

# SkillSync – Phase 3: Data Modeling & Relationships

**Project Title:** SkillSync- Knowledge and Expertise Management

Phase3 : Data Modeling & Relationships

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## 1. Standard & Custom Objects and Fields

SkillSync uses **only custom objects** (all prefixed with KEM\_). Each object has a clear purpose:

- 1. Employee (KEM\_Employee\_\_c)** – Stores employee profiles with skills, department, role, points, engagement score, and reporting manager.

### Fields:

Role, Department, Skills, Engagement\_Score, Manager (Lookup).

The screenshot shows the Salesforce Object Manager interface for the 'Employee' object. The left sidebar lists various setup options like Page Layouts, Lightning Record Pages, and Field Sets. The main area is titled 'Fields & Relationships' and displays 13 items, sorted by Field Label. The table shows the following fields:

Field Label	Type	Description
Created By	CreatedById	Lookup(User)
Currency	CurrencyIsoCode	Picklist
Department	Department_c	Picklist
Email	Email_c	Email
Employee Name	Name	Text(80)
Engagement_Score	Engagement_Score_c	Number(16, 2)
Last Modified By	LastModifiedById	Lookup(User)
Manager	Manager_c	Lookup(Employee)
Name	Name_c	Text(18)
Owner	OwnerId	Lookup(User,Group)
Points	Points_c	Number(16, 1)
Role	Role_c	Picklist

- 2. Skill (KEM\_Skill\_\_c)** – Stores details of available skills (category, proficiency level, description).

### Fields:

Category, Level, Description.

**Fields & Relationships**  
8 Items, Sorted by Field Label

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Category	Category_c	Picklist		
Created By	CreatedById	Lookup(User)		
Currency	CurrencyIsoCode	Picklist		
Description	Description_c	Text Area(255)		
Last Modified By	LastModifiedById	Lookup(User)		
Level	Level_c	Picklist		
Name	Name	Text(80)		✓
Owner	OwnerId	Lookup(User,Group)		✓

### 3. Project (KEM\_Project\_\_c) – Stores details of projects and required skills.

#### Fields:

Required\_Skills, Assigned\_Employees, Status.

**Fields & Relationships**  
11 Items, Sorted by Field Label

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Assigned_Employees	Assigned_Employees_c	Lookup(Employee)		✓
Created By	CreatedById	Lookup(User)		
Currency	CurrencyIsoCode	Picklist		
Description	Description_c	Text Area(255)		
End_Date	End_Date_c	Date		
Last Modified By	LastModifiedById	Lookup(User)		
Name	Name	Text(80)		✓
Owner	OwnerId	Lookup(User,Group)		✓
Required_Skills	Required_Skills_c	Picklist (Multi-Select)		
Start_Date	Start_Date_c	Date		
Status	Status_c	Picklist		

### 4. Task (KEM\_Task\_\_c) – Sub-unit of a project assigned to employees.

#### Fields:

Project (Lookup), Assigned\_To (Lookup), Due Date, Points.

SETUP > OBJECT MANAGER  
Task

Fields & Relationships					
	FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Page Layouts	Assigned_To	Assigned_To_c	Lookup(Employee)		✓
Lightning Record Pages	Created_By	CreatedById	Lookup(User)		
Buttons, Links, and Actions	Currency	CurrencyIsoCode	Picklist		
Compact Layouts	Description	Description_c	Text Area(255)		
Field Sets	Due_Date	Due_Date_c	Date		
Object Limits	Last_Modified_By	LastModifiedById	Lookup(User)		
Record Types	Owner	OwnerId	Lookup(User,Group)		✓
Related Lookup Filters	Points	Points_c	Number(16, 2)		
Search Layouts	Project	Project_c	Lookup(Project)		
List View Button Layout	Status	Status_c	Picklist		
Restriction Rules	Task_Name	Name	Text(80)		✓
Scoping Rules					
Object Access					
Triggers					

## 5. Mentorship (KEM\_Mentorship\_\_c) – Links mentors and mentees with a skill focus.

### Fields:

Mentor, Mentee, Skill\_Focus, Status, Points.

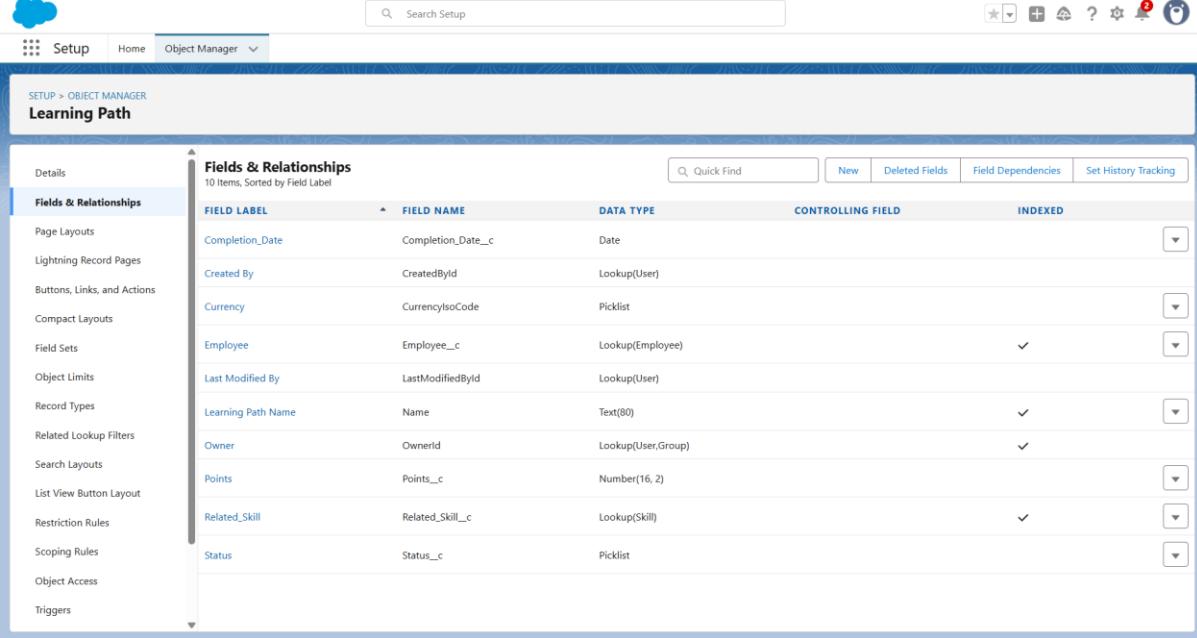
SETUP > OBJECT MANAGER  
Mentorship Opportunity

Fields & Relationships					
	FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Page Layouts	Created_By	CreatedById	Lookup(User)		
Lightning Record Pages	Currency	CurrencyIsoCode	Picklist		
Buttons, Links, and Actions	End_Date	End_Date_c	Date		
Compact Layouts	Last_Modified_By	LastModifiedById	Lookup(User)		
Field Sets	Mentee	Mentee_c	Lookup(Employee)		✓
Object Limits	Mentor	Mentor_c	Lookup(Employee)		✓
Record Types	Mentorship_Opportunity_Name	Name	Text(80)		✓
Related Lookup Filters	Owner	OwnerId	Lookup(User,Group)		✓
Search Layouts	Points	Points_c	Number(16, 2)		
List View Button Layout	Skill	Skill_c	Lookup(Skill)		✓
Restriction Rules	Start_Date	Start_Date_c	Date		
Scoping Rules					
Object Access					
Triggers					

## 6. Learning Path (KEM\_Learning\_Path\_\_c) – Stores training/learning journeys for employees.

## Fields:

Related\_Skill, Employee, Status, Completion\_Date, Points.



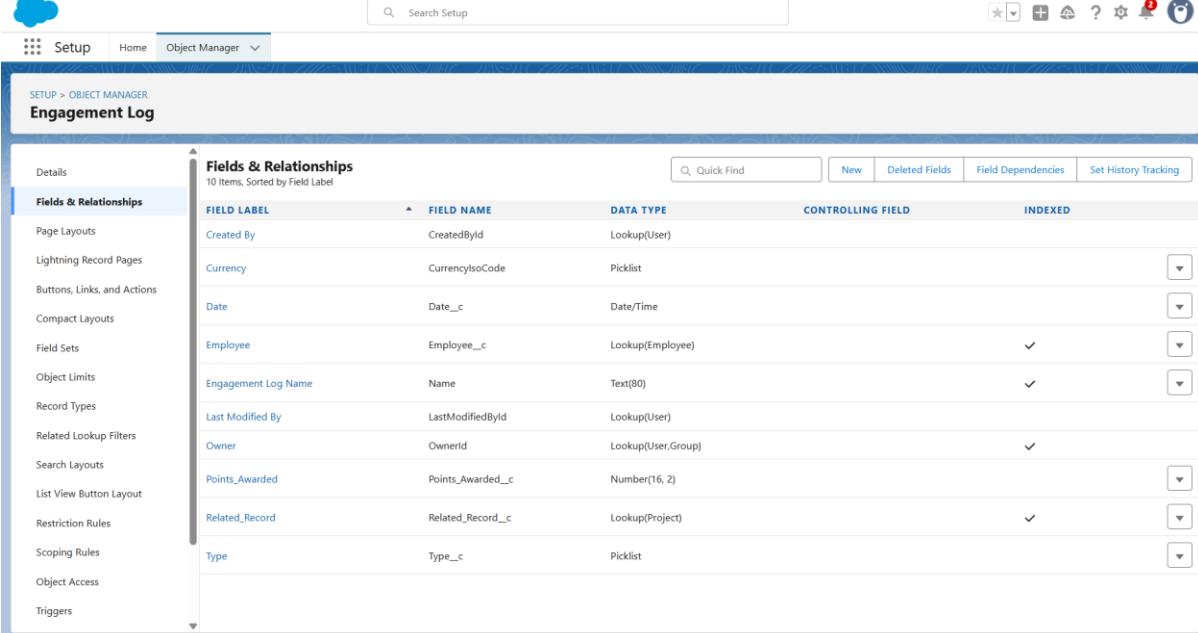
The screenshot shows the Salesforce Object Manager interface for the 'Learning Path' object. The left sidebar lists various setup categories like Page Layouts, Lightning Record Pages, and Fields & Relationships. The main content area displays a table titled 'Fields & Relationships' with 10 items. The columns are FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The fields listed are Completion\_Date, Created\_By, Currency, Employee, Last\_Modified\_By, Learning\_Path\_Name, Owner, Points, Related\_Skill, and Status.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Completion_Date	Completion_Date_c	Date		
Created By	CreatedById	Lookup(User)		
Currency	CurrencyIsoCode	Picklist		
Employee	Employee_c	Lookup(Employee)		
Last Modified By	LastModifiedById	Lookup(User)		
Learning Path Name	Name	Text(80)		
Owner	OwnerId	Lookup(User,Group)		
Points	Points_c	Number(16, 2)		
Related_Skill	Related_Skill_c	Lookup(Skill)		
Status	Status_c	Picklist		

**7. Engagement Log (KEM\_Engagement\_\_c)** – Tracks employee contributions and awarded points.

## Fields:

Employee, Related\_Record, Points\_Awarded, Type.



The screenshot shows the Salesforce Object Manager interface for the 'Engagement Log' object. The left sidebar lists various setup categories. The main content area displays a table titled 'Fields & Relationships' with 10 items. The columns are FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The fields listed are Created\_By, Currency, Date, Employee, Engagement\_Log\_Name, Last\_Modified\_By, Owner, Points\_Awarded, Related\_Record, and Type.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Currency	CurrencyIsoCode	Picklist		
Date	Date_c	Date/Time		
Employee	Employee_c	Lookup(Employee)		
Engagement Log Name	Name	Text(80)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		
Points_Awarded	Points_Awarded_c	Number(16, 2)		
Related_Record	Related_Record_c	Lookup(Project)		
Type	Type_c	Picklist		

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## 2. Record Types

Record types separate different **categories** within objects.

- **Employee:** Role types (Admin, Employee, Manager).
  - **Skill:** Categories (Technical, Soft Skill, Domain).
  - **Project:** Status types (Open, In Progress, Completed).
  - **Task:** Status types (Open, In Progress, Completed).
  - **Learning Path:** Status (Not Started, In Progress, Completed).
  - **Mentorship:** Status (Open, Accepted, Completed).
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## 4. Page Layouts

Layouts define what users see on a record.

- **Employee Layout** – Shows profile (Name, Email, Department, Skills, Engagement Score, Manager).
  - **Skill Layout** – Shows Category, Level, Description, Related Learning Paths.
  - **Project Layout** – Shows Description, Required Skills, Status, Assigned Employees.
  - **Task Layout** – Shows Associated Project, Assigned Employee, Due Date, Points.
  - **Mentorship Layout** – Shows Mentor, Mentee, Skill Focus, Status, Points.
  - **Learning Path Layout** – Shows Related Skill, Assigned Employee, Completion Date, Status.
  - **Engagement Log Layout** – Shows Type, Related Record, Points Awarded, Date.
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## 5. Compact Layouts

Used in **mobile app & highlights panel** for quick glance.

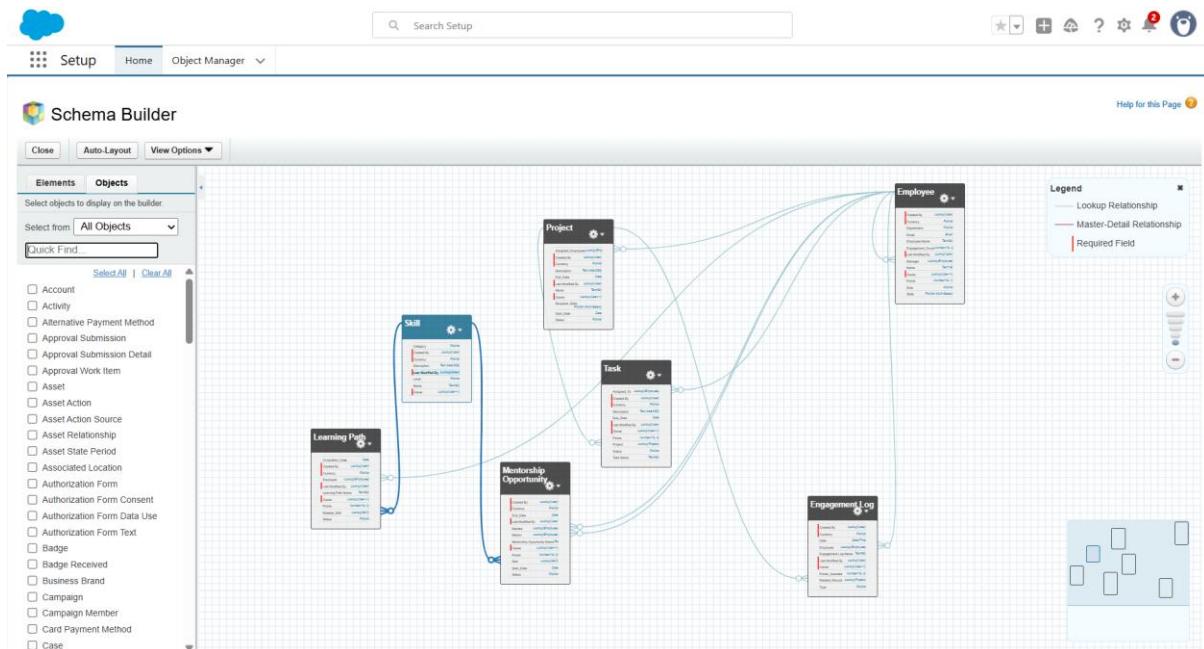
- **Employee** – Name, Role, Department, Engagement Score.
- **Skill** – Name, Category, Level.
- **Project** – Name, Status, Start Date, End Date.
- **Task** – Name, Status, Due Date.

- **Mentorship** – Name, Mentor, Mentee, Status.
  - **Learning Path** – Name, Employee, Status.
  - **Engagement Log** – ID, Employee, Type, Points Awarded.
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## 6. Schema Builder

Schema Builder visualizes object relationships in SkillSync:

- **Employee ↔ Manager** → Self-relationship (Lookup).
- **Employee ↔ Project** → Lookup (Assigned\_Employees).
- **Employee ↔ Task** → Lookup (Assigned\_To).
- **Employee ↔ Mentorship** → Mentor and Mentee relationships.
- **Employee ↔ Learning Path** → Lookup (Employee).
- **Employee ↔ Engagement Log** → Lookup (Employee).
- **Skill ↔ Learning Path** → Lookup (Related\_Skill).
- **Skill ↔ Mentorship** → Lookup (Skill\_Focus).
- **Project ↔ Task** → Lookup (Task → Project).
- **Project ↔ Engagement Log** → Related Record reference.



👉 This creates a **hub-and-spoke model**, where Employee is the **central object** connected to all engagement activities.

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## 7. Lookup vs Master-Detail vs Hierarchical

- **Lookup**
  - Employee → Manager (self-lookup).
  - Task → Employee (Assigned\_To).
  - Task → Project.
  - Mentorship → Mentor & Mentee (Employees).
  - Mentorship → Skill.
  - Learning Path → Skill, Employee.
- **Master-Detail**
  - Could be applied for Engagement Log → Employee (if you want cascading delete).
  - Could also apply Task → Project for strict ownership.
- **Hierarchical**
  - Only available on **Employee (User equivalent)**. Used to define mentor-supervisor hierarchy if needed.

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## 8. Junction Objects

Currently, you used **multi-select picklist (Required\_Skills\_\_c, Skills\_\_c)** for skills.

If you want **better reporting & filtering**, you should replace them with **junction objects**:

- **Employee\_Skill\_\_c** (Employee ↔ Skill).
- **Project\_Skill\_\_c** (Project ↔ Skill).

This will allow many-to-many relationships instead of plain text/picklists.