Project Design Phase
Solution Architecture

Date	1/11/2025
Team ID	NM2025TMID06645
Project Name	**Garage Management system**
Maximum Marks	4 Marks

Solution Architecture:

Goals of the Architecture:

- Provide a centralized system for managing garage operations

- Ensure data integrity across customers, vehicles, services, and billing

- Automate workflows to minimize manual errors and improve efficiency

Key Components:

- **Customer Object** – stores customer details and contact information

- **Vehicle Object** – linked to customers, tracks vehicle details and service history

- **Service Record Object** – manages job cards, assigned mechanics, and service status

- **Inventory Object** – tracks spare parts availability and usage

- **Automation Rules & Workflows** – handle updates, notifications, and billing processes

Development Phases:

- Create sample customer and vehicle records

- Generate job cards and assign mechanics

- Configure workflows and validation rules

- Test automation for service updates, billing, and report generation

Solution Architecture Description:

The **Garage Management System (GMS)** is built on Salesforce **Customer 360**, integrating customer, vehicle, service, and billing data into one platform. Using **Data 360**, all records are centralized to ensure accuracy and transparency across operations. **MuleSoft Integration** connects Salesforce with external systems such as parts suppliers, accounting tools, and IoT-based vehicle diagnostics. This allows real-time data exchange and smooth automation of service workflows. The architecture supports scalability by linking to **cloud storage** and **analytics platforms** like **AWS** and **Snowflake**, enabling advanced reporting and performance tracking. Overall, GMS enhances efficiency, reduces manual work, and improves customer satisfaction through a connected, intelligent ecosystem.
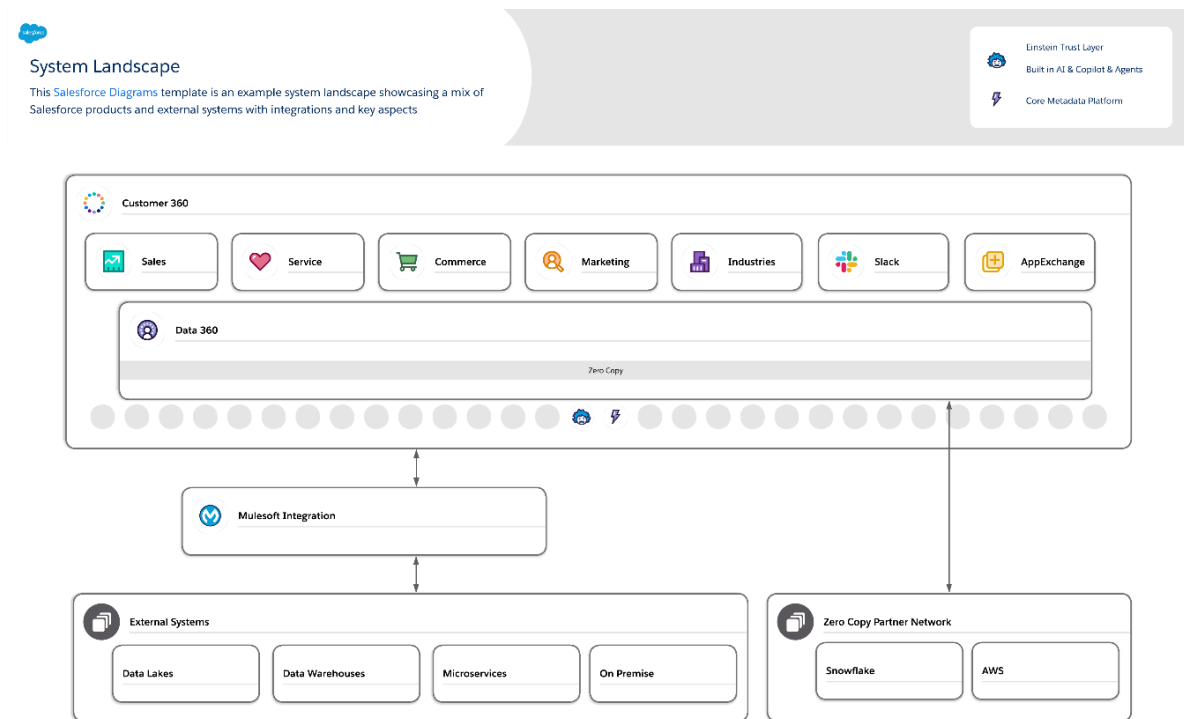
Example - Solution Architecture Diagram:

Figure 1: Architecture and data flow of the Garage Management System sample application

Reference: https://architect.salesforce.com/diagrams/reference-architectures/system-landscape?utm_source=chatgpt.com