Solution Architecture

Date	23 Oct 2025
Team Id	NM2025TMID04744
project Name	Garage management system
Maximum Mark	4 marks

Architectural Layers

1. Presentation Layer (User Interface)

- Built using Salesforce Lightning App with custom tabs for each module:
  Customer Details, Appointment, Service Records, Billing & Feedback, Reports, Dashboards.
- Provides a simple, intuitive interface for users such as Managers and Sales Persons.
- Responsive design accessible via both desktop and mobile.

2. Application Layer (Business Logic & Automation)
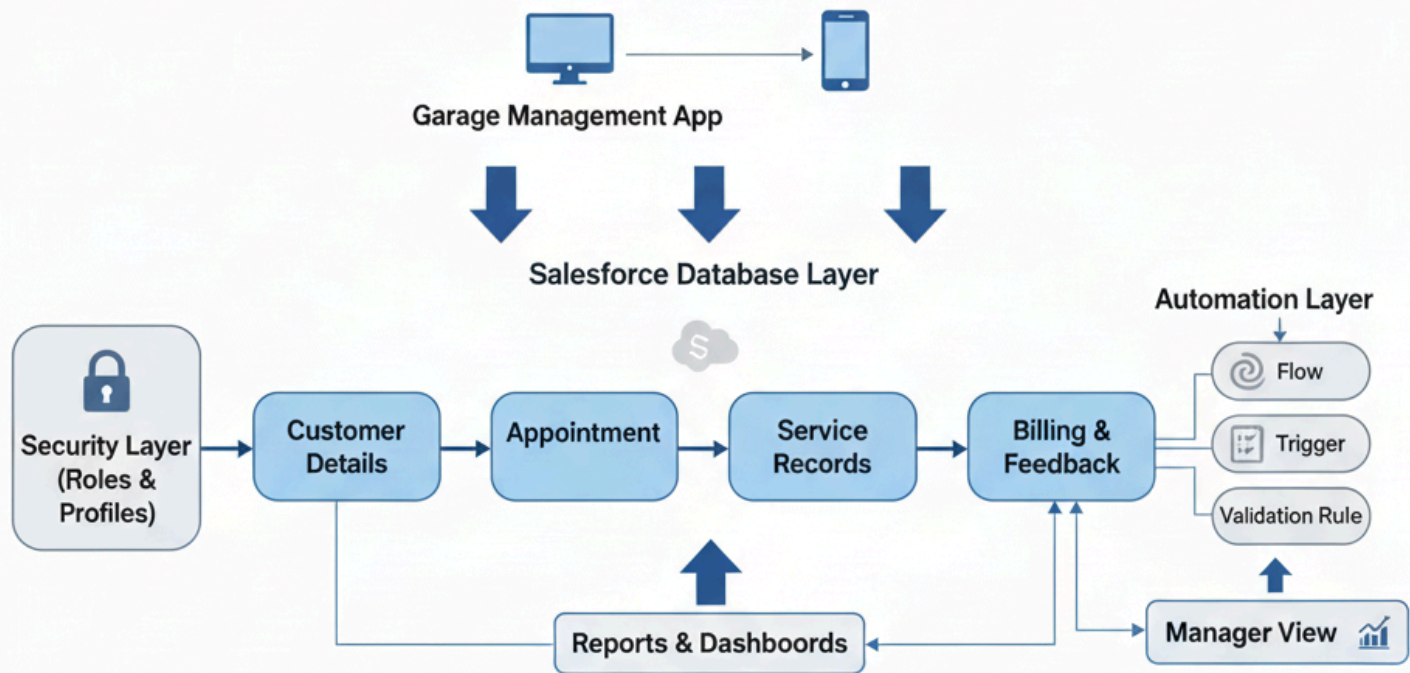
- Handles all automated processes through Salesforce tools like:
  - Flows – Automate record updates, status changes, and email alerts.
  - Apex Triggers – Execute business logic like service amount calculation.
  - Validation Rules – Ensure accurate data input (e.g., rating range, vehicle number format).
  - Process Builder – Simplifies task automation for internal actions

3. Data Layer (Database & Relationships)

- All data is stored in Salesforce Custom Objects.
- Objects used:
  1. Customer Details – stores customer name, phone, and vehicle info.
  2. Appointment – records service booking details.
  3. Service Records – tracks actual work performed on vehicles.
  4. Billing & Feedback – manages payments and service ratings.

4. Analytics Layer (Reports & Dashboards)

- Dashboards visualize daily service count, payments received, and customer ratings.
- Reports provide a detailed breakdown for management decisions.
- Managers can filter data by date, customer, or service type to monitor performance.

Technology Stack

Component	Technology Used	Purpose
Platform	Salesforce Lightning	Cloud-based development
Backend Logic	Apex Triggers & Flows	Business automation
Database	Salesforce Objects	Data management
User Interface	Lightning Pages & Tabs	UI access for modules
Analytics	Reports & Dashboards	Visual performance data
Security	Roles, Profiles, Sharing Rules	Controlled access