

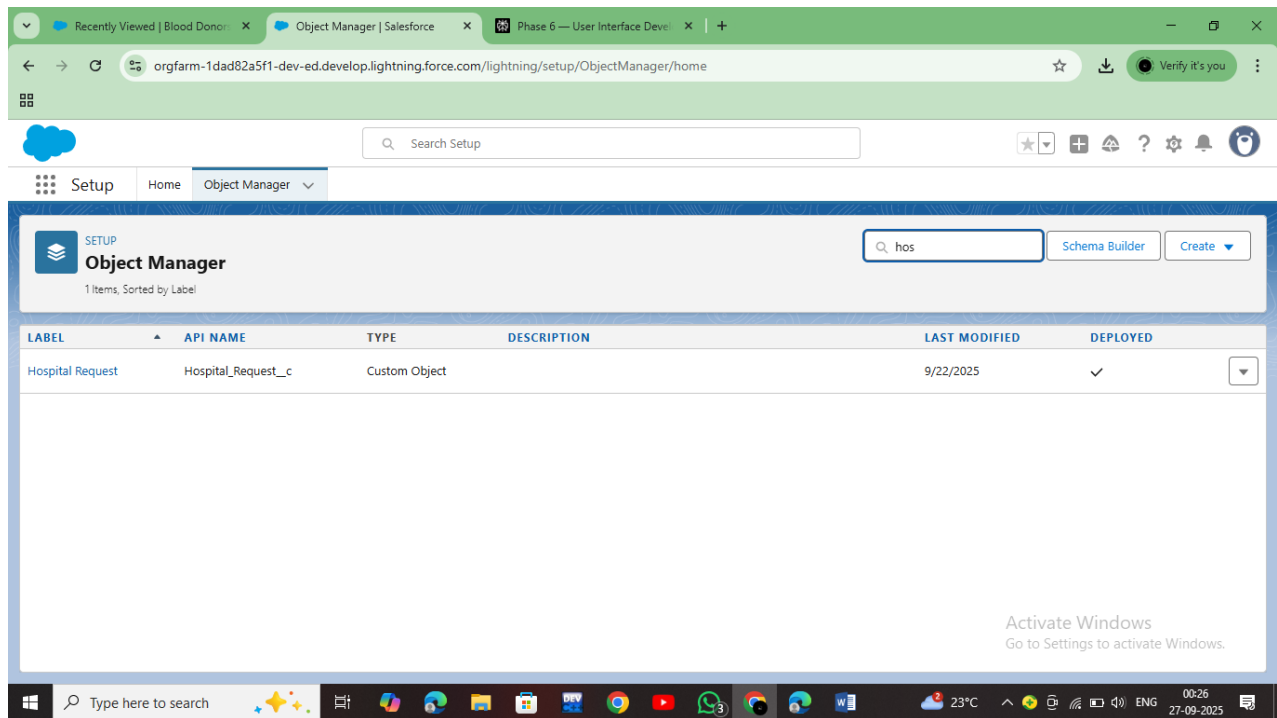
# Phase 3: Data Modeling & Relationships

## 1. Standard & Custom Objects

- Created 4 core custom objects:
  - **Blood Donor:** Individual donor information.
  - **Blood Request:** Internal departmental requests.
  - **Blood Inventory:** Available blood units and stock.
  - **Hospital Request:** External hospital blood requests.

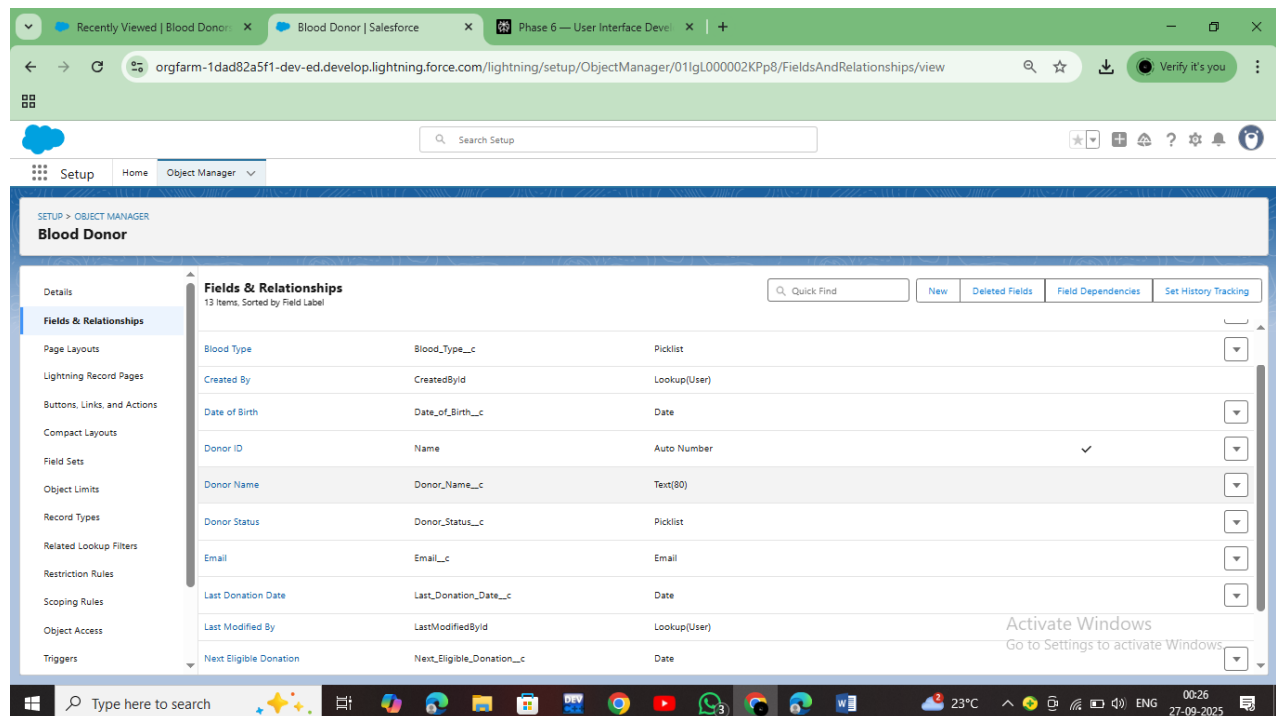
The screenshot displays the Salesforce Object Manager interface in a web browser. The browser's address bar shows the URL: `orgfarm-1dad82a5f1-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/home`. The Salesforce header includes the 'Setup' menu, a search bar, and navigation links for 'Schema Builder' and 'Create'. The main content area is titled 'Object Manager' and shows a list of three custom objects, sorted by label. The objects are 'Blood Donor', 'Blood Inventory', and 'Blood Request', all of which are 'Custom Object' type and were last modified on '9/22/2025'. Each object has a 'Deployed' status of 'Yes' (indicated by a checkmark) and a dropdown menu for further actions.

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Blood Donor	Blood_Donor__c	Custom Object		9/22/2025	✓
Blood Inventory	Blood_Inventory__c	Custom Object		9/22/2025	✓
Blood Request	Blood_Request__c	Custom Object		9/22/2025	✓



## 2. Fields

- **Blood Donor:** Donor Name, Blood Type (A+/A-/B+/B-/AB+/AB-/O+/O-), Phone, Email, DOB, Last Donation Date, Status, Address.



- **Blood Request:** Hospital Name, Blood Type Required, Units Required, Priority (Emergency/High/Medium/Low), Status, Request Date, Required By Date, Contact Person, Contact Phone.

The screenshot shows the Salesforce Object Manager interface for the 'Blood Request' object. The left sidebar contains a navigation menu with options: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Restriction Rules, and Scoping Rules. The main content area is titled 'Blood Request' and shows 'Fields & Relationships' with 15 items. The table lists the following fields:

Field Label	Field Name	Data Type	Controlling Field	Indexed
Blood Inventory	Blood_Inventory__c	Lookup(Blood Inventory)		✓
Blood Type Required	Blood_Type_Required__c	Picklist		
Contact Person	Contact_Person__c	Text(80)		
Contact Phone	Contact_Phone__c	Phone		
Created By	CreatedById	Lookup(User)		
Donor	Donor__c	Lookup(Blood Donor)		✓
Hospital Name	Hospital_Name__c	Text(80)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		

An 'Activate Windows' watermark is visible in the bottom right corner of the main content area.

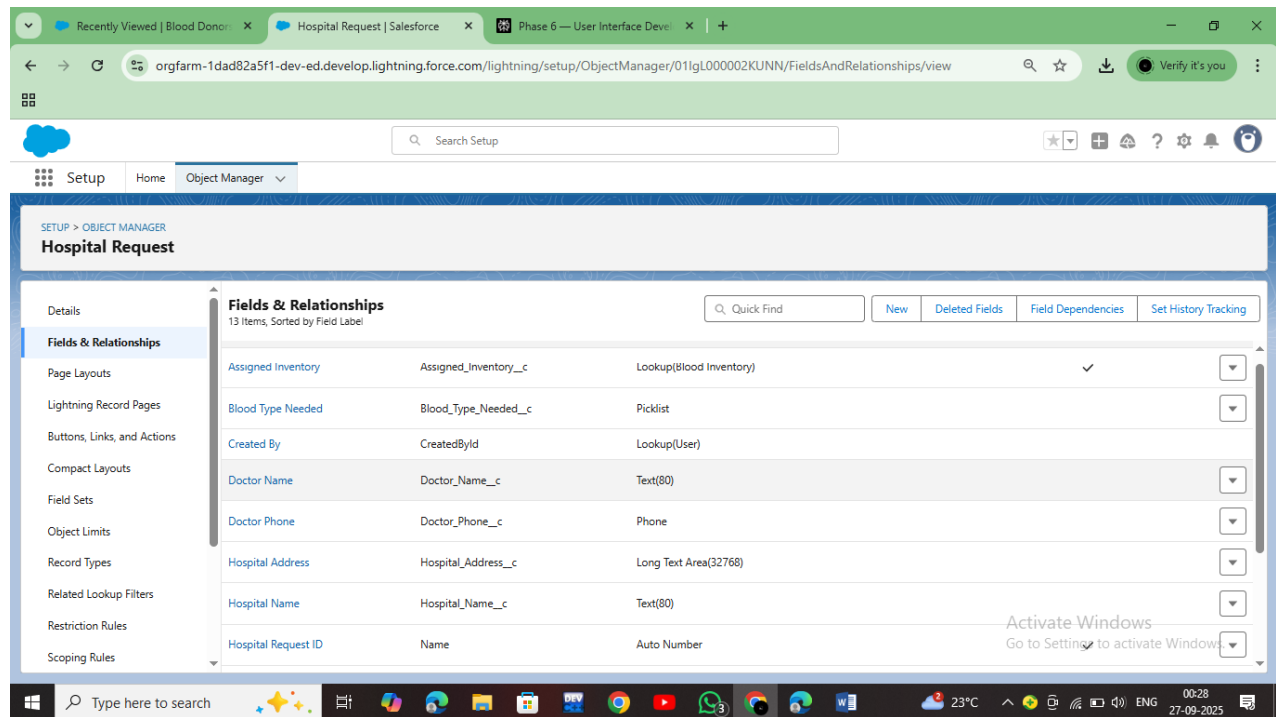
- **Blood Inventory:** Blood Type, Units Available, Location, Last Updated, Status (In Stock/Low Stock/Out of Stock/Reserved).

The screenshot shows the Salesforce Object Manager interface for the 'Blood Inventory' object. The left sidebar contains a navigation menu with options: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Restriction Rules, and Scoping Rules. The main content area is titled 'Blood Inventory' and shows 'Fields & Relationships' with 8 items. The table lists the following fields:

Field Label	Field Name	Data Type	Controlling Field	Indexed
Blood Type	Blood_Type__c	Picklist		
Created By	CreatedById	Lookup(User)		
Inventory ID	Name	Auto Number		✓
Last Modified By	LastModifiedById	Lookup(User)		
Last Updated	Last_Updated__c	Date/Time		
Location	Location__c	Text(80)		
Owner	OwnerId	Lookup(User,Group)		
Units Available	Units_Available__c	Number(4, 0)		

An 'Activate Windows' watermark is visible in the bottom right corner of the main content area.

- **Hospital Request:** Hospital Name, Address, Blood Type Needed, Units Requested, Urgency Level (Critical/High/Normal), Status, Doctor Name, Doctor Phone.



### 3. Record Types

- Current: Single record types for simplicity.
- Future: Multiple record types planned (Regular Donor, VIP Donor, Emergency Request, Routine Request).

### 4. Page Layouts

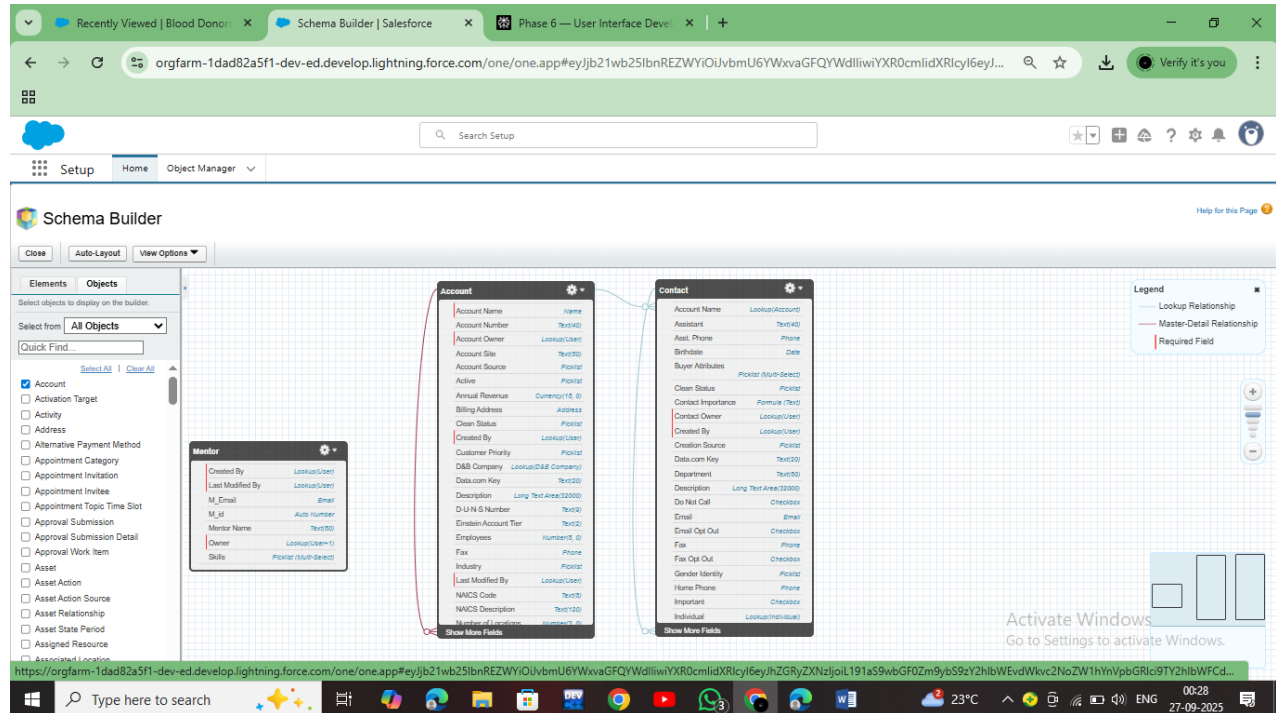
- Current: Default layouts with all custom fields.
- Future: Role-specific layouts for optimized workflows.

### 5. Compact Layouts

- Current: System-generated layouts.
- Future: Custom compact layouts for mobile optimization.

## 6. Schema Builder

- Used for visual verification of object relationships.
- Confirmed proper data flow between all four objects.



## 7. Lookup vs Master-Detail vs Hierarchical Relationships

- Blood Request → Blood Donor (Lookup relationship): Supports multiple requests per donor.
- Blood Request → Blood Inventory (Lookup): Links requests to blood stock.
- Hospital Request → Blood Inventory (Lookup): Allocates inventory to hospitals.
- Avoided Master-Detail relationships to preserve historical data integrity.

## 8. Junction Objects

- None implemented currently; direct one-to-many relationships used.
- Future plans to implement junction objects for:
  - Blood Donors ↔ Blood Drives
  - Staff ↔ Inventory Allocation

## **9. External Objects**

- None implemented currently.
- Future plans to integrate with:
  - Hospital systems
  - Government health databases
  - Lab systems
  - Regional blood bank networks