**Project Design Phase-II**

**Technology Stack (Architecture & Stack)**

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| Date | 14 th June 2025 |
| Team ID | LTVIP2025TMID42578 |
| Project Name | ResolveNow |
| Maximum Marks | 4 Marks |

**🔹 Technical Architecture – *ResolveNow***

**🖼 Architecture Diagram (Simplified 3-Tier Model)**

**📋 Table 1: Components & Technologies**

| **S.No** | **Component** | **Description** | **Technology** |
| --- | --- | --- | --- |
| **1** | **User Interface** | **Web dashboard for users, agents, and admins** | **HTML, CSS, ReactJS (Vite), Tailwind, Bootstrap** |
| **2** | **Application Logic-1** | **Handles complaint submission, assignment logic, chat** | **JavaScript, Node.js, Express.js** |
| **3** | **Database** | **Stores users, complaints, messages, audit logs** | **MongoDB, Mongoose** |
| **4** | **File Storage** | **Stores complaint attachments/documents** | **MongoDB GridFS or Cluster Storage** |
| **5** | **External API-1** | **For location-based service routing (optional)** | **Google Maps API / OpenStreetMap** |
| **6** | **External API-2** | **Email notifications (for complaint assignment)** | **Nodemailer, SendGrid (optional)** |

**📊 Table 2: Application Characteristics**

| **S.No** | **Characteristics** | **Description** | **Technology** |
| --- | --- | --- | --- |
| **1** | **Open-Source Frameworks** | **Built using open frameworks and libraries for full-stack development** | **React, Vite, Tailwind CSS, Axios, Node.js, Express** |
| **2** | **Security Implementations** | **Secure login and form validation** | **bcrypt, express-validator, CORS, Helmet** |
| **3** | **Scalable Architecture** | **Microservice-ready backend; frontend-backend decoupled** | **Node.js, Docker (optional), 3-tier architecture** |
| **4** | **Availability** | **Deployable to cloud with horizontal scaling and load balancing** | **Render, Heroku, AWS, Nginx (optional)** |
| **5** | **Performance** | **Optimized API calls, cached assets, efficient data access** | **Axios, MongoDB, Cloudflare CDN, Compression** |