SALESFORCE PROJECT

PROJECT TITLE: AI-Powered Smart Case Routing
PROBLEM: Customer support teams face challenges in efficiently prioritizing and routing cases. Manual triage causes delays, dissatisfied customers, and poor SLA compliance.

Phase 3: Data Modeling & Relationships

A. Standard & Custom Objects

Object	Type	Description
Case	Standard	Core object for customer support interactions. Enhanced with Sentiment__c & Priority_Level__c.
User	Standard	Represents support agents, managers, admins.
QueueSobject	Standard	Used for case assignment to Senior Agent Queue / Junior Agent Queue.
Sentiment_Log__c	Custom	(Optional) Stores API response details for audit/debugging.
Escalation_History__c	Custom	(Optional) Tracks escalated case events for SLA reporting.

B. Fields per Object

Case (Standard)

Sentiment__c (Picklist: Positive, Neutral, Negative)

Priority_Level__c (Picklist: High, Medium, Low)

Escalated__c (Checkbox: True if routed to Senior Queue)

Last_Sentiment_Update__c (Date/Time: last API update)

Sentiment_Log__c (Custom)

Case__c (Lookup → Case)

API_Response__c (Long Text Area)

Confidence_Score__c (Percent)

Analyzed_On__c (Date/Time)

Escalation_History__c (Custom)

Case__c (Lookup → Case)

Escalated_To__c (Lookup → User/Queue)

Escalated_On__c (Date/Time)

C. Record Types

Case

Customer Complaint — Default record type for incoming complaints.

Feedback/Inquiry — Used for positive or neutral customer messages.

Sentiment_Log__c — (Optional) No record types required, single purpose.

D. Page Layouts

Case Layout → Add Sentiment__c, Priority_Level__c, Escalated__c, and related lists (Escalation History, Sentiment Logs).

Sentiment_Log__c Layout → Show API Response, Confidence, Analyzed On.

Escalation_History__c Layout → Show Escalated To, Escalated On.

E. Relationships

Parent Object	Child Object	Relationship Type	Description
Case	Sentiment_Log__c	Lookup	Logs multiple API responses for a case.
Case	Escalation_History__c	Lookup	Track escalation events per case.
User/Queue	Case	Lookup	Assign cases to queues or users.

F. Lookup vs Master-Detail vs Hierarchical Relationships

Type	Use Case	Key Points
Lookup	Case → Sentiment_Log__c, Case → Escalation_History__c	Flexible; logs exist independently of Case.
Master-Detail	Not applied in this project	Would tightly couple logs with Case; avoided for scalability.
Hierarchical	User → User	Used for Manager → Agent visibility in role hierarchy.

G. Schema Builder

Visualized relationships in Salesforce Schema Builder:

Case → Sentiment_Log__c

Case → Escalation_History__c

User/Queue → Case (assignment ownership)