**Project Design Phase-II**

**Technology Stack (Architecture & Stack)**

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| --- | --- |
| Date | 26-05-2025 |
| Team ID | LTVIP2025TMID59501 |
| Project Name | ResolveNow |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

**ResolveNow** is developed with a modular, scalable 3-tier architecture to ensure flexibility, maintainability, and performance:

* **Presentation Layer (Frontend):**  
  Offers a responsive and intuitive user interface for citizens, agents, and administrators to register complaints, track status, and manage resolution activities.
* **Business Logic Layer (Backend):**  
  Handles core functionalities including complaint submission, routing, user authentication, in-app messaging, escalation, and feedback.
* **Data Storage Layer**:  
  Responsible for secure and structured storage of user accounts, complaint records, message logs, and resolution history.

The platform integrates with third-party APIs for notifications (SMS/email) and supports real-time chat communication, enhancing responsiveness and user engagement.

**Table-1 : Components & Technologies:**

| **S.No** | **Component** | **Description** | **Technology** |
| --- | --- | --- | --- |
|  | User Interface | Web interface for citizens, agents, and admins | HTML, CSS, JavaScript, React.js |
|  | Application Logic-1 | Complaint submission, status tracking, messaging | Node.js, Express.js |
|  | Application Logic-2 | |  | | --- | | Admin dashboard, user management, feedback, escalation logic | | React js, Node js |
|  | Database | |  | | --- | |  |  |  | | --- | | Stores user data, complaints, chat logs, and resolution feedback | | MongoDB |

**Table-2: Application Characteristics:**

| **S.No** | **Characteristics** | **Description** | **Technology** |
| --- | --- | --- | --- |
|  | Open-Source Frameworks | Modern frontend and backend stacks for rapid development | React.js, Node.js, BootStrap, Tailwind CSS |
|  | Scalable Architecture | 3-tier architecture with RESTful APIs | Microservices,REST APIs |

**References:**

* **React.js Documentation  
  https://reactjs.org/docs/getting-started.html**
* **Node.js Best Practices**[**https://github.com/goldbergyoni/nodebestpractices**](https://github.com/goldbergyoni/nodebestpractices)
* **JSON Web Token (JWT) Auth Guide  
  https://jwt.io/introduction**
* **How to Draw Useful Technical Architecture Diagrams**[**https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d**](https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d)