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Project title: ZHERO
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Project Documentation: ZHERO (Zero Hunger & Efficient Resource Optimization)

1. Introduction

1.1 Project Overview

ZHERO is an innovative food waste management system designed to address hunger and optimize resource use. It combines technology with community-driven action to redistribute surplus food efficiently. The platform connects food donors (restaurants, grocery stores, households) with food banks, shelters, and individuals in need, ensuring edible food doesn't go to waste. Inspired by the principles of sustainability and social equity, ZHERO is unique in its dual focus on environmental and humanitarian benefits.

1.2 Objectives

1. **Reduce Food Waste**: Create a system to track, manage, and redistribute surplus food effectively.
2. **Promote Sustainability**: Encourage responsible consumption and production patterns.
3. **Alleviate Hunger**: Connect food donors with those in need to ensure access to nutritious meals.

1.3 Target Audience

- Community organizations such as food banks and shelters.
- Restaurants, grocery stores, and households with surplus food.
- Individuals and groups advocating for sustainability and social welfare.

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2. System Design

2.1 Concept and Storyline

ZHERO is designed as a platform that reduces food waste while tackling global hunger. It aligns with the concept of a circular economy, where food resources are maximized to benefit communities. The platform's narrative centers on transforming food waste into a resource that can save lives and protect the planet.

2.2 Core Features

Core Functionality

- **Donation System**: Allows donors to submit surplus food details via a simple form.
- **Request System**: Enables recipients to request surplus food based on availability and need.

Admin Page:

- **Dashboard**: Provides an overview of platform activity, including total donations, requests, and active users.
- **Donations**: Displays details of all donations for monitoring and management.
- **Recipients**: Manages the list of registered food recipients, including food banks and shelters.
- **Food Requests**: Tracks all incoming requests for food and their fulfillment status.

Challenges/Obstacles

- **Food Spoilage**: Addressed by tracking preparation dates and ensuring timely pickups.
- **Distribution Logistics**: Optimized through partnerships with local organizations.

2.3 User Journey

Structure and Workflow

- Donors list surplus food with details (e.g., category, quantity, preparation date).
- Recipients browse or request food donations.
- ZHERO coordinates the collection and delivery.

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Difficulty Progression

- Initial focus on local communities with potential scaling to regional or national levels as partnerships and logistics improve.

3. Technical Development

3.1 Development Tools

- **Frontend**: HTML, CSS, JavaScript for a responsive and user-friendly interface.
- **Backend**: Local storage (future integration with a database).

3.2 Art and Audio Assets

- **Visuals**: Simple, modern designs reflecting the themes of sustainability and community.
- **Icons**: Boxicons for intuitive navigation.

4. User Interface Design

Main Menu

- **Navigation**: Links to "Home," "Donate," "Request," "About Us," and "Contact."
- **Call-to-Action Buttons**: Prominent options to "Donate Food" or "Request Food."

Admin Page

- **Dashboard**: Summarizes total donations, requests, and platform statistics.
- **Donations Management**: Enables viewing, editing, and tracking donation records.
- **Recipients List**: Provides details of recipient organizations and individuals.
- **Food Request Tracker**: Monitors food requests and their status, including fulfilled and pending requests.

In-Platform UI

- **Donation Form**: Easy-to-use input fields with validation for accurate data.
- **Recipient Dashboard**: List of available food with filters for categories and location.

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Feedback Mechanisms

- Real-time notifications on successful submissions.
- Visual and auditory confirmations for actions like food donation and request approvals.

5. Challenges and Solutions

Development Challenges

- **Data Management**: Transitioning from local storage to a centralized database.
- **User Engagement**: Encouraging consistent participation from donors and recipients.

Additional Feature in the Future

- Proposed incentives for participation, such as impact metrics and recognition programs.
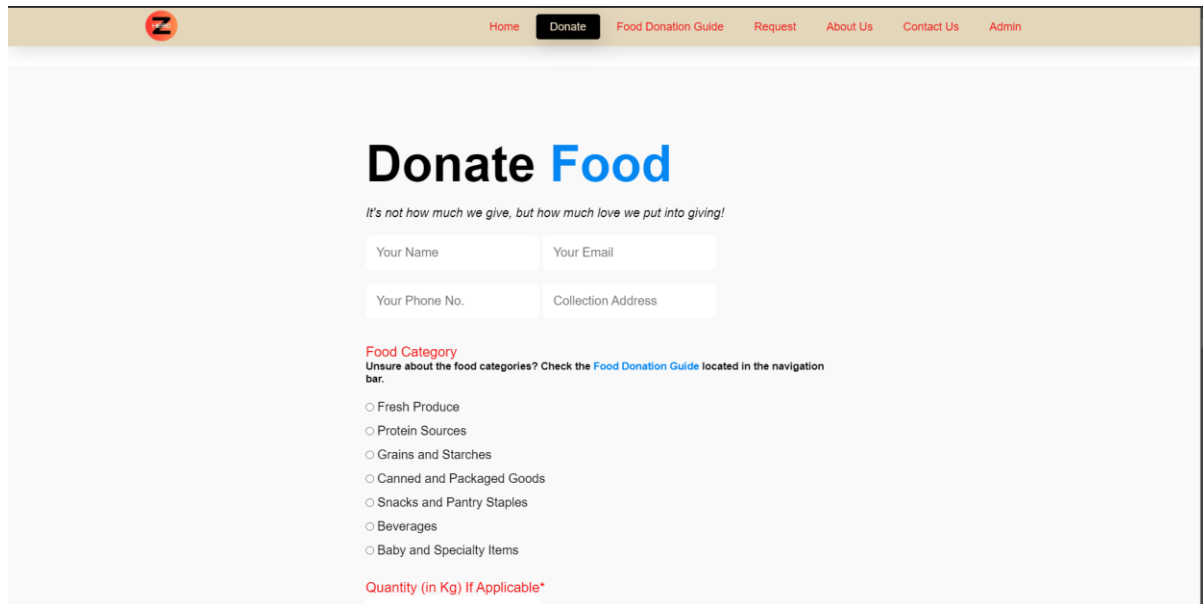
6. Conclusion

ZHERO successfully combines technology and community action to reduce food waste and combat hunger. Its strengths include a user-friendly design, clear alignment with sustainability goals, and the potential for large-scale impact. Areas for improvement include enhancing logistics and expanding technical capabilities.

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7. Appendices

7.1 Screenshots

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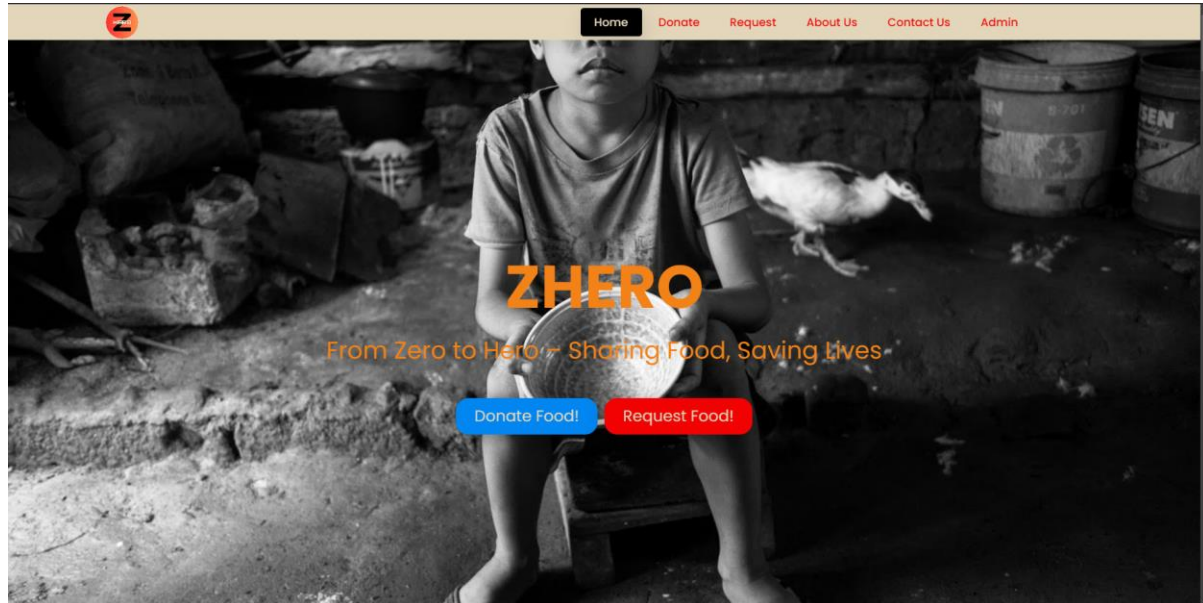
Food Donation Guide

A streamlined guide to food categories for donations

Fresh Produce

Examples: **Fruits** (apples, bananas), **Vegetables** (broccoli, carrots), **Herbs** (parsley, basil).

Protein Sources

Includes: **Meat**, **Seafood**, **Plant-Based Proteins**, **Dairy**, and **Nuts**.

Grains and Starches

Examples: **Whole Grains** (quinoa, oats), **Refined Grains** (pasta, bread), **Starchy Vegetables** (potatoes, corn).

Canned and Packaged Goods

Examples: **Canned Vegetables**, **Soups**, **Canned Proteins** (tuna, beans).

Snacks and Pantry Staples

Examples: **Snacks** (crackers, granola), **Cooking Oils**, **Condiments**.

Beverages

Includes: bottled water, tea, coffee, shelf-stable juices.

Baby and Specialty Items

Includes: baby food, infant formula, allergen-free products.

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Request Food

Let us help you meet your needs with compassion and care.

Your Name

Your Email

Your Phone No.

Delivery Address

Food Category

○ Fresh Produce
○ Protein Sources
○ Grains and Starches
○ Canned and Packaged Goods
○ Snacks and Pantry Staples
○ Beverages
○ Baby and Specialty Items

Quantity (in Kg) If Applicable*

Home   Donate   Request   About Us   Contact Us   Admin

About Us

ZHERO is a food waste management system designed to reduce the food wastage and use it in a useful way. This system also provide a platform to people where they can donate food. We are in contact with 150+ banquets. We collect the donated food and distribute it among the people who really need it. It not only reduces food waste but also hunger, which is a major problem of the world. We believe nutritious food should go to people, not landfills. This website is developed by:

The Founders

Adrian Villarosa   Luel Dawn Cagay   Troy Rojo

Our Mission
ZHERO is a food waste management system designed to reduce food wastage and use it in a useful way. This system provides a platform where people can donate food. We are in contact with 150+ banquets. We collect

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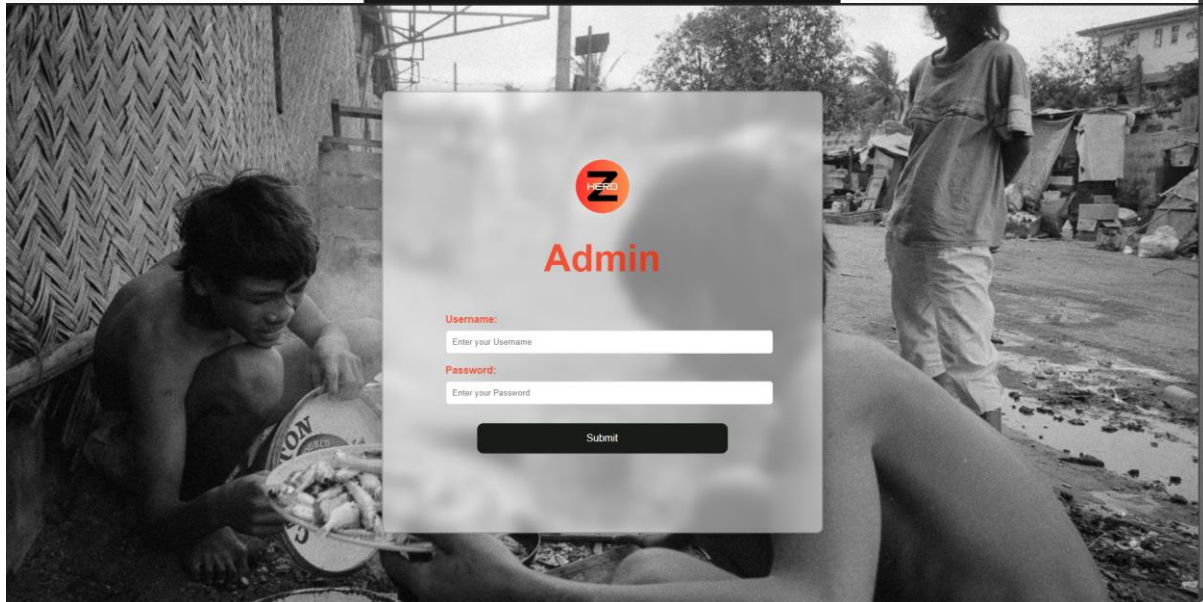Home   Donate   Request   About Us   Contact Us   Admin

Contact Us

We are always out there to help you! Fill out the form given below and get a reply from us within 2 business days.

Your Name

Your E-mail

What brings you here?

Your Message

Admin

Username:

Enter your Username

Password:

Enter your Password

Submit

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Admin Panel

- Home
- Dashboard
- Donations
- Recipients
- Food Request

Food Waste Management Dashboard

Fresh Produce	Protein Sources	Grains and Starches	Canned & Packaged Goods	Snacks & Pantry Staples	Beverages	Baby & Specialty Items
12	110	10	10	10	62	5

Total Donors	Total Requests	Approved Requests	Total Food Units (kg)	Total Food Item (per item)
4	0	3	460	97

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Admin Dashboard - Donations

Donations

Filter by Category ▾   Filter by Donor ▾

Total Donations per kg: 460

Total Donations per item: 97

Donor Name	Email	Phone	Address	Category	Quantity (kg)	Quantity (per item)	Prep Date & Time	Note
adrian	20231057@gmail.com	09288617200	sankanan, manolo fortich	Fruits and Vegetables	15	undefined	2024-11-19T13:25	good bless
adrian	20231057@gmail.com	09288617200	sankanan, manolo fortich	Fruits and Vegetables	14	undefined	2024-11-17T13:28	God bless
adrian	20231057@gmail.com	09288617200	sankanan, manolo fortich	Canned Goods	199	undefined	2024-11-11T18:14	your welcome
drian	20231057@gmail.com	09288617200	sankanan, manolo fortich	Canned Goods	100	undefined	2024-11-20T19:49	ser
s	20231057@gmail.com	09233417100	sankanan, manolo fortich	Fruits and Vegetables	10	undefined	2024-11-19T20:09	y
luel	luelawn@gmail.com	09867219399	lindaban	Protein Sources	10	undefined	2024-11-18T20:39	eyy
luel	luelawn@gmail.com	09867219399	lindaban	Protein Sources	100	undefined	2024-11-20T20:44	eeyy
drian	luelawn@gmail.com	09288617200	sankanan, manolo fortich	Beverages		2	2024-11-28T23:35	gb
luel	20231057@gmail.com	09867219399	sankanan, manolo fortich	Baby and Specialty Items		5	2024-12-03T23:42	bg
s	luelawn@gmail.com	09867219399	dio	Fresh Produce	12		2024-11-25T00:04	er
s	20231057@gmail.com	09288617200	sankanan, manolo fortich	Snacks and Pantry Staples		10	2024-11-25T00:05	re
adrian	20231057@gmail.com	09288617200	sankanan, manolo fortich	Beverages		5	2024-11-25T00:09	rrrrr
adrian	20231057@gmail.com	09288617200	sankanan, manolo fortich	Grains and Starches		10	2024-11-29T00:10	v
adrian	20231057@gmail.com	09288617200	sankanan, manolo fortich	Beverages		10	2024-11-27T00:14	o

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Admin Panel

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Admin Dashboard - Recipients

Accepted Food Requests

Name	Email	Phone	Address	Category	Quantity (kg)	Need Date & Time	Note
adrian	20231057@gmail.com	09288617200	sankanan, manolo fortich	Protein Sources	100	2024-11-22T17:59	pleeeeseee
adrian	20231057@gmail.com	09288617200	sankanan, manolo fortich	Grains and Starches	12	2024-11-14T18:34	ty
adrian	20231057@gmail.com	09288617200	dio	Grains and Starches	10	2024-11-19T20:32	t

Admin Panel

- Home
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- Food Request

Admin Dashboard - Food Donations

Food Request Data

Name	Email	Phone	Address	Category	Quantity (kg)	Need Date & Time	Note	Action

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