

Project Title: Finance Management System – Salesforce CRM

Phase 3: Data Modeling & Relationships

Standard & Custom Objects

Objects and Purpose:

- **Member (Custom):** Stores member information and tracks contributions.
- **Contribution (Custom):** Tracks each payment made by a member.
- **Auction (Custom):** Tracks auction events, winning members, and payouts.
- **Notification (Custom):** Records notifications sent to members for payments or auction updates.

Data Flow:

Member → Contribution → Auction → Notification

Master-Detail & Lookup Relationships

To ensure proper linkage and data integrity:

1. **Member → Contribution:** Master-Detail relationship
 - Master Object: Member
 - Detail Object: Contribution
 - Why: Contributions always belong to a member; roll-up summaries (Total Contributions, Missed Payments) depend on this relationship.
 - **Steps Taken:**
 1. Setup → Object Manager → Contribution → Fields & Relationships → New
 2. Selected Master-Detail Relationship
 3. Related To: Member
 4. Field Label: Member (API: Member__c)
 5. Keep default sharing so child inherits parent
 6. Save configuration

Contribution

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

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Conditional Field Formatting

Contribution Custom Field
Member
[Back to Contribution](#)

Validation Rules [0]

[Edit](#) [Set Field-Level Security](#) [View Field Accessibility](#) [Where is this used?](#)

Field Information

Field Label	Member	Object Name	Contribution
Field Name	Member	Data Type	Master-Detail
API Name	Member__c		
Description			
Help Text			
Data Owner			
Field Usage			
Data Sensitivity Level			
Compliance Categorization			
Created By	Pemireddy Durga Naga Padmanabha Manikanta, 9/14/2025, 11:35 PM	Modified By	Pemireddy Durga Naga Padmanabha Manikanta, 9/21/2025, 2:35 AM

Master-Detail Options

Related To	Member	Child Relationship Name	Contributions
Related List Label	Contributions		
Sharing Setting	Read/Write: Allows users with at least Read/Write access to the Master record to create, edit, or delete related Detail records.		
Reparentable Master Detail	<input type="checkbox"/>		

Lookup Filter

Filter Criteria	Member: Status EQUALS Active
Filter Type	Required. The user-entered value must match filter criteria.
Error Message	Value does not exist or does not match filter criteria.
Lookup Window Text	
Active	<input checked="" type="checkbox"/>

Validation Rules [New](#) [Validation Rules Help](#)

No validation rules defined.

[Back To Top](#) Always show me [more records per related list](#)

2. Member → Auction: Master-Detail relationship

- Allows Auctions to reference the winning member.

Auction

Details

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Auction Custom Field
Winner
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Validation Rules [0]

[Edit](#) [Set Field-Level Security](#) [View Field Accessibility](#) [Where is this used?](#)

Field Information

Field Label	Winner	Object Name	Auction
Field Name	Winner	Data Type	Master-Detail
API Name	Winner__c		
Description			
Help Text	Member who won the auction		
Data Owner			
Field Usage			
Data Sensitivity Level			
Compliance Categorization			
Created By	Pemireddy Durga Naga Padmanabha Manikanta, 9/14/2025, 11:49 PM	Modified By	Pemireddy Durga Naga Padmanabha Manikanta, 9/21/2025, 3:41 AM

Master-Detail Options

Related To	Member	Child Relationship Name	Auctions
Related List Label	Auctions		
Sharing Setting	Read/Write: Allows users with at least Read/Write access to the Master record to create, edit, or delete related Detail records.		
Reparentable Master Detail	<input type="checkbox"/>		

Lookup Filter

No lookup filters defined.

Validation Rules [New](#) [Validation Rules Help](#)

No validation rules defined.

[Back To Top](#) Always show me [more records per related list](#)

3. Member → Notification: Master-Detail relationship

- Ensures notifications inherit access from the member record.

The screenshot shows the Salesforce Setup interface for configuring a custom field named 'Related Member' on the 'Notification' object. The left sidebar contains navigation links: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Restriction Rules, Scoping Rules, Object Access, Triggers, Flow Triggers, Validation Rules, and Conditional Field Formatting.

The main content area is titled 'Notification Custom Field Related Member' with a 'Back to Notification' link. It includes a 'Validation Rules' link and a 'Help for this Page' icon. Below this is the 'Custom Field Definition Detail' section with tabs for 'Edit', 'Set Field-Level Security', 'View Field Accessibility', and 'Where is this used?'. The 'Field Information' section displays the following details:

Field Label	Related Member	Object Name	Notification
Field Name	Related_Member	Data Type	Master-Detail
API Name	Related_Member__c		
Description	Member this notification is for		
Help Text			
Data Owner			
Field Usage			
Data Sensitivity Level			
Compliance Categorization			
Created By	Pemireddy Durga Naga Padmanabha Manikanta, 9/14/2025, 11:57 PM	Modified By	Pemireddy Durga Naga Padmanabha Manikanta, 9/21/2025, 2:38 AM

The 'Master-Detail Options' section shows the relationship with 'Member' as the parent object, with a 'Child Relationship Name' of 'Notifications'. The 'Sharing Setting' is 'Read/Write: Allows users with at least Read/Write access to the Master record to create, edit, or delete related Detail records.' The 'Reparentable Master Detail' checkbox is unchecked.

The 'Lookup Filter' section indicates 'No lookup filters defined.' The 'Validation Rules' section shows 'No validation rules defined.' with a 'New' button and a 'Validation Rules Help' link. At the bottom, there is a 'Back To Top' link and a note 'Always show me more records per related list'.

Fields for Objects

Member

- Member ID (Auto Number: MEM-{0000})
- Name (Text)
- Phone (Phone)
- Email (Email)
- Address (Text Area)
- Join Date (Date)
- Status (Picklist: Active, Inactive, Defaulted)
- Is Premium Member? (Checkbox)
- KYC ID (Text)
- Total Contributions (Roll-Up Summary: SUM of Contribution.Amount where Status = Paid)
- Missed Payments (Roll-Up Summary: COUNT of Contribution where Status = Overdue)

Setup

Home

Object Manager

Search Setup

</

Contribution

- Contribution ID (Auto Number: CONT-{0000})
- Member (Master-Detail → Member)
- Amount (Currency)
- Payment Date (Date)
- Mode of Payment (Picklist: Cash, Bank Transfer, UPI, Other)
- Status (Picklist: Paid, Pending, Overdue)
- Late Payment? (Checkbox)
- Transaction ID (Text)
- Late Fee (Formula: IF(Status__c="Overdue", Amount__c*0.05, 0))
- Total With Fee (Formula: Amount__c + Late Fee__c)

Setup

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★

?

SETUP > OBJECT MANAGER

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13 Items, Sorted by Field Label

Q Quick Find

New

Deleted Fields

Field Dependencies

Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount	Amount__c	Currency(16, 2)		<div></div>
Contribution ID	Contribution_ID__c	Auto Number		<div></div>
Contribution Name	Name	Auto Number		<div>✓</div> <div></div>
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Late Fee	Late_Fee__c	Formula (Currency)		<div></div>
Late Payment?	Late_Payment__c	Checkbox		<div></div>
Member	Member__c	Master-Detail(Member)		<div>✓</div> <div></div>
Mode of Payment	Mode_of_Payment__c	Picklist		<div></div>
Payment Date	Payment_Date__c	Date		<div></div>
Payment Reference / Transaction ID	Payment_Reference_Transaction_ID__c	Text(80) (Unique Case Insensitive)		<div>✓</div> <div></div>
Status	Status__c	Picklist		<div></div>
Total With Late Fee	Total_With_Late_Fee__c	Formula (Currency)		<div></div>

Auction

- Auction Name (Text)
- Auction Date (Date)
- Winner (Lookup → Member)
- Bid Amount (Currency)
- Payout Amount (Currency)
- Net Payout (Formula: Payout - Bid Amount)
- Is Closed? (Checkbox)
- Remarks (Text Area)

Setup Home Object Manager

Search Setup

SETUP > OBJECT MANAGER

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Fields & Relationships

11 Items, Sorted by Field Label

Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Auction Date	Auction_Date__c	Date		
Auction Name	Name	Text(80)		✓
Bid Amount	Bid_Amount__c	Currency(18, 0)		
Created By	CreatedById	Lookup(User)		
Is Closed?	Is_Closed__c	Checkbox		
Last Modified By	LastModifiedById	Lookup(User)		
Net Payout	Net_Payout__c	Formula (Currency)		
Payout Amount	Payout_Amount__c	Currency(18, 0)		
Record Type	RecordTypeId	Record Type		✓
Remarks	Remarks__c	Long Text Area(32768)		
Winner	Winner__c	Master-Detail(Member)		✓

Notification

- Notification ID (Auto Number: NOTI-{0000})
- Related Member (Master-Detail → Member)
- Notification Type (Picklist: SMS, Email, WhatsApp)
- Date (Date/Time)
- Status (Picklist: Sent, Failed, Pending)
- High Priority? (Checkbox)
- Is Urgent? (Formula Checkbox: High Priority = TRUE AND Status <> "Sent")

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Date	Date__c	Date/Time		
High Priority?	High_Priority__c	Checkbox		
Last Modified By	LastModifiedById	Lookup(User)		
Notification ID	Name	Auto Number		✓
Notification Type	Notification_Type__c	Picklist		
Related Member	Related_Member__c	Master-Detail(Member)		✓
Status	Status__c	Picklist		

Formula and Roll-Up Fields

Member

- **Total Contributions:** Roll-Up Summary of Contribution.Amount where Status = Paid
- **Missed Payments:** Roll-Up Summary of Contribution count where Status = Overdue

Contribution

- **Late Fee:** IF(Status = "Overdue", Amount * 0.05, 0)
- **Total With Fee:** Amount + Late Fee

Auction

- **Net Payout:** Payout - Bid Amount

Notification

- **Is Urgent?:** High Priority = TRUE AND Status <> "Sent"

Validation Rules

- **Contribution:** Amount > 0, Payment Date ≤ TODAY
- **Auction:** Auction Date ≥ TODAY
- **Member:** KYC ID required for Premium Members
- **Notification:** Date cannot be blank

Rule Example:

- **Validation Rule Name:** EndDate_After_StartDate
- **Purpose:** Ensures data integrity by preventing saving subscription/contribution records with invalid dates
- **Error Message:** “End Date must be after Start Date”

The screenshot shows the Salesforce Setup interface. The top navigation bar includes the Salesforce logo, a search bar labeled "Search Setup", and several utility icons. Below the navigation bar, the breadcrumb trail reads "Setup > OBJECT MANAGER". The main heading is "Member". On the left, a sidebar lists various setup options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Restriction Rules, Scoping Rules, Object Access, Triggers, Flow Triggers, Validation Rules (highlighted), and Conditional Field Formatting. The main content area is titled "Validation Rules" with a subtitle "1 Items, Sorted by Rule Name". A "New" button is in the top right corner. Below the title is a table with the following data:

RULE NAME	ERROR LOCATION	ERROR MESSAGE	ACTIVE	MODIFIED BY
KYC_Required_Premium	KYC ID	"KYC ID is mandatory for Premium Members."	✓	Pemmireddy Durga Naga Padmanbha Manikanta, 9/21/2025, 4:10 AM

Page Layouts

Member Layout

- Sections: Member Info, Premium Info, Financial Summary
- Related Lists: Contributions, Auctions Won, Notifications

The screenshot shows the Salesforce 'Member Layout' configuration page. The left sidebar contains navigation links: Setup, Home, Object Manager, and a sub-menu for 'Member' including Details, Fields & Relationships, Page Layouts (selected), Lightning Record Pages, Expanded Lookups, Related Lists, Report Charts, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Restriction Rules, Scoping Rules, Object Access, Triggers, Flow Triggers, Validation Rules, and Conditional Field Formatting.

The main content area is titled 'Member Layout' and includes a 'Quick Find' bar. Below this is a 'Fields' table with columns for Field Name, Email, Last Modified By, Owner, Label, and Type. The table lists fields such as Section, Blank Space, Address, Join Date, Member Name, Status, Created By, KYC ID, Missed Payments, and Total Contributions.

The layout preview shows a 'Member Sample' with a 'Highlights Panel' and 'Quick Actions in the Salesforce Classic Publisher'. Below these are sections for 'Salesforce Mobile and Lightning Experience Actions', 'Member Detail' (with buttons for Edit, Delete, Clone, Change Owner, Change Record Type, Printable View, Sharing, Sharing Hierarchy, Edit Labels), and 'Information' (Member ID, Member Name, Phone, Email, Address, Join Date, Status). The 'Premium Information' section includes 'Is Premium Member?' and 'KYC ID'. The 'Financial Summary' section shows 'Total Contributions' of \$123.45. The 'System Information' section includes 'Created By' and 'Last Modified By'. The 'Custom Links' section is also present.

The 'Related Lists' section shows four related lists: Contributions, Auctions, and Notifications. Each list has a 'New' button and a 'Change Owner' button. The 'Contributions' list shows 'Contribution Name' and 'Sample Text'. The 'Auctions' list shows 'Auction Name' and 'Sample Text'. The 'Notifications' list shows 'Notification ID' and 'Sample Text'.

Contribution Layout

- Sections: Contribution Details, Member Info
- Related Lists: Member contribution history

Setup Home Object Manager

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Contribution Layout

Save Quick Save Preview As... Cancel Undo Redo Layout Properties

Quick Find Field Name

Fields

Buttons

Quick Actions

Mobile & Lightning Actions

Expanded Lookups

Related Lists

Report Charts

Section

Blank Space

Contribution Name

Created By

Amount

Contribution ID

Late Payment?

Last Modified By

Late Fee

Payment Reference...

Member

Mode of Payment

Payment Date

Status

Total With Late Fee

Contribution Sample

Highlights Panel

Customize the highlights panel for this page layout...

Quick Actions in the Salesforce Classic Publisher

Actions in this section are currently inherited from the global publisher layout. You can override the global publisher layout to set a customized list of actions for the publisher on pages that use this layout.

Salesforce Mobile and Lightning Experience Actions

Actions in this section are predefined by Salesforce. You can override the predefined actions to set a customized list of actions on Lightning Experience and mobile app pages that use this layout. If you customize the actions in the Quick Actions in the Salesforce Classic Publisher section, and have saved the layout, then this section inherits that set of actions by default when you click to override.

Contribution Detail

Standard Buttons

Edit Delete Clone Change Owner Change Record Type Printable View Edit Labels

Custom Buttons

Information (Header visible on edit only)

Contribution Name GEN-2004-001234

Member Sample Text

Amount \$123.45

Payment Date 9/21/2025

Mode of Payment Sample Text

Status Sample Text

Late Payment? ☒

Payment Reference / Transaction ID Sample Text

Late Fee \$123.45

Total With Late Fee \$123.45

System Information (Header visible on edit only)

Created By Sample Text

Last Modified By Sample Text

Custom Links (Header visible on edit only)

Mobile Cards (Salesforce mobile only)

Drag expanded lookups and mobile-enabled Visualforce pages here to display them as mobile cards.

Related Lists

Auction Layout

- Sections: Auction Details, Winning Member, Bidding Info

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Member Layout

Save Quick Save Preview As... Cancel Undo Redo Layout Properties

Quick Find

Field Name

Section

Blank Space

Email

Is Premium Member?

Address

Created By

Last Modified By

Member ID

Member Name

KYC ID

Owner

Phone

Status

Missed Payments

Label: Owner

Type: Lookup

This item is currently in use (click to locate)

Member Sample

Highlights Panel

Customize the highlights panel for this page layout...

Quick Actions in the Salesforce Classic Publisher

Actions in this section are currently inherited from the global publisher layout. You can override the global publisher layout to set a customized list of actions for the publisher on pages that use this layout.

Salesforce Mobile and Lightning Experience Actions

Actions in this section are predefined by Salesforce. You can override the predefined actions to set a customized list of actions on Lightning Experience and mobile app pages that use this layout. If you customize the actions in the Quick Actions in the Salesforce Classic Publisher section, and have saved the layout, then this section inherits that set of actions by default when you click to override.

Member Detail

Standard Buttons

Edit Delete Clone Change Owner Change Record Type Printable View Sharing Sharing Hierarchy Edit Labels

Custom Buttons

Information (Header visible on edit only)

Member ID

GEN-2004-001234

Owner

Sample Text

Member Name

Sample Text

Phone

1-415-555-1212

Email

sarah.sample@company.com

Address

Sample Text

Join Date

9/21/2025

Status

Sample Text

Premium Information

Is Premium Member?

☒

KYC ID

Sample Text

Financial Summary

Total Contributions

\$123.45

System Information (Header visible on edit only)

Created By

Sample Text

Last Modified By

Sample Text

Custom Links (Header visible on edit only)

Mobile Cards (Salesforce mobile only)

Drag expanded lookups and mobile-enabled Visualforce pages here to display them as mobile cards.

Related Lists

Contributions

Contribution Name

Sample Text

Auctions

Auction Name

Sample Text

Notifications

Notification ID

Sample Text

Notification Layout

- Sections: Notification Details, Status Info

The screenshot displays the Salesforce Setup interface for configuring a Notification Layout. The top navigation bar includes the Setup menu, Home, and Object Manager. The main content area is titled "Notification" and shows the "Notification Layout" configuration page. The left sidebar lists various setup options, with "Page Layouts" selected. The main content area includes a "Notification Layout" header with tabs for Save, Quick Save, Preview As..., Cancel, Undo, Redo, and Layout Properties. Below this is a "Fields" section with a search bar and a list of fields including Section, Blank Space, High Priority?, Related Member, Last Modified By, Status, Created By, Notification ID, Date, and Notification Type. The main content area also includes sections for Highlights Panel, Quick Actions in the Salesforce Classic Publisher, Salesforce Mobile and Lightning Experience Actions, Notification Detail, System Information, Custom Links, Mobile Cards (Salesforce mobile only), and Related Lists.

Record Types

- **Contribution:** No record types required
- **Auction:** Monthly, Special
- **Member & Notification:** No record types required

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Setup > OBJECT MANAGER

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Record Types

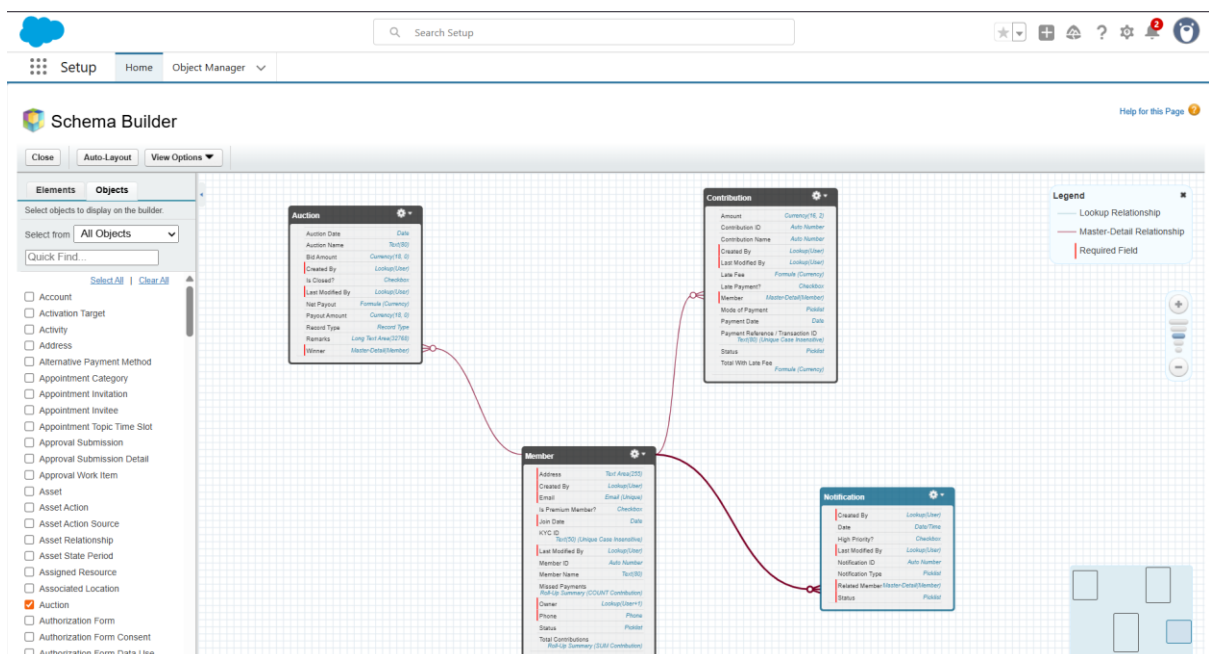
2 Items, Sorted by Record Type Label

Quick Find New Page Layout Assignment

RECORD TYPE LABEL	DESCRIPTION	ACTIVE	MODIFIED BY
Monthly Auction		✓	Pemmireddy Durga Naga Padmanbha Manikanta, 9/21/2025, 5:41 AM
Special Auction	Special bidding session for premium members.	✓	Pemmireddy Durga Naga Padmanbha Manikanta, 9/21/2025, 4:47 AM

Schema Builder

- Displays all objects and relationships visually:
 - Member ↔ Contribution
 - Member ↔ Auction
 - Member ↔ Notification



Junction Objects

Not used because the project does not require a many-to-many relationship. Members and other already already have clear one-to-many relationships, so junction objects are unnecessary.

External Objects

Not included since the project does not integrate with external systems or data sources. All required data is stored within Salesforce standard/custom objects.