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

Date	30 June 2025
Team ID	**LTVIP2025TMID28956**
Project Name	**Asset Management Portal**
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example:

An Asset Management Portal helps track, allocate, and maintain physical assets like equipment or furniture efficiently.

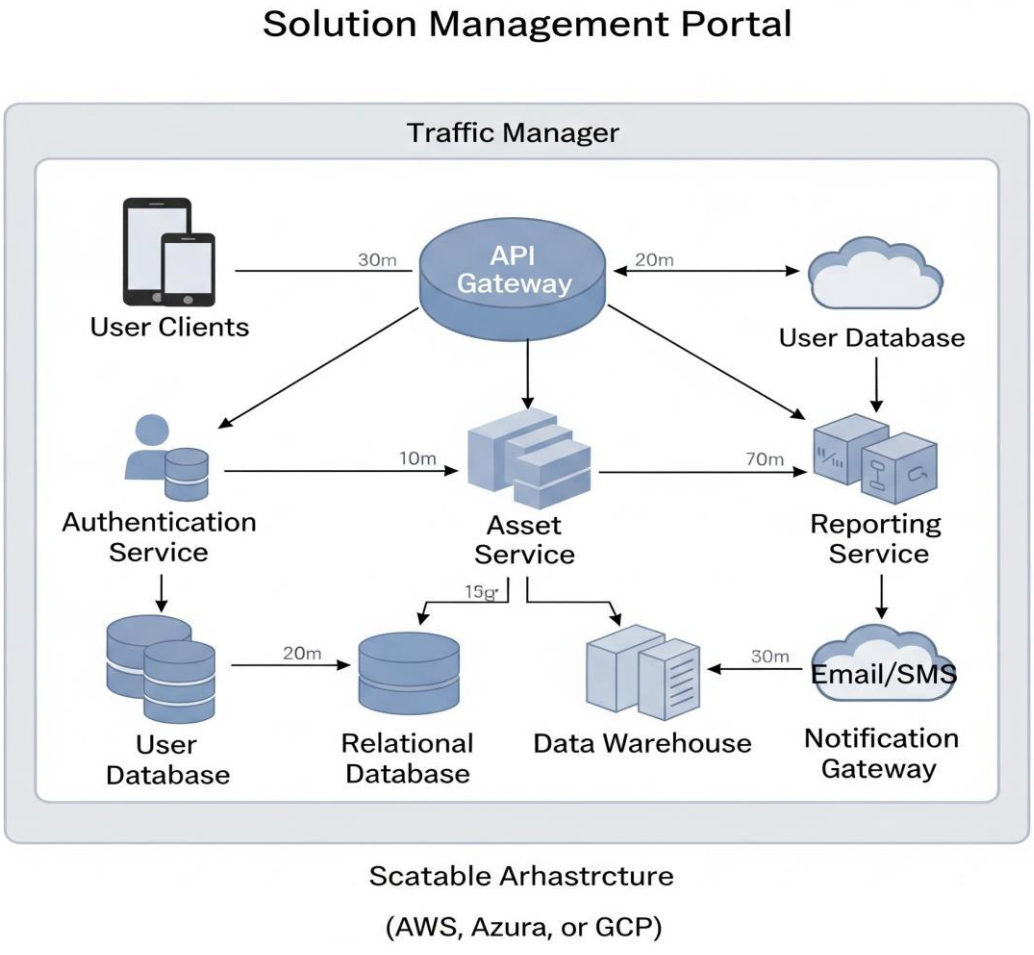

Table 1:

S.No.	Component	Description	Technology used
1.	Frontend (UI)	User interface for interacting with the portal (e.g., asset list, reports)	HTML, CSS, JavaScript, React.js
2.	Backend (API Layer)	Handles business logic, data processing, and communication with the database	Node.js / Java / Python (Django)
3.	Database	Stores asset data, user roles, logs, and maintenance records	MySQL / PostgreSQL / MongoDB
4.	Authentication	Manages user login, roles, and permission	JWT / OAuth / Firebase Auth
5.	Asset Tracking	Tracks asset location, status, and history	RFID / QR Code with scanner
6.	Reporting Module	Generates reports for asset usage, maintenance, and depreciation	Power BI / Jasper Reports
7.	Notification System	Sends alerts for maintenance, due returns, or issues Email	APIs / Firebase Cloud Messaging
8.	Cloud Hosting	Hosts the portal and ensures availability	AWS / Azure / Google Cloud

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Scalability	Ability to handle increasing number of assets and users without performance loss	Cloud infrastructure (AWS, Azure)
2.	Security	Ensures secure access, data protection, and user role management	HTTPS, JWT, OAuth, Role-Based Access
3.	Availability	Accessible anytime from anywhere, ensuring business continuity	Cloud Hosting, Load Balancers
4.	User-Friendly Interface	Easy to navigate and use for admins, staff, and maintenance team	React.js / Angular / Bootstrap
5.	Data Integrity	Accurate and consistent asset data during create, update, or delete operations	Relational DBs like MySQL / PostgreSQL