Project Design Phase
Solution Architecture

Date	**20 Feb 2026**
Team ID	**LTVIP2026TMIDS60253**
Project Name	**Asset Management Portal**
Maximum Marks	4 Marks

Solution Architecture:

The solution architecture of the Asset Management Portal is designed as a robust, scalable, and secure system to manage the entire lifecycle of physical and digital assets within an organization. It follows a multi-layered architecture comprising a presentation layer, application layer, and data layer. The presentation layer provides a user-friendly web-based interface, enabling employees, managers, and administrators to interact with the system according to their roles. The application layer contains the core business logic and workflow automation, supporting functionalities such as asset registration, allocation, tracking, maintenance, and disposal. This layer is developed using secure and scalable backend technologies and integrates with external systems like HRMS or ERP through APIs. The data layer consists of a centralized relational database that stores detailed information about assets, users, transactions, and logs, ensuring data consistency and integrity. Role-based access controls and authentication mechanisms like SSO or LDAP are implemented to maintain system security. Additionally, the architecture supports automated email/SMS notifications, audit logging for compliance, and is deployed on a cloud platform to ensure scalability, high availability, and easy maintenance. This structured architecture ensures efficient asset tracking, streamlined operations, and better decision-making through real-time data visibility.

Example - Solution Architecture Diagram: