based access control (Admin/User)

- Data Protection: Encrypted data storage and secure API endpoints

- Scalability: Microservice-ready design; deployable on cloud (AWS/GCP)