Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	
Team ID	**PNT2025TMID09625**
Project Name	**Online Complaint Registration And Management System**
Maximum Marks	**4 Marks**

Technology Stack (Architecture & Stack)

Technical Architecture

Our Online Complaint Registration and Management System is built using the **MERN stack**:

1. **Frontend (React.js)**
    - The part users see and interact with.
    - Shows complaint submission forms, status tracking pages, and admin dashboards.
    - Designed to be simple, fast, and user-friendly.
2. **Backend (Node.js + Express.js)**
    - The server-side logic that connects the frontend to the database.
    - Handles complaint processing, user authentication, and API calls.
3. **Database (MongoDB)**
    - Stores user details, complaints, updates, and resolution history.
    - Flexible NoSQL database for fast data handling.

Table 1: Components & Technologies

S.No	Component	Description	Technology
1	User Interface	How users interact with the system	HTML, CSS, JavaScript, React.js
2	Application Logic-1	Complaint submission and tracking process	JavaScript

S.No	Component	Description	Technology
3	Application Logic-2	Admin functions (assign, resolve complaints)	JavaScript
4	Application Logic-3	Super Admin control & reports	JavaScript
5	Database	Store complaints and user data	MongoDB (NoSQL)
6	Cloud Database	Not used for now	-
7	File Storage	Store attachments/images	Basic local storage
8	External API-1	For notifications	Email/SMS API
9	External API-2	For dashboard updates	Internal API
10	Machine Learning Model	Not used	-
11	Infrastructure	Deployment on local or cloud server	Local/Cloud

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Table 2: Application Characteristics

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	Built using MERN stack and open-source tools	MERN
2	Security	Secure login and encrypted data transfer	HTTPS, JWT
3	Scalable Architecture	3-tier architecture (Frontend, Backend, Database)	MERN
4	Availability	Accessible to all users	Web-based

S.No	Characteristics	Description	Technology
5	Performance	Fast response and efficient data handling	Optimized MERN setup