**Phase 3: Data Modeling & Relationships**

**Introduction**

In this phase, I designed and implemented the core data model for the **Phishing Awareness Training Tracker** application. The objective was to establish a scalable and secure structure to track employees, phishing training assignments, training modules, and completion records. This phase ensures that relationships between employees and assignments are managed accurately while providing a clear foundation for analytics and reporting.

**Standard & Custom Objects**

The application was built using a mix of Salesforce standard objects and custom objects:

**Standard Objects**

* **User / Employee\_\_c (custom version):** Stores information about employees undergoing phishing training.
* **Campaign (optional):** Can be used to group assignments into monthly or organizational campaigns.

**Custom Objects**

* **Assignment\_\_c:** Represents phishing training assigned to employees.
* **Training\_Module\_\_c:** Stores the phishing awareness modules (e.g., Email Spoofing, Link Safety).
* **Completion\_\_c:** Acts as a junction object to track completion details between Employee and Assignment.



**Fields & Data Types**

Each object was enhanced with custom fields to capture critical data:

* **Assignment\_\_c** → Assignment Name, Status (Assigned/Completed/Overdue), Due Date, Training Module (Lookup).
* **Training\_Module\_\_c** → Module Name, Module Type, Difficulty Level, Description.
* **Completion\_\_c** → Completion Date, Score, Feedback, Employee (MD), Assignment (MD).
* **Employee\_\_c** → Employee Name, Email, Department, Manager (Lookup to Employee).

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**Record Types & Page Layouts**

Record Types were created to support different assignment levels:

* **Basic Training** → Only requires Assignment Name, Due Date, Status.
* **Advanced Training** → Includes Module details and Completion tracking.

Each record type was linked to its own **Page Layout**, ensuring relevant fields are displayed depending on training complexity.

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**Compact Layouts**

Compact layouts were configured to display key fields at a glance:

* **Assignment\_\_c:** Assignment Name, Status, Due Date, Training Module.
* **Training\_Module\_\_c:** Module Name, Module Type, Difficulty.
* **Completion\_\_c:** Employee, Assignment, Completion Date, Score.
* **Employee\_\_c:** Name, Email, Department, Manager.

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**Schema Builder**

The **Schema Builder** was used to visualize and verify the relationships among objects.

* Assignment → Employee (Lookup) → Assignments are linked to a module but can exist independently.
* **Employee ↔ Completion (Master-Detail)** → A completion record requires an employee.
* **Assignment ↔ Completion (Master-Detail)** → A completion record requires an assignment.
* **Assignment ↔ Training Module (Lookup)** → Assignments are linked to a module, but can exist independently.
* **Employee ↔ Employee (Lookup)** → Used to define managerial hierarchy.

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**Testing the Data Model**

To validate the data model:

1. Created a new **Employee** record.
2. Created a new **Training Module** record.
3. Created a new **Assignment** record linked to that module.
4. Created a **Completion** record linking the Employee and Assignment, with score and completion date.
5. Verified that the related lists updated correctly on both Employee and Assignment records.

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**Conclusion**

The data model successfully supports tracking phishing training assignments, modules, and completion results. By combining **master-detail and lookup relationships** with clear page layouts and compact layouts, the model ensures accuracy, scalability, and visibility. The Schema Builder validation confirmed that the junction object (Completion\_\_c) is functioning correctly, enabling a robust framework for phishing awareness monitoring across the organization.