SOLUTION ARCHITECTURE

Date	23 October 2025
ID	2025TMID02573
Project Name	Garage Management System
Maximum Marks	4 Marks

Solution Architecture:

The solution architecture for the Garage Management System (GMS) is designed as a multi-tier, modular application that ensures scalability, security, and ease of use. The system consists of three main layers: the presentation layer, the application layer, and the data layer. The presentation layer provides the user interface through which customers, mechanics, and administrators interact with the system. This layer can be accessed via a web or mobile application, offering features such as booking appointments, checking service status, generating invoices, and viewing reports.

The application layer serves as the core processing unit that handles all business logic and workflows. It manages customer registrations, job scheduling, mechanic assignments, service tracking, and notifications. This layer also integrates with third-party services such as payment gateways for online payments and messaging APIs for sending SMS or email updates. Role-based access control ensures that each user—customer, mechanic, or admin—can only access authorized functions.

The data layer is responsible for secure storage and management of all system data, including customer details, vehicle information, service records, inventory data, and billing history. A relational database such as MySQL or PostgreSQL can be used to maintain data integrity and support quick retrieval. Data backups and encryption mechanisms ensure reliability and security.

All layers communicate through RESTful APIs to ensure flexibility and integration capabilities. The architecture supports cloud deployment for scalability and remote access. Additionally, analytics and reporting modules draw data from the database to provide real-time insights into garage performance, customer behavior, and inventory trends.

Solution Architecture Description :

The Garage Management Project architecture is built entirely on the Salesforce platform, integrating data, automation, and analytics to streamline garage operations. It uses a relational

data model connecting Customers, Vehicles, Services, and Billing through custom objects. Automation is achieved via Salesforce Flows and Process Builder for service tracking, invoice generation, and notifications. Validation Rules maintain data accuracy, while dashboards provide real-time insights into service performance. The architecture follows a modular approach to allow easy scaling and future enhancements. By leveraging Salesforce's security and cloud infrastructure, the system ensures reliable, accessible, and high-performing management of all garage-related processes.

Solution Architecture Diagram :