

Phase 3 Report: Data Modeling & Relationships

Project: Return Flow – Efficient Reverse Logistics and Return Management System

1. Introduction

Phase 3 focuses on **data modeling and building the core objects and relationships** required for the Return Flow system. A well-structured data model is critical for enabling automation, reporting, and smooth operational workflows. For this project, custom objects, fields, and relationships were designed to manage return requests, refunds, and associated orders efficiently.

2. Objectives

- Identify and create key objects to manage return processes.
 - Establish relationships between objects for data integrity and seamless navigation.
 - Design fields to capture essential data for return requests, refunds, and approvals.
 - Ensure the data model supports automation and reporting requirements in subsequent phases.
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3. Data Modeling Scenario: Return Request Management

Description: The system must track all return requests initiated by customers, the status of the request, related orders, and refunds. Manual tracking leads to inefficiencies, delays, and inconsistent records.

Solution: Custom objects and fields were created to manage the return lifecycle, including **Return_Request__c**, **Refund__c**, and **Return_Order__c**, with appropriate lookups and relationships to ensure data consistency.

Setup > OBJECT MANAGER

Return Request

Save Quick Save Preview As... Cancel Undo Redo Layout Properties

Quick Find Field Name

Fields

- Buttons
- Quick Actions
- Mobile & Lightning Actions
- Expanded Lookups
- Related Lists
- Report Charts

Section Customer Preferred Resolution

Blank Space Last Modified By Return Reason

Contact Order Return Request Name

Created By Owner Status

Inspections

Inspection Name

Sample Text

Refund Actions

Refund Action Name

Sample Text

Logistics Jobs

Logistics Job Name

Sample Text

Setup > OBJECT MANAGER

Refund Action

Details

Fields & Relationships

8 Items, Sorted by Field Label

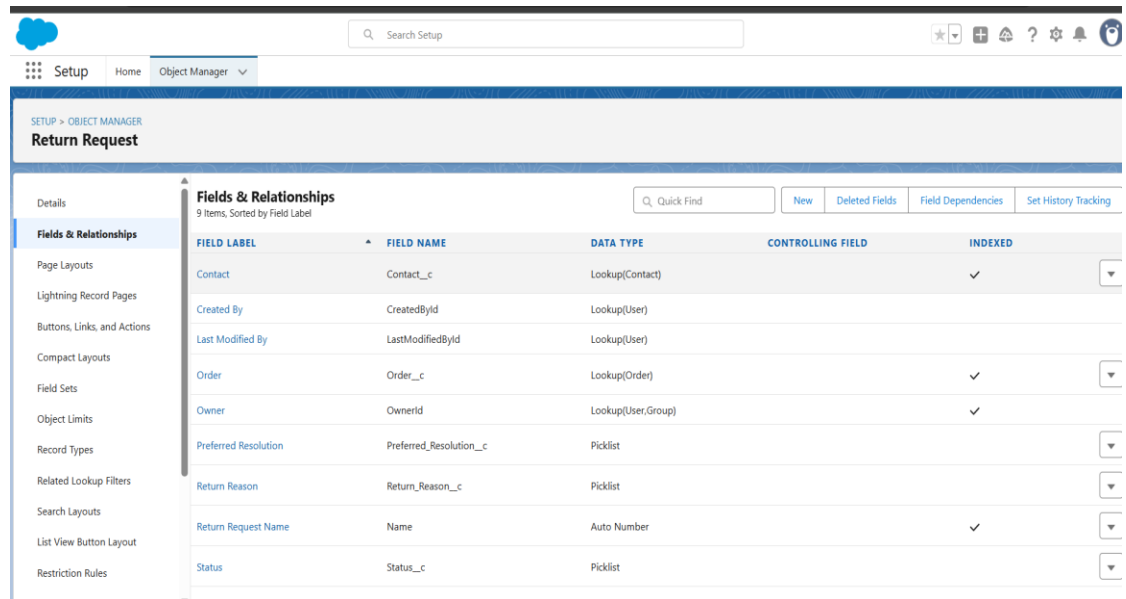
Quick Find New Deleted Fields Field Dependencies Sr

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Payment Method	Payment_Method__c	Picklist		
Refund Action Name	Name	Auto Number		✓

4. Steps Performed

4.1 Creation of Custom Objects

- **Return_Request__c:** Tracks each return request with fields like:
 - Request Number (Auto Number)
 - Customer (Lookup to Contact)
 - Order Reference (Lookup to Order)
 - Status (Picklist: New, Approved, Rejected)
 - Reason for Return (Picklist/Text)



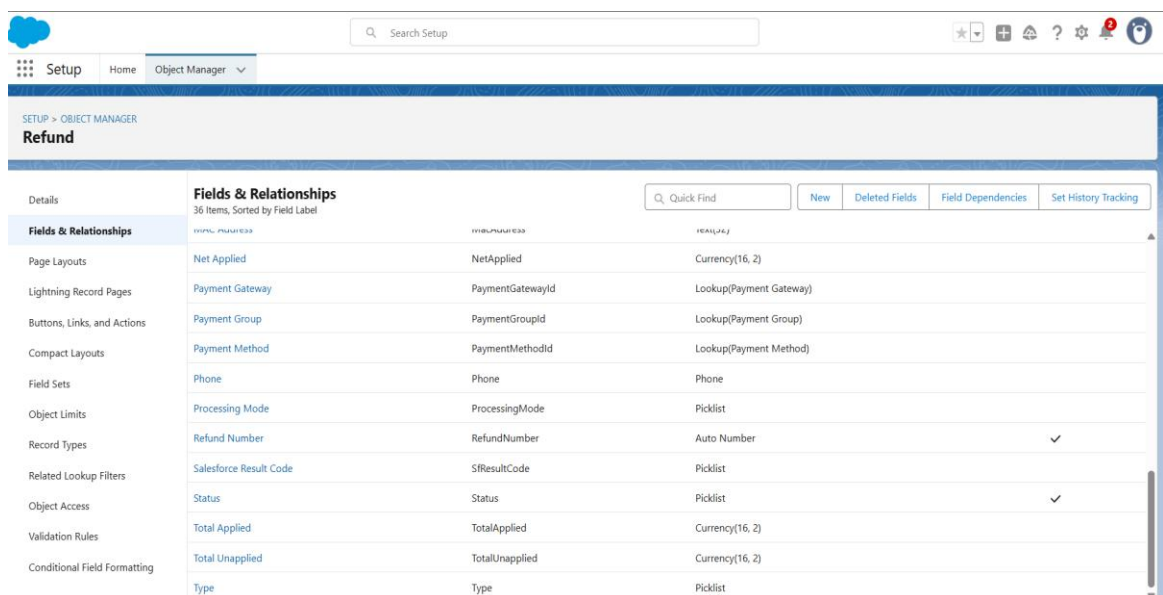
SETUP > OBJECT MANAGER
Return Request

Details | **Fields & Relationships** | 9 Items, Sorted by Field Label

Q Quick Find | New | Deleted Fields | Field Dependencies | Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Contact	Contact__c	Lookup(Contact)		✓
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Order	Order__c	Lookup(Order)		✓
Owner	OwnerId	Lookup(User, Group)		✓
Preferred Resolution	Preferred_Resolution__c	Picklist		
Return Reason	Return_Reason__c	Picklist		
Return Request Name	Name	Auto Number		✓
Status	Status__c	Picklist		

- **Refund__c**: Manages refund details linked to Return Requests, with fields like Refund Amount and Refund Status.



SETUP > OBJECT MANAGER
Refund

Details | **Fields & Relationships** | 36 Items, Sorted by Field Label

Q Quick Find | New | Deleted Fields | Field Dependencies | Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Net Applied	NetApplied	Currency(16, 2)		
Payment Gateway	PaymentGatewayId	Lookup(Payment Gateway)		
Payment Group	PaymentGroupId	Lookup(Payment Group)		
Payment Method	PaymentMethodId	Lookup(Payment Method)		
Phone	Phone	Phone		
Processing Mode	ProcessingMode	Picklist		
Refund Number	RefundNumber	Auto Number		✓
Salesforce Result Code	SfResultCode	Picklist		
Status	Status	Picklist		✓
Total Applied	TotalApplied	Currency(16, 2)		
Total Unapplied	TotalUnapplied	Currency(16, 2)		
Type	Type	Picklist		

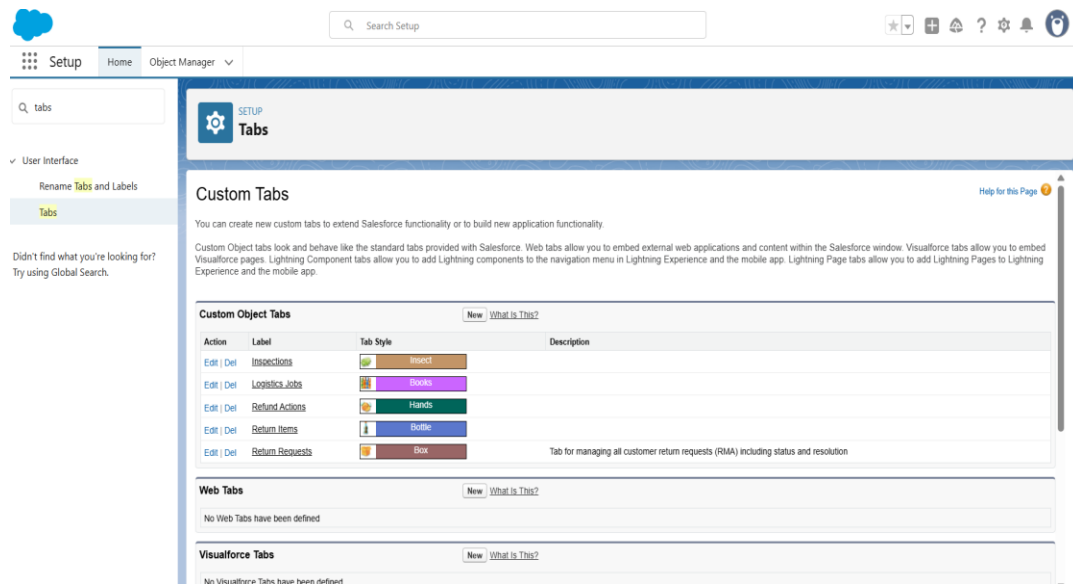
- **Return_Order__c**: Tracks return shipments and logistics details.

4.2 Relationships Between Objects

- **Return_Request** → **Refund**: One-to-One / Lookup
- **Return_Request** → **Order**: Lookup to ensure connection to the original order
- **Return_Request** → **Customer**: Lookup to Contact to capture the requester
- **Return_Order** → **Return_Request**: Lookup to track shipments for each return request

4.3 Field Definitions and Validations

- Picklists for Status, Refund Status, and Reason for Return ensure consistent data entry.
- Auto Number fields for Request Number and Refund ID provide unique identifiers.
- Lookup filters ensure that only valid related records can be selected, e.g., only active Orders.



5. Testing and Verification

- Sample records were created for Return Requests, Refunds, and Return Orders.
- Relationships were verified by checking that Return Requests correctly reference Orders and Customers.
- Test data confirmed that refunds could be linked to return requests and updates propagate correctly.

6. Expected Outcomes

- **Data Integrity:** Ensures relationships between return requests, orders, and refunds are maintained.
- **Consistent Recordkeeping:** Standardized picklists and field types reduce data entry errors.

- **Foundation for Automation:** Supports Flow and other automation in Phase 4.
 - **Enhanced Reporting:** Enables tracking of returns, refunds, and shipment status for analytics.
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7. Conclusion

Phase 3 successfully established the core **data model and relationships** for the Return Flow system. By creating custom objects, fields, and relationships, the system is now ready for **business process automation** in Phase 4. The structured model ensures efficient tracking of returns, refunds, and related orders, forming a solid foundation for advanced flows and reporting.