

# DATA FLOW DIAGRAMS & USER STORIES

Date	3 August 2025
Team ID	LTVIP2025TMID30830
Project name	Lease management
Maximum Marks	

## What is a data flow diagram(DFD)?

Here’s a complete response including both Data Flow Diagrams (DFDs) and User Stories for your Lease Management Project, tailored for inclusion in your report or presentation.

## Core Objective of the Process Flow

To provide a **systematic, error-free, and automated method** for handling all key leasing operations:

- Property and tenant setup
- Lease creation and validation
- Approval workflows
- Payment tracking
- Communication automation
- Dashboard reporting

---

## Process Flow Phases

- ◆ **1. Initiation Phase**
  - The process starts with the **user logging into Salesforce** and accessing the **Lease Management Lightning App**.
  - The user creates new records for **properties** and **tenants**, forming the base data.
- ◆ **2. Lease Record Creation**
  - The user creates a **Lease** record linking a tenant to a property.
  - The system enforces **validation rules**, such as:
    - Lease end date must be after start date.
    - No duplicate tenant assignments to the same property.
- ◆ **3. Approval Workflow**
  - Once submitted, the lease enters an **automated approval process**.

## DATA FLOW DIAGRAMS & USER STORIES

- Managers review, approve, or reject the lease. The system sends **email alerts** accordingly.
- ◆ **4. Automation Phase**
  - If approved, the lease status changes to **Active**.
  - The system schedules **monthly rent reminders** using **Apex scheduled classes**.
  - Notifications are sent automatically without user intervention.
- ◆ **5. Payment Logging**
  - Rent payments are **recorded manually** or **pulled from integrated systems**.
  - Payments are stored under the **Payment object**, linked to tenants and properties.
- ◆ **6. Reporting & Monitoring**
  - Dashboards and reports provide visibility into:
    - Active leases
    - Overdue payments
    - Lease expirations
    - Occupancy trends

---

### Key Technologies Enabling the Flow

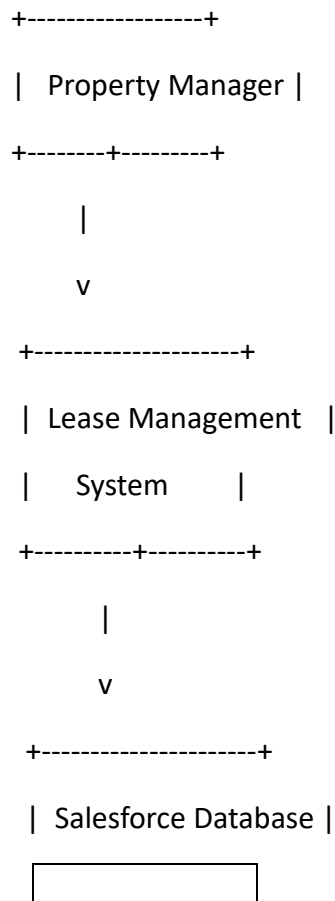
Component	Role in Process Flow
Salesforce Objects	Structure data for Properties, Tenants, Leases, Payments
Validation Rules	Enforce business constraints at data-entry level
Apex Triggers	Prevent logical errors (e.g., duplicate tenants per property)
Approval Processes	Route lease records for review and authorization
Email Templates	Send system-generated communication
Scheduled Apex	Automate rent reminders and backend processes
Dashboards	Provide real-time visibility and insights

---

### Benefits of This Process Flow

## DATA FLOW DIAGRAMS & USER STORIES

- Reduces manual effort and human errors.
- Maintains high data accuracy and consistency.
- Supports accountability through approval workflows.
- Enhances communication via automated alerts.
- Provides operational transparency through dashboards.



### User Stories – Lease Management System:

#### ◆ Admin / Salesforce Administrator

1. **As an Admin**, I want to create custom objects and relationships so that property, tenant, lease, and payment data are correctly structured.
2. **As an Admin**, I want to configure validation rules and approvals so that business rules are automatically enforced.

## DATA FLOW DIAGRAMS & USER STORIES

3. **As an Admin**, I want to manage user access and permissions so that only authorized users can view or edit data.
- 

### ◆ Property Manager / Staff

4. **As a Property Manager**, I want to add property records so I can maintain an inventory of all available units.
  5. **As a Property Manager**, I want to assign tenants to properties and create leases so that tenant agreements are recorded.
  6. **As a Property Manager**, I want to approve lease requests so that only valid and verified leases go live.
  7. **As a Property Manager**, I want to view dashboards to monitor lease statuses, payment trends, and tenant activity.
- 

### ◆ Tenant (Future Scope)

8. **As a Tenant**, I want to receive rent reminders so I don't miss due payments.
  9. **As a Tenant**, I want to receive notifications for lease approvals or rejections.
  10. *(Future)* **As a Tenant**, I want to log in to a self-service portal so I can view my lease and payment history.
- 

### ◆ Developer

11. **As a Developer**, I want to write Apex triggers and classes to automate duplicate checks and rent reminders.
12. **As a Developer**, I want to ensure flows and handlers execute quickly so that the system stays performant.

## Conclusion

The process flow designed for the Lease Management System ensures a **structured, efficient, and error-free path** from lease creation to rent collection. By leveraging Salesforce's automation tools—such as validation rules, approval workflows, Apex triggers, and scheduled jobs—the system handles complex business operations with minimal manual intervention.