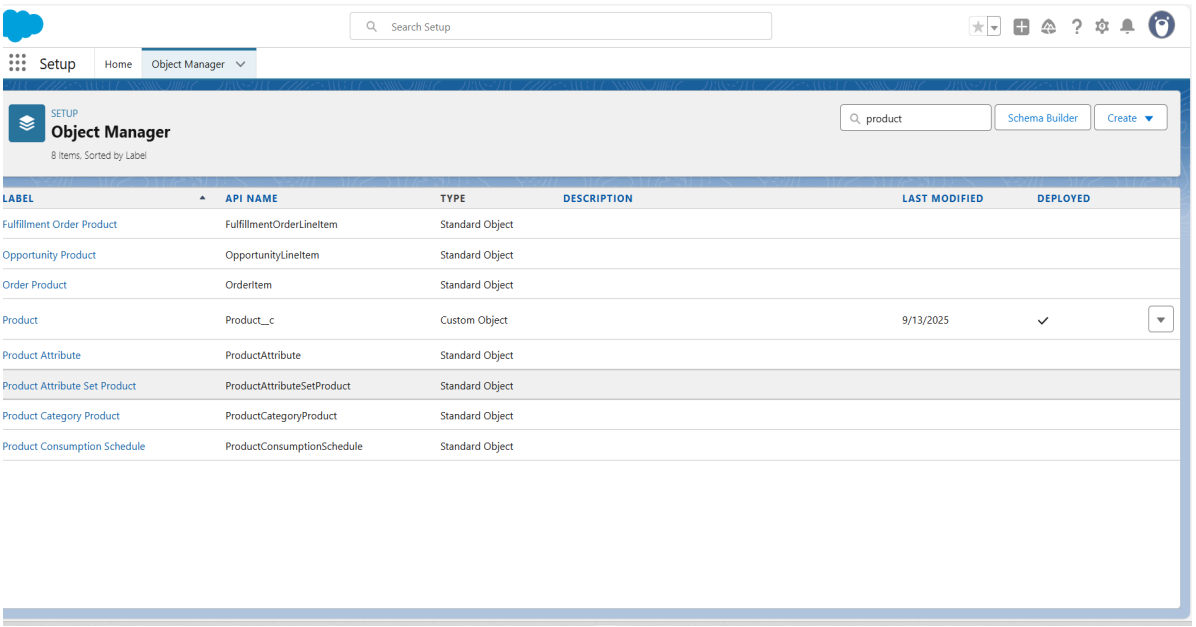
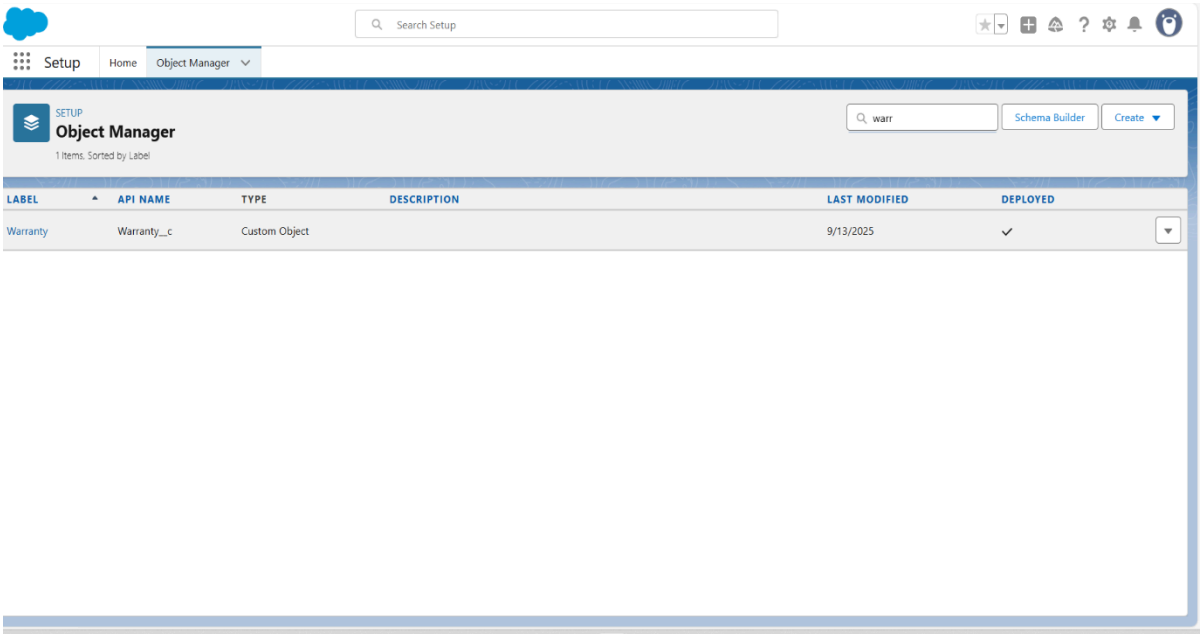
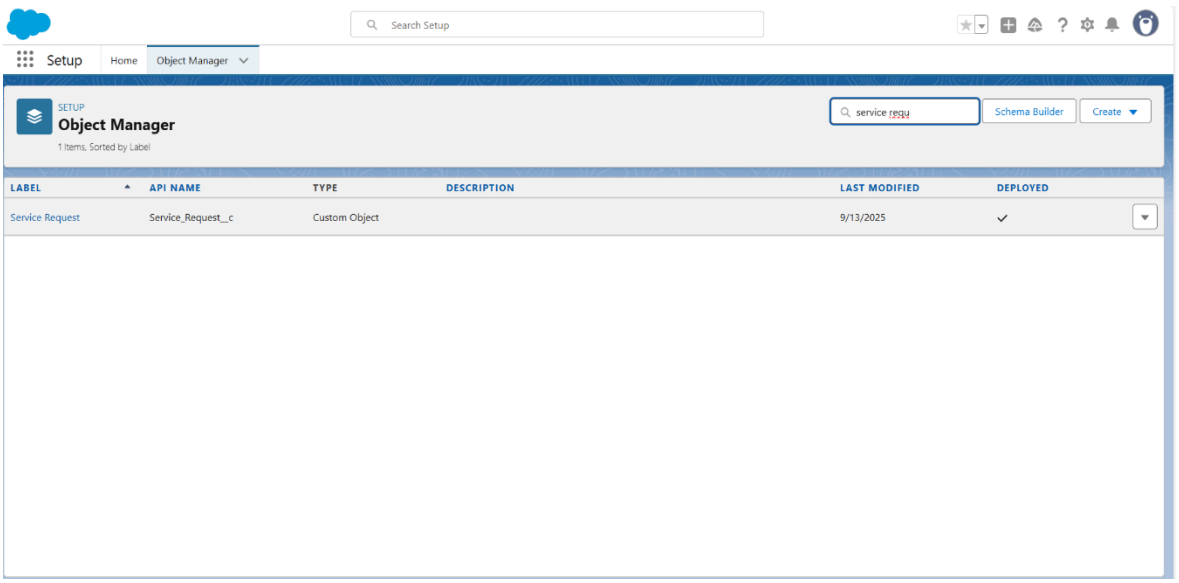
Phase 3: Data Modeling & Relationships

Step 1: Standard & Custom Objects

- Confirm in **Object Manager** that you have:
    - Product__c
    - Warranty__c
    - Service_Request__c
- (You already created these ✅).





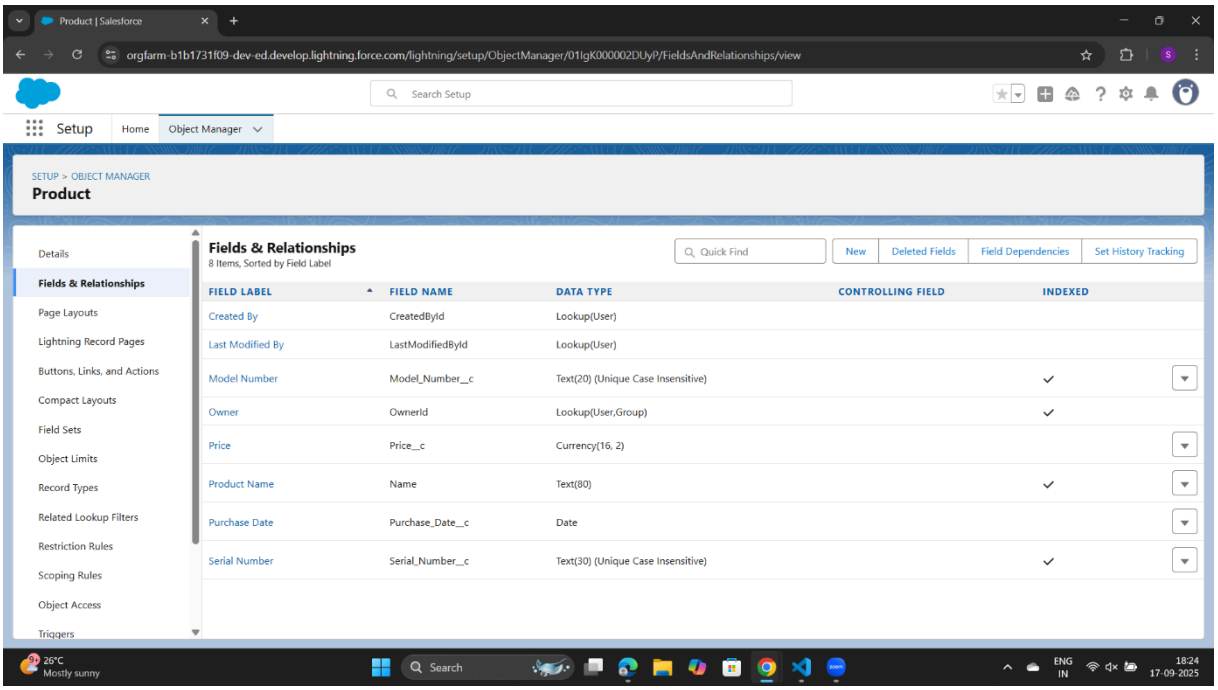


❖ Step 2: Fields

Create fields for each object.

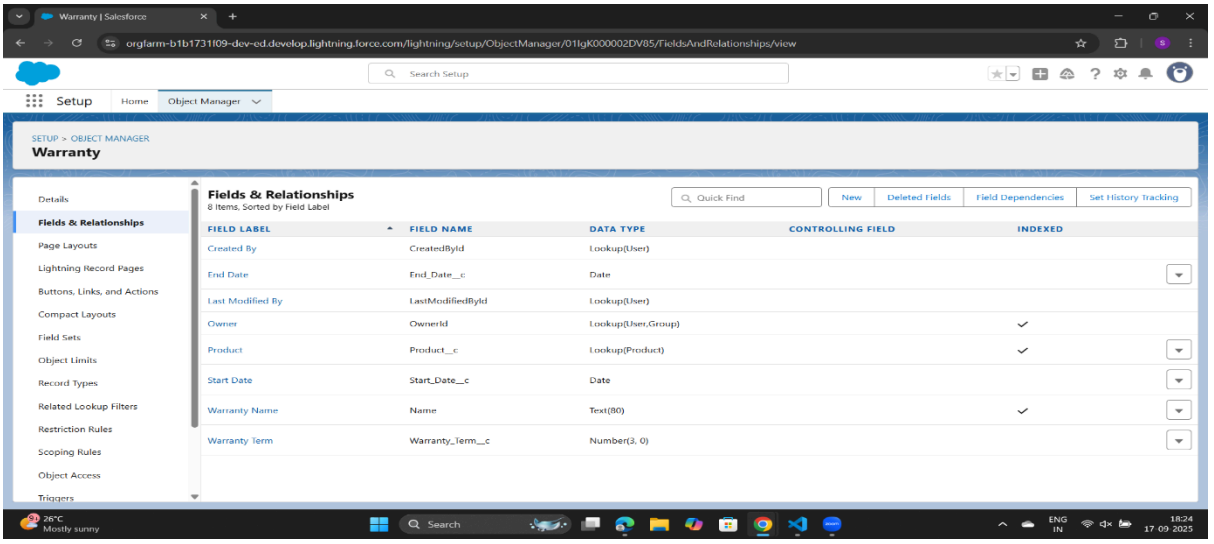
Product__c

- Serial Number → Text(30), Unique ✅
- Model Number → Text(20), Required ✅
- Price → Currency(16,2), Required ✅
- Purchase Date → Date, Required ✅



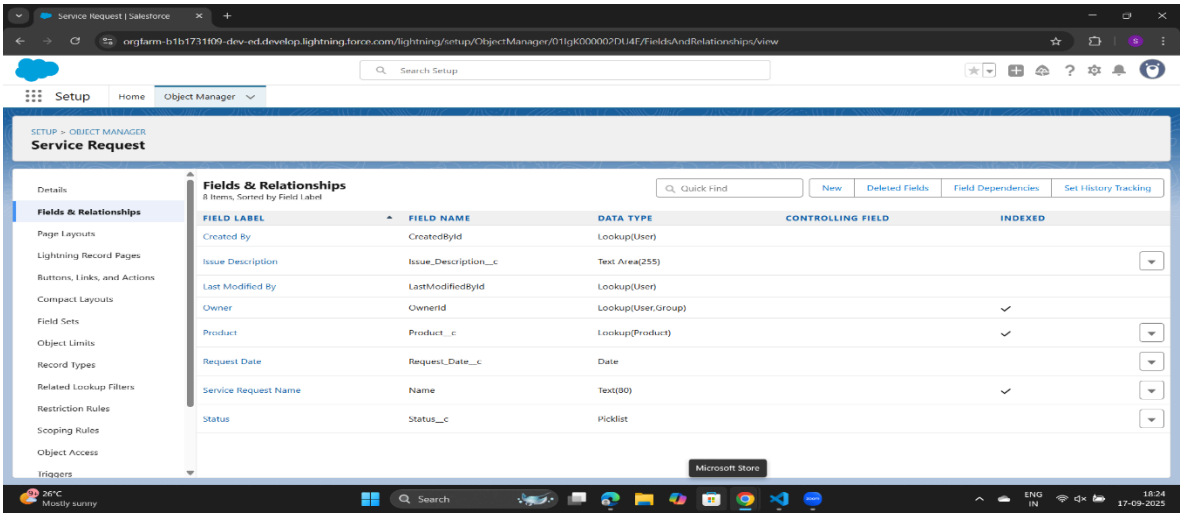
Warranty__c

- Start Date → Date, Required ✅
- End Date → Date, Required ✅
- Warranty Term (Months) → Number(3,0), Required ✅
- Related Product → Lookup(Product__c), Required ✅



Service_Request__c

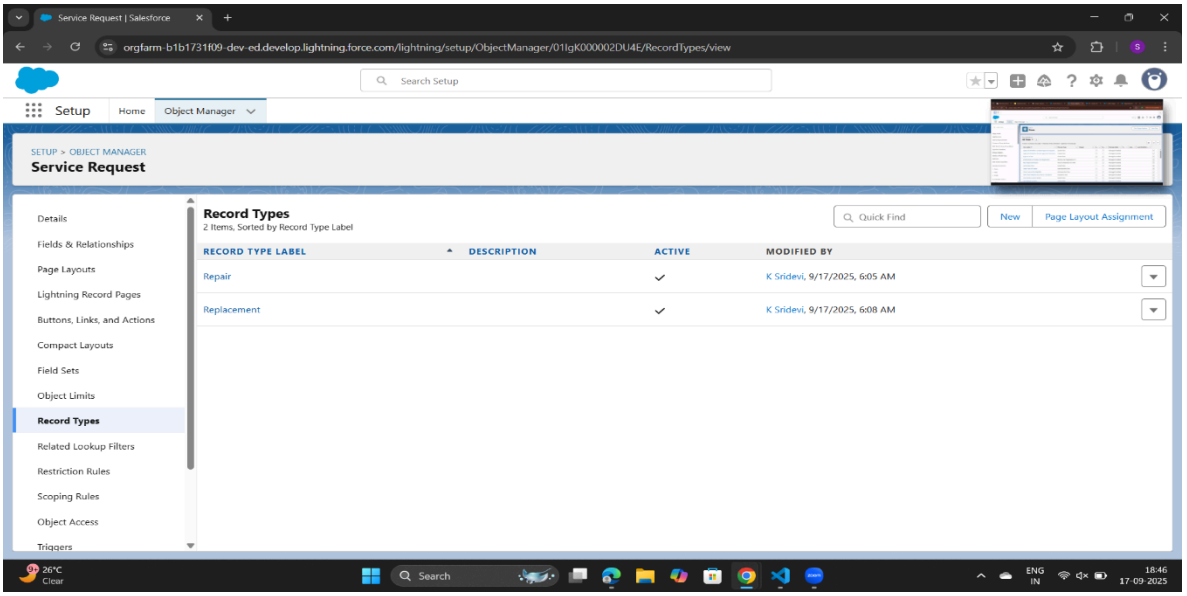
- Request Date → Date, Default = TODAY(), Required ✅
- Status → Picklist (New, In Progress, Completed, Closed), Default = New
- Issue Description → Long Text Area (500)
- Related Product → Lookup(Product__c), Required ✅
- Related Warranty → Lookup(Warranty__c), Required ❌



❖ **Step 3: Record Types**

(Do this only for Service_Request__c).

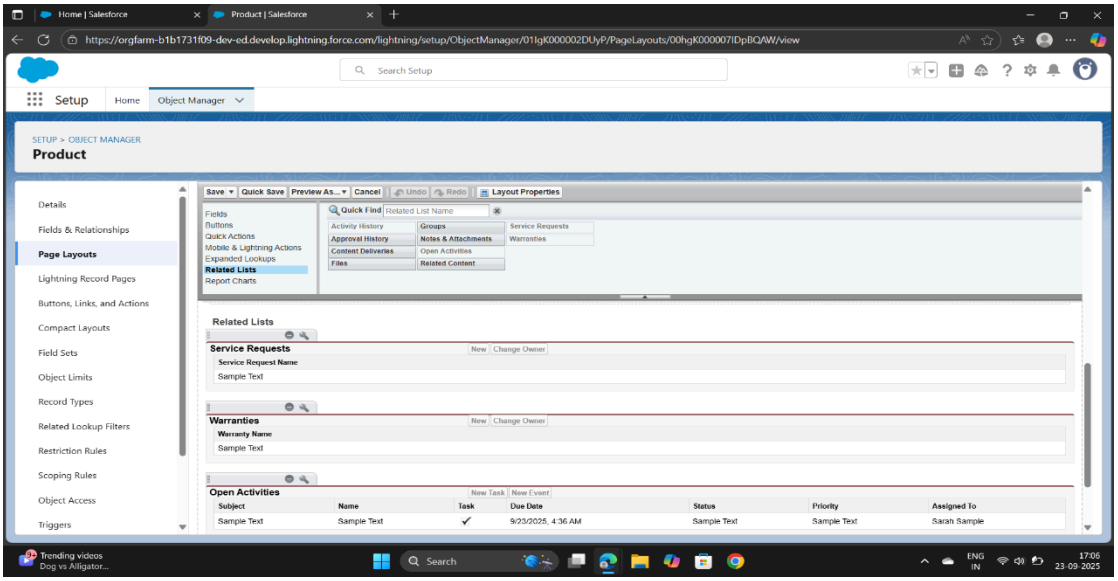
- Create **Repair** record type.
- Create **Replacement** record type.
- Assign to all profiles.
- For both, use the *Service Request Layout* (for now).



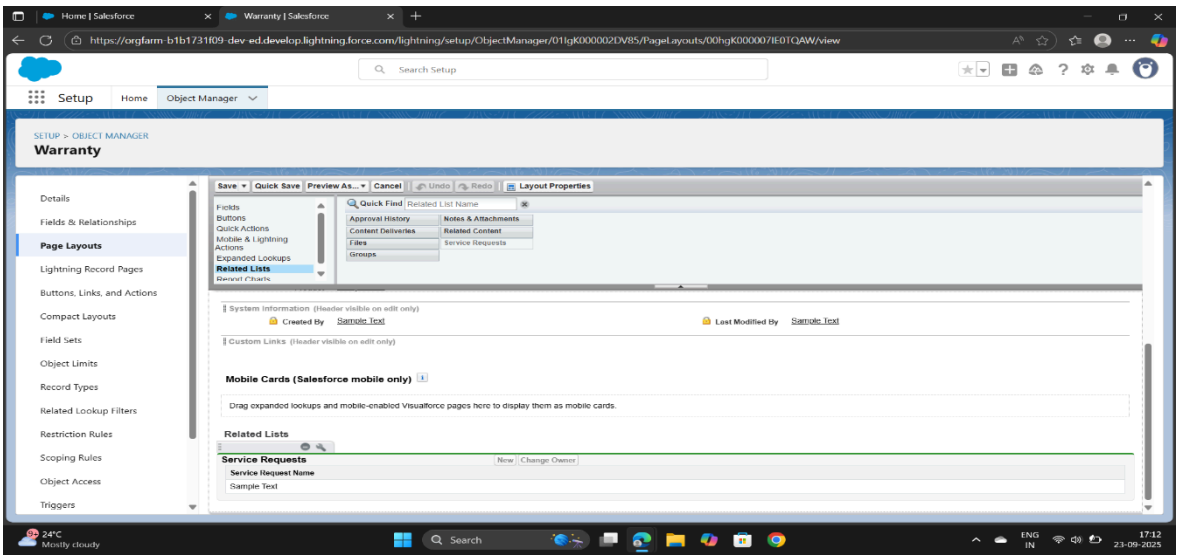
❖ Step 4: Page Layouts

Customize layouts so relationships are visible.

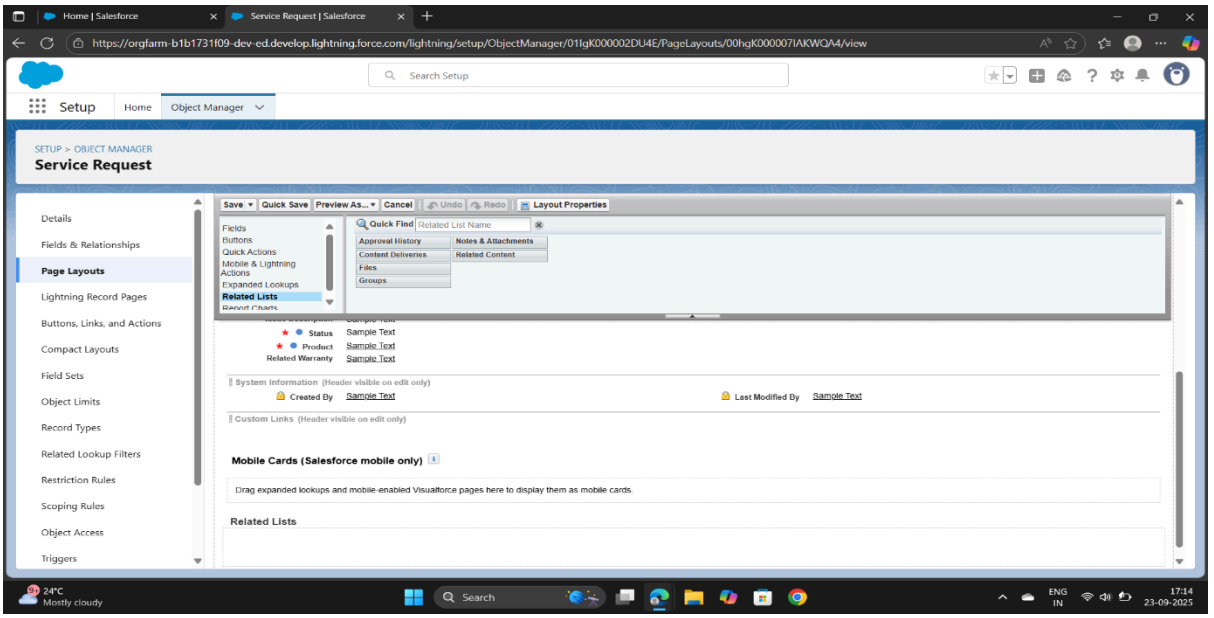
- **Product__c Layout** → add Related Lists: Warranties, Service Requests.



- **Warranty__c Layout** → add Related Product + Service Requests.

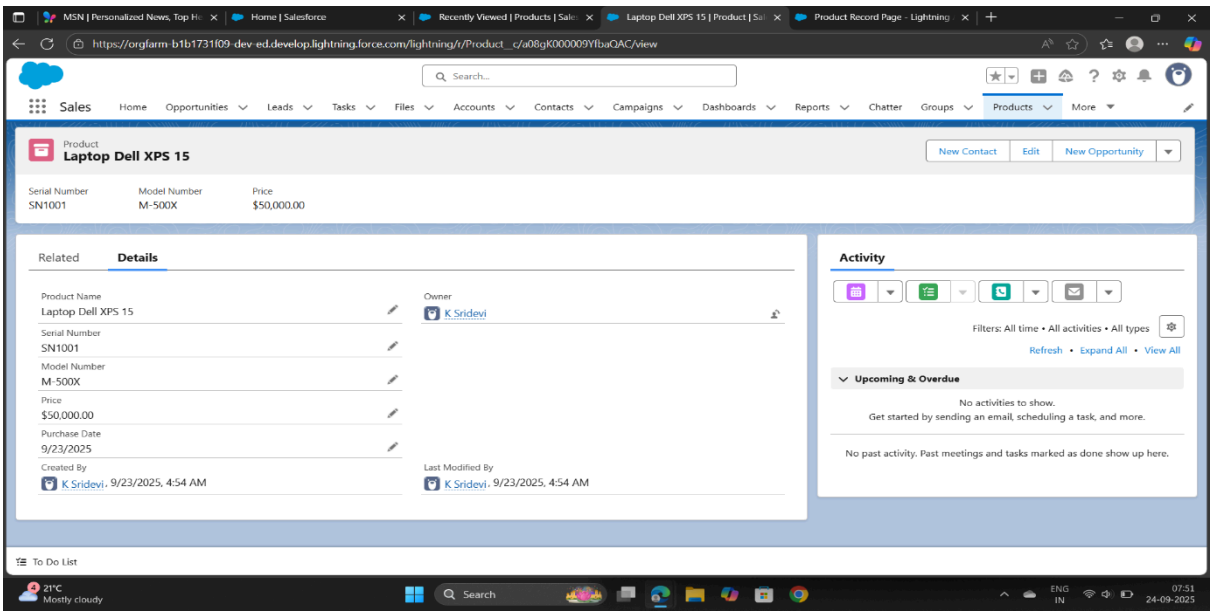


- **Service_Request__c Layout** → add Related Product + Related Warranty.



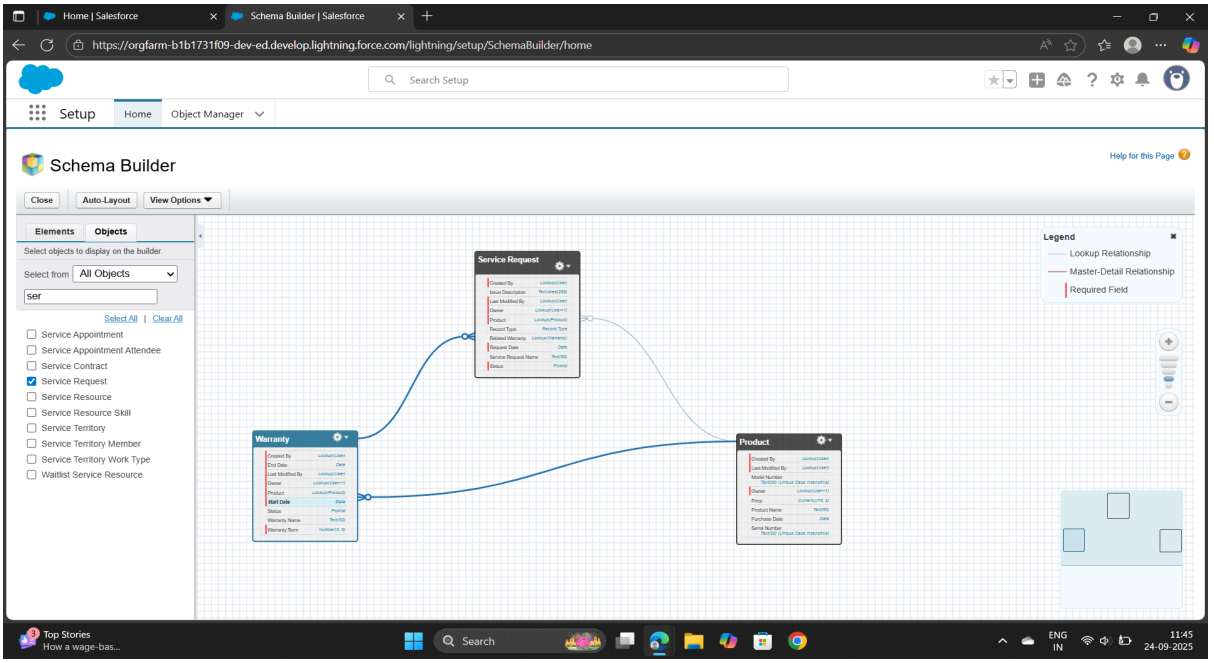
❖ Step 5: Compact Layouts

- For each object, set compact layout fields (these show in Highlights Panel).
- Example:
  - Product: Serial Number, Model Number, Price
  - Warranty: Start Date, End Date, Product
  - Service Request: Status, Request Date, Product



❖ Step 6: Schema Builder

- Go to **Schema Builder**.
- Select your 3 objects (Product, Warranty, Service Request).
- See the relationship lines.



❖ Step 7: Relationships

- Ensure relationships are correct:
  - Product → Warranty (Lookup)
  - Product → Service Request (Lookup)

- Warranty → Service Request (Lookup)

❖ **Step 8 — Junction Objects**

A Junction Object in Salesforce is a custom object with two Master-Detail relationships used to model a many-to-many relationship between two objects.
For example, if a Service Request could apply to multiple Products, and each Product could be linked to multiple Service Requests, then we would create a junction object called Product_Service_Request__c with:

- Master-Detail to Product__c
- Master-Detail to Service_Request__c
- In our Warranty & Service Tracker project, we do not require junction objects because our relationships are **one-to-many**.
- A Product can have many Warranties and Service Requests.
- But each Warranty and Service Request belongs to only one Product.

Hence, junction objects were not created but are explained here for completeness.

❖ **Step 9 — Hierarchical Relationships**

Salesforce also supports a special type of relationship called **Hierarchical Relationship**, which is only available on the User object.
It allows users to be related in a parent-child way, such as showing reporting structures (e.g., Manager → Agent).

In our Warranty & Service Tracker project, hierarchical relationships are **not required** because we are focusing on Products, Warranties, and Service Requests. However, hierarchical relationships are often used in real-life scenarios for approval flows or reporting managers.