



# MealBridge

Bridging the Gap Between Surplus and Need

Bedor Alharbi

Muzna Abdelgadir

Aroob Altuwajiri

Balqees Almohsen

Maha Alrashidi

Lena Alsweid

# **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

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

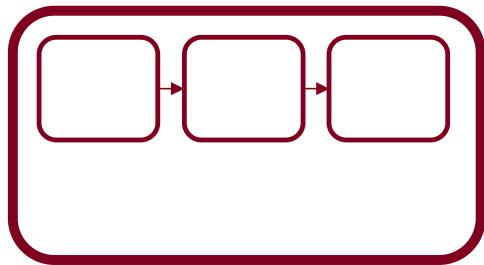
Responsive UI supporting multiple screen sizes.

Multi-language support (Arabic & English).



# Software Design Document (SDD)

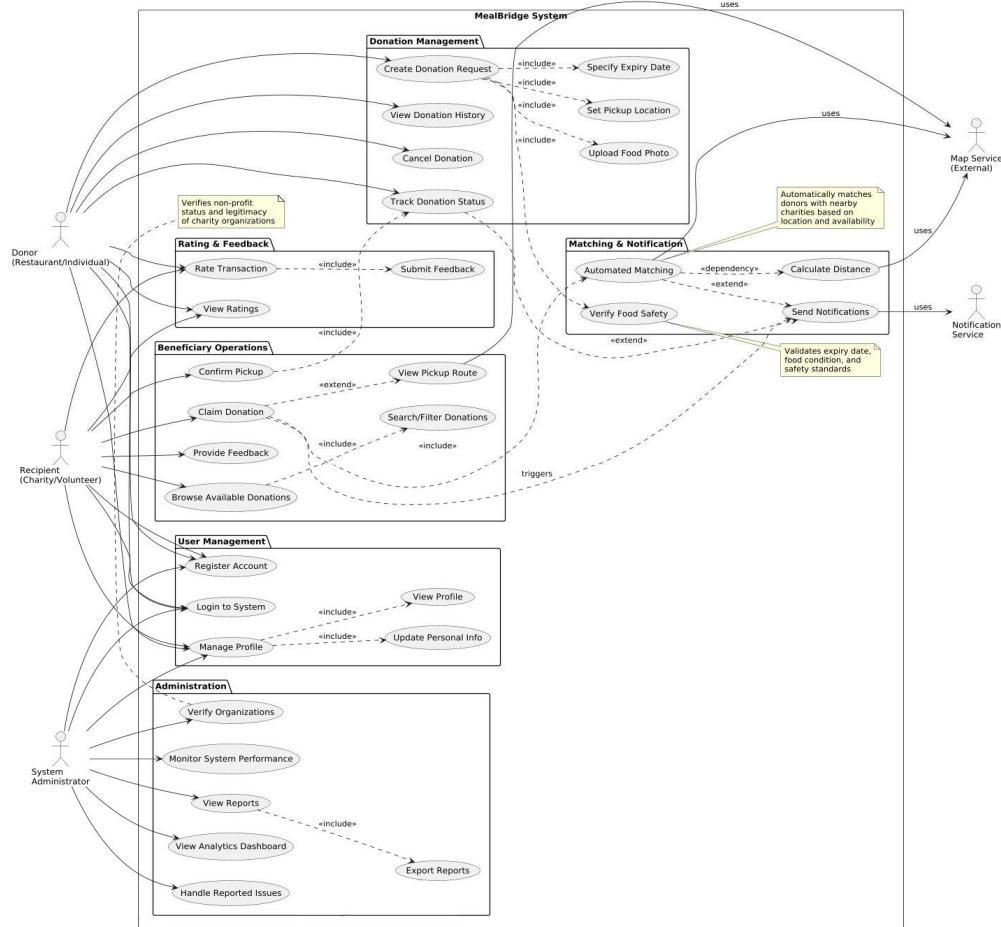
Provides a roadmap for implementing the system architecture and UI. It specifies how core functionalities, such as donation matching, notifications, and tracking, are structured and integrated with third-party services like mapping and authentication. The design emphasizes modularity, scalability, and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



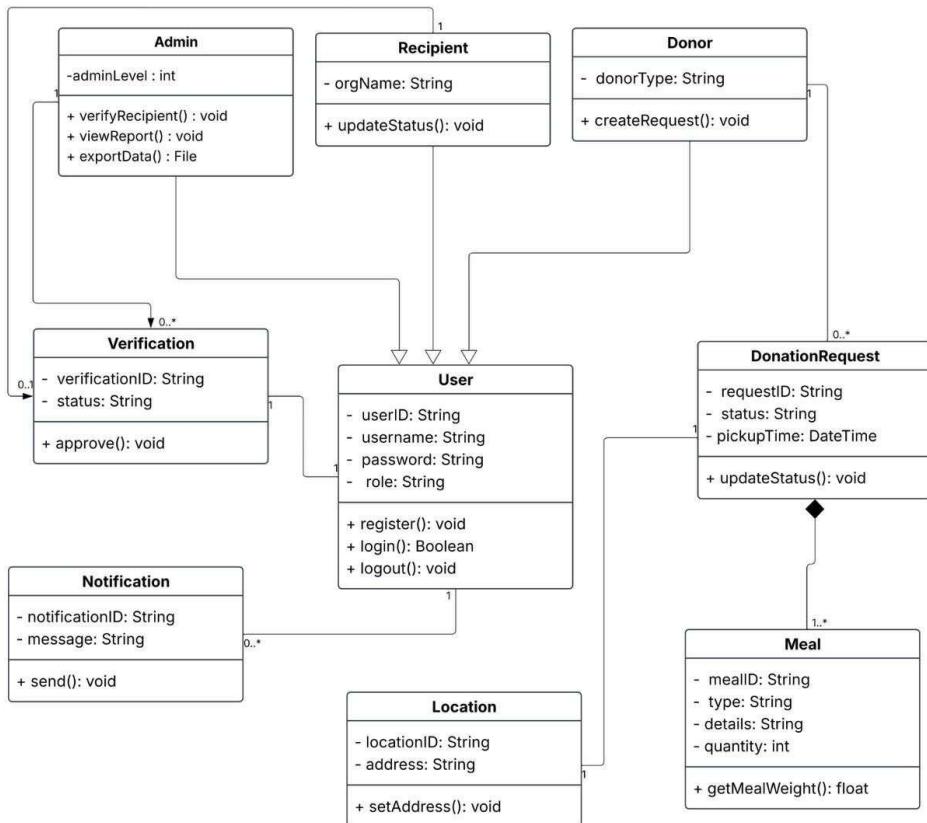
## UML Diagrams

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.

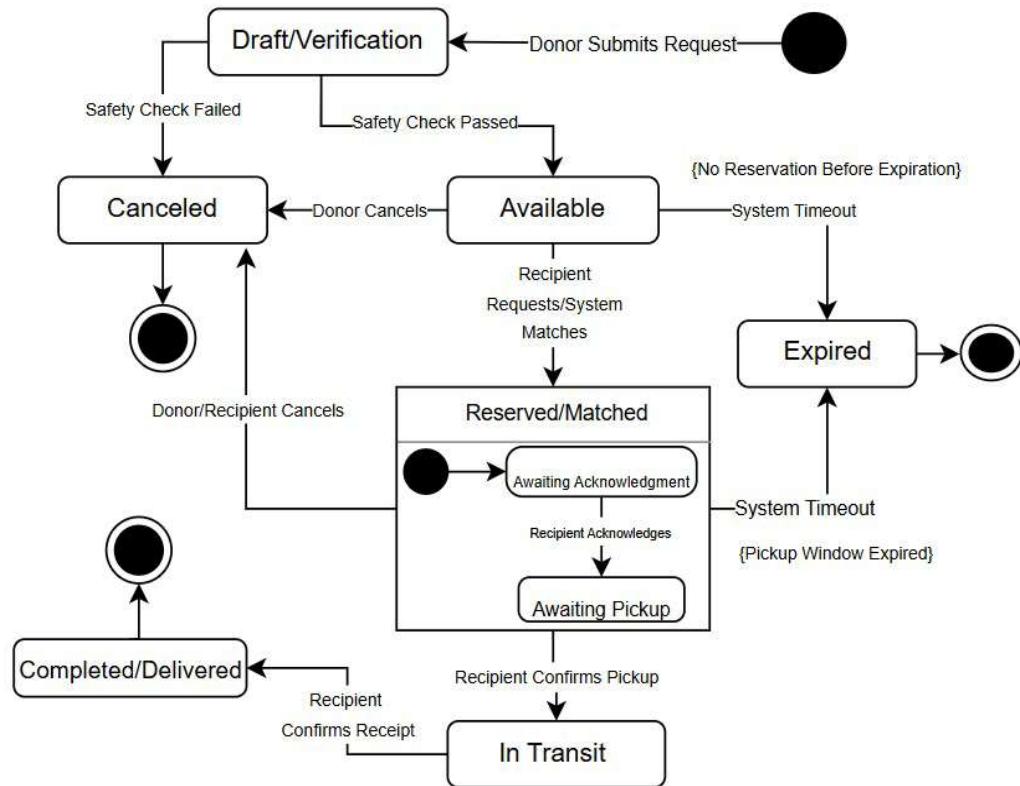
# UML Use Case



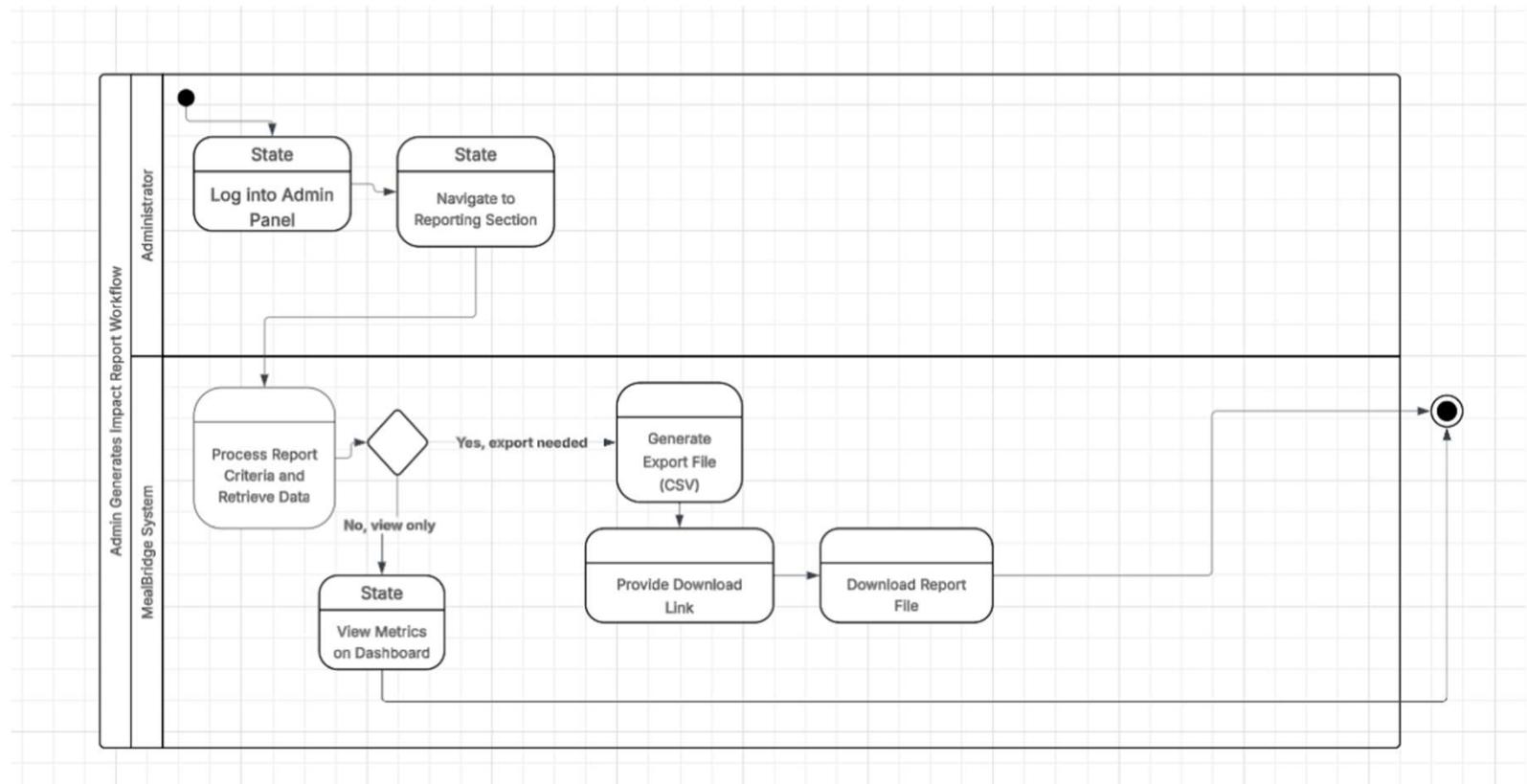
# UML Class Diagram



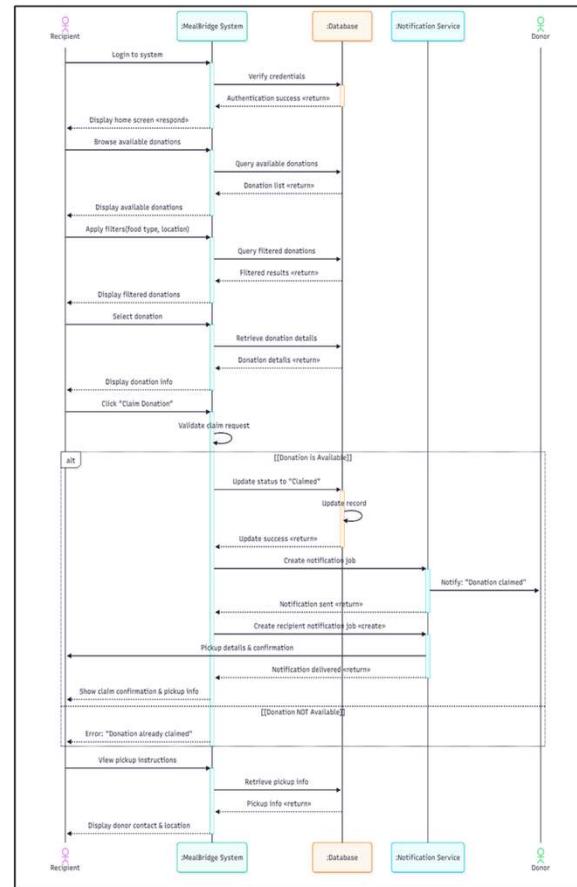
# UML State Diagram: Donation Creation



# Activity Diagram: Admin Exporting a report



# Sequence Diagram: Claiming a Donation



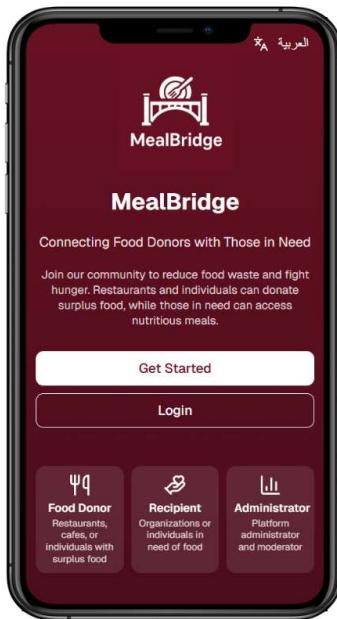


## MealBridge Application UI

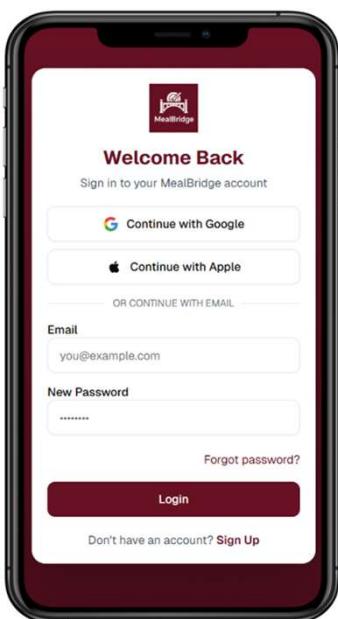
The UI is designed to be intuitive, responsive, and role-specific. Donors can easily create donation requests in a few simple steps, upload images, and provide pickup details. Beneficiaries can browse, search, and claim donations while receiving real-time updates.

# Login & Registration

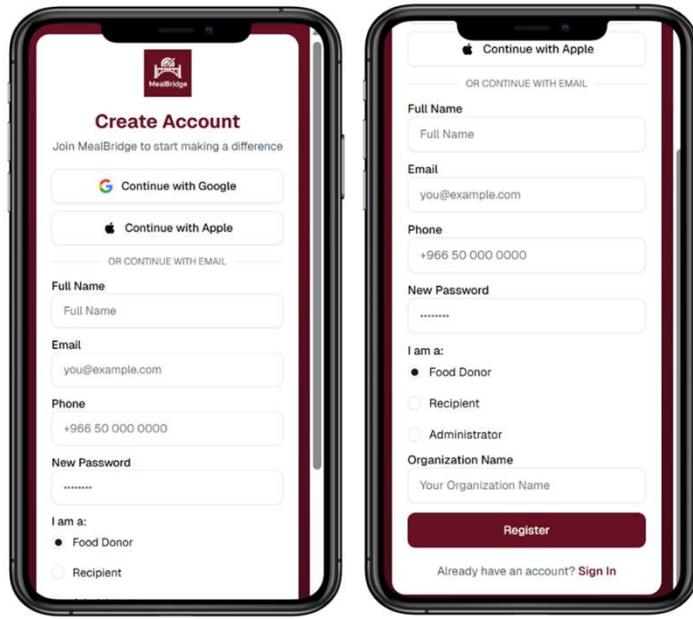
Start page



Login page

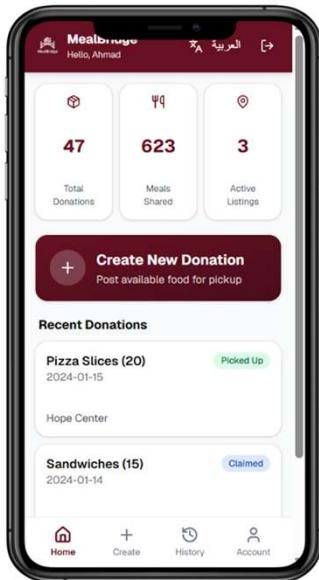


Sign Up page

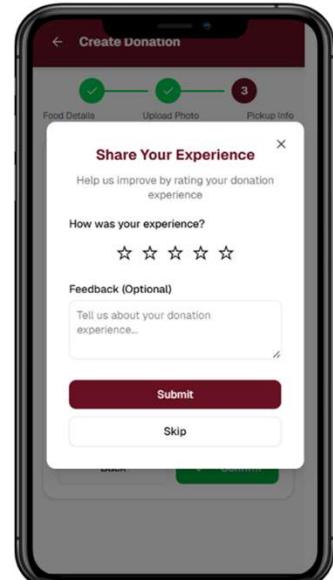
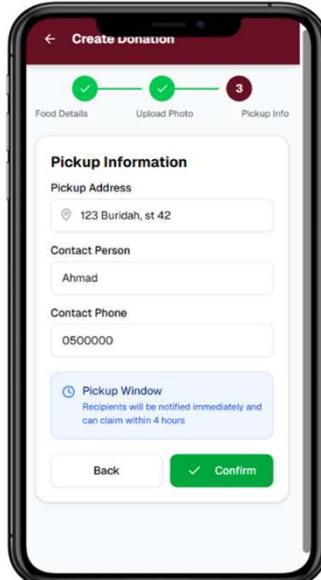
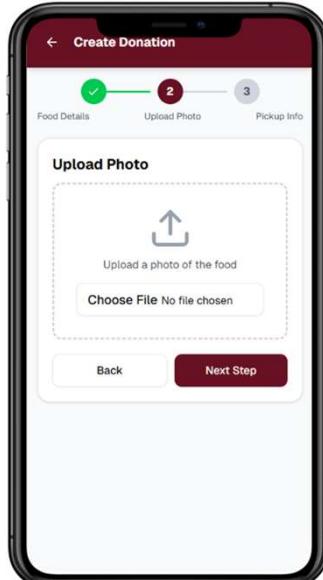
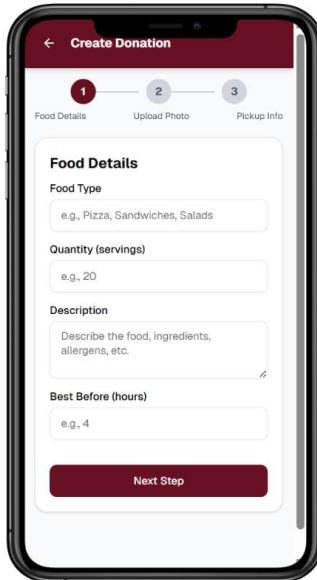


# Donor Interface

Home page

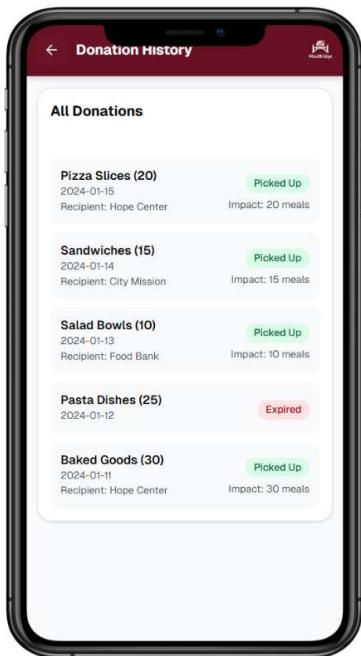


Donation Creation Flow



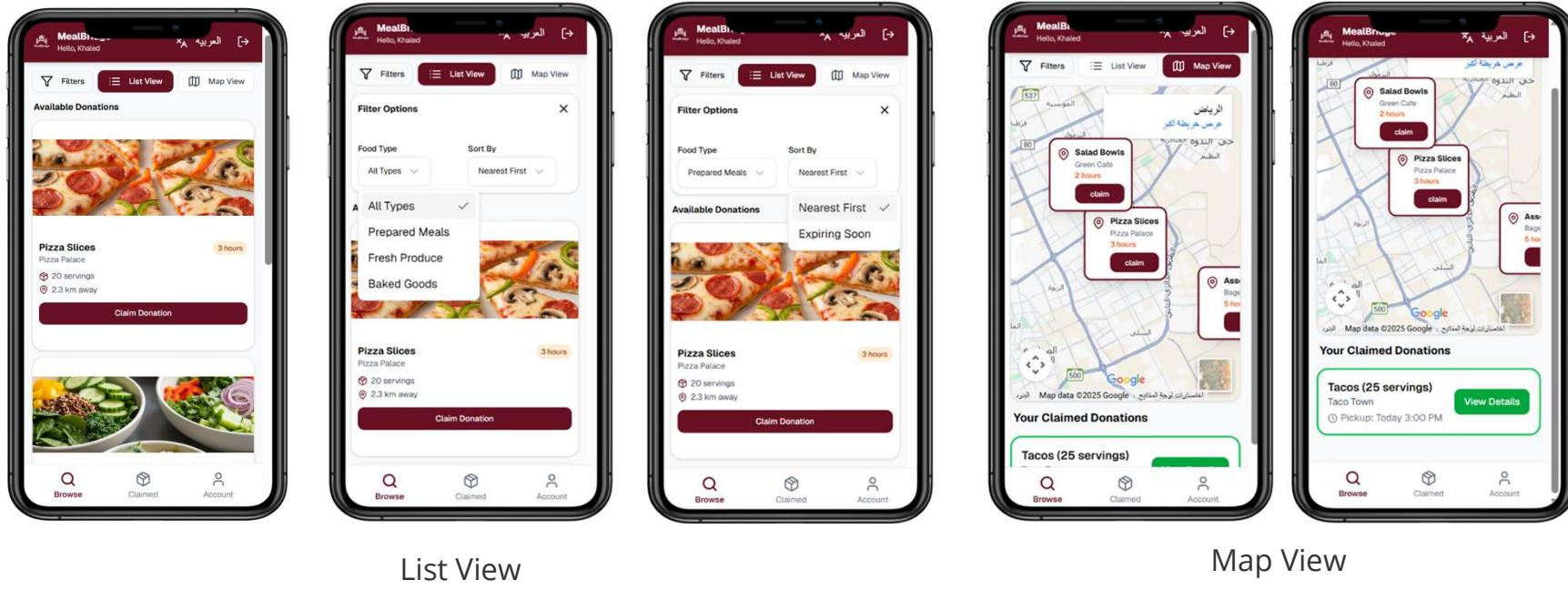
# Donor Interface

History page



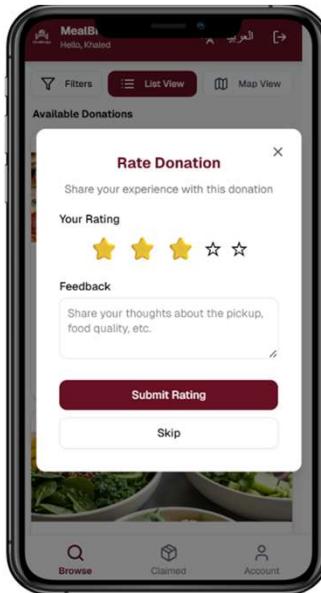
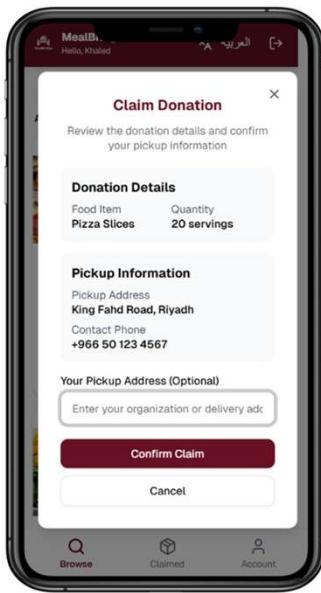
Account page

# Recipient Interface

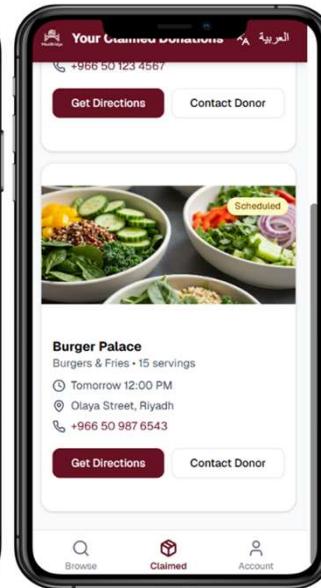
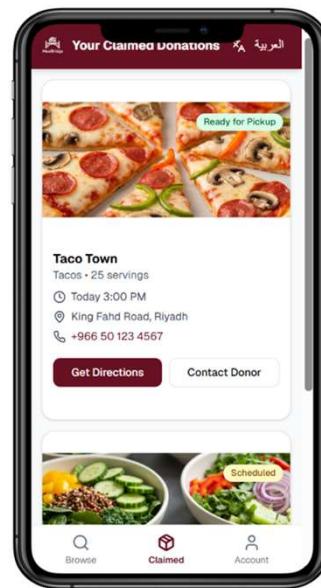


# Recipient Interface

Claiming a donation

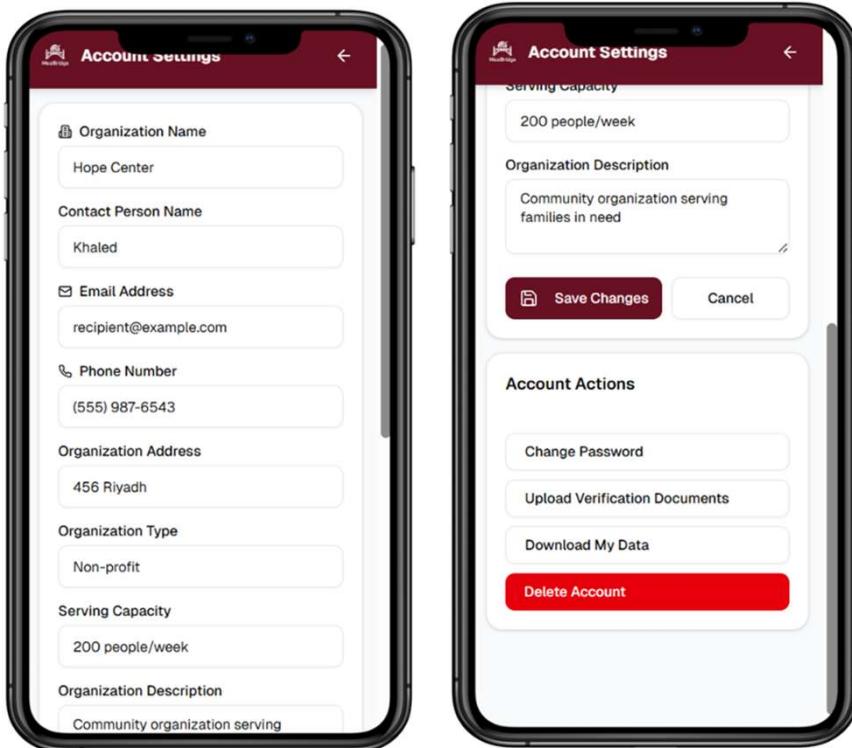


Claimed page



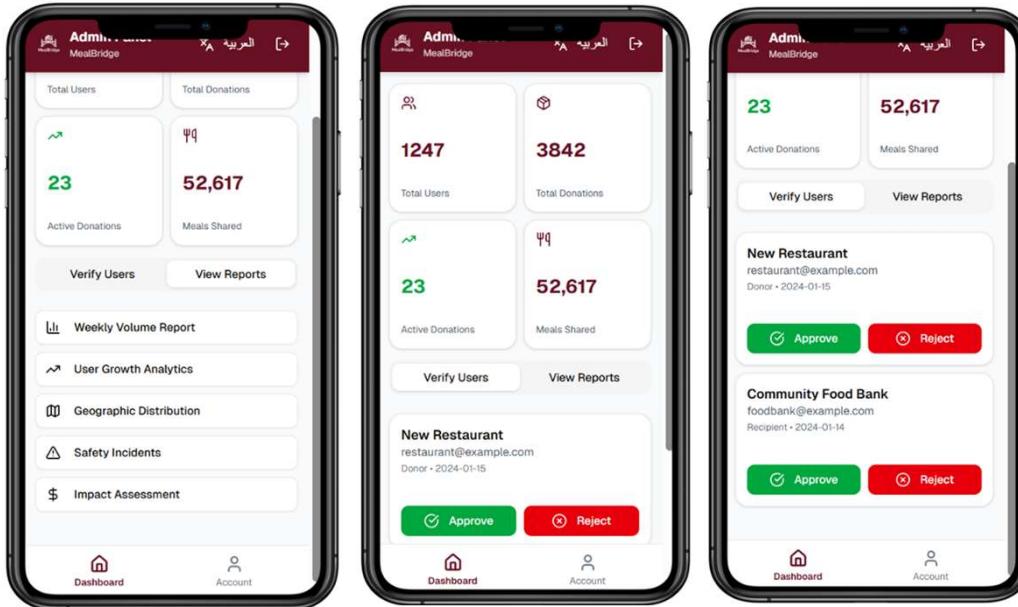
# Recipient Interface

Account page



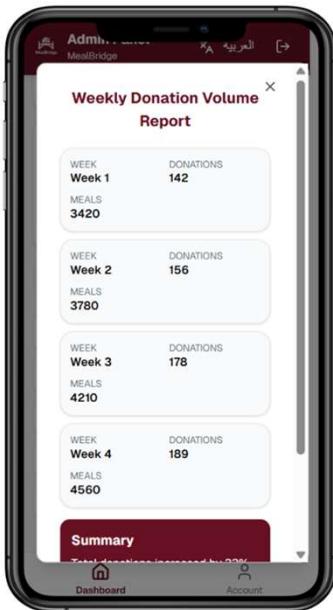
# Admin Interface

Dashboard page

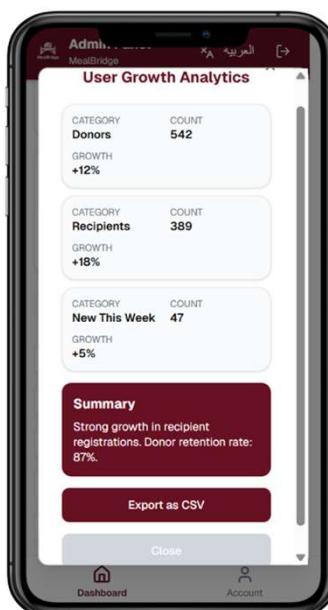


# Admin Interface: Reports

Weekly Volume

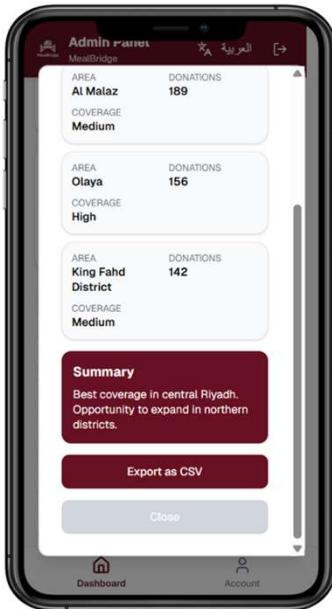
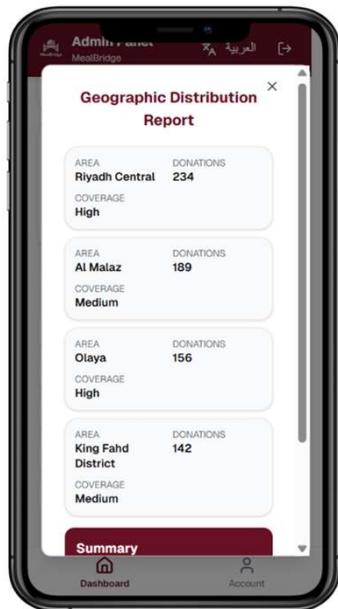


User Growth

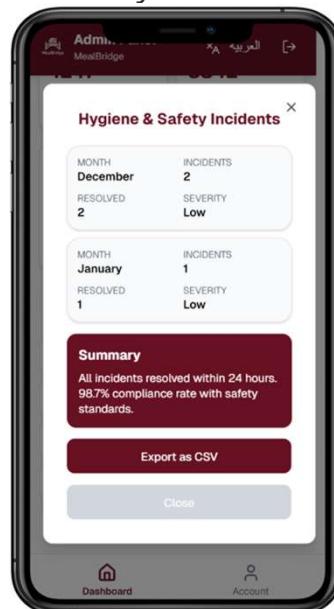


# Admin Interface: Reports

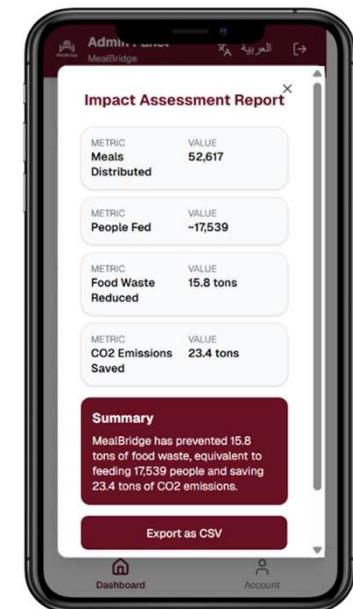
Geographic Distribution



Safety Incidents



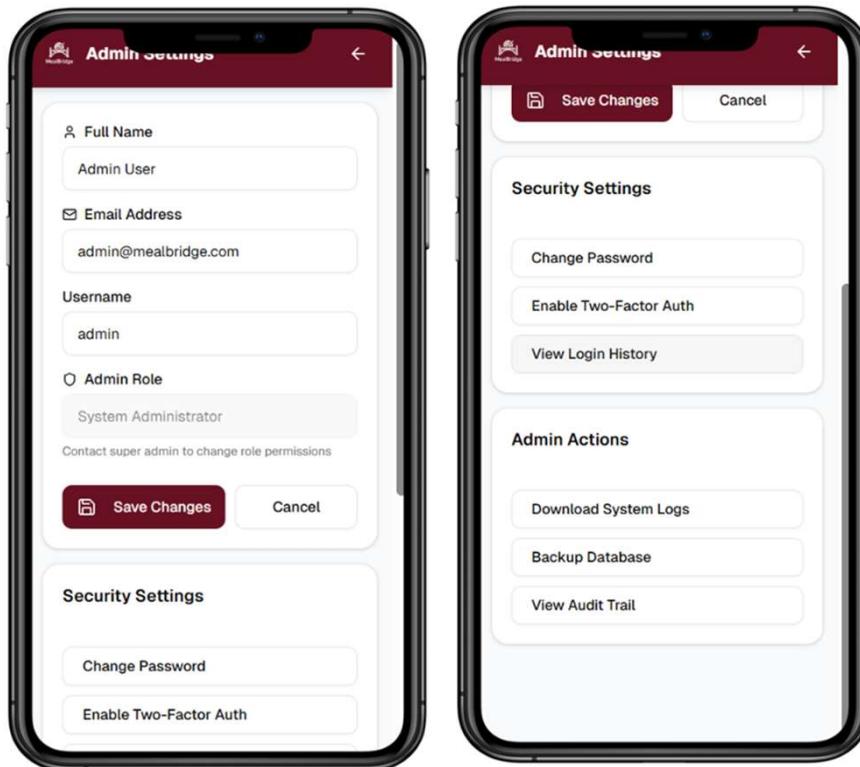
Impact Assessment



# Admin Interface

---

Admin Account Page





**Thank You!**  
**Any Questions?**