

Phase 3: Data Modelling & Relationships

1. Creation of Custom Objects

We created the following custom objects in Salesforce (Setup → Object Manager → New Custom Object).

1. **Event_c** → To store hackathon/workshop details.

- Fields: Event Date, Venue, Description, Event Name, Registration Open
- Purpose: Acts as the parent object for Teams.

Fields & Relationships 9 Items, Sorted by Field Label				
	FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD
Page Layouts	Created By	CreatedById	Lookup(User)	
Lightning Record Pages	Description	Description_c	Long Text Area(500)	
Buttons, Links, and Actions	End Date	End_Date__c	Date	
Compact Layouts	Event Date	Event_Date__c	Date	
Field Sets	Event Name	Name	Text(80)	✓
Object Limits	Last Modified By	LastModifiedById	Lookup(User)	
Record Types	Owner	OwnerId	Lookup(User,Group)	✓
Related Lookup Filters	Registration Open	Registration_Open__c	Checkbox	
Restriction Rules	Venue	Venue_c	Text(255)	

2. **Participant_c** → To store participant details.

- Fields: Participant Name, Email, College, Skills, Role
- Relationship: Linked to Team via Master-Detail.

Fields & Relationships 9 Items, Sorted by Field Label				
	FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD
Page Layouts	College	College__c	Text(150)	
Lightning Record Pages	Created By	CreatedById	Lookup(User)	
Buttons, Links, and Actions	Email	Email__c	Email	
Compact Layouts	Last Modified By	LastModifiedById	Lookup(User)	
Field Sets	Participant Name	Name	Text(80)	✓
Object Limits	Phone	Phone__c	Phone	
Record Types	Role	Role__c	Picklist	
Related Lookup Filters	Skills	Skills__c	Picklist (Multi-Select)	
Restriction Rules	Team	Team__c	Master-Detail(Team)	✓
Scoping Rules				
Object Access				
Triggers				
Flow Triggers				

3. **Team_c** → To manage team-level data.

- Fields: Team Name, Team Lead, Status, Assigned Judge, Average Score, Institution, Member Count, Mentor

- o Relationships: Connected to Event (Lookup), Mentor (Lookup), Participants (Lookup), Results (Master-Detail).

Fields & Relationships					
	FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Page Layouts	Assigned Judge	Assigned_Judge__c	Lookup(User)		✓
Lightning Record Pages	Average Score	Average_Score__c	Formula (Number)		▼
Buttons, Links, and Actions	Created By	CreatedById	Lookup(User)		▼
Compact Layouts	Event	Event_del_c	Lookup(Event)		▼
Field Sets	Institution	Institution_c	Text(25)		▼
Object Limits	Last Modified By	LastModifiedByld	Lookup(User)		▼
Record Types	Member Count	Member_Count_c	Roll-Up Summary (COUNT Participant)		▼
Related Lookup Filters	Mentor	Mentor_c	Lookup(User)		▼
Restriction Rules	Owner	OwnerId	Lookup(User,Group)		✓
Scoping Rules					
Object Access					

Fields & Relationships					
	FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Page Layouts	Owner	OwnerId	Lookup(User,Group)		✓
Lightning Record Pages	Participants	Participants_del_c	Lookup(User)		✓
Buttons, Links, and Actions	Project Idea	Project_Idea_c	Long Text Area(32768)		▼
Compact Layouts	Results Count	Results_Count_c	Roll-Up Summary (COUNT Result)		▼
Field Sets	Results Sum Score	Results_Sum_Score_c	Roll-Up Summary (SUM Result)		▼
Object Limits	Status	Status_c	Picklist		▼
Record Types	Team Lead	Team_Lead_c	Lookup(Participant)		▼
Related Lookup Filters	Team Name	Team_Name_c	Text(15)		▼
Restriction Rules	Team Object Name	Name	Text(80)		✓
Scoping Rules					
Object Access					

4. Mentor_c → To store mentor details.

- o Fields: Name, Expertise, Availability, Skills, Email, Phone
- o Relationship: Teams can link to a Mentor via Lookup.

Fields & Relationships					
	FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Page Layouts	Availability	Availability_c	Picklist		▼
Lightning Record Pages	Created By	CreatedById	Lookup(User)		▼
Buttons, Links, and Actions	Email	Email_c	Email		▼
Compact Layouts	Expertise	Expertise_c	Picklist		▼
Field Sets	Last Modified By	LastModifiedByld	Lookup(User)		▼
Object Limits	M_Email	M_Email_c	Email		▼
Record Types	Mentor Id	Name	Auto Number		▼
Related Lookup Filters	Name	Name_c	Text(15)		▼
Search Layouts	Owner	OwnerId	Lookup(User,Group)		▼
List View Button Layout	Phone	Phone_c	Phone		▼
Restriction Rules	Skills	Skills_c	Picklist (Multi-Select)		▼
Scoping Rules					
Object Access					

5. Judge__c → To store judge information.

- Fields: Judge Name, Expertise, Contact(Phone & email).
- Relationship: Results can link to Judge via Lookup.

Judge

Fields & Relationships				
7 Items, Sorted by Field Label				
FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Email	Email__c	Email		
Expertise	Expertise__c	Picklist		
Judge Name	Name	Text(80)		✓
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Phone	Phone__c	Phone		

6. Round__c → To manage hackathon rounds.

- Fields: Round Name, Deadline, Round Order, Description
- Relationship: Results can reference Round.

Round

Fields & Relationships				
7 Items, Sorted by Field Label				
FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Deadline	Deadline__c	Date		
Description	Description__c	Long Text Area(32768)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Round Name	Name	Text(80)		✓
Round Order	Round_Order__c	Number(18, 0)		

7. Result__c → To capture scoring of teams in different rounds.

- Fields: Score, Status, Comments, Result Name
- Relationship: Master-Detail to Team, Lookup to Judge, Lookup to Round.

Result

Fields & Relationships
9 Items, Sorted by Field Label

Field Label	Type	Description
Comments	Long Text Area(32768)	Comments_c
Created By	Lookup(User)	CreatedById
Judge	Lookup(Judge)	Judge_c
Last Modified By	Lookup(User)	LastModifiedById
Result Name	Text(80)	Name
Round	Lookup(Round)	Round_c
Score	Number(18, 0)	Score_c
Status	Picklist	Status_c
Team	Master-Detail(Team)	Team_c

8. Sponsor_c → To track sponsor details.

- Fields: Sponsor Name, Contribution, Contact, Name, Sponsor Name
- Relationship: Linked to Event via Lookup.

Sponsor

Fields & Relationships
8 Items, Sorted by Field Label

Field Label	Type	Description
Contact	Phone	Contact_c
Contribution	Currency(18, 0)	Contribution_c
Created By	Lookup(User)	CreatedById
Event	Lookup(Event)	Event_c
Last Modified By	Lookup(User)	LastModifiedById
Name	Text(25)	Name_c
Owner	Lookup(User,Group)	OwnerId
Sponsor Name	Text(80)	Name

2. Relationships Implemented

We defined relationships to connect objects logically:

- **Team ↔ Participant** → Master-Detail (One Team can have many Participants).
- **Team ↔ Result** → Master-Detail (One Team can have many Results).
- **Team ↔ Event** → Lookup (Each Team belongs to one Event).
- **Team ↔ Mentor** → Lookup (Each Team can have one Mentor).
- **Result ↔ Judge** → Lookup (Each Result is evaluated by one Judge).

- **Result ↔ Round → Lookup** (Each Result belongs to one Round).
- **Sponsor ↔ Event → Lookup** (Sponsors linked to specific Events).

SETUP > OBJECT MANAGER
Participant

Fields & Relationships			Quick Find	New	Deleted Fields	Field Dependencies	Set History Tracking
Created By	CreatedById	Lookup(User)					
Email	Email__c	Email					
Last Modified By	LastModifiedById	Lookup(User)					
Participant Name	Name	Text(80)	✓				
Phone	Phone__c	Phone					
Role	Role__c	Picklist					
Skills	Skills__c	Picklist (Multi-Select)					
Team	Team__c	Master-Detail(Team)	✓				

SETUP > OBJECT MANAGER
Result

Fields & Relationships			Quick Find	New	Deleted Fields	Field Dependencies	Set History Tracking
Created By	CreatedById	Lookup(User)					
Judge	Judge__c	Lookup(Judge)	✓				
Last Modified By	LastModifiedById	Lookup(User)					
Result Name	Name	Text(80)	✓				
Round	Round__c	Lookup(Round)	✓				
Score	Score__c	Number(18, 0)					
Status	Status__c	Picklist					
Team	Team__c	Master-Detail(Team)	✓				

SETUP > OBJECT MANAGER
Event

Fields & Relationships			Quick Find	New	Deleted Fields	Field Dependencies	Set History Tracking
Description	Description__c	Long Text Area(500)					
End Date	End_Date__c	Date					
Event Date	Event_Date__c	Date					
Event Name	Name	Text(80)	✓				
Last Modified By	LastModifiedById	Lookup(User)					
Registration Open	Registration_Open__c	Checkbox					
Team	Team__c	Master-Detail(Team)	✓				
Venue	Venue__c	Text(255)					

Mentor

Details	Fields & Relationships		
Fields & Relationships	12 Items, Sorted by Field Label		
Last Modified By	LastModifiedById	Lookup(User)	
M_Email	M_Email__c	Email	
Mentor Id	Name	Auto Number	✓
Name	Name__c	Text(15)	
Owner	OwnerId	Lookup(User,Group)	✓
Phone	Phone__c	Phone	
Skills	Skills__c	Picklist (Multi-Select)	
Team	Team__c	Lookup(Team)	✓
Search Layouts			

Result

Details	Fields & Relationships				
Fields & Relationships	9 Items, Sorted by Field Label				
Comments	Comments__c	Long Text Area(32768)			
Created By	CreatedBy	Lookup(User)			
Judge	Judge__c	Lookup(Judge)	✓		
Last Modified By	LastModifiedById	Lookup(User)			
Result Name	Name	Text(80)	✓		
Round	Round__c	Lookup(Round)	✓		
Score	Score__c	Number(18, 0)			
Restriction Rules					

Sponsor

Details	Fields & Relationships				
Fields & Relationships	8 Items, Sorted by Field Label				
Contact	Contact__c	Phone			
Contribution	Contribution__c	Currency(18, 0)			
Created By	CreatedBy	Lookup(User)			
Event	Event__c	Lookup(Event)	✓		
Last Modified By	LastModifiedById	Lookup(User)			
Name	Name__c	Text(25)			
Owner	OwnerId	Lookup(User,Group)	✓		
Restriction Rules					

3. Page Layouts & Related Lists

To make the model user-friendly, page layouts were customized:

- **Team Layout** → Shows related Participants, Results, Event, Mentor.

The screenshot shows the 'Team' object setup in the Salesforce Object Manager. The 'Page Layouts' tab is selected in the sidebar. The main area displays the layout configuration with a 'Fields' section containing fields like Section, Blank Space, and various lookup fields for Created By, Event, Mentor, etc. Below the fields is an 'Information' block showing sample data for fields such as Team Object Name, Member Count, and Average Score. At the bottom are sections for 'System Information' and 'Custom Links'.

- **Event Layout** → Shows related Teams, Sponsors, Schedules.

The screenshot shows the 'Event' object setup in the Salesforce Object Manager. The 'Page Layouts' tab is selected in the sidebar. The main area displays the layout configuration with a 'Fields' section containing fields like Section, Blank Space, and various lookup fields for End Date, Event Date, Registration Open, etc. Below the fields is an 'Information' block showing sample data for fields such as Event Name, End Date, and Description. At the bottom are sections for 'System Information', 'Custom Links', and 'Mobile Cards (Salesforce mobile only)'.

- **Judge Layout** → Shows Results assigned to the Judge.

SETUP > OBJECT MANAGER
Judge

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

- **Round Layout → Shows related Results & Schedules.**

SETUP > OBJECT MANAGER
Round

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

4. Key Benefits of This Data Model

- **Organized Data** → All entities (Events, Teams, Participants, Mentors, Judges, Sponsors) are structured.
- **Clear Relationships** → Ensures proper linking (e.g., Teams must belong to Events, Participants belong to Teams).
- **Scalability** → The model can handle multiple hackathons, workshops, and sponsors.
- **Future-ready** → Prepares for Phase 4 (Automation, Record Sharing, Scoring logic, LWC components).

5. Testing Done

- Created a sample **Event** (Hackathon 2025).
- Created a **Team** under the Event.
- Added **Participants** to the Team.
- Assigned a **Mentor** and **Judge**.
- Added a **Round** and linked a **Result**.
- Verified related lists show correctly.

The screenshot displays a CRM interface for managing teams and events. The top navigation bar includes links for Accounts, Contacts, Registrations, Events, Teams (selected), Participants, Mentors, Judges, Rounds, and Results. A search bar and various system icons are also present.

The main content area shows a team record for "Alpha 2.0". The "Details" tab is active, displaying the following fields:

- Team Object Name: Alpha 2.0
- Team Lead: Hrishi Suhas Dahake
- Status: Active
- Member Count: 5
- Average Score: 95.00
- Project Idea: AI-powered personal assistants or chatbots, computer vision-based waste sorting, blockchain for financial security
- Mentor: (linked to a Mentors list)

The "Activity" section on the right shows a summary of upcoming and overdue tasks. It indicates "No activities to show." and provides instructions to "Get started by sending an email, scheduling a task, and more." Below this, it states "No past activity. Past meetings and tasks marked as done show up here."