Phase 3 Report: Data Modeling & Relationships

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

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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.

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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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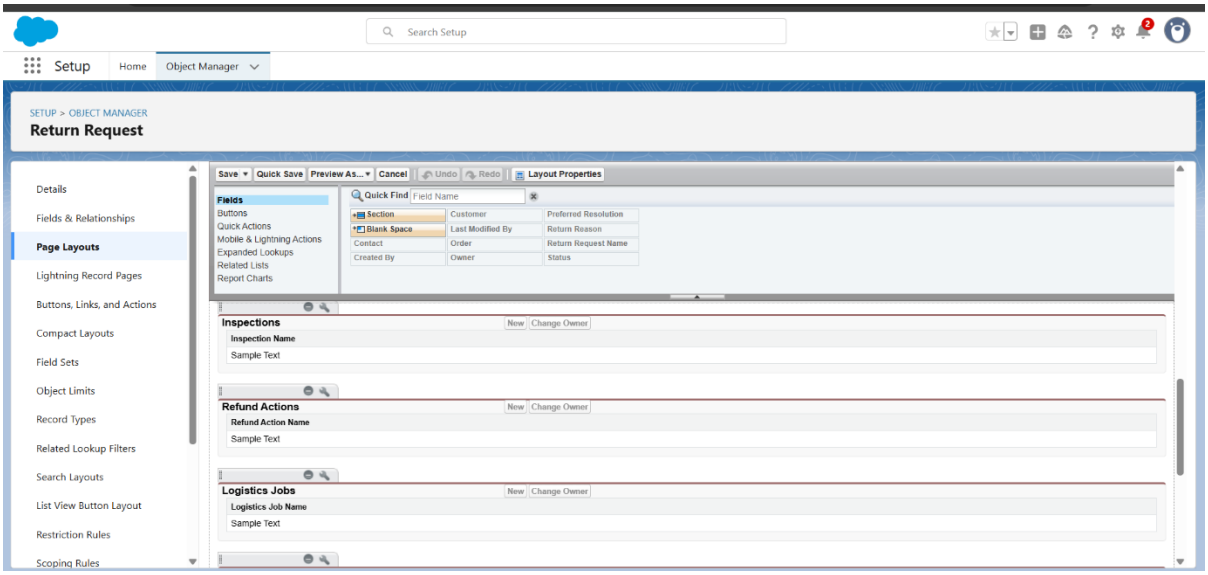
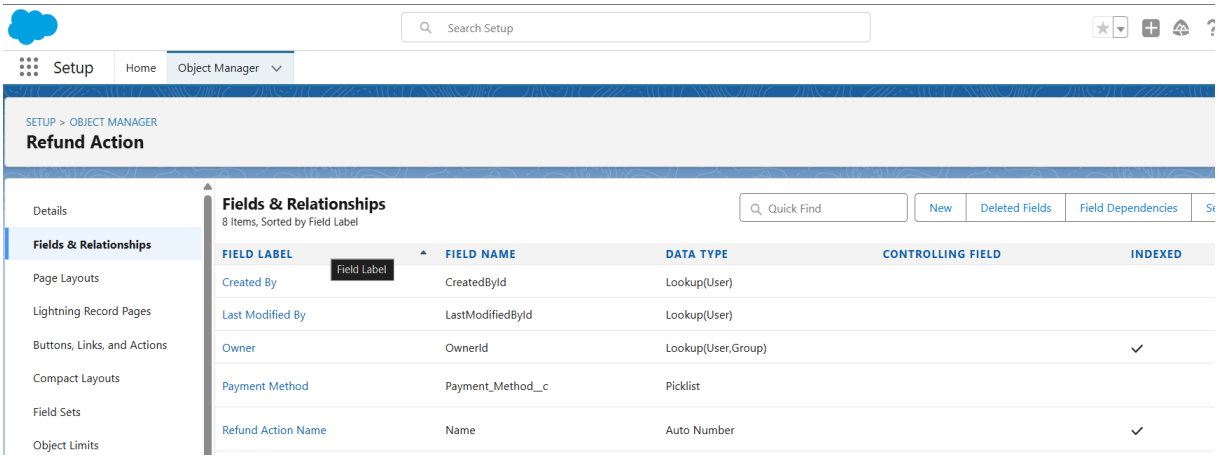
3. Data Modeling Scenario: Return Request Management

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.





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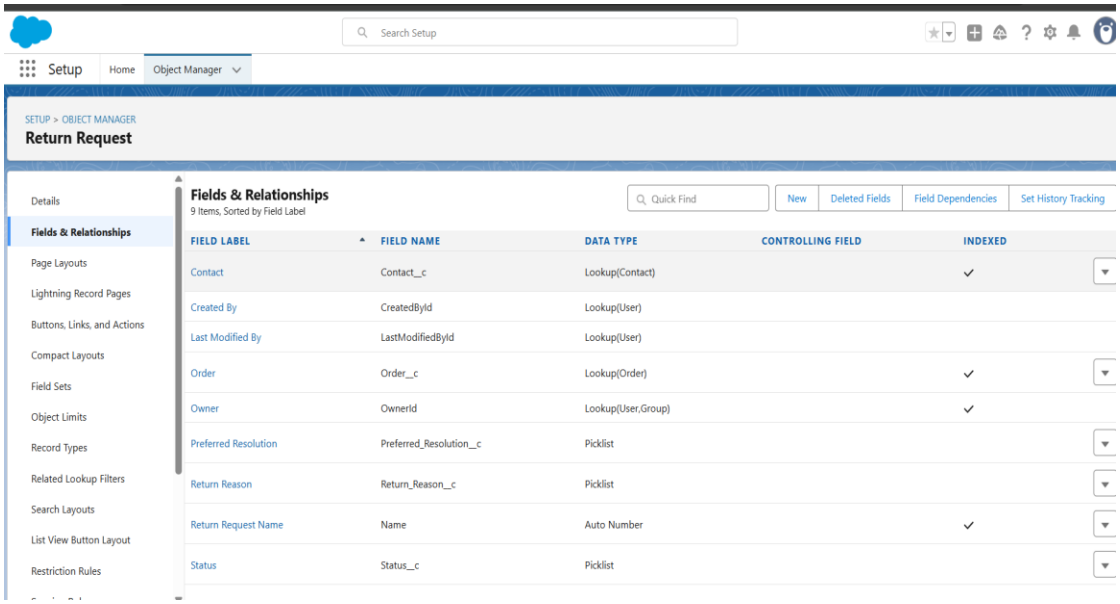
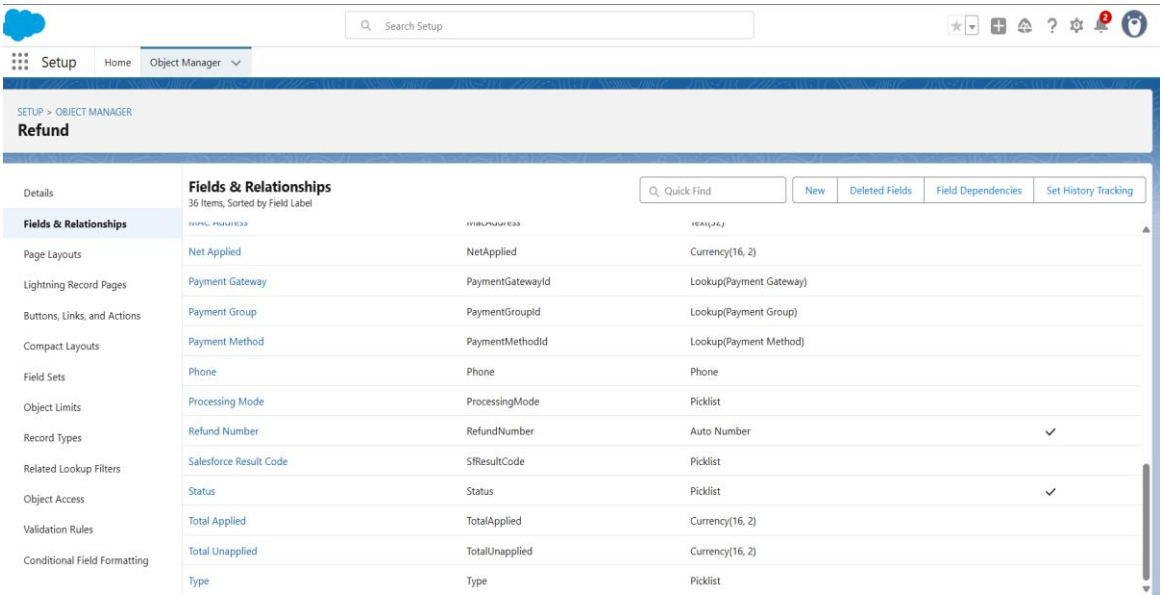
4. Steps Performed

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)



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



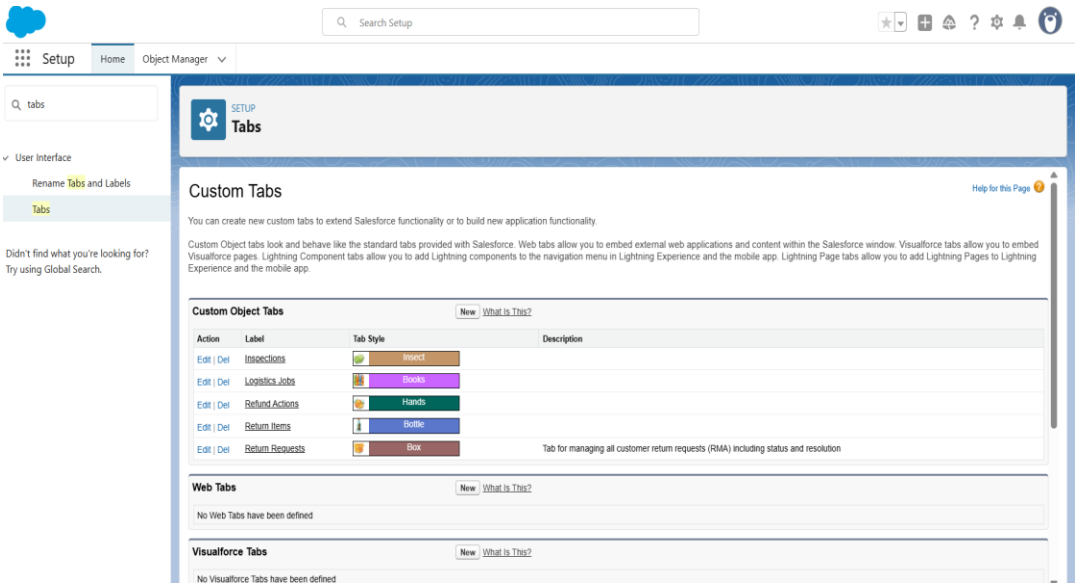
- **Return_Order__c**: Tracks return shipments and logistics details.

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.



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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.

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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.