



MealBridge

Bridging the Gap Between Surplus and Need

Bedor Alharbi

Muzna Abdelgadir

Aroob Altuwajiri

Balqees Almohsen

Maha Alrashidi

Lena Alswed

Table of Contents

- **Project Idea**
- **The reason for choosing the idea**
- **Project planning**
- **Software Requirements Specification (SRS)**
- **Software Design Document (SDD)**
- **Diagrams**
- **MealBridge Application UI**

Project Idea

MealBridge is a digital platform that tackles food waste by efficiently connecting surplus food donors with charities and volunteers who deliver meals to those in need. It allows restaurants, bakeries, and individuals to post donations, while beneficiaries can easily claim and manage them. Through automated matching, notifications, and tracking, MealBridge ensures fast, safe food redistribution that supports community welfare and sustainability.



Why We Chose This Idea



Reduce Waste

Food waste is a major global issue, and many surplus meals go unused. MealBridge helps reduce this by redirecting excess food to people who need it.



Improving Donations Efficiency

MealBridge uses technology to make the process faster, more organized, and more transparent for both donors and recipients.



Sustainability & Community

The idea supports sustainability, strengthens community help, and allows us to build a modern cross-platform solution with real social impact.

Project Planning

Meetings

- ✓ **1st Meeting:** Getting to know each other and nominating a leader.
- ✓ **2nd Meeting:** Discuss project ideas and select the final idea to develop.
- ✓ **3rd Meeting:** Discuss the SRS document structure and distribute sections among team members.
- ✓ **4th Meeting:** Finalizing SRS document.
- ✓ **5th Meeting:** Discuss the SDD document structure and distribute sections among team members.
- ✓ **6th Meeting:** Review the entire project progress and agree on final deadlines for the next meeting, the presentation, and the final project file.
- ✓ **7th Meeting:** Reviewing Presentation, final project file and Project Repository.
- ✓ **8th Meeting:** Getting ready for project discussion.



Software Requirements Specification (SRS)

The document defines both functional and non-functional requirements, serving as a detailed blueprint for development and testing. The SRS also outlines the operating environment, assumptions, and dependencies, such as the need for internet connectivity, GPS services, and external verification for charity organizations.

Functional Requirements: Donor

For Donors

- ✓ Register and log in.
- ✓ Create donation requests with meal details, quantity, photos, and pickup location.
- ✓ Track the status of donations in real-time.
- ✓ Provide feedback and rate the donation process.
- ✓ Receive notifications when a charity claims a donation.

Functional Requirements: Recipient

For Recipient

- ✓ Register and log in securely.
- ✓ View available donation requests.
- ✓ Request donations and confirm receipt.
- ✓ Search and filter donations by type, quantity, location, and pickup time.
- ✓ Receive notifications for new donations and pickup reminders.
- ✓ Provide feedback and rate donors.

Functional Requirements: Admin

For Admin

- ✓ Verify donor and charity accounts.
- ✓ Monitor system performance and donation activity.
- ✓ Generate reports on donations, active users, and food waste reduction.
- ✓ Manage users and data integrity.
- ✓ Access analytics dashboards for decision-making.
- ✓ Export Reports in CSV.

Non-Functional Requirements



Security

Encrypt sensitive data (addresses, phone numbers).

Use secure HTTPS connections for all data transfers.



Performance

System actions (login, donation creation, matching) ≤ 3 seconds.

Support at least 100 concurrent users.



Safety

Automatic data backup and recovery.

Prevent accidental deletion of critical records.

Display clear error messages and retry failed operations safely.



System Quality

Compatible with major browsers and mobile devices.

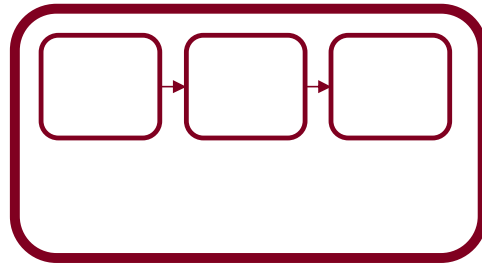
Responsive UI supporting multiple screen sizes.

Multi-language support (Arabic & English).



Software Design Document (SDD)

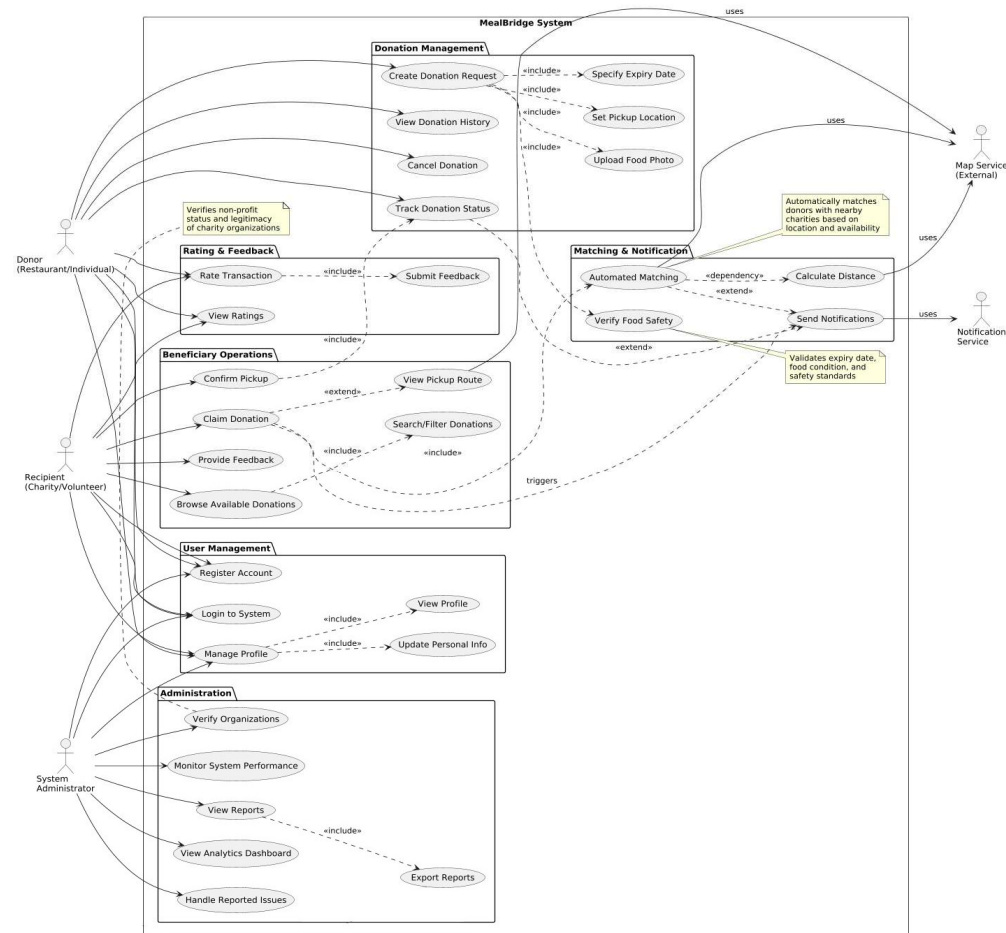
Provides a roadmap for implementing the system architecture and UI. It specifies how core functionalities, such as donation matching, notifications, and tracking, are structured and integrated with third-party services like mapping and authentication. The design emphasizes modularity, scalability, and security to handle multiple user roles and high concurrency while ensuring a seamless user experience across mobile and web platforms.



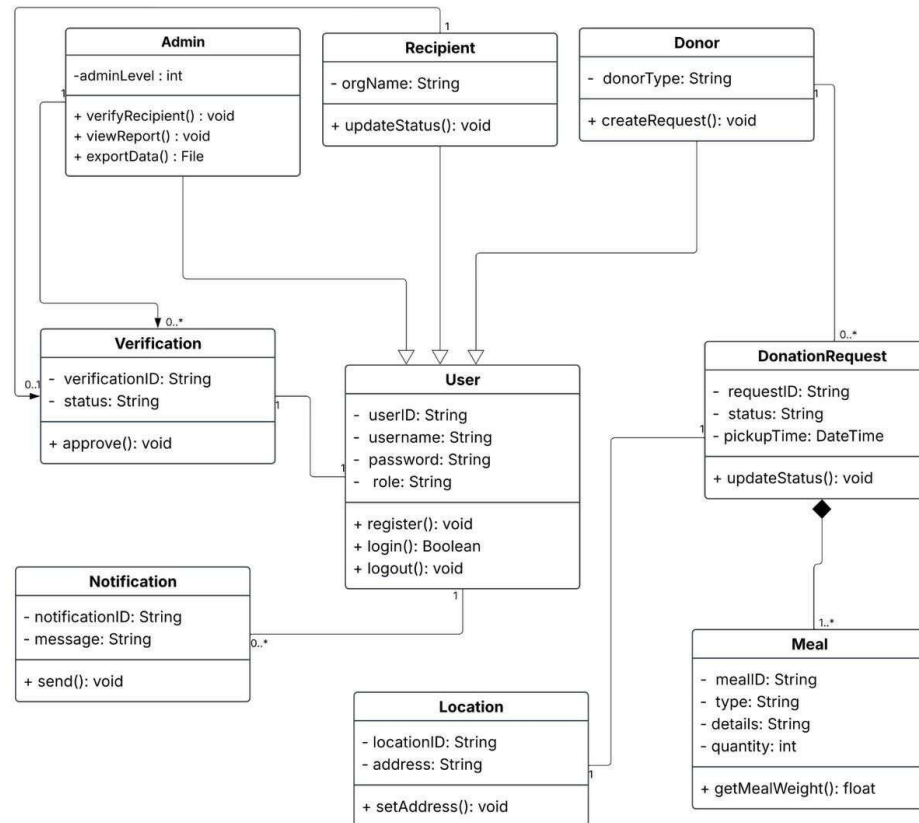
UML Diagrams

This section is allocated to provide an overview of the system's design through UML diagrams. The diagrams presented here visually represent the structure, interactions, and workflows of the MealBridge application, giving a clear understanding of how different components and user roles are connected and operate together.

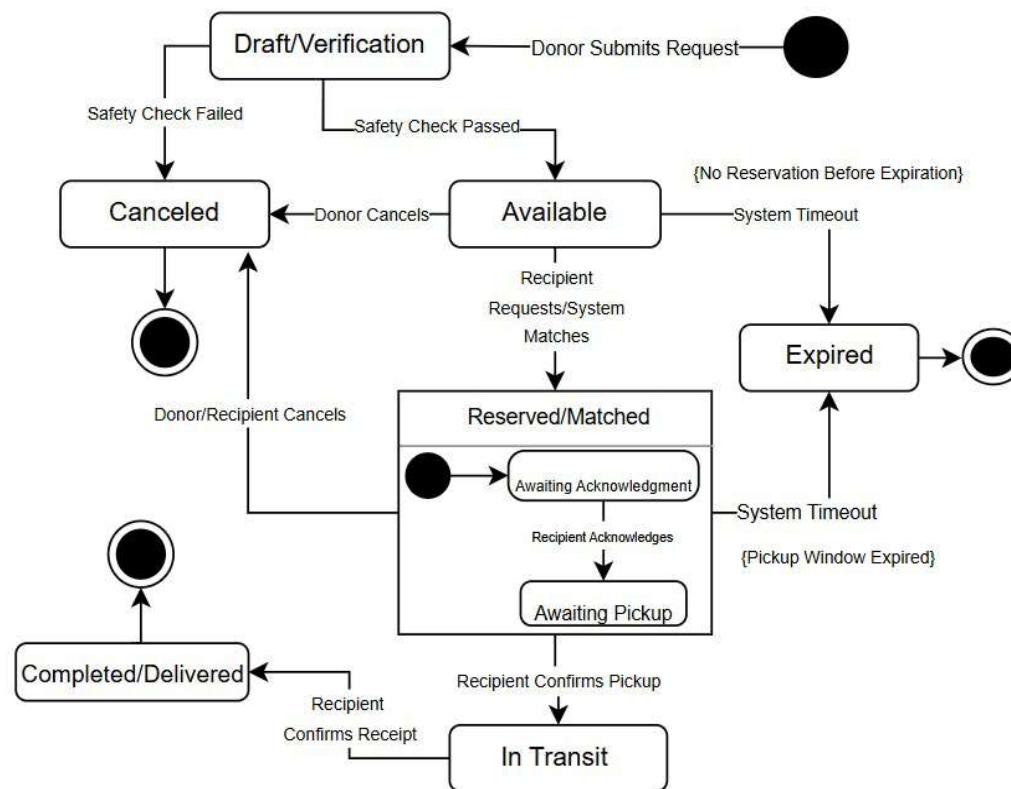
UML Use Case



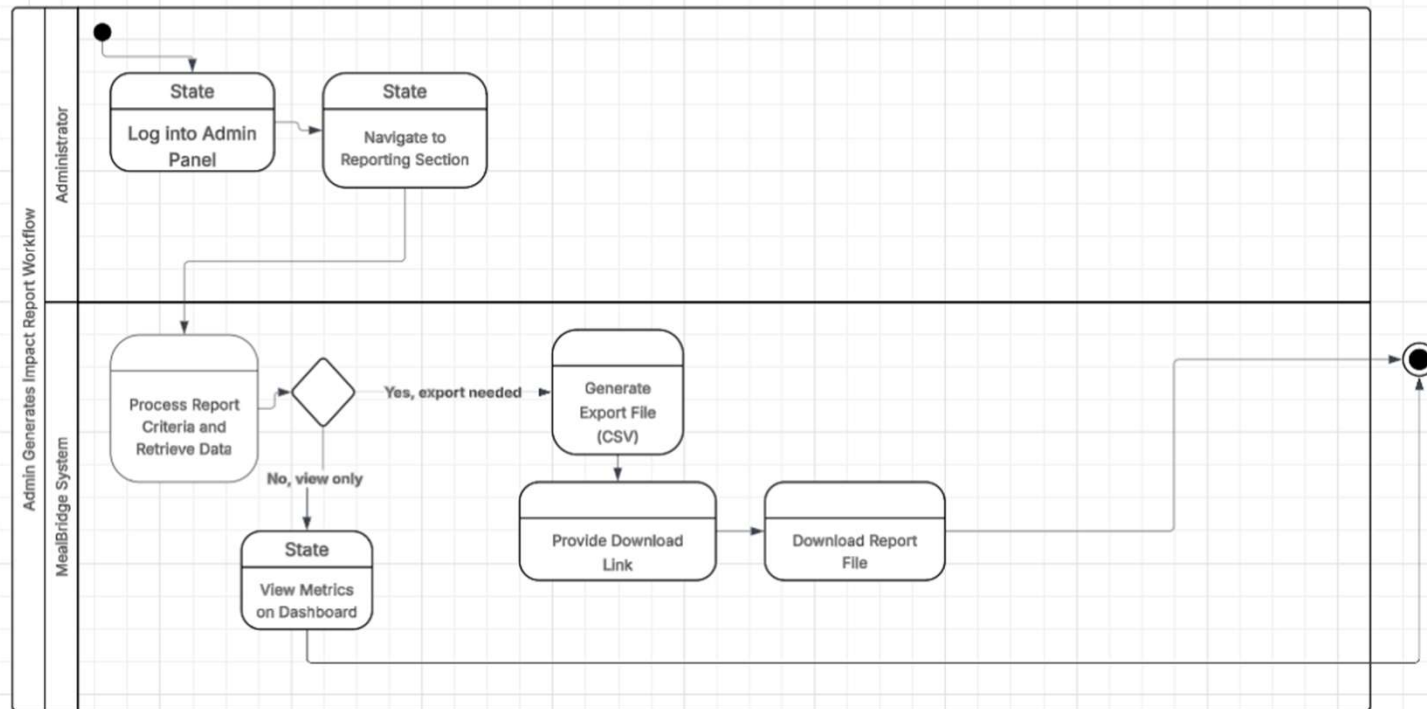
UML Class Diagram



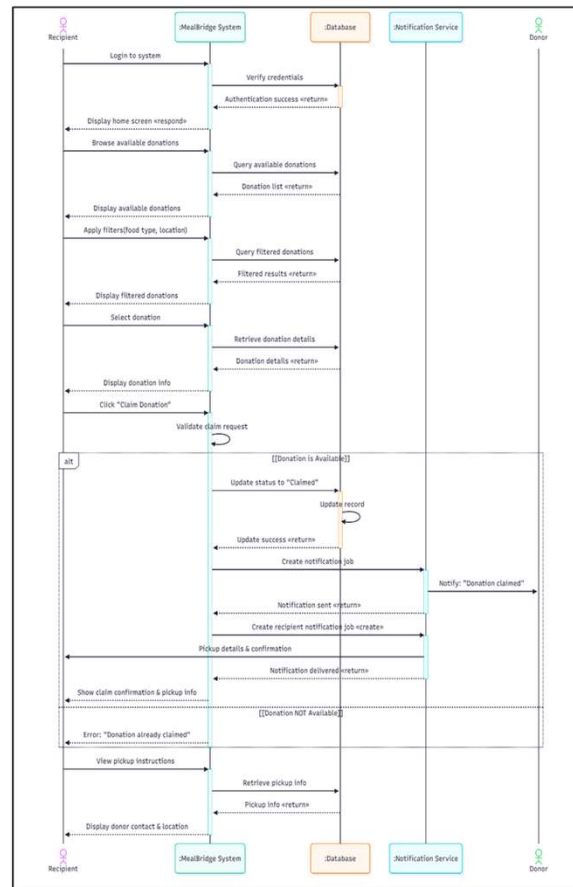
UML State Diagram: Donation Creation



Activity Diagram: Admin Exporting a report



Sequence Diagram: Claiming a Donation



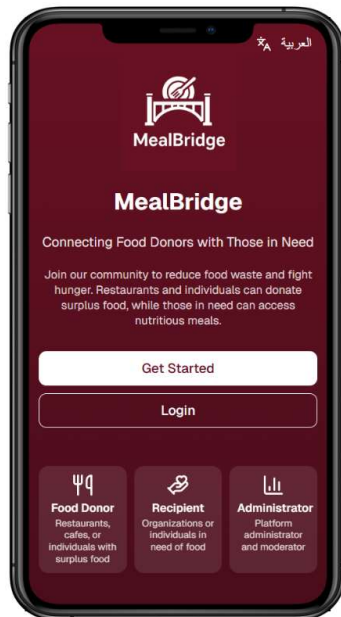


MealBridge Application UI

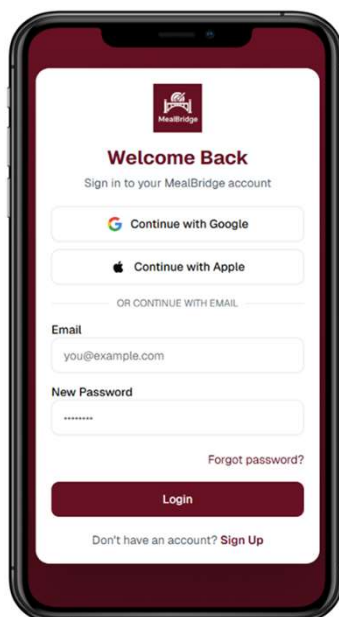
The UI is designed to be intuitive, responsive, and role-specific. Donors can easily create donation requests in a few simple steps, upload images, and provide pickup details. Beneficiaries can browse, search, and claim donations while receiving real-time updates.

Login & Registration

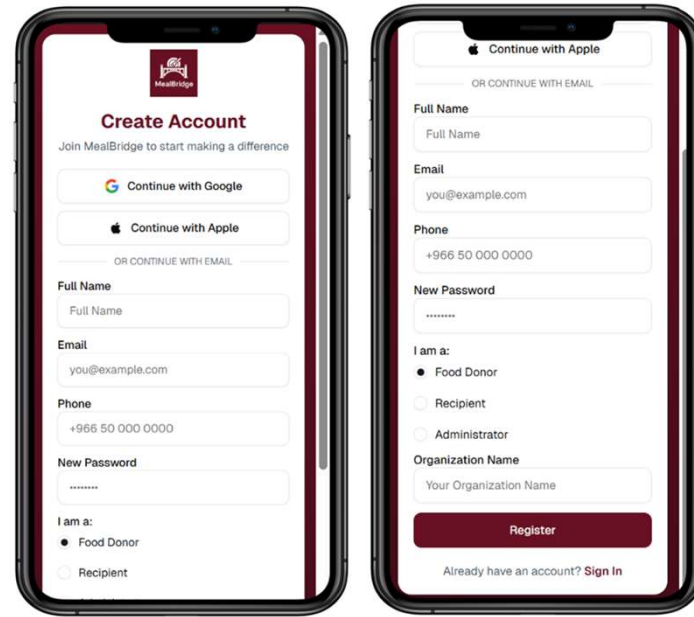
Start page



Login page

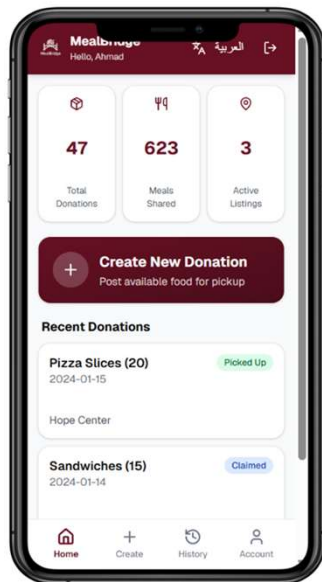


Sign Up page

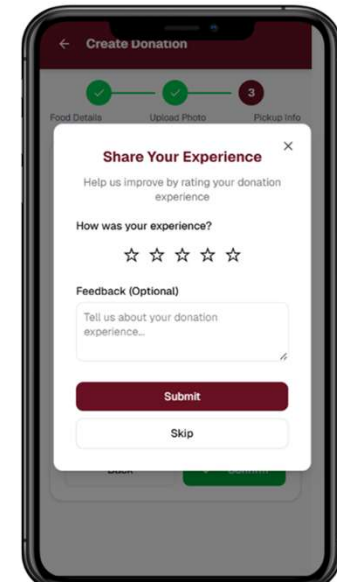
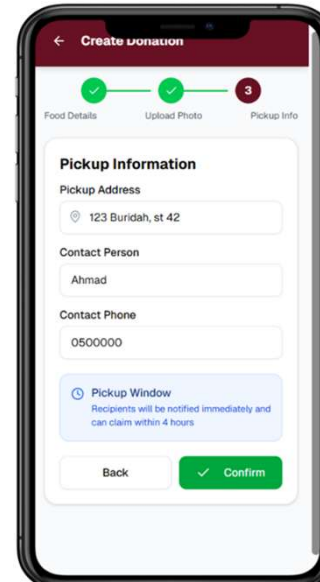
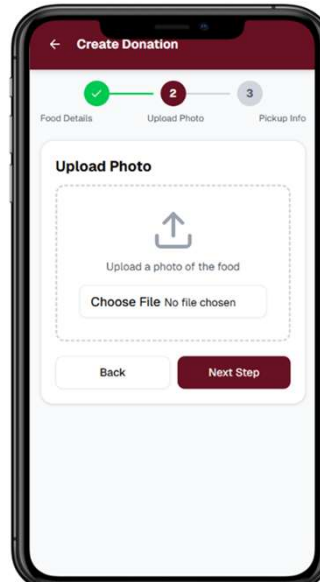
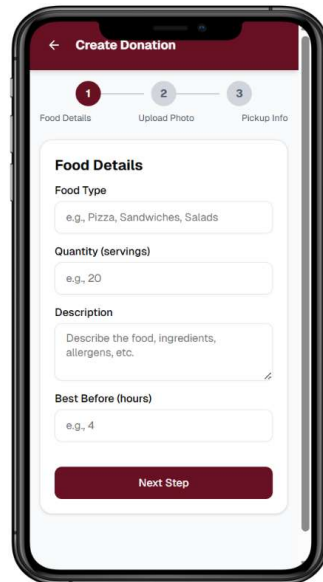


Donor Interface

Home page

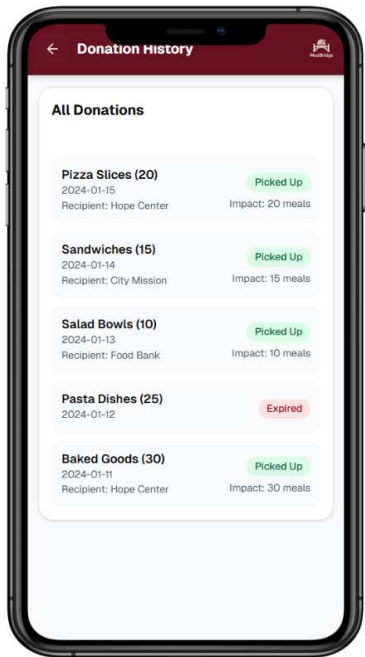


Donation Creation Flow

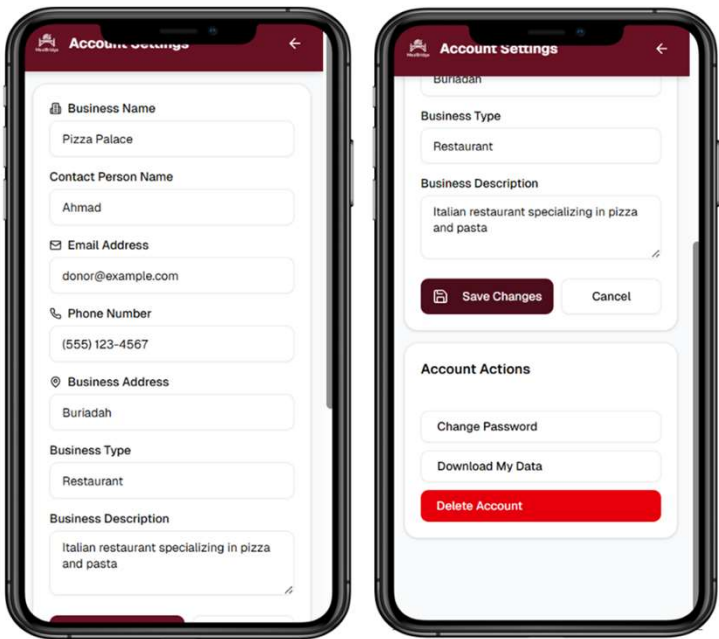


Donor Interface

History page

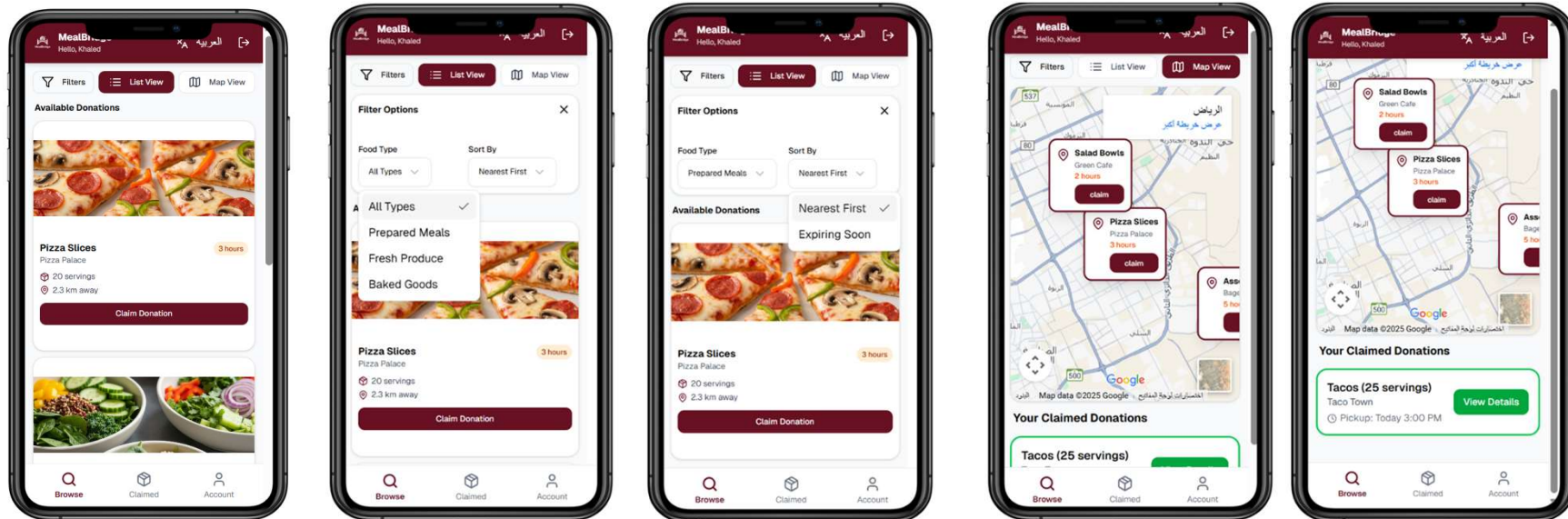


Account page



Recipient Interface

Browse page

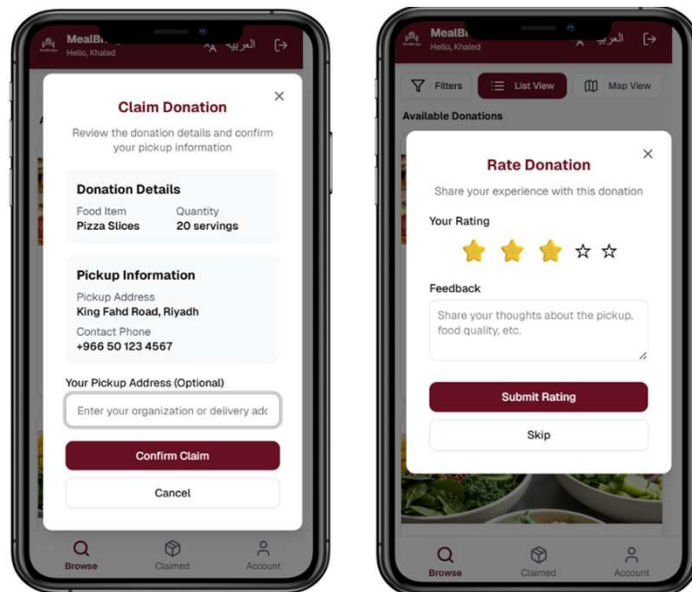


List View

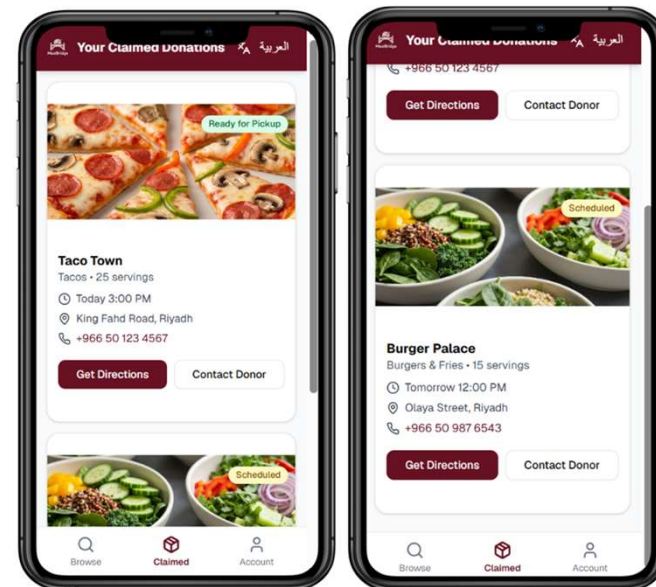
Map View

Recipient Interface

Claiming a donation



Claimed page



Recipient Interface

Account page

Account Settings

Organization Name
Hope Center

Contact Person Name
Khaled

Email Address
recipient@example.com

Phone Number
(555) 987-6543

Organization Address
456 Riyadh

Organization Type
Non-profit

Serving Capacity
200 people/week

Organization Description
Community organization serving families in need

Save Changes **Cancel**

Account Actions

Change Password

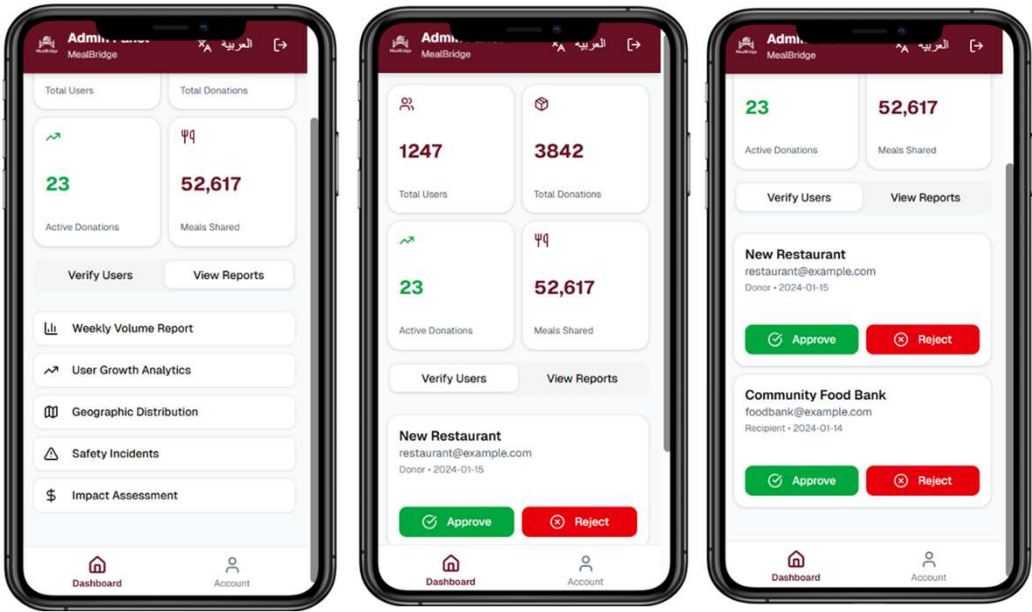
Upload Verification Documents

Download My Data

Delete Account

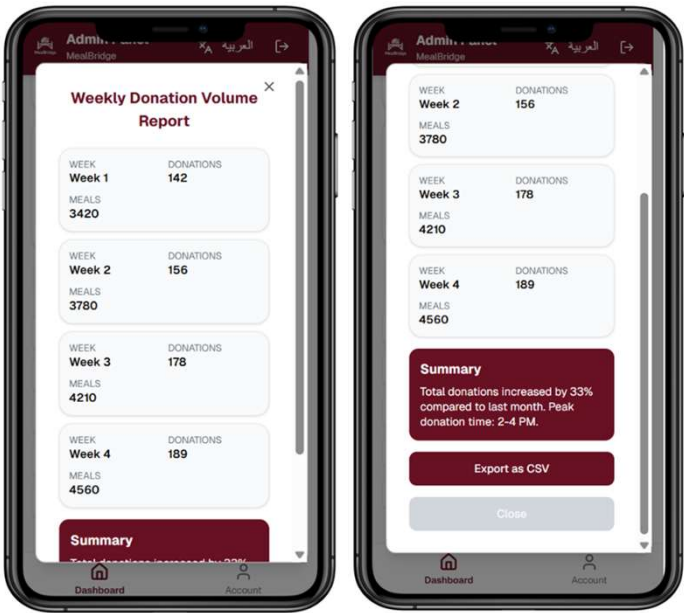
Admin Interface

Dashboard page

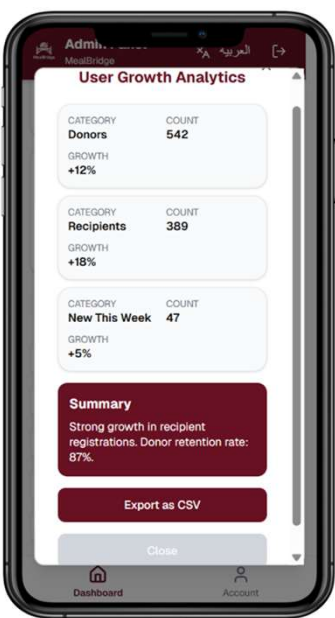


Admin Interface: Reports

Weekly Volume

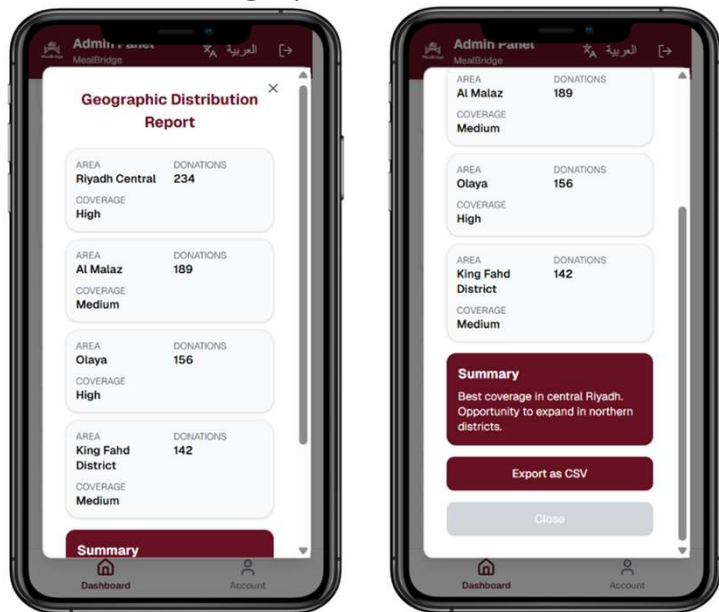


User Growth

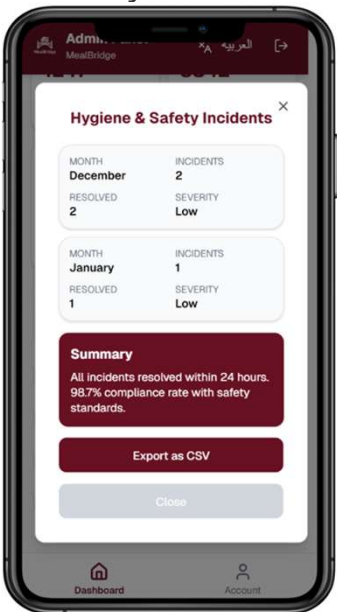


Admin Interface: Reports

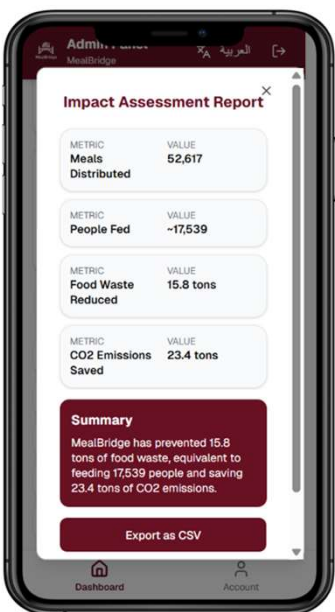
Geographic Distribution



Safety Incidents



Impact Assessment



Admin Interface

Admin Account Page

The image displays two mobile phone screens showing the Admin Settings interface. The left screen shows the 'Admin Settings' page with the following fields:

- Full Name:** Admin User
- Email Address:** admin@mealbridge.com
- Username:** admin
- Admin Role:** System Administrator

Below these fields is a note: "Contact super admin to change role permissions". At the bottom of this section are two buttons: "Save Changes" and "Cancel".

The right screen shows the 'Security Settings' and 'Admin Actions' sections.

Security Settings:

- Change Password
- Enable Two-Factor Auth
- View Login History

Admin Actions:

- Download System Logs
- Backup Database
- View Audit Trail



Thank You!
Any Questions?