Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	18-06-2025
Team ID	LTVIP2025TMID53208
Project Name	Resolve
Maximum Marks	4 Marks

Technical Architecture:

- The ResolveNow platform is built using a MERN stack-based 3-tier architecture:

- **Presentation Layer (Frontend):**
  Provides an intuitive, responsive UI for citizens, agents, and admins.

- **Business Logic (Backend):**
  Handles complaint registration, status updates, user management, authentication, and admin controls.

- **Data Storage Layer:**
  Stores user profiles, complaint data, resolution history, feedback, and admin logs.

- The architecture supports RESTful APIs, ensuring scalability, modularity, and secure integration with email services and notification APIs (e.g., Twilio, Nodemailer)**.**

Table-1: Components & Technologies

S.No	Component	Technology

1	User Interface	React.js, HTML5, CSS3, Material UI, Bootstrap
2	Application Logic-1	Node.js, Express.js (Authentication, Course Management)
3	Application Logic-2	React.js (Frontend SPA), Node.js (Admin & API Services)
4	Database	MongoDB (User, Courses, Enrollments, Certificates, Payments)

Table-2: Application Characteristics

S.No	Characteristics	Description / Technology
5	**Open-Source Frameworks**	React.js, Node.js, Express.js, MongoDB, Material UI
6	**Scalable Architecture**	3-tier architecture with RESTful APIs, supports microservices

References:

- React.js Documentation: https://react.dev
- Node.js Guide: https://nodejs.org/en/learn/getting-started/introduction-to-nodejs
- MongoDB Docs: https://www.mongodb.com/docs/