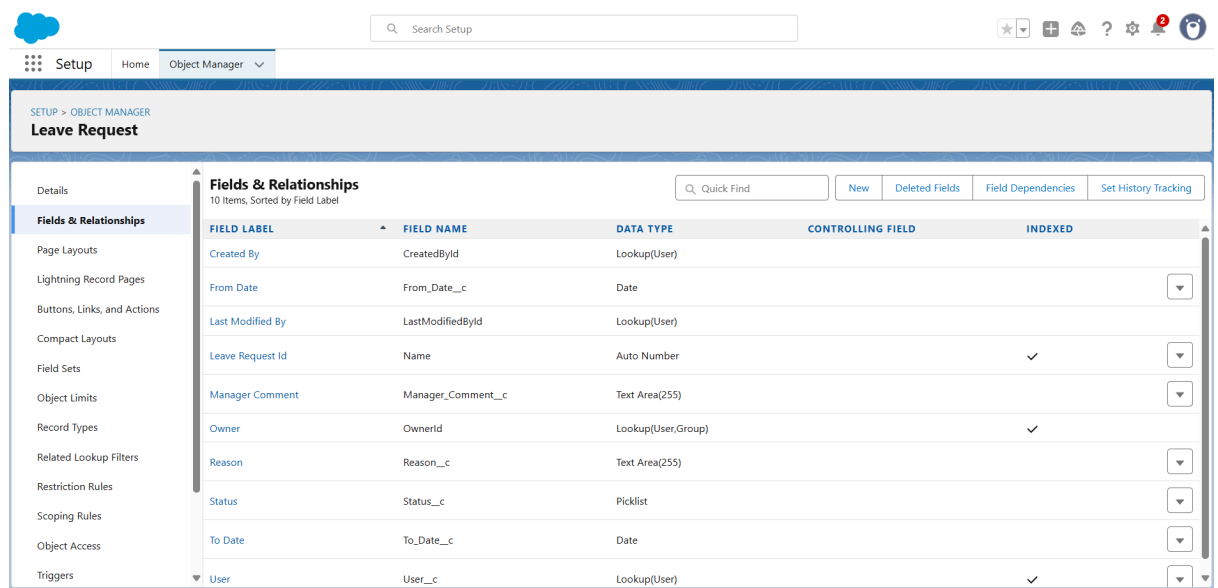# Phase 3: Data Modeling & Relationships – Leave Tracking App

1. Standard & Custom Objects

- **Standard Objects**:
    - **User** → Represents employees, managers, and HR/Admin.
- **Custom Objects**:
    - **Leave Request** → Stores employee leave applications.
    - **Leave Balance** → Tracks leave allocation, taken, and remaining.
    - **Holiday Calendar** *(optional)* → Stores company/public holidays.

2. Fields

- **Leave Request**: Employee (Lookup to User), Leave Type, Start Date, End Date, Total Days (Formula), Status, Reason.
- **Leave Balance**: Employee (Lookup to User), Leave Type, Allocated, Taken, Remaining Balance (Formula).
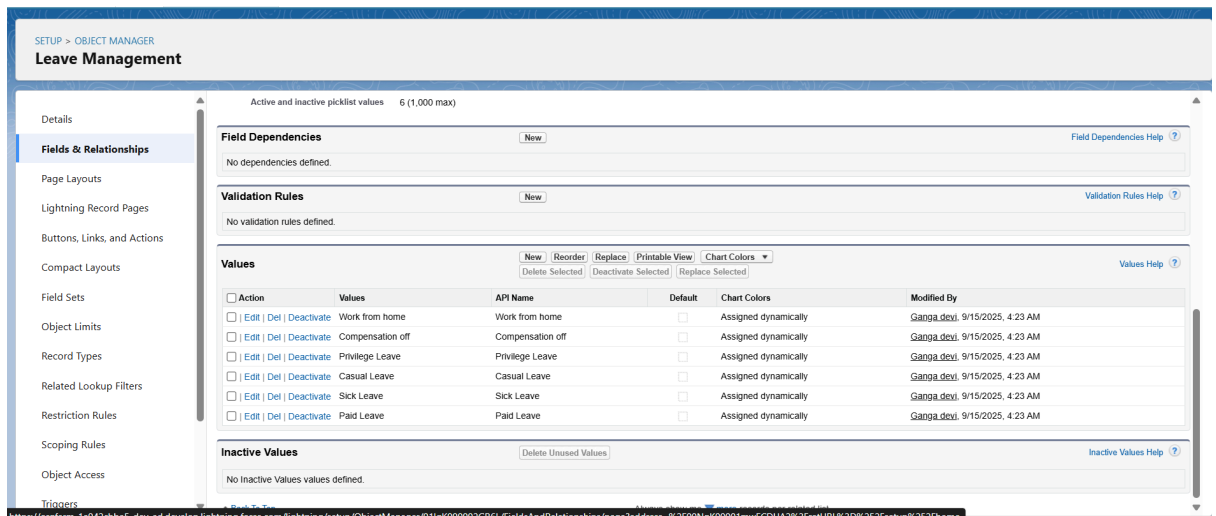- **Holiday Calendar**: Holiday Name, Holiday Date, Type.

3. Record Types

- **Leave Request Record Types**:
    - Sick Leave
    - Casual Leave
    - Earned Leave
    - Special Leave(ex:Maternity,Paternity)

○ Work from home

- Record Types allow different **picklist values, page layouts, and approval processes** for each leave type.

4. Page Layouts

- **Employee Layout**: Simple form for applying leave.
- **Manager Layout**: Includes approval section and team view.
- **HR/Admin Layout**: Full access, including balance adjustment fields.

5. Compact Layouts

- For **Leave Request** (Mobile / Highlights Panel):
  - Employee, Leave Type, Start Date, End Date, Status.
- For **Leave Balance**:
  - Employee, Leave Type, Remaining Balance.

6. Schema Builder

- Use **Schema Builder** to:

  - Visually design object relationships (User ↔ Leave Request ↔ Leave Balance).
  - Add fields & relationships quickly.
  - Check dependencies across objects.

7. Lookup vs Master-Detail vs Hierarchical

- **Lookup Relationship**:

- ○ Used between **Leave Request ↔ User** and **Leave Balance ↔ User** (loose coupling).
- ● **Master-Detail Relationship**:
  - ○ Could be used between **Leave Balance ↔ Leave Request** if you want cascading delete and roll-up summaries.
- ● **Hierarchical Relationship** (only on User):
  - ○ Can define Manager → Employee relationship for approvals.

8. Junction Objects

- ● Useful if you want **many-to-many relationships**, e.g.:
  - ○ **Employee ↔ Project ↔ Leave Requests** (if leaves are project-specific).
- ● For basic Leave Management, junction objects are **not mandatory**.

9. External Objects *(Optional)*

- ● If company holidays or employee data is stored in an **external HR system (ERP/Payroll)**, use **External Objects** (via Salesforce Connect).
- ● Allows referencing external data in real-time without storing in Salesforce.

Phase 3 Outcome

- ● A **complete data structure** for Leave Management is defined.
- ● **Standard & Custom Objects** ensure flexibility and scalability.
- ● **Record Types & Page Layouts** provide tailored experiences for employees, managers, and HR.
- ● **Schema Builder** helps visualize and maintain relationships.
- ● Clear use of **Lookup vs Master-Detail** ensures proper data integrity.
- ● Future scalability supported with **Junction Objects & External Objects** if business expands.