**Project Design Phase-II**

**Technology Stack (Architecture & Stack)**

|  |  |
| --- | --- |
| Date | 26-05-2025 |
| Team ID | LTVIP2025TMID54893 |
| Project Name | Online Complaint Management |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

**Online Complaint Management is built using a scalable 3-tier architecture:**

* **Presentation Layer (Frontend)**:  
  Web-based interface for users to submit complaints and track resolution status.
* **Business Logic Layer (Backend)**:  
  Handles complaint processing, status updates, role-based access, escalation, and notifications.
* **Data Storage Layer**:  
  Stores user accounts, complaint records, status logs, and audit trails securely.

The platform integrates with third-party APIs for automated email/SMS notifications and supports role-specific dashboards.

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

| **S.No** | **Component** | **Description** | **Technology** |
| --- | --- | --- | --- |
|  | User Interface | Web UI for complaint submission and tracking | HTML, CSS, JavaScript / React Js etc. |
|  | Application Logic-1 | Complaint registration, tracking, notifications | Node.js, Express.js |
|  | Application Logic-2 | Admin dashboard, resolver assignment, reporting | React js, Node js |
|  | Database | Stores user info, complaint logs, status history | MongoDB |

**Table-2: Application Characteristics:**

| **S.No** | **Characteristics** | **Description** | **Technology** |
| --- | --- | --- | --- |
|  | Open-Source Frameworks | Frontend frameworks | React.js, Node.js, BootStrap, Tailwind CSS |
|  | Scalable Architecture | 3-tier architecture with RESTful APIs | Microservices |

**References:**

[**React.js Documentation**](https://react.dev/)

[**Node js Best Practice**](https://nodejs.org/en/learn/getting-started/introduction-to-nodejs)

[**JSON Web Server Referance**](https://www.npmjs.com/package/json-server)

[**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)