

# Solution Architecture

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Solution Architecture is a high-level design that outlines how the different components of a system (like applications, databases, users, and external systems) work together to solve a specific business problem.

In your case, the problem is managing leases manually, and the solution is a Salesforce-based automated lease management system.

It's importance:

- Ensures all components work smoothly together.
- Helps stakeholders visualize the system.
- Supports planning, scalability, and risk management.
- Guides developers and admins during implementation.

## Key Elements of a Solution Architecture

- 1. User Layer (Frontend):**
  - The interface that end users (like tenants or property managers) interact with.
  - In your project: Salesforce UI, Mobile app.
- 2. Application Layer (Logic):**
  - Core business logic that performs tasks like creating leases, sending notifications, approvals, etc.
  - In Salesforce: Apex, Flows, Process Builder, Triggers.
- 3. Data Layer:**
  - Where all data is stored and managed.
  - In your case: Salesforce custom objects like **Tenant**, **Property**, **Lease**, **Payment**.
- 4. Integration Layer:**
  - Connects your system with other services or apps.
  - Examples: Email alerts, Payment gateways, Calendar integration.
- 5. Security Layer:**
  - Controls who can access what.
  - Uses roles, profiles, permission sets in Salesforce.
- 6. Reporting Layer:**
  - Provides reports, dashboards, and analytics for decision-making.
- 7. Deployment & Maintenance:**
  - Tools and environments used to build, test, and deploy changes (like sandbox, production org, change sets).

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