Date	1 November 2025
Team ID	NM2025TMID02844
Project Name	Garage Management System
Maximum Marks	4 Marks

Technology Stack (Architecture & Stack) :

Technical Architecture :

The Garage Management System (GMS) developed using Salesforce is designed as a cloud-based multi-layered architecture, ensuring scalability, data integrity, and process automation. The architecture integrates various Salesforce components such as custom objects, Apex Triggers, Flows, Reports, and Dashboards to automate garage operations including customer registration, appointment booking, service tracking, billing, and feedback collection.

The system leverages Salesforce's Software-as-a-Service (SaaS) infrastructure to host all data and business logic on the cloud, providing secure and seamless access from any device. It also uses Flow Builder for automation, Apex scripts for logic execution, and Validation Rules for data quality assurance.

Key Features of the Architecture:

Cloud-Hosted Application: Entirely deployed and managed within the Salesforce Cloud (SaaS platform).

No Local Dependencies: Users interact via the Salesforce Lightning App interface through browsers.

Automation Layer: Business logic handled through Salesforce Flow and Apex triggers.

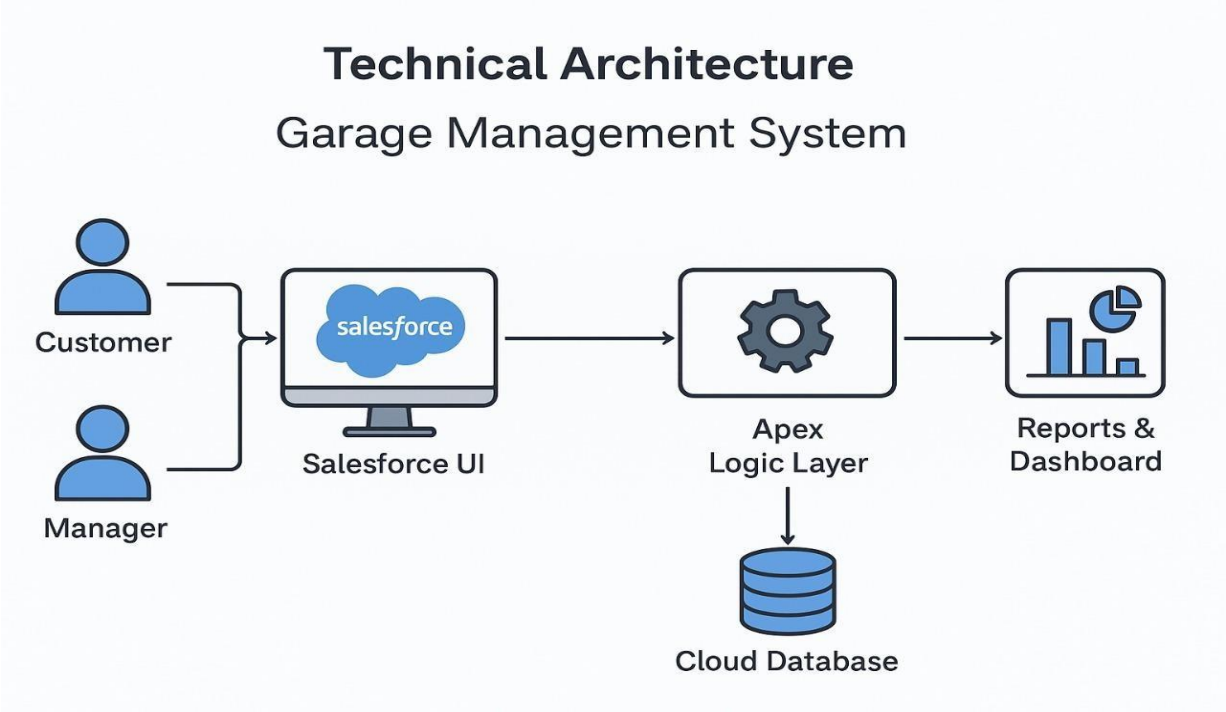
Data Management: Secure storage in Salesforce objects (Customer, Appointment, Service Record, Billing).

Integration Layer: Optionally supports REST API integration for external systems (e.g., online payment gateways).

Visualization Layer: Reports and dashboards provide analytical insights into operations and customer feedback.

Technical Architecture Diagram of Garage Management System:

(Suggested Diagram – Show the following components: Customer, Manager, Salesforce UI, Apex Logic Layer, Flows, Cloud Database, Reports & Dashboard visualization.
Would you like me to generate this image next



Table–1: Components & Technologies :

S.No	Component	Description	Technology Used
1.	User Interface	Provides the interface for Managers and Staff to manage customers, appointments, and billing.	Salesforce Lightning Experience
2.	Application Logic – 1	Automates service cost calculation and updates status during service record creation.	Salesforce Flow Builder
3.	Application Logic – 2	Implements business logic for data validation and field updates.	Apex Triggers and Apex Classes

4.	Application Logic – 3	Sends email notifications to customers after billing completion.	Salesforce Email Alerts (Flow Action)
5.	Database	Stores all object records (Customer Details, Appointments, Services, Billing).	Salesforce Object Database
6.	Cloud Database	Fully managed, scalable data storage hosted on Salesforce cloud infrastructure.	Salesforce Cloud (SaaS)
7.	File Storage	Stores files and attachments such as invoices or reports.	Salesforce Files & Attachments
8.	External API – 1 (Optional)	Integrates with payment systems like Razorpay or UPI for online billing.	Salesforce REST API Integration
9.	External API – 2	Not applicable in current implementation.	—
10.	Machine Learning Model	Not applicable for current version; can be extended using Salesforce Einstein.	—
11.	Infrastructure (Server / Cloud)	Hosted and managed through Salesforce's cloud-based SaaS platform.	Salesforce Cloud Infrastructure

Table–2: Application Characteristics:

S.No	Characteristics	Description	Technology Used
1.	Framework	Salesforce provides a proprietary low-code development environment.	Lightning Platform
2.	Security Implementations	Uses Role-Based Access Control, Object Permissions, and Validation Rules to ensure data protection.	Salesforce Roles, Profiles, and Permission Sets
3.	Scalable Architecture	Multi-tenant cloud system supports horizontal scaling for multiple organizations.	Salesforce SaaS Architecture
4.	Availability	Ensures high uptime and reliability for all users through Salesforce's cloud hosting.	Salesforce Cloud Hosting
5.	Performance	Optimized with Apex Triggers and asynchronous background processing for faster data handling.	Apex, Flow Builder, Indexed Objects
6.	Reliability	Consistent validation and automated error handling ensure data integrity	

Summary :

The Garage Management System leverages Salesforce's cloud-native architecture to deliver a secure, scalable, and fully automated application. By combining declarative tools (Flows, Validation Rules) and programmatic logic (Apex Triggers), the project ensures smooth execution of all business processes—from customer onboarding to final billing—within a unified environment.