**Phase 3: Data Modeling**

1. **Book (Book\_\_c):-**

Represents all books in the catalog. Used for inventory management and connecting sales with suppliers.

**Key Fields:**

* **Book Title (Name field)** → Primary text field to store the book’s title.
* **Author\_\_c (Text, Required)** → Stores the author’s name.
* **ISBN\_\_c (Text, Unique)** → Unique identifier for each book, prevents duplicates.
* **Genre\_\_c (Picklist)** → Categorizes the book (Fiction, Non-Fiction, Science, etc.).
* **Price\_\_c (Currency, Required)** → Standard price of the book.
* **Stock\_Quantity\_\_c (Number, Required, Default=0)** → Available stock count.
* **Low\_Stock\_Alert\_\_c (Formula: Stock\_Quantity\_\_c < 10)** → Automatically flags when stock is low.
* **Supplier\_\_c (Lookup → Supplier\_\_c)** → Establishes relationship to supplier who provides the book. A screenshot of a computer

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**Relationships:**

* **Lookup to Supplier\_\_c** → A supplier provides many books.
* **Child in Sale Line Items (via Lookup)** → Books are linked to sales through line items.

1. **Customer Object (Customer\_\_c)**

Stores information about bookstore customers. Used to track purchase history and manage customer relationships.

* **Key Fields:**
* **Customer Name (Name field)** → Primary text field for customer’s full name.
* **Email\_\_c (Email, Unique, Required)** → Unique customer identifier, prevents duplicates.
* **Phone\_\_c (Phone)** → Customer’s contact number.
* **Customer\_Type\_\_c (Picklist: Regular, Premium, Student, Senior)** → Segments customers for special offers or benefits.
* **Total\_Purchases\_\_c (Currency, Roll-up Summary)** → Sums the value of all **Completed Sales** linked to this customer.
* **Last\_Visit\_\_c (Date)** → Records the last time a customer made a purchase or visited.

**Relationships:**

* **Parent in Customer → Sale (Lookup)** → Each customer can have multiple sales records.
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  AI-generated content may be incorrect.**Roll-up Summary to Sales** → Calculates total spend (Total\_Purchases\_\_c).

1. **Sale Object (Sale\_\_c)**

Represents a sales transaction (similar to an order). It connects customers to the books they buy through **Sale Line Items**.

**Key Fields:**

* **Sale Number (AutoNumber: SALE-{0000})** → Unique identifier for each sale.
* **Customer\_\_c (Lookup → Customer\_\_c)** → Identifies which customer made the purchase.
* **Sale\_Date\_\_c (Date, Default=TODAY())** → Date of sale, defaults to current date.
* **Payment\_Method\_\_c (Picklist: Cash, Credit Card, Debit Card, Mobile Payment)** → Captures the mode of payment.
* **Status\_\_c (Picklist: Pending, Completed, Cancelled)** → Tracks sale status.
* **Subtotal\_\_c (Currency, Roll-up Summary)** → Sums all line item subtotals for this sale.
* **Tax\_\_c (Formula: Subtotal\_\_c \* 0.08)** → Automatically calculates tax (8%).
* **Total\_\_c (Formula: Subtotal\_\_c + Tax\_\_c)** → Final sale amount including tax.

**Relationships:**

* **Lookup to Customer\_\_c** → A customer can make many sales.
* **Master-Detail with Sale Line Item\_\_c** → A sale is parent to its line items.
* **Roll-up Summary from Line Items** → Used to calculate subtotal and totals.

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