

# Phase 3 : Data Modeling & Relationships

## 1. Purpose & Objectives

**Purpose:** Develop the data model necessary to manage Volunteers, Events, Donations, Volunteer assignments, and tasks, enabling the Helping Hands Foundation to track volunteer participation, donations, and event activities.

**Objectives:**

- Create and configure custom objects and fields
- Establish relationships (lookup & master-detail, junction object)
- Configure Page Layouts, Compact Layouts, and Related Lists
- Verify model in Schema Builder
- Create sample data and test basic SOQL queries
- Pull metadata into SFDX and commit to Git

## 2. General Conventions & Notes

- All custom objects use the suffix `_c` in the API name (e.g., `Volunteer_c`).
- Use Lookup relationships for flexibility and use Master-Detail when you need roll-up summaries and ownership inheritance.
- System fields like `CreatedById`, `LastModifiedById`, `OwnerId` are created automatically — you don't need to add them.

## 3. Full Object & Field Definitions

### 3.1 Volunteer (`Volunteer_c`)

**Object settings**

- Label: Volunteer
- Plural Label: Volunteers
- Record Name: Volunteer ID (Auto Number)
- Display Format: VOL-{0000}

## Fields to create (custom object-volunteer):

Label	API Name	Data Type	Notes
Volunteer Name	Volunteer_Name__c	Text (255)	Full person name
Email	Email__c	Email	--
Phone	Phone__c	Phone	--
Skills	Skills__c	Multi-Select Picklist	e.g., Event Management; Fundraising; Teaching; Medical
Availability	Availability__c	Picklist	Values: Weekdays, Weekends, Evenings, Flexible
Joined Date	Joined_Date__c	Date	--
Total Hours	Total_Hours__c	Number (5,1)	Sum of hours contributed (see roll-up notes)
Status	Status__c	Picklist	Active, Inactive, Onboarding
Linked Account (optional)	Account__c	Lookup(Account)	If volunteers are linked to organizations

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Availability	Availability__c	Picklist		
Created By	CreatedById	Lookup(User)		
Email	Email__c	Email		
Joined Date	Joined_Date__c	Date		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User, Group)		✓
Phone Number	Phone_Number__c	Phone		
Skills	Skills__c	Picklist (Multi-select)		
Status	Status__c	Picklist		
Total Hours	Total_Hours__c	Number(3, 1)		
Volunteer ID	Name	Auto Number		✓
Volunteer Name	Volunteer_Name__c	Text(100)		

## 3.2 Event (Event\_\_c)

### Object settings

- Label: Event
- Plural Label: Events

- Record Name: Event ID (Auto Number)
- Display Format: EVT-{0000}

### Fields to create (custom object - Event):

Label	API Name	Data Type	Notes
Event Name	Event_Name__c	Text (255)	Human-readable name
Event Date	Event_Date__c	Date	--
Location	Location__c	Text (255)	--
Description	Description__c	Long Text Area	--
Event Type	Event_Type__c	Picklist	Fundraising, Awareness, Education, Other
Organizer (Volunteer)	Organizer__c	Lookup(Volunteer__c)	Who organizes the event

Event				
Fields & Relationships				
FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Description	Description__c	Long Text Area(32768)		
Event Date	Event_Date__c	Date		
Event ID	Name	Auto Number		✓
Event Name	Event_Name__c	Text(255)		
Last Modified By	LastModifiedById	Lookup(User)		
Location	Location__c	Text(255)		
Owner	OwnerId	Lookup(User/Group)		✓

## 3.3 Donation (Donation\_\_c)

### Object settings

- Label: Donation
- Plural Label: Donations
- Record Name: Donation ID (Auto Number) — DON-{0000}

**Fields present in my org:**

- **Donation ID** — Name (Auto Number).
- **Amount** — Amount\_\_c — Currency.
- **Donation Date** — Donation\_Date\_\_c — Date.
- **Donor Name** — Donor\_Name\_\_c — Text(100).
- **Donor Email** — Donor\_Email\_\_c — Email.
- **Linked Volunteer** — Linked\_Volunteer\_\_c — Lookup(Volunteer\_\_c).
- **Payment Method** — Payment\_Method\_\_c — Picklist. (Values you used e.g., Cash, Bank Transfer, Credit Card, UPI, Cheque, Other)
- **Status** — Status\_\_c — Picklist. (e.g., Pledged, Received, Refunded)
- **Notes** — Notes\_\_c — Long Text Area.
- **Owner** — standard OwnerId (User/Queue).
- **CreatedBy, LastModifiedBy** — system fields.

**Recommended additional field(s):**

- **Receipt Sent** — Receipt\_Sent\_\_c — Checkbox (default false).
- **Related Event** — Related\_Event\_\_c — Lookup(Event\_\_c)

**Validation Rule (recommended):**

- **Name:** Amount\_Must\_Be\_Positive
- **Formula:** Amount\_\_c <= 0
- **Error message:** Donation Amount must be greater than 0.
- **Error location:** Amount\_\_c field

SETUP > OBJECT MANAGER

**Donation**

Details

**Fields & Relationships**  
12 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(18, 0)		
Created By	CreatedById	Lookup(User)		
Donation Date	Donation_Date__c	Date		
Donation ID	Name	Auto Number		✓
Donor Email	Donor_Email__c	Email		
Donor Name	Donor_Name__c	Text(100)		
Last Modified By	LastModifiedById	Lookup(User)		
Linked Volunteer	Linked_Volunteer__c	Lookup(Volunteer)		✓
Notes	Notes__c	Long Text Area(32768)		
Owner	OwnerId	Lookup(User Group)		✓
Payment Method	Payment_Method__c	Picklist		
Status	Status__c	Picklist		

### 3.4 Volunteer Event (Junction) (VolunteerEvent\_\_c)

#### Object settings

- Label: Volunteer Event
- Plural Label: Volunteer Events
- Record Name: Volunteer Event ID (Auto Number) — VE-{0000}

#### Relationships (required)

- Master-Detail → Volunteer (Volunteer\_\_c) — Volunteer\_\_c (Master-Detail)
- Master-Detail → Event (Event\_\_c) — Event\_\_c (Master-Detail)

#### Optional fields on the junction:

- Role — Role\_\_c — Picklist (Helper, Organizer, Coordinator)
- Hours Contributed — Hours\_Contributed\_\_c — Number (5,1)
- Feedback — Feedback\_\_c — Long Text Area

SETUP > OBJECT MANAGER

**Volunteer Event**

Details

**Fields & Relationships**  
5 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
Created By	CreatedById	Lookup(User)		
Event	Event__c	Master-Detail(Event)		✓
Last Modified By	LastModifiedById	Lookup(User)		
Volunteer	Volunteer__c	Master-Detail(Volunteer)		✓
Volunteer Event Name	Name	Auto Number		✓

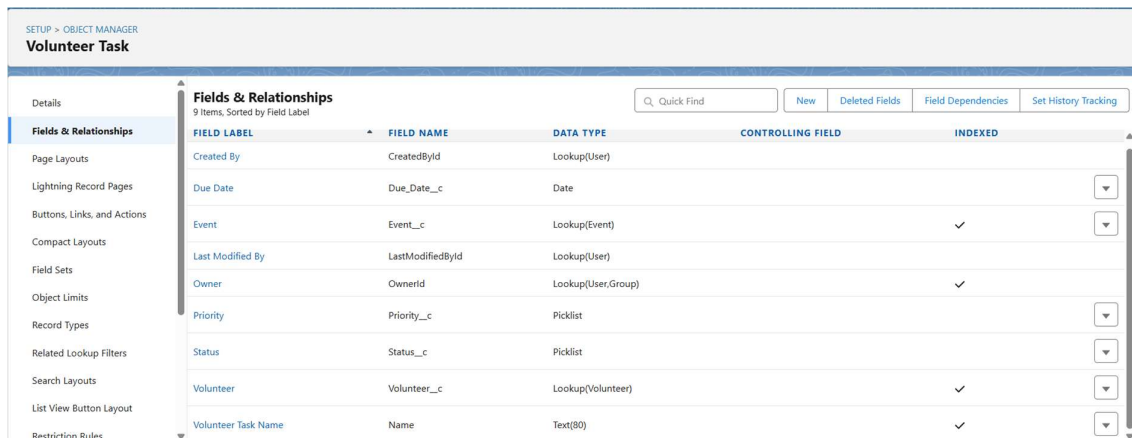
### 3.5 Volunteer Task (Volunteer\_Task\_\_c) — custom task object

#### Object settings

- Label: Volunteer Task
- Plural Label: Volunteer Tasks
- Record Name: Task ID (Auto Number) or Task Name (Text) – choose Task Name (Text) if you want descriptive titles.

#### Fields:

- Task Name — Name — Text (if used as Name)
- Assigned Volunteer — Assigned\_Volunteer\_\_c — Lookup(Volunteer\_\_c)
- Related Event — Related\_Event\_\_c — Lookup(Event\_\_c)
- Status — Status\_\_c — Picklist (Not Started, In Progress, Completed)
- Priority — Priority\_\_c — Picklist (High, Medium, Low)
- Due Date — Due\_Date\_\_c — Date
- Notes — Notes\_\_c — Long Text Area



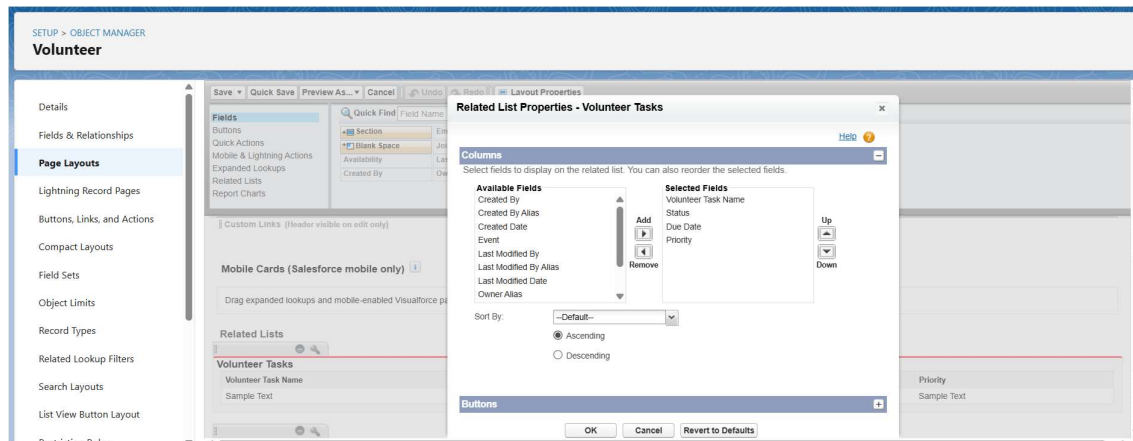
The screenshot shows the Salesforce Object Manager interface for the 'Volunteer Task' object. The 'Fields & Relationships' tab is selected, displaying a list of 9 fields. The fields are sorted by Field Label. The table includes columns for Field Label, Field Name, Data Type, Controlling Field, and Indexed status. The fields listed are: Created By (Lookup(User)), Due Date (Date), Event (Lookup(Event)), Last Modified By (Lookup(User)), Owner (Lookup(User,Group)), Priority (Picklist), Status (Picklist), Volunteer (Lookup(Volunteer)), and Volunteer Task Name (Text(80)).

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Due Date	Due_Date__c	Date		
Event	Event__c	Lookup(Event)		✓
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Priority	Priority__c	Picklist		
Status	Status__c	Picklist		
Volunteer	Volunteer__c	Lookup(Volunteer)		✓
Volunteer Task Name	Name	Text(80)		✓

## 4. Page Layouts

### Configure Page Layouts & Related Lists

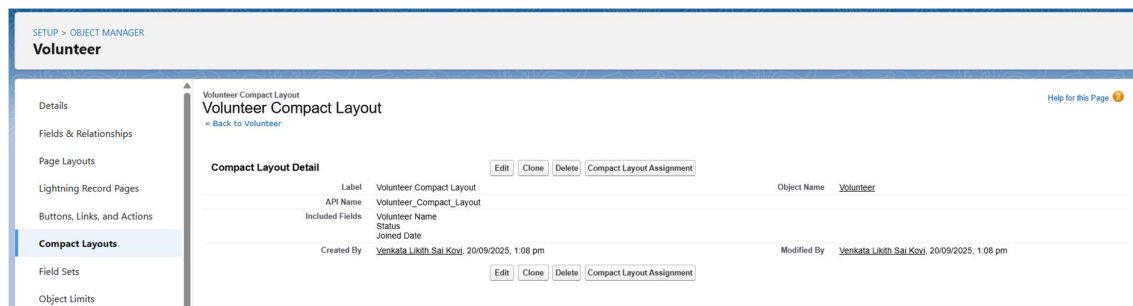
1. Object Manager → Volunteer → **Page Layouts** → Edit default layout.
2. Drag key fields at the top (Volunteer Name, Email, Phone, Status, Skills), and add related lists: Volunteer Events, Volunteer Tasks, Donations (if Donations link to Volunteer).
3. Save.
4. Repeat for Event and Donation (add related lists and important fields).



## 5. Compact Layouts

### Configure Compact Layouts (Mobile / Highlights Panel)

1. Object Manager → Volunteer → **Compact Layouts** → New → choose key fields (Volunteer Name, Status, Joined Date).
2. Save → Click **Compact Layout Assignment** → Set as Primary.



## 6. Field Level Security & Profile Access

1. For each field: Object Manager → {Object} → Fields & Relationships → click field → **Set Field-Level Security** → Select profiles that should have visibility/edit access → Save.
2. For each object: Object Manager → {Object} → **Object Settings** in profile to control CRUD (Create, Read, Edit, Delete). Or edit the cloned profiles created in Phase 2 and set Object Permissions.

## 7. Record Types & Page Layout Assignments

Object Manager → Donation → **Record Types** → New: One-Time, Recurring.

1. Assign different page layouts if you want different fields visible for types.
2. Save and assign to profiles.

SETUP > OBJECT MANAGER  
**Donation**

Record Type  
**one-time**  
← Back to Custom Object: Donation

Use the Edit button to change the properties of this record type. Use the Edit links in the Picklist Values related list to choose the picklist values available for records with this record type.

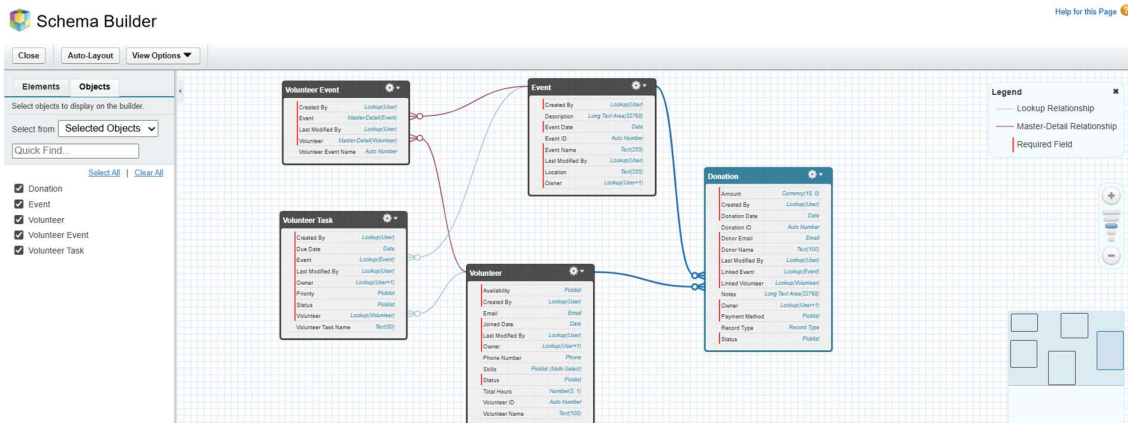
Record Type Label: one-time  
Record Type Name: one\_time  
Namespace Prefix:  
Description:  
Created By: Venkata Laksh Sai Kovi  
Modified By: Venkata Laksh Sai Kovi

**Picklists Available for Editing**

Action	Field	Modified Date
<a href="#">Edit</a>	Payment Method	20/09/2025, 1:16 pm
<a href="#">Edit</a>	Status	20/09/2025, 1:16 pm

## 8. Schema Builder

1. Setup → **Schema Builder** → Check the left panel boxes for Volunteer, Event, Donation, Volunteer Event, Volunteer Task.
2. Layout the schema on the canvas and verify relationships (look for lines representing Lookup and Master-Detail).
3. Take a screenshot of the schema diagram for documentation.



## 9. Sample Data (Test Records)

Create sample records to validate relationships and reporting:

**Volunteers:**



Helping Hands Man...

Home

Donations

Volunteers

Events

Reports

Dashboards

Volunteer

A-001

New Contact

Edit

New Opportunity

Volunteer ID

A-001

Owner

Venkata Likith Sai Kovi

Volunteer Name

Rahul

Email

rahul73@gmail.com

Phone Number

7479546738

Skills

Event Management;Teaching

Availability

Evenings

Joined Date

08/09/2025

Status

Active

Total Hours

12.0

Created By

Venkata Likith Sai Kovi · 19/09/2025, 10:50 pm

Last Modified By

Venkata Likith Sai Kovi · 19/09/2025, 10:50 pm

## Events:

Helping Hands Man...

Home

Donations

Volunteers

Events

Reports

Dashboards

Event

A-0001

New Contact

Edit

New Opportunity

Related

Details

Event ID

A-0001

Owner

Venkata Likith Sai Kovi

Event Name

Food Distribution Camp

Event Date

21/09/2025

Location

Gachibowli,Hyderabad

Description

It is a Food distribution camp,where the organic and protien foods are handovered to the poor people and daily wage workers.

Created By

Venkata Likith Sai Kovi · 19/09/2025, 10:48 pm

Last Modified By

Venkata Likith Sai Kovi · 19/09/2025, 10:48 pm

## VolunteerEvent (junction):

Helping Hands Man...

Home

Donations

Volunteers

Volunteer Tasks

Events

Reports

Dashboards

Volunteer Events

Volunteer Event

VE-0001

Related

Details

Volunteer Event Name

VE-0001

Volunteer

A-002

Event

A-0001

Created By

Venkata Likith Sai Kovi · 20/09/2025, 1:29 pm

Last Modified By

Venkata Likith Sai Kovi · 20/09/2025, 1:29 pm

## Donations:

Helping Hands Man... Home Donations Volunteers Volunteer Tasks Events Reports Dashboards

Search...

Donation DON-0001 New Contact Edit New Opportunity

Related Details

Donation ID: DON-0001  
Amount: 13,000  
Donation Date: 19/09/2025  
Donor Name: Likith sai  
Donor Email: saikish511@gmail.com  
Payment Method: Online  
Status: Received  
Linked Volunteer: A-001  
Notes: Very Good Work  
Linked Event: A-0001  
Created By: Venkata Likith Sai Kovi, 19/09/2025, 11:45 pm  
Last Modified By: Venkata Likith Sai Kovi, 19/09/2025, 11:45 pm

Activity

Filter: All time • All activities • All types  
Refresh Expand All View All

Upcoming & Overdue

No activities to show.  
Get started by sending an email, scheduling a task, and more.

No past activity. Past meetings and tasks marked as done show up here.

## Volunteer Task(Food Donation):

Helping Hands Man... Home Donations Volunteers Events Reports Dashboards Volunteer Tasks

Search...

Volunteer Task Collect Food Packets New Contact Edit New Opportunity

Related Details

Volunteer Task Name: Collect Food Packets  
Volunteer: A-001  
Event: A-0001  
Status: In Progress  
Priority: High  
Due Date: 30/09/2025  
Created By: Venkata Likith Sai Kovi, 19/09/2025, 11:08 pm  
Last Modified By: Venkata Likith Sai Kovi, 19/09/2025, 11:08 pm

Activity

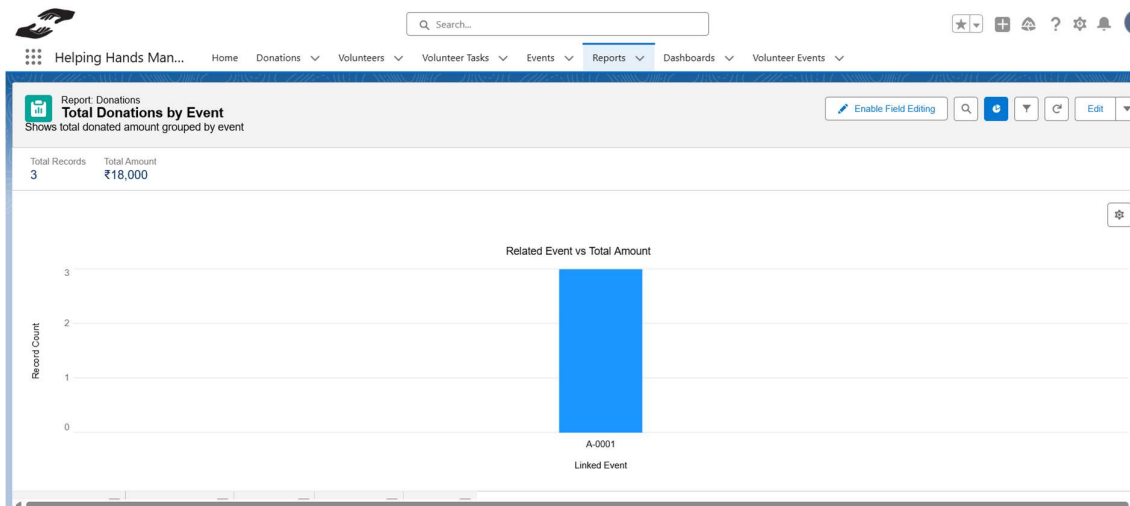
No activities to show.  
Get started by sending an email, scheduling a task, and more.

No past activity. Past meetings and tasks marked as done show up here.

## 10. Reports & Dashboards

### Reports to create:

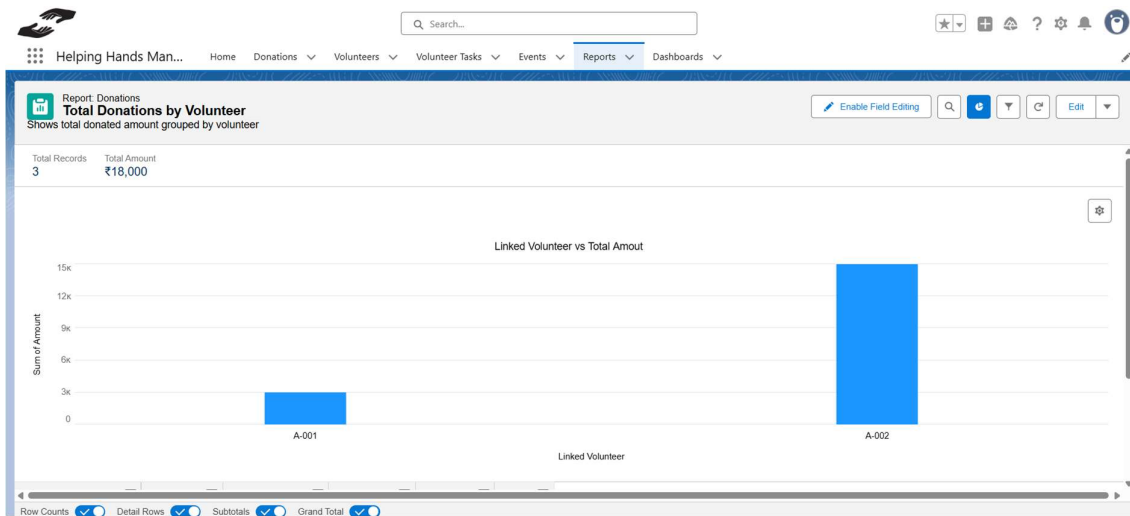
1. Total Donations by Event
  - Group by Related Event, summarize Sum(Amount)
  - add chart (bar).



## 2. Donations by Volunteer

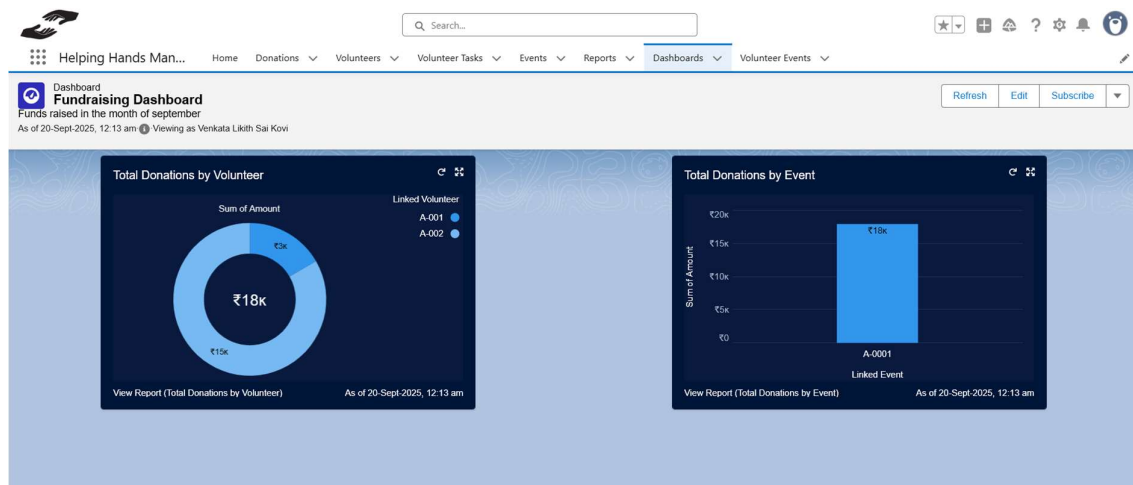
— Group by Linked Volunteer

— Sum Amount.



## Dashboard:

- Dashboards → New Dashboard
- Name: Fundraising Dashboard
- Add component: select report Total Donations by Event
- choose Bar Chart
  - Total Donations by Event
  - Total Donations by Volunteer → Save.



## 11. Developer: Retrieve Metadata to SFDX & Version Control

### Authenticate to Dev Org

```
sfdx force:auth:web:login -a DevOrg
```

### Retrieve specific custom objects

```
sfdx force:source:retrieve -m
```

```
CustomObject:Volunteer__c,CustomObject:Event__c,CustomObject:Donation__c,CustomObject:VolunteerEvent__c,CustomObject:VolunteerTask__c -u DevOrg
```

### Commit to Git

```
git add .
```

```
git commit -m "Phase 3: Add custom objects Volunteer, Event, Donation, VolunteerEvent, VolunteerTask"
```

```
git push origin main
```

