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Sustainable Accessory Market: Project Proposal

1. Problem Statement

Communities often face challenges in efficiently managing donations, coordinating volunteers, and ensuring resources are distributed to those in need. Without a centralized system, personal donors, partner organizations, and volunteers often struggle to communicate effectively and track contributions. Requests like accessory pickups, deliveries, and volunteer assignments are difficult to organize, leading to delays, underutilized resources, and unfulfilled needs. The lack of clarity in roles and workflows further complicates the process, impacting the overall goal of helping those in need.

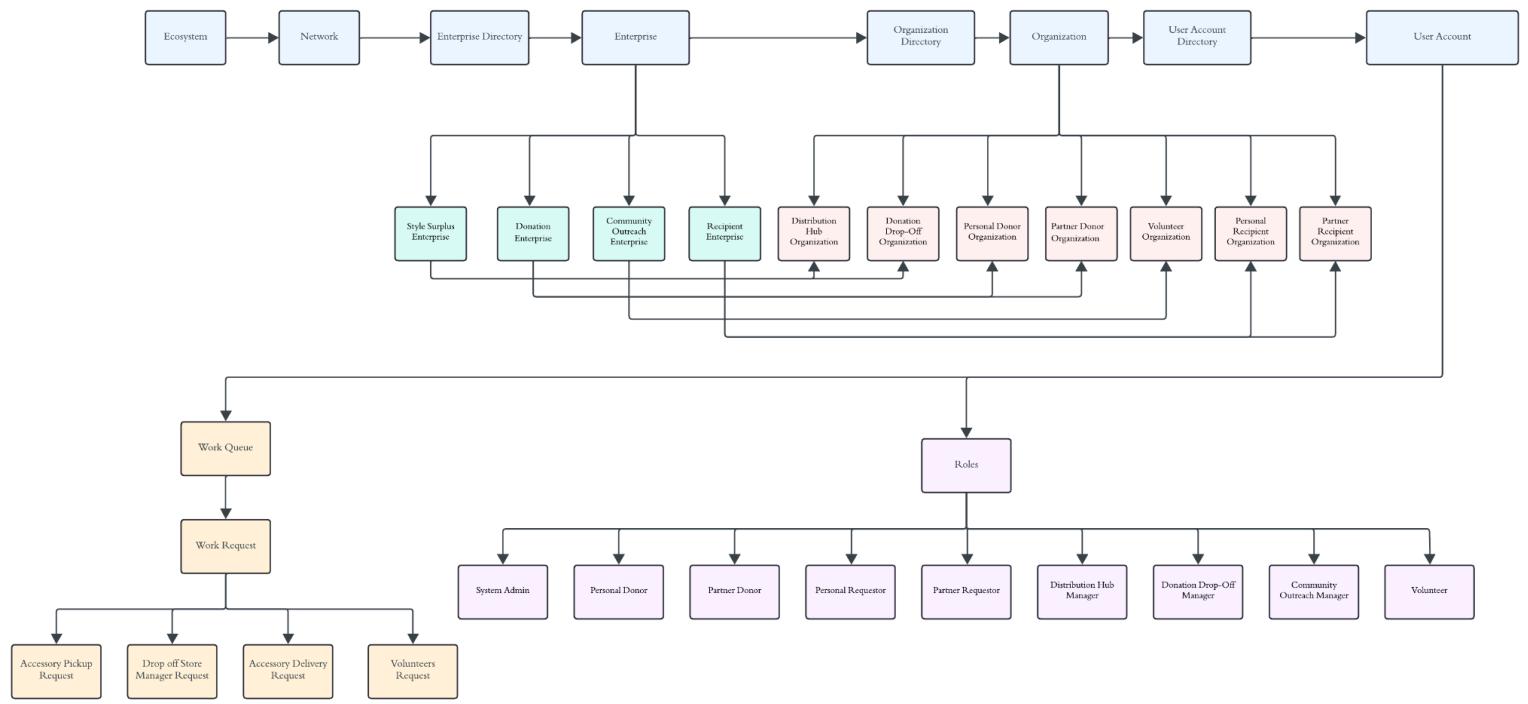
2. Solution

To address these challenges, we propose a comprehensive and centralized donation management ecosystem. This system is designed to streamline coordination between donors, recipients, and volunteers through clear workflows and role-based access. Here's how the solution works:

- **Ecosystem and Network Management:** The system begins with a directory structure that categorizes organizations into enterprises, such as style surplus enterprises, community outreach enterprises, and distribution hubs. This structure ensures clear communication and accountability.
- **Organization and User Directory:** Organizations are categorized into groups like personal donors, partner donors, and volunteer organizations. Each group is tied to a user directory, which tracks individual contributors and their roles, ensuring all activities are connected to authorized users.
- **Work Queue System:** Requests such as accessory pickups, deliveries, or volunteer tasks are organized through a "Work Queue." This queue ensures that tasks are assigned and monitored systematically.
- **Role-Based Access:** Each user and organization is assigned a specific role, such as system admin, donor, or volunteer. These roles define their responsibilities, ensuring that tasks are completed efficiently.
- **Scalability and Flexibility:** The system is built to handle multiple organizations and users, allowing it to grow as the community's needs expand.

3. High-Level Component Diagram

https://lucid.app/lucidchart/1bed0c1c-b9fd-4939-b6a8-76f90e66825a/edit?invitationId=inv_e787bfcb-f81d-4cc2-9be1-d5dda3e8e723&page=0_0#



4. Ecosystem Hierarchy Statements

Enterprise	Associated Organizations	Roles
Style Surplus Enterprise	- Distribution Hub Organization	- Distribution Hub Manager : Manages storage, inventory, and allocation of donated accessories.
	- Donation Drop-Off Organization	- Donation Drop-Off Manager : Oversees intake and categorization of donations at drop-off locations.
Donation Enterprise	- Personal Donor Organization	- Personal Donor : Represents individual contributors donating smaller quantities of accessories.
	- Partner Donor Organization	- Partner Donor : Represents enterprise donors providing bulk accessories.
Community Outreach	- Volunteer Organization	- Volunteer : Handles logistical tasks like

Enterprise		pickups, deliveries, and sorting.
		- Community Outreach Manager: Ensures the final delivery of accessories to underserved communities.
Recipient Enterprise	- Personal Recipient Organization	- Personal Requestor: Individuals submitting accessory requests for personal use.
	- Partner Recipient Organization	- Partner Requestor: Organizations requesting items for multiple beneficiaries.
Entire Ecosystem	- All Organizations (across enterprises)	- System Admin: Oversees the entire platform, ensuring smooth workflows, managing permissions, and resolving system-wide issues.

4.1 Four Requests:

1. Accessory Pickup Request

- Definition: This request is generated when a donor (individual or organization) schedules a pickup for surplus accessories they wish to contribute.
- Purpose: To facilitate the collection of donated accessories by volunteers from donor locations.
- Process:
 - A donor registers their donation details (e.g., items, quantity, location) on the system.
 - The Community Outreach Manager assigns a volunteer or a logistics team to handle the pickup.
 - The assigned personnel collects the items and transports them to the nearest distribution hub or drop-off location.

2. Drop-off Store Manager Request

- Definition: This request is created when accessories are delivered to a drop-off location, requiring store managers to process and inventory the items.
- Purpose: To ensure that donated items are properly received, categorized, and recorded in the inventory system.
- Process:
 - A volunteer or donor delivers accessories to a drop-off store or distribution hub.
 - Drop-off Store Manager inspects and records the items in the system (e.g., type, quantity).

3. Accessory Delivery Request

- Definition: This request is created when a recipient (individual or organization) places an order for specific accessories to be delivered to their location.
- Purpose: To fulfill requests by transporting accessories from distribution hub or drop-off locations to the end recipients.
- Process:
 - A recipient submits a request specifying the type and quantity of accessories they need.
 - The system matches the request with available inventory in the nearest distribution hub or drop-off location.
 - A volunteer or logistics team is assigned to transport the items to the recipient's address.

4. Volunteers Request

- Definition: This request is generated by the system when a task, such as a pickup or delivery, requires volunteer assistance.
- Purpose: To coordinate and assign volunteers to tasks within the accessory redistribution ecosystem.
- Process:
 - The system flags pending tasks such as accessory pickups, deliveries, or inventory sorting.
 - Volunteers registered on the platform are notified and matched to tasks based on their proximity and availability.
 - Volunteers accept the tasks, complete them, and update their status in the system.

4.2 Network

- Definition:
The network acts as the foundation of the entire ecosystem, connecting all entities (donors, organizations, recipients, and volunteers) involved in redistributing surplus accessories.
- Purpose:
To serve as the backbone for collaboration and communication between all enterprises and organizations.
- Functionality:
 - Enables seamless data sharing and coordination.
 - Connects donors with warehouses, organizations, and volunteers.
 - Facilitates real-time updates on donation and delivery statuses.

4.3. Enterprises

Components and Their Roles:

1. Style Surplus Enterprise:

- Definition: Represents organizations contributing surplus accessories, such as fashion brands and retailers.
- Purpose: To supply large quantities of accessories for redistribution to those in need.
- Functionality: Collects, processes, and transfers donated accessories to distribution hubs or warehouses for inventory management.

2. Donation Enterprise:

- Definition: Represents entities facilitating the collection of accessory donations from individual and corporate contributors.
- Purpose: To centralize and streamline the donation process, enabling efficient contributions from donors.
- Functionality: Manages the registration of donations, schedules pickups or drop-offs, and ensures seamless handoff to distribution hubs.

3. Community Outreach Enterprise:

- Definition: Represents community outreach that work with underserved communities.
- Purpose: To ensure donated accessories reach the right beneficiaries.
- Functionality: Facilitates distribution and coordinates with warehouses and volunteers.

4. Recipient Enterprise:

- Definition: Represents organizations or groups that request accessories for their communities.
- Purpose: To manage and fulfill accessory requests for those in need.
- Functionality: Tracks and prioritizes requests, ensuring timely delivery.

4.4. Organizations

Components and Their Roles:

1. Distribution Hub Organization:

- Definition: Serves as the central facility that receives all donated items for storage and organization.
- Purpose: To act as a central hub for managing inventory and facilitating the redistribution of donated accessories.
- Functionality: Tracks inventory, assigns volunteers to pick up items from donors, processes donations, and allocates items to drop-off locations or recipients.

2. Donation Drop-Off Organization:

- Definition: Represents locations where the Distribution Hub Organization redistributes donated accessories to recipients or partnering organizations.
- Purpose: To act as the final distribution point for delivering items to recipients or community groups.
- Functionality: Receives items from distribution hubs, organizes donations for easy access, and ensures timely delivery to recipients or organizations in need.

3. Personal Donor Organization:

- Definition: Represents individual contributors donating accessories.
- Purpose: To enable individuals to contribute directly to the system.
- Functionality: Registers donations and schedules logistics for pickup or delivery.

4. Partner Donor Organization:

- Definition: Represents companies or enterprises providing consistent donations.
- Purpose: To facilitate ongoing collaboration with large contributors.
- Functionality: Manages bulk contributions and ensures regular supply to the ecosystem.

5. Volunteer Organization:

- Definition: Coordinates volunteers who assist in picking up and delivering accessories.
- Purpose: To manage the human resources needed for logistics.
- Functionality: Assigns volunteers to tasks such as pickups and deliveries.

6. Personal Recipient Organization:

- Definition: Represents individuals requesting specific accessories.
- Purpose: To support individuals in obtaining items for personal use.
- Functionality: Facilitates submission and tracking of personal requests.

7. Partner Recipient Organization:

- Definition: Represents groups or organizations requesting accessories for multiple beneficiaries.
- Purpose: To manage larger-scale accessory requests.
- Functionality: Collaborates with the system to fulfill bulk needs.

4.5. Roles

Components and Their Roles:

1. System Admin:

- Definition: Oversees and maintains the entire ecosystem.
- Purpose: To ensure smooth operations and resolve system-wide issues.
- Functionality: Manages user accounts, permissions, and overall platform performance.

2. Personal Donor:

- Definition: Represents individuals contributing accessories.
- Purpose: To enable small-scale accessory donations.
- Functionality: Registers donations, schedules pickups, and tracks progress.

3. Partner Donor:

- Definition: Represents corporate or enterprise donors.
- Purpose: To manage bulk accessory contributions.
- Functionality: Coordinates large-scale donations with warehouses and drop-off centers.

4. Personal Requestor:

- Definition: Represents individual beneficiaries requesting accessories.

- Purpose: To allow individuals to request and receive items.
- Functionality: Submits requests and tracks their status.

5. Partner Requestor:

- Definition: Represents organizations requesting items for multiple beneficiaries.
- Purpose: To handle larger-scale accessory needs.
- Functionality: Submits bulk requests and coordinates delivery logistics.

6. Distribution Hub Manager:

- Definition: Manages inventory and allocation at distribution hubs.
- Purpose: To ensure proper storage and timely allocation of accessories.
- Functionality: Processes incoming donations and fulfills outgoing requests.

7. Donation Drop-Off Manager:

- Definition: Oversees operations at drop-off locations.
- Purpose: To ensure donations are processed and categorized correctly.
- Functionality: Manages the intake of donated items.

8. Community Outreach Manager:

- Definition: Oversees and coordinates the outreach and delivery efforts of the Community Outreach Enterprise.
- Purpose: To ensure donated accessories reach underserved communities effectively and efficiently.
- Functionality: Manages outreach programs, collaborates with recipient organizations, and ensures timely fulfillment of accessory requests.

9. Volunteer:

- Definition: Handles on-the-ground tasks such as pickups and deliveries.
- Purpose: To provide logistical support within the ecosystem.
- Functionality: Completes assigned tasks and updates the system on their status.

Application Screenshots-

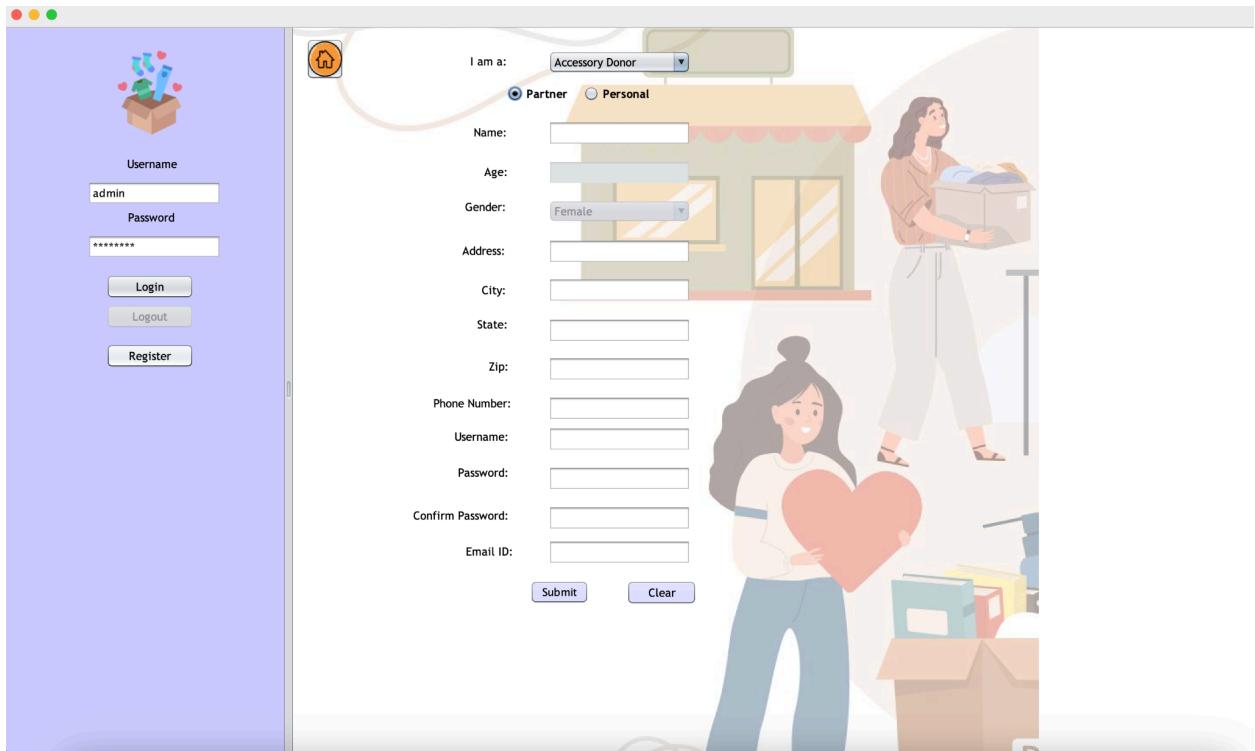
1. Login Page-



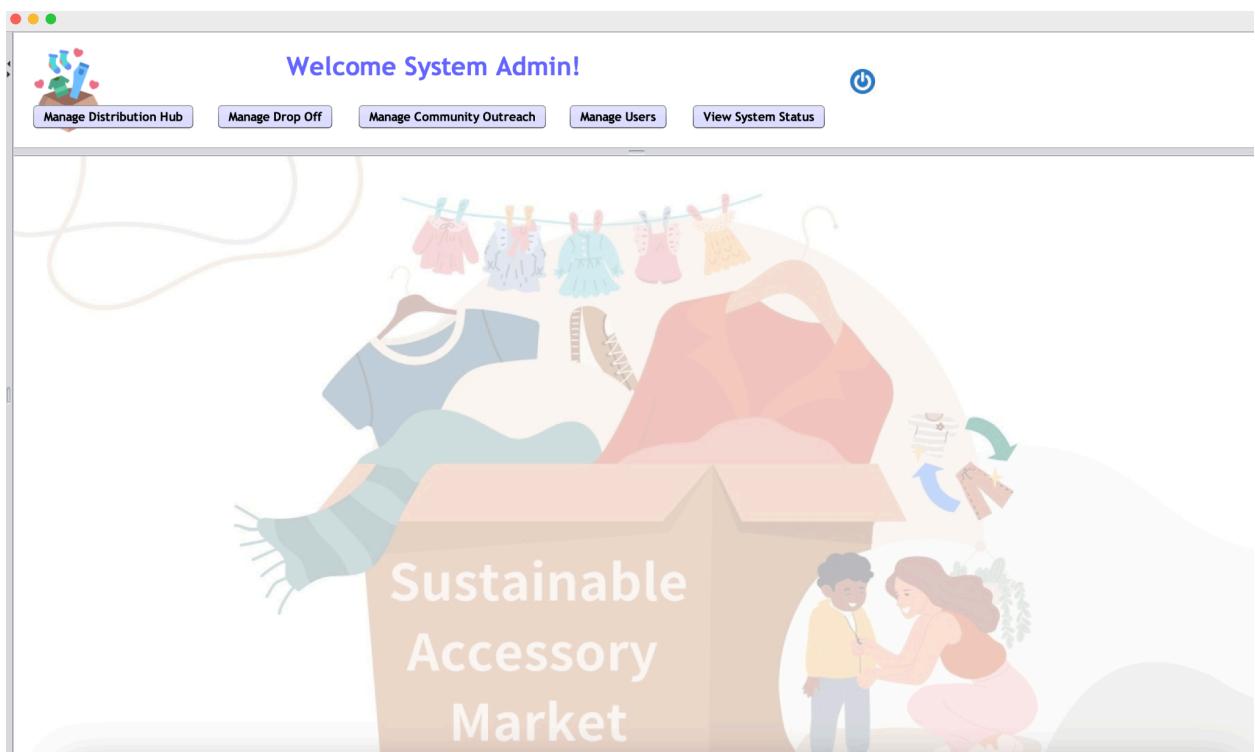
2. Register Page -

You can register as a :

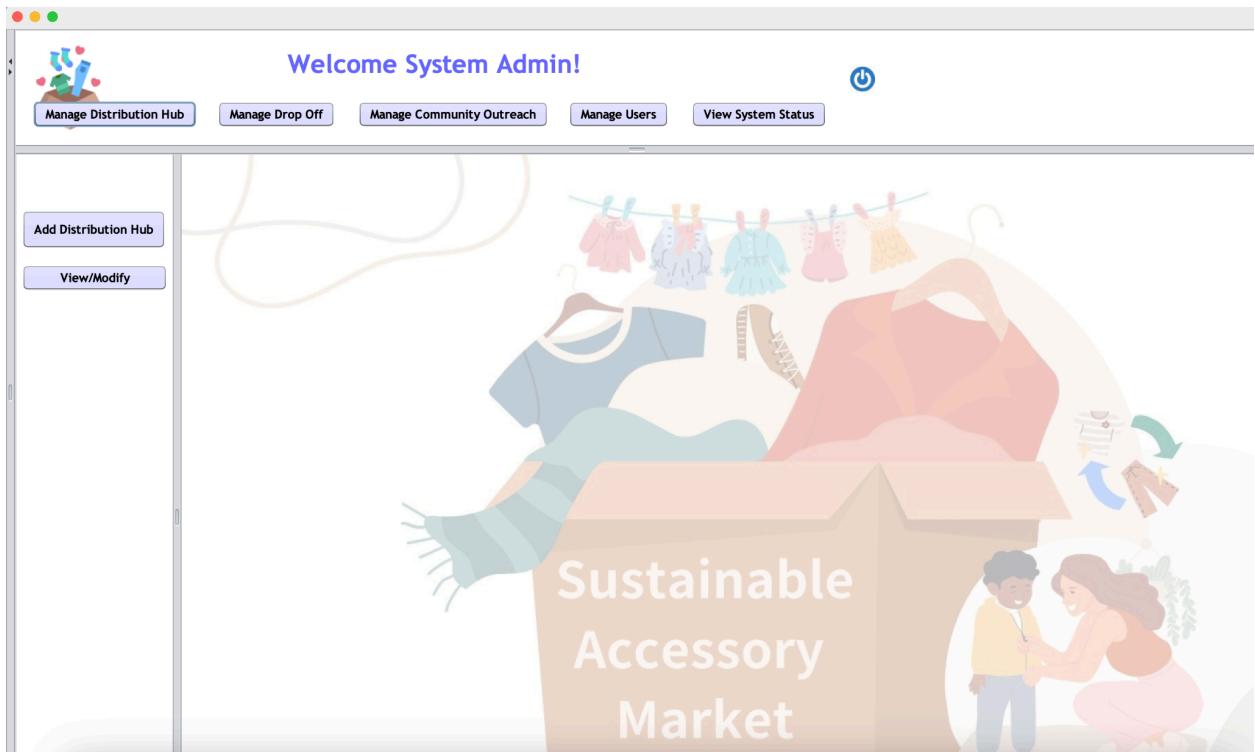
1. Partner Accessory Donor
2. Personal Accessory Donor
3. Partner Accessory Requester
4. Personal Accessory Requester



3. Admin UI-



Manage Distribution Hub-



Manage Distribution Hub > Add Distribution Hub

This screenshot shows the "Add Distribution Hub" form within the same application window. The title bar "Welcome System Admin!" is visible at the top. The sidebar on the left has the "Add Distribution Hub" button highlighted. The main form contains fields for entering distribution hub information:

Distribution Hub ID:	<input type="text"/>
Distribution Hub Name:	<input type="text"/>
Distribution Hub Phone Number:	<input type="text"/>
Distribution Hub Address:	<input type="text"/>
City:	<input type="text"/>
State:	<input type="text"/>
Zip:	<input type="text"/>
Distribution Hub Manager Name:	<input type="text"/>
Distribution Hub Manager Username:	<input type="text"/>
Password:	<input type="password"/>
Confirm Password:	<input type="password"/>

A "Submit" button is located at the bottom of the form. The background illustration remains the same, featuring the cardboard box and clothing items.

Manage Distribution Hub > View/Modify

Welcome System Admin!

Distribution Hub Details

Distribution Hub ID	Name	Admin	Phone Number	Address	City	State	Zip
DH001	Central Distribution Hub	Distribution Hub Admin	1234567890	123 Main St	Boston	MA	02118
DH002	East Distribution Hub	Distribution Hub Admin	9876543210	456 Elm St	New York	NY	10001

Distribution Hub ID: Distribution Hub Name: Update

Distribution Hub Phone Number: Edit

Distribution Hub Address: Delete

Distribution Hub City:

Distribution Hub State:

Distribution Hub Zip:

Distribution Hub Admin Name:

Distribution Hub Admin Username:

Distribution Hub Admin Password:

Sustainable Accessory Market

Add Distribution Hub View/Modify

Manage Drop Off

Welcome System Admin!

Add Drop Off View/Modify

Sustainable Accessory

Manage Drop Off > Add Drop Off

Welcome System Admin!

Add Drop Off

Distribution Hub Name:	<input type="text" value="Central Distribution Hub"/>
Drop Off ID:	<input type="text" value="East Distribution Hub"/>
Drop Off Name:	<input type="text"/>
Phone Number:	<input type="text"/>
Address:	<input type="text"/>
City:	<input type="text"/>
State:	<input type="text"/>
Zip:	<input type="text"/>
Drop Off Manager Name:	<input type="text"/>
Drop Off Manager Username:	<input type="text"/>
Password:	<input type="text"/>
Confirm Password:	<input type="text"/>

Submit

Manage Drop Off > View/Modify

Welcome System Admin!

View/Modify Drop Off

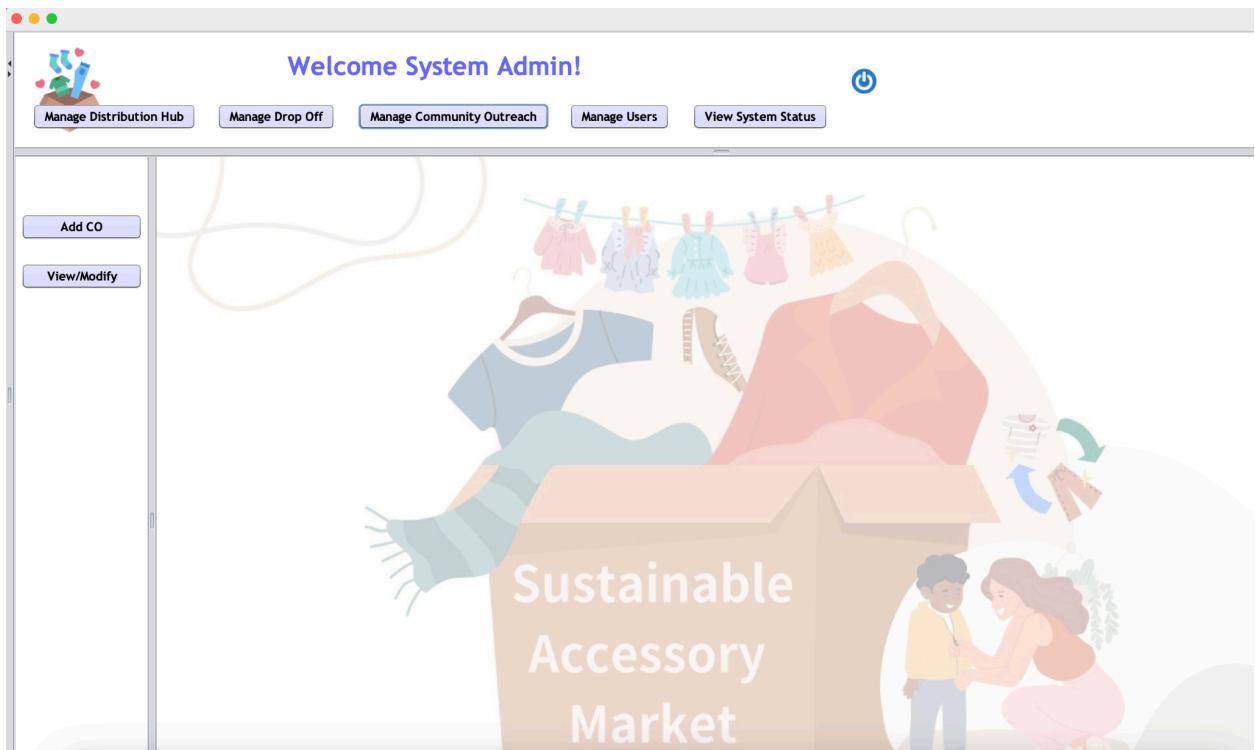
ID	Name	Distribution H...	Manager	Phone Number	Address	City	State	Zip
DO1	Default DropO...	Main Distribut...	DropOff Store...	1234567890	123 Main Street	Boston	MA	02115
DO2	Default DropO...	Secondary Dis...	Manager two	9876543210	456 Elm Street	Cambridge	MA	02139

Drop Off ID:

Drop Off Name:	<input type="text"/>
Drop Off Phone Number:	<input type="text"/>
Drop Off Address:	<input type="text"/>
Drop Off City:	<input type="text"/>
Drop Off State:	<input type="text"/>
Drop Off Zip:	<input type="text"/>
Drop Off Manager Name:	<input type="text"/>
Drop Off Manager Username:	<input type="text"/>
Password:	<input type="text"/>

Update **Edit** **Delete**

Manage Community Outreach



Manage Community Outreach > Add CO

Welcome System Admin!

Manage Distribution Hub | Manage Drop Off | Manage Community Outreach | Manage Users | View System Status

Add CO | View/Modify

Add Community Outreach

CO ID:
CO Name:
CO Phone Number:
CO Address:
City:
State:
Zip:
CO Agent Name:
CO Agent Username:
Password:
Confirm Password:

Submit | Cancel

Sustainable Accessory Market

The screen shows a central illustration of a cardboard box overflowing with clothes, with a woman adjusting a child's outfit. A clothesline with laundry is visible in the background.

Manage Community Outreach >View/Modify

Welcome System Admin!

Community Outreach Details

CO ID	Name	Agent Name	Phone Number	Address	City	State	Zip
CO1	Helping Hand...	Community ...	1234567890	789 Oak Street	Boston	MA	02116
CO2	Care and Share...	Community ...	9876543210	123 Maple Av...	Cambridge	MA	02140

Add CO View/Modify

CO Id: Update Edit Delete

CO Name:
 Phone Number:
 CO Address:
 City :
 State :
 Zip:
 CO Agent Name:
 CO Agent Username :
 Password :

Manage Users

Welcome System Admin!

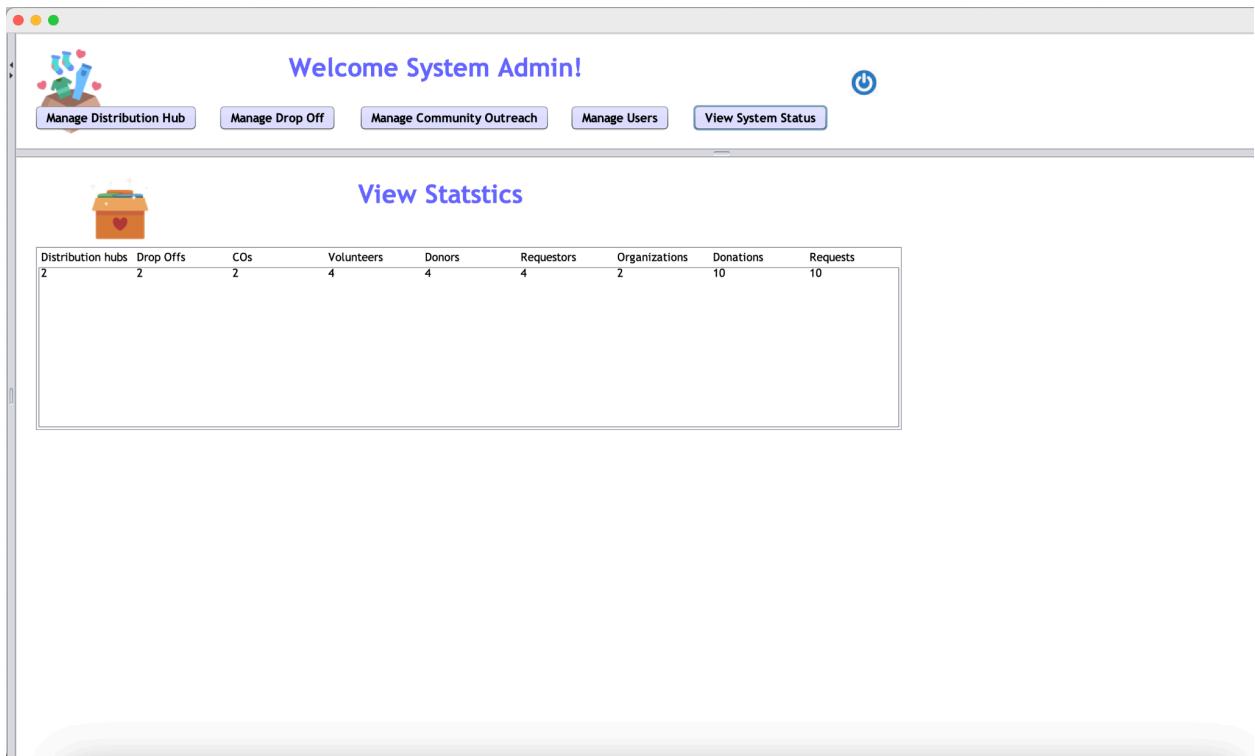
Manage Users

Username	Password	Role	Name
admin	admin123	System Admin	DropOff Store Manager one
domanager1	@Password123	DO Manager	DropOff Store Manager two
domanager2	@Password123	DO Manager	Community Manager One
comanager1	@Password123	CO Manager	Community Manager Two
comanager2	@Password123	CO Manager	Distribution Hub Manager One
dhmanager1	@Password123	DH Manager	Distribution Hub Manager Two
dhmanager2	@Password123	DH Manager	Personal Requestor One
personalreq1	@Password123	Personal Requestor	Personal Requestor Two
personalreq2	@Password123	Personal Requestor	Partner Requestor One
partnerreq1	@Password123	Partner Requestor	Partner Requestor Two
partnerreq2	@Password123	Partner Requestor	Personal Donor One
personaldonor1	@Password123	Personal Donor	

Delete

Sustainable Accessory Market

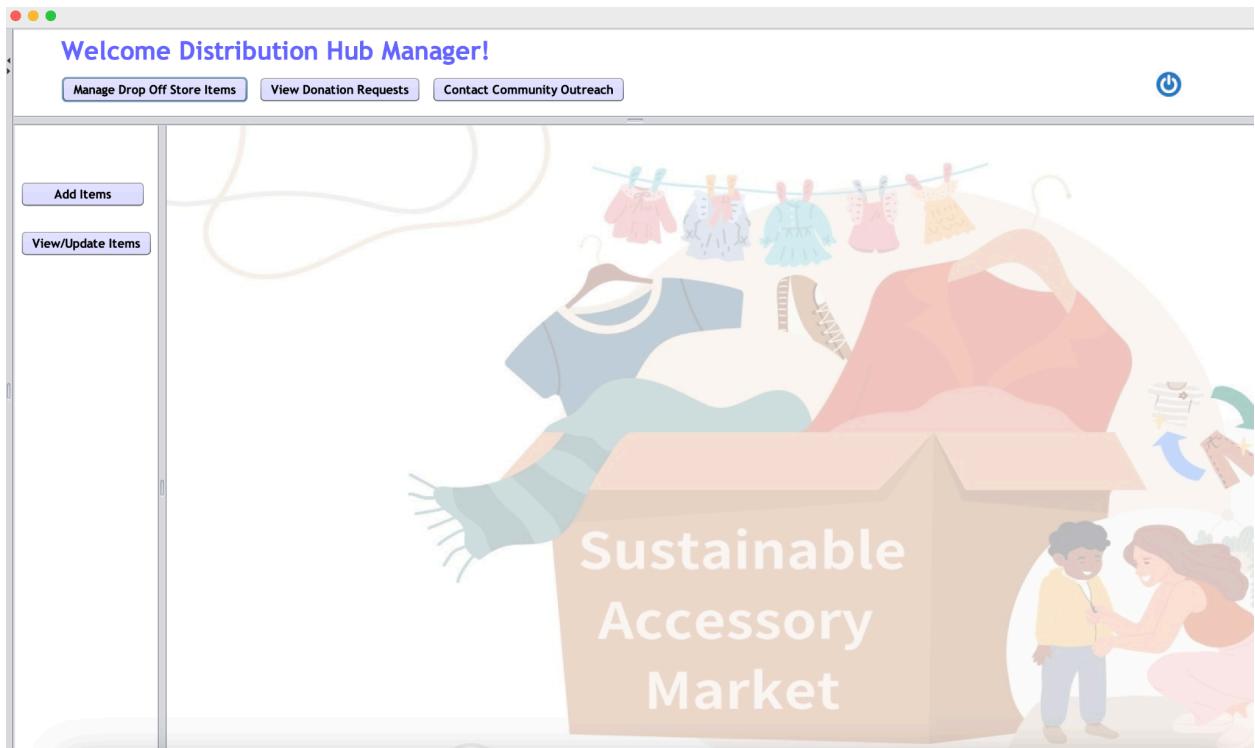
View System Statistics



Distribution Hub Manager UI -



Manage Drop Off Store Items



Manage Drop Off Store Items > Add Items

A screenshot of the "Add Drop Off Items" form within the same application window. The title "Add Drop Off Items" is centered at the top. The form contains several input fields: "Distribution Hub Name" (set to "Central Distribution..."), "Drop Off Store" (a dropdown menu showing "Default DropOff ...", "Default DropOff Store 1", and "Default DropOff Store 2", with "Default DropOff Store 1" selected), "Item ID" (an empty input field), "Accessory Item" (an empty input field), and "Item Quantity" (an empty input field). Below the form are two buttons: "Submit" and "Clear". The background features the same "Sustainable Accessory Market" illustration as the previous screen.

Manage Drop Off Store Items > View/Update Items

Welcome Distribution Hub Manager!

Manage Drop Off Store Items View Donation Requests Contact Community Outreach

View/Modify Drop-Off Store Items

Add Items View/Update Items

Item ID	Drop-Off Hub Name	Drop-Off Name	Drop-Off Manager	Accessory Items	Accessory Quantity

Edit Delete

View Donation Requests

Welcome Distribution Hub Manager!

Manage Drop Off Store Items View Donation Requests Contact Community Outreach

Donation Requests

Donation ID	Accessory Item	Quantity	Address	Status

Send request to volunteer

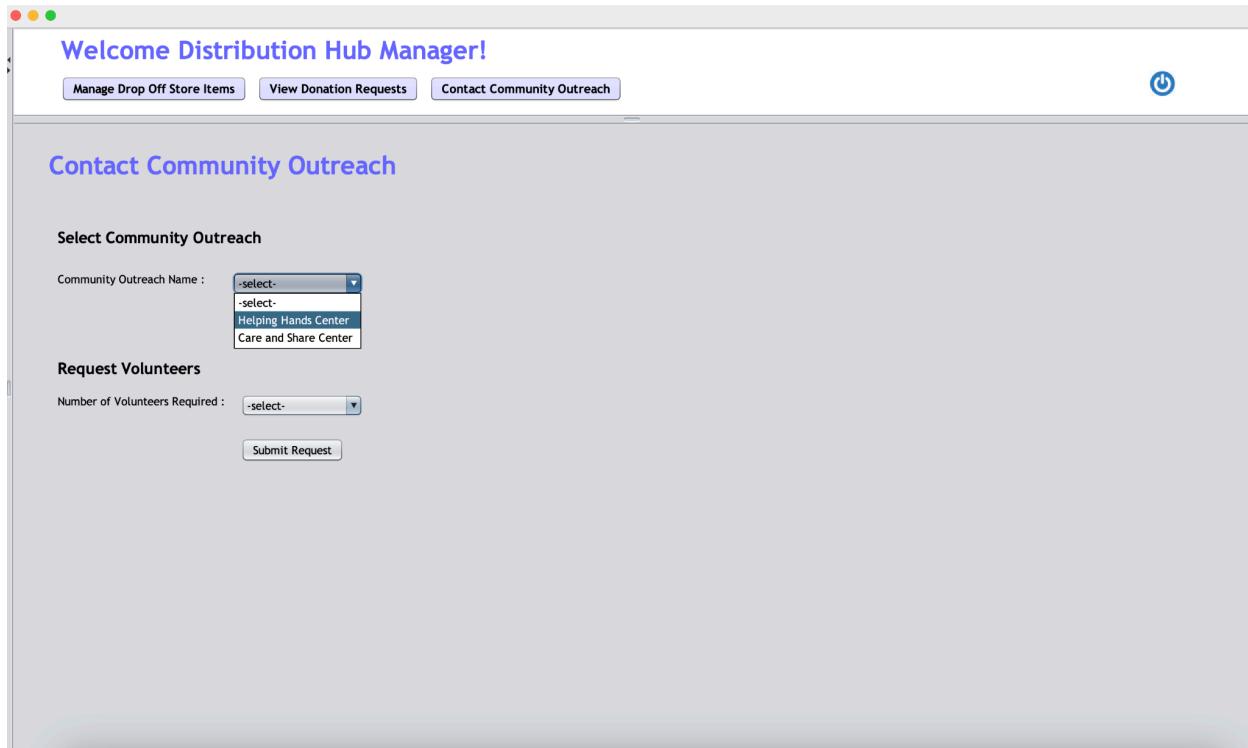
Assign Volunteer

Donation ID :

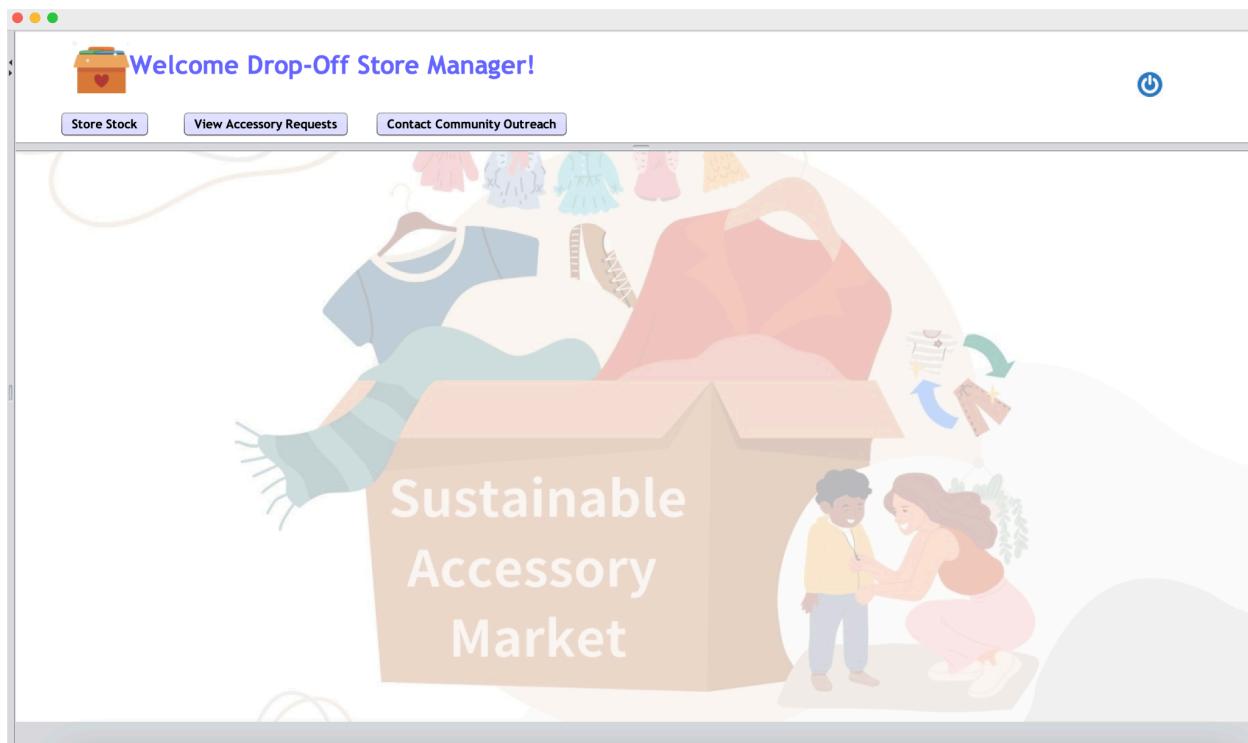
Assign Volunteer :

Assign

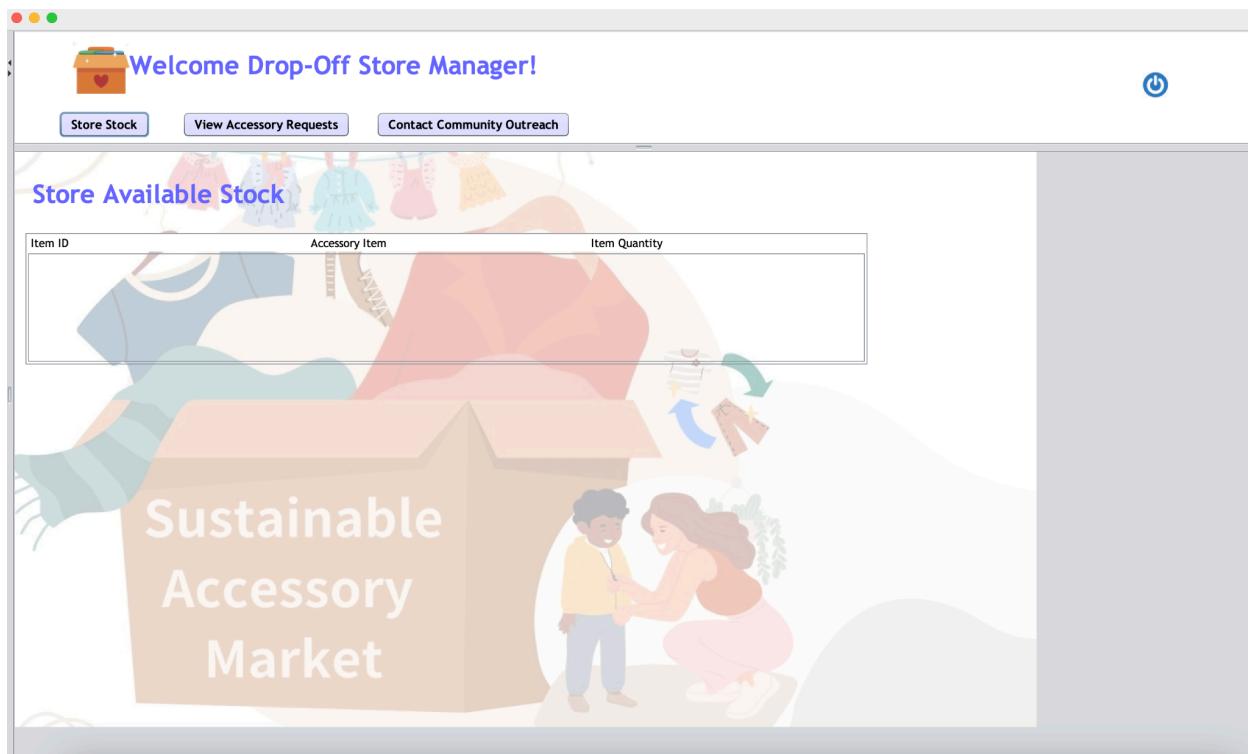
Contact Community Outreach



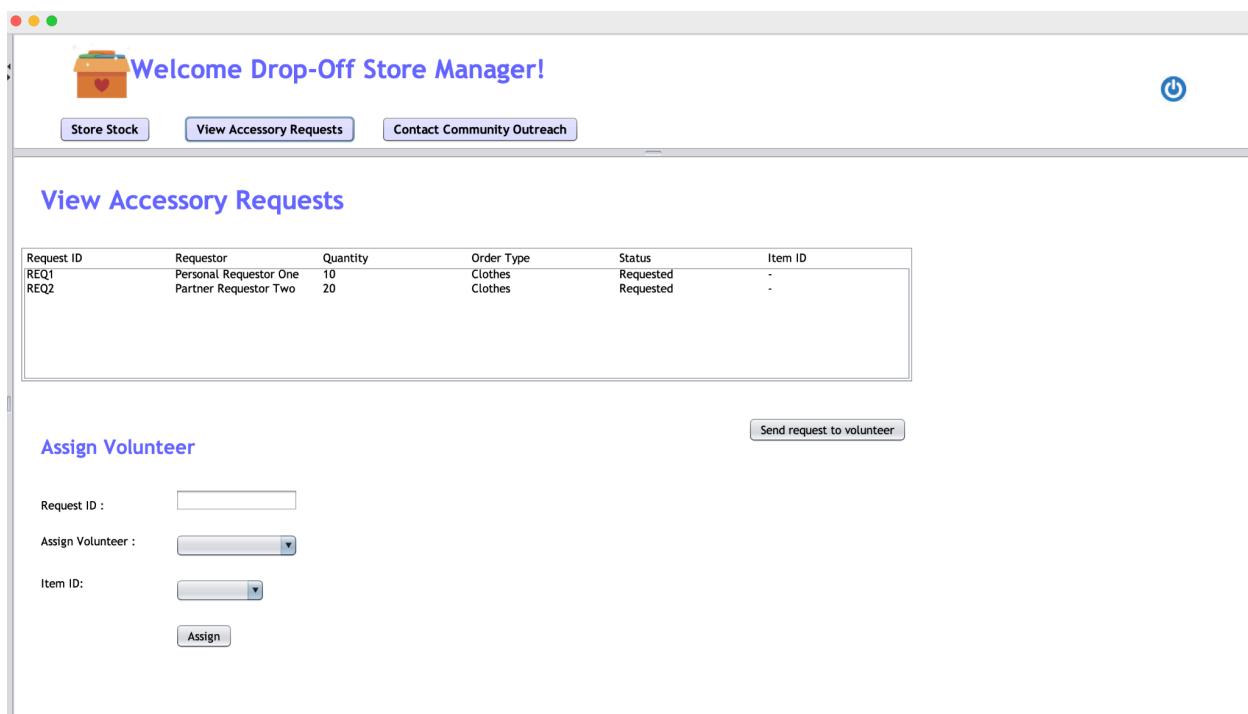
Drop Off Manager UI-



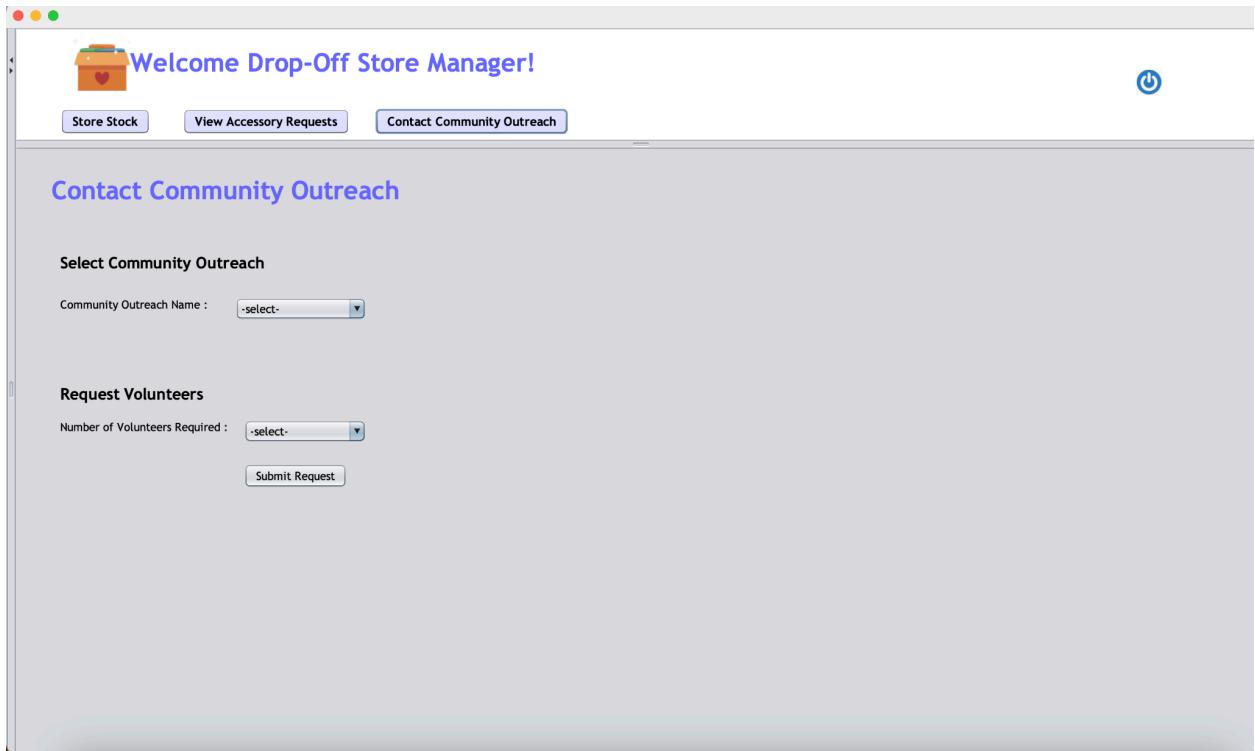
Drop off Manager > Store Stock



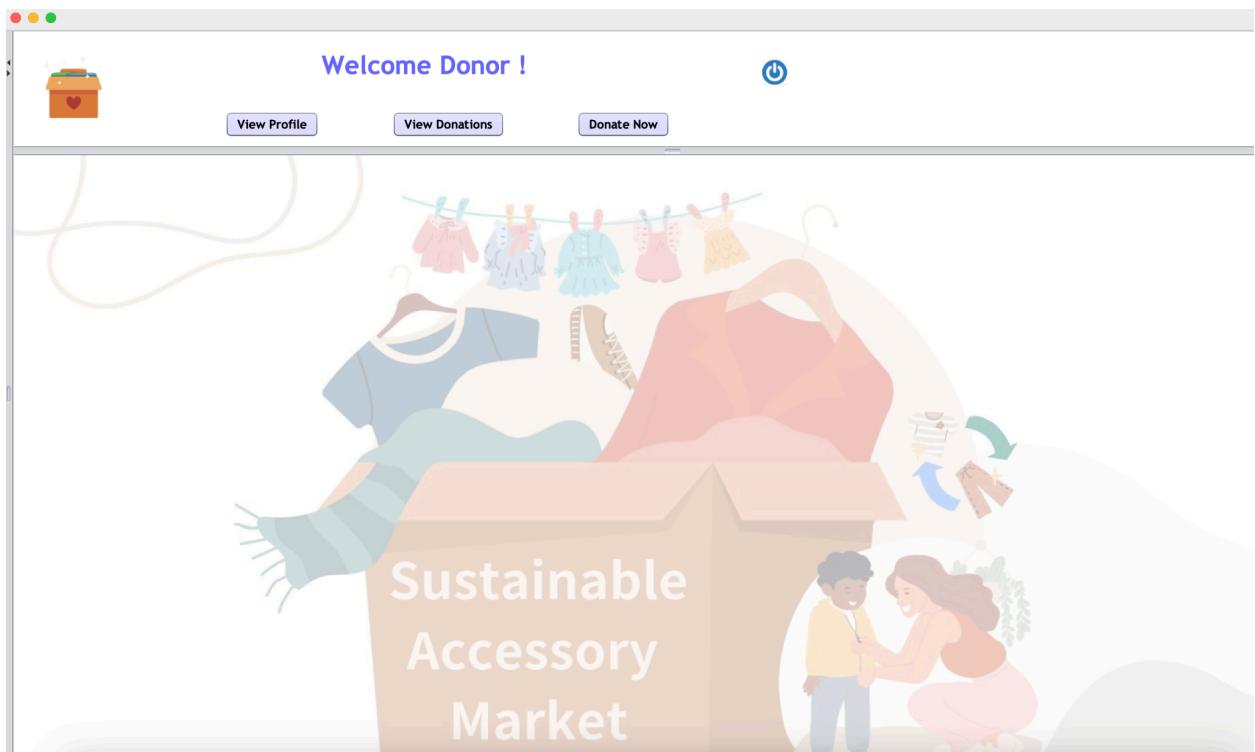
Drop off Manager > View Accessory Requests



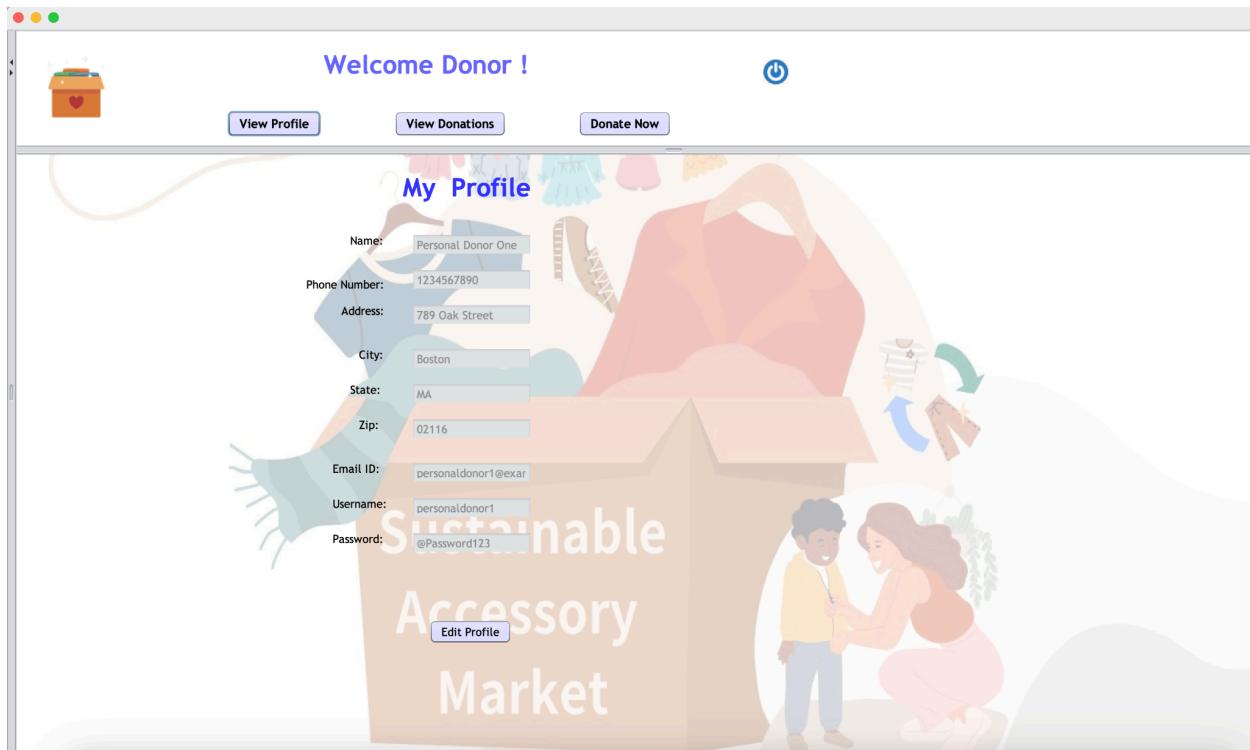
Drop off Manager > Contact Community Outreach



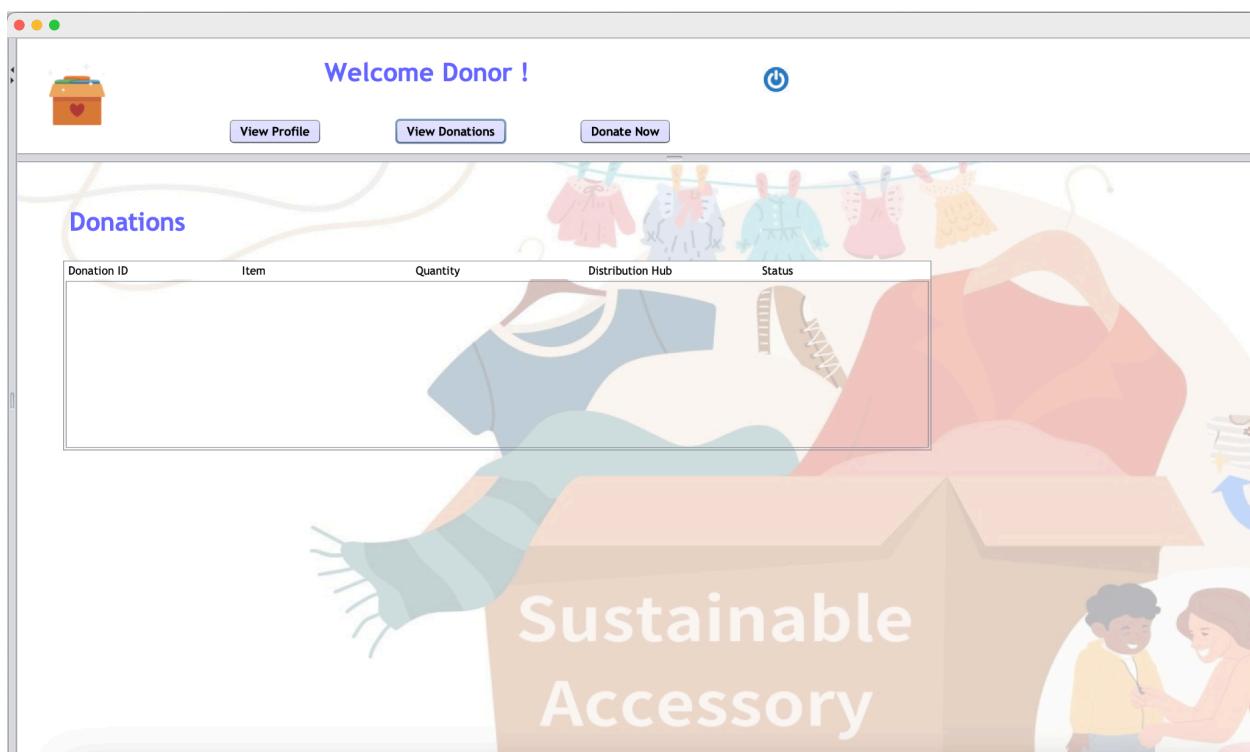
Personal/Partner Donor UI -



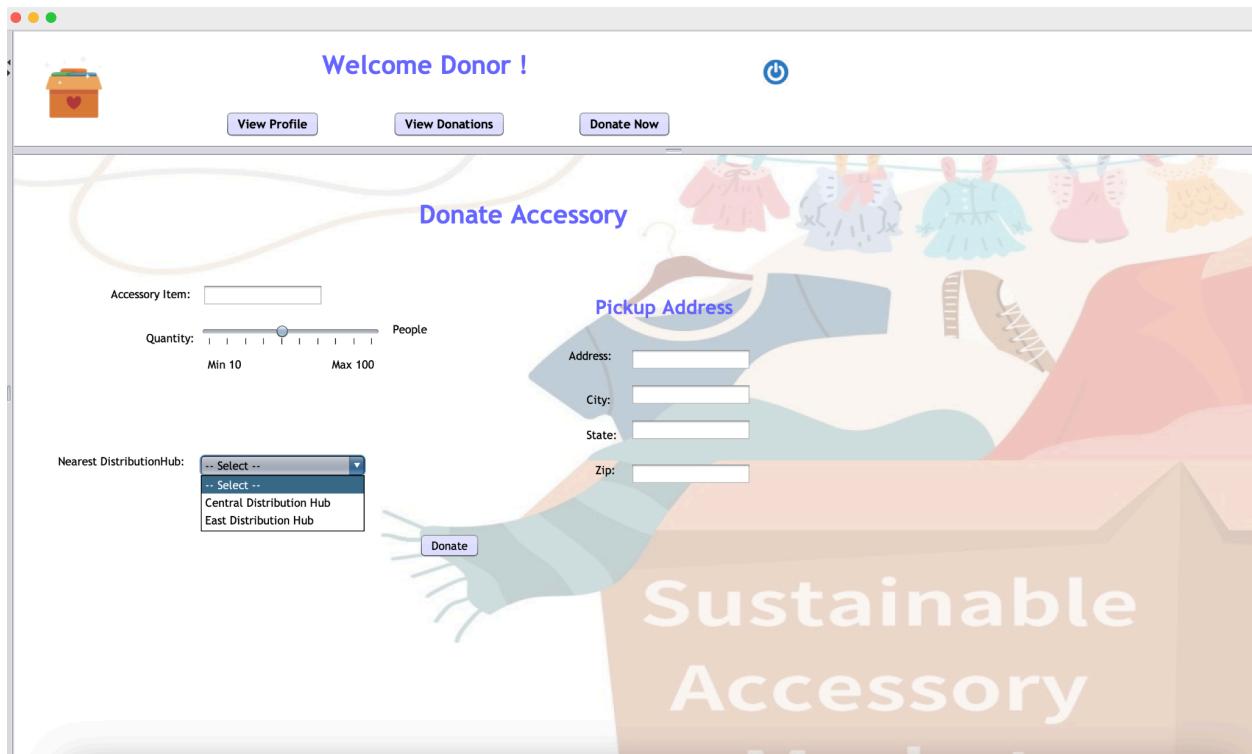
Donor > View Profile



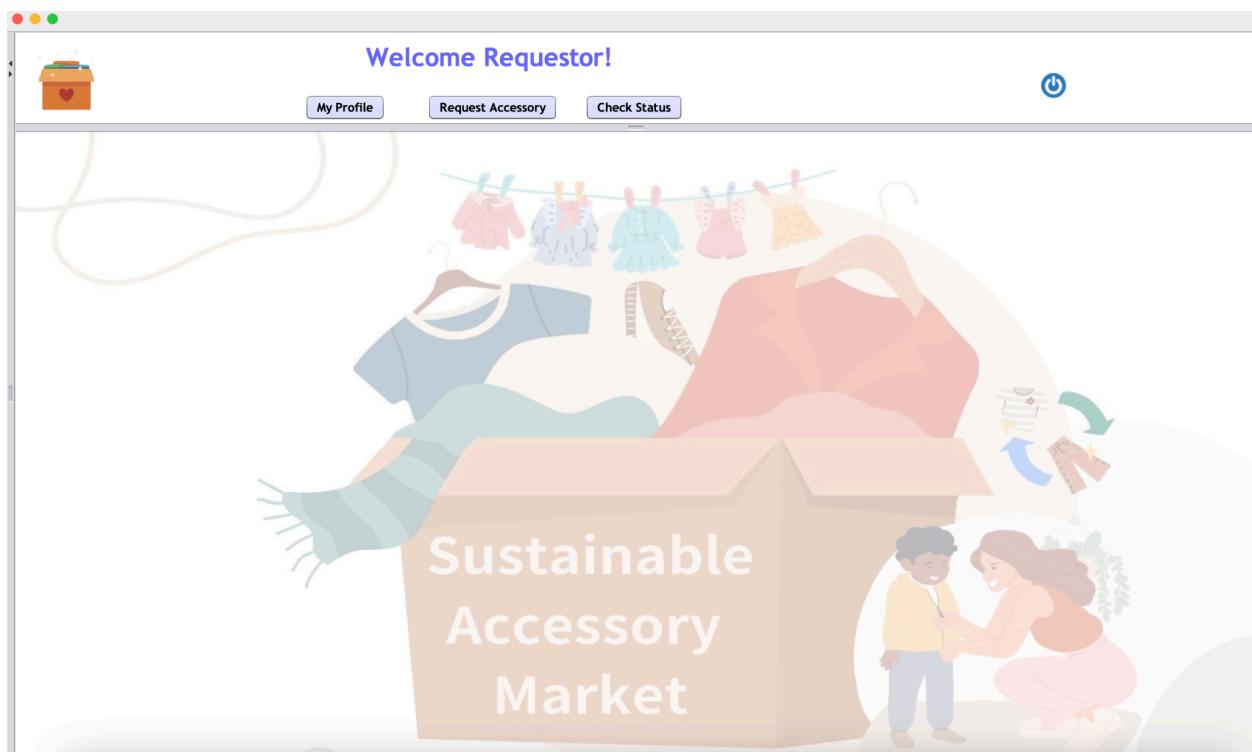
Donor > View Donations



Donor > Donate Now



Personal/Partner Requester UI-



Requestor > My Profile



Requestor > Request Accessory



Requestor > Check Status

