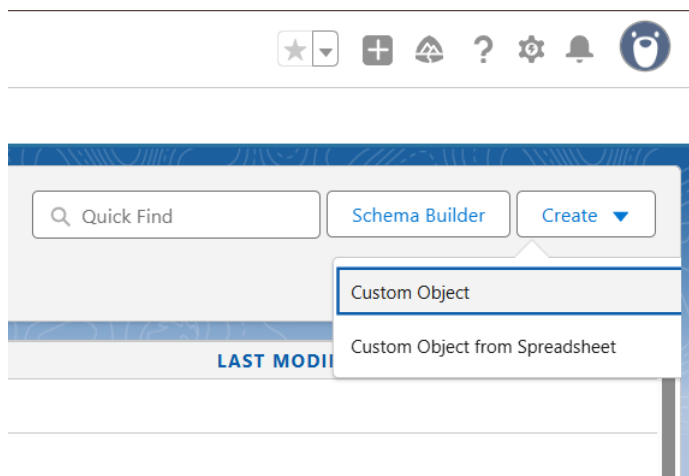# Phase 3

This phase discusses about the Data modelling, Objects, Fields and the Relationships between them

❖ **Objects :**

Custom Objects :

- <u>Book</u> : Will be used to store the information of library books.
- <u>Borrower</u> : This object will be used for maintaining the borrowers list and possible late dues.
- <u>Member</u> : This will maintain the information of the library members.
- <u>Bill</u> : This will maintain the bills for the library member and their payment status.

❖**Creating the objects :**

Book :

Creating tab for book :

Now disable include tab to all the custom apps and selecting just "Shelf Sync Library" App

And hitting save.

Borrower :

Creating the Tab for this object and including in Library app

New Custom Object Tab

Step 1. Enter the Details   Step 1 of 3

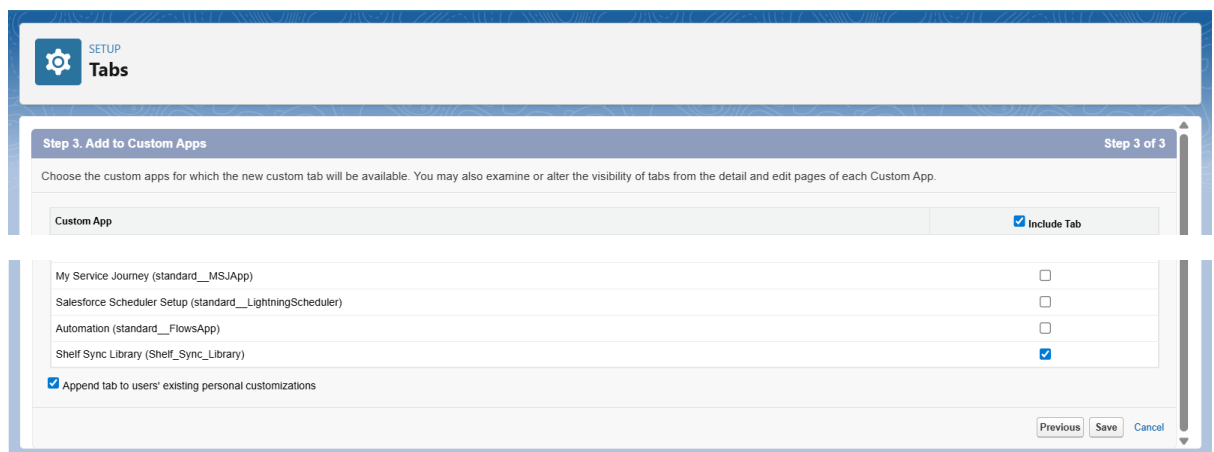Choose the custom object for this new custom tab. Fill in other details.

New Custom Object Tab   ▌ = Required Information

Select an existing custom object or create a new custom object now.

Object ▌[Borrower ⌄]

Tab Style ▌[⏰ | Alarm clock] 🔍

(Optional) Choose a Home Page Custom Link to show as a splash page the first time your users click on this tab.

Splash Page Custom Link [--None-- ⌄]

Enter a short description.

Description [   ]

[Next] Cancel

Member :

Custom Object Definition Edit   [Save] [Save & New] [Cancel]

Custom Object Information   ▌ = Required Information

The singular and plural labels are used in tabs, page layouts, and reports.

Label ▌[Member]   **Example: Account**

Plural Label ▌[Members]   **Example: Accounts**

Starts with vowel sound ☐

The Object Name is used when referencing the object via the API.

Object Name ▌[Member]   **Example: Account**

Description [   ]

Context-Sensitive Help Setting ◉ Open the standard Salesforce.com Help & Training window
                               ○ Open a window using a Visualforce page

Content Name [--None-- ⌄]

Enter Record Name Label and Format

The Record Name appears in page layouts, key lists, related lists, lookups, and search results. For example, the Record Name for Account is "Account Name" and for Case it is "Case Number". Note that the Record Name field is always called "Name" when referenced via the API.

Record Name ▌[Member Name]   **Example: Account Name**

Data Type [Auto Number ⌄]   **Warning:** If you plan to insert a high volume of records in this object, via the API for example, use the Text data type.

Display Format [M-{0000}]   **Example: A-{0000}** What Is This?

Starting Number ▌[1]

And a Tab for this object :

Bill :

New Custom Object Tab

Step 1. Enter the Details   Step 1 of 3

Choose the custom object for this new custom tab. Fill in other details.

New Custom Object Tab   I *= Required Information

Select an existing custom object or create a new custom object now.
Object   [Bill ∨]
Tab Style   [Desk]

(Optional) Choose a Home Page Custom Link to show as a splash page the first time your users click on this tab.
Splash Page Custom Link   [--None-- ∨]

Enter a short description.
Description   [   ]

                                                                    Next   Cancel

❖ Adding the Navigation bar items for the Library :

Edit Shelf Sync Library App Navigation Items

Personalize your nav bar for this app. Reorder items, and rename or remove items you've added.
Learn More

NAVIGATION ITEMS (8)   Add More Items

☰ 🏠 Home
☰ 🏢 Accounts
☰ 📅 Calendar
☰ 🎯 Dashboards
☰ 📖 Books
☰ ⏰ Borrowers
☰ 🖥 Members
☰ 🗔 Bills

Reset Navigation to Default

                                                          Cancel   Save

Edit Shelf Sync Library App Navigation Items

Personalize your nav bar for this app. Reorder items, and rename or remove items you've added.
Learn More

ℹ 1 item added to your list. Save your updates.

NAVIGATION ITEMS (9)   Add More Items

☰ 🏠 Home
☰ 🏢 Accounts
☰ 📅 Calendar
☰ 🎯 Dashboards
☰ 📖 Books
☰ ⏰ Borrowers
☰ 🖥 Members
☰ 🗔 Bills
☰ 📇 Contacts   ✕

Reset Navigation to Default

                                                          Cancel   Save

❖ Fields in Objects:

● Book :

Creating Fields : Book Name/Title (Text), Author (Text), Book Type (Picklist), Description (Text), Quantity / Stock (Number).

Below is a screenshot :

- We need an book title, author name, book type, stock available and description of the book if needed.
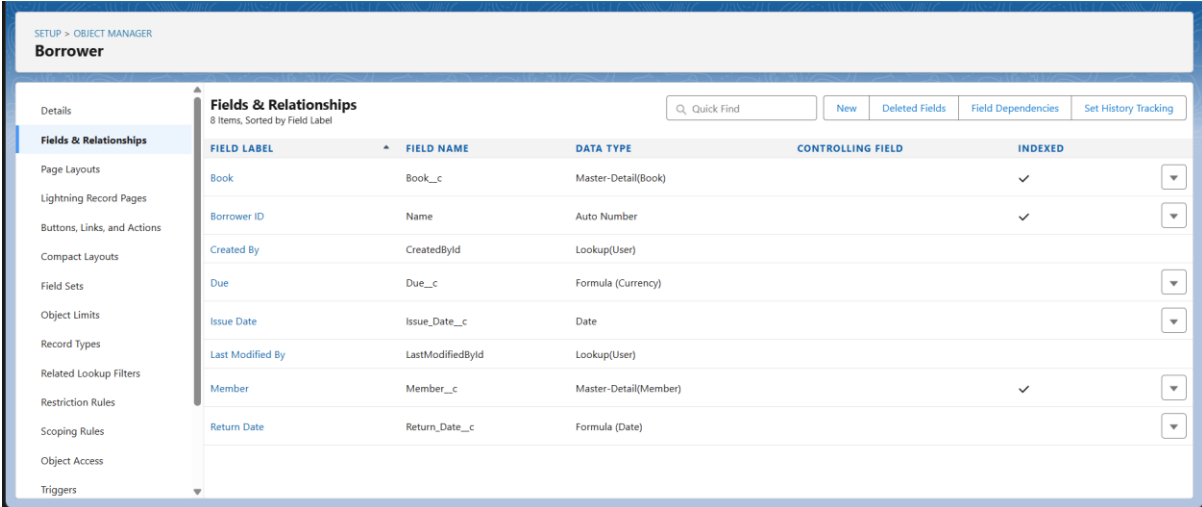- This Objects Record is a Parent for Borrower's Master – Detail Relationship.

Book Type has List of book types :

Romance, Fantasy, Science Fiction, Mystery & Detective, Thriller & Suspense, Horror, Historical Fiction, Adventure, Memoir & Autobiography, Biography, Self-Help/Personal Development, History, Business & Economics, Science & Technology, Art & Photography.

• Borrower :

Creating Fields : Book (Master Detail (Book)),Issue Date (Date), Return Date (Formula(Date)), Member (Master Detail (Member)), Due/Fine (Formula (Currency)), Borrower ID (Auto Number).

Below is a screenshot :

- This Object is a child to its **two parents** i.e. One is **BOOK** and Other is **MEMBER**, and thus has **2 Master Detail Relationships** and is the **Junction Object** here.
- If any of its parent gets deleted the borrower records will be deleted and depends on its parents.
- Return Date is Formulated from the Issue Date :
- Formula is : **Issue_Date__c + 30**
- **To get an return date of 30 days after issuing the book**.
- Due is calculated using formula depending on the days passed after the return date, with 50 $ per day as Fine.

- Formula is : **IF(TODAY() > Return_Date__c, (TODAY() - Return_Date__c) * 50, 0)**

• Member :

Creating Fields : Member Name (Text), Member ID (Auto Number), Email ID (Email), Mobile Number (Phone), Gender (Picklist), Address (Text).
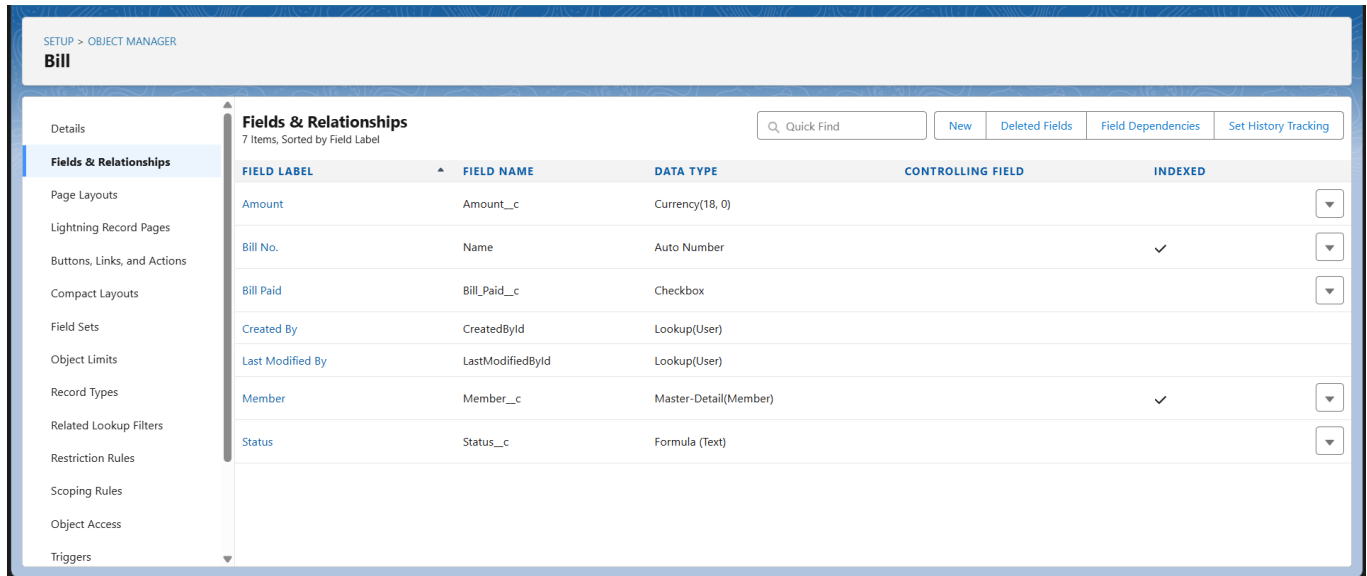
Below is a screenshot :

- This Object is one of the parents of the Borrower Object and the parent of Bill Object.
- Deleting this record will cause records of both Borrower and Bill to be deleted according to MD relationship.
- Gender is a Picklist with values : Male, Female and Others.

• Bill :

Creating Fields : Bill No., Status (Formulae(Text)), Member Name (Master Detail (Member)), Amount Due (Currency), Bill Paid (Checkbox).

Below is a screenshot :

- This is a child to the Member Object and has one Master Detail Relationship.
- This Object will show us the impending dues of the library members and the records which will be created using automation features of salesforce and triggers.
- The Status Box Shows a Image Output from a formula i.e. if the Bill_Paid is True or False.

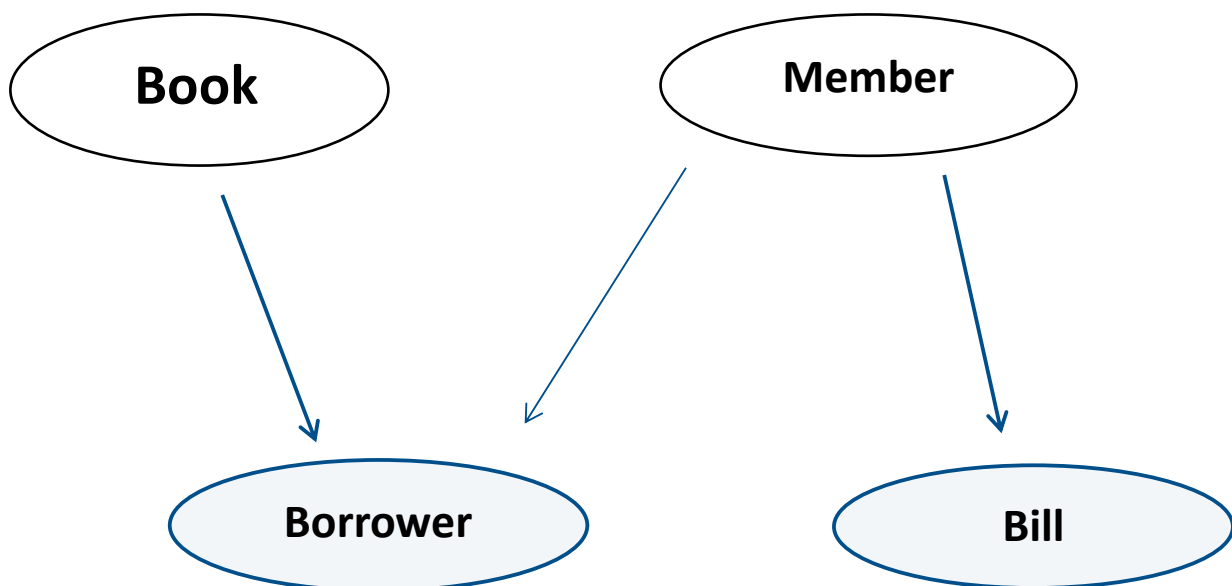The images are imported as **Static Resource** in the org.

The formula used :

IF(

   Bill_Paid__c,

   IMAGE("/resource/paid_icon", "Paid", 100, 100),

   IMAGE("/resource/unpaid_icon", "Unpaid", 100, 100)

)

   Shows the respective image for bill paid or not paid.

❖**The Relationship Diagram :**

- In the above diagram the Book → Borrower shows a parent to child relation and ;
- Member → Borrower, Member → Bill shows another parent to child relation
- Here the Borrower Object has Two Master Detail Relationships
- The Bill Object has One Master Detail Relationship
- The Borrower is a **Junction** Object.

❖ Page Layouts :

- **Books :** (Changing the layout for Members)
Hiding unnecessary detail

- **Borrower : (Arranging the Existing One)**

- **Bill (Change for Members)**
Hiding sensitive setting for bill paid option