

Project title:

- Food Share.

System:

Weaste Food Donation system

Actor:

Users of the system

- Admin
- donors
- volunteers

Admin:

The administrators have complete control over all the activities that can be performed

- Admin must provide rules for the Login,
- Admin must take care of the security issues involved in the login,
- Admin verifies the user after the donor/volunteer registers,
- Admin verifies the user activity if the unnecessary posts, crimes the user account is the band then never give access to that account to login and use for the system,

User:

The user's activities can be performed

- If they are registered members of the system. They can view all the features,
- A few types of users in the system donors, volunteers, and both(volunteers/donors if they are interested or have free time the do both work).
- Donors can post to request the food donated to people or animals with all the food information,
- Users can view all the donated food,
- Volunteers can filter the donated food for people or animals and they can contact donors,
- To find the donate locations and also effectively collect, and efficiently distribute emergency food provisions,

- other...

#### Use Cases:

List all the user actions

- User register, login and logout
- Admin controls the system
- View donated food details
- Food filter for animals or people
- Donors post food details and check the accepted request
- To find the donate locations with GPS(Global Positioning System)
- Damaged, Expired, or Unused food for farmers(animal/fish/other)
- Get the Push Notification

#### User(s) flow:

- User register, login and logout => User(donor/volunteer/others) can register the system (take the membership) then log in to the system and after using the system log out of the user account (if interested in logout).
- Admin controls the system => Admin verifies the user activity, and provides security, and information, if the user can do unnecessary posts or, crimes then the user account is the band then never give access to that account to log in and use the system
- View foods => Users can scroll through a list of donated foods and also individually view details on tap
- Filter donated food => The volunteer can filter the donated food animals or people then send the accepted request to the donor
- View accepts request => The Donnor can view details of who can receive, which location and where distribute the food
- Volunteers can find the donate locations and also effectively collect, and efficiently distribute emergency food provisions with the help of GPS and donors' contact details.
- Farmer accepts the unsuitable donated food => This statement focuses on collecting damaged, expired, or surplus food for farmers who raise fish, pigs, and other animals.
- Admin/system push notifications for donors, recipients or volunteers about available donations, pick-up requests, and relevant updates.

Possibly a unique feature

List of unique features:

- User views the history and user profile offline with no internet connection
- Food Donation Options for Both Animals and Homeless or Impoverished Individuals,
- Collection of Damaged, Expired, or Unused Food for Farmers Raising Fish, Pigs, and Other Animals,
- This section management of environmental pollution resulting from food waste,
- Easy-to-use CRUDE operations for Food, User, and Quantity Management

One unique feature of the FoodShare app is the ability to connect donors with people in need and animal shelters or farms. Donors can specify whether their donations are intended for human consumption or if they are suitable for animal consumption. This dual-purpose functionality allows for a wider reach of food redistribution to the poor and homeless, disadvantaged individuals and animals in need.

Project topic: **Waste Food Management System (Mobile Application)**

App Name: **Food Share**

### 1. System: **Web Applications**

User Type: Admin

Features:

- Login
- Admin shall manage database information and shall do relevant tasks related to the same
- Admin is quick to address any challenges that may arise during the food donation process

### 2. System: **Mobile App**

User Type: NGO

Features:

- View the donation request then manage requests by donors and inform the volunteers
- Keep a record of the performance and details of the volunteers

User Type: Volunteer/receiver

Features:

- Login and Register
- View all the donation history
- Food donation request view the details: like location, food types etc.
- Accept the donation request given by donors

- Go to the locations and pick up the food that is provided by the donors
- Food received is to be distributed to the specific place and notified to the donor to complete the distribution,
- After contact with donors and going for food pickup but donors cannot provide the food the receiver is compliant with admin
- Food Donation Ratings and Information (After completing the distribution):

Donors can provide information about the conditions of their donated food and the receiver can pick it up to distribute it the any location. After donation, they can rate the condition of the food as "Excellent," "Good," "Fair," or "Poor." Volunteers and recipients can view these ratings and make informed decisions about which food donations to accept and distribute. This can include tips on safe handling, storage, and preparation of food, helping all users become more aware of food safety issues.

User Type: Donors

Features:

- Login and Register
- View all the donation history
- Food donation post with all about information if the useless food is provided for animal farmers,
- After the donate request is accepted, they cannot come to receive the food and then compliant to admin
- Check where the volunteer has reached to distribute and the status of your donated food
- **Food Expiry Tracker (Notify):**

This feature allows donors to input the expiration dates of the food items they are donating. The app can then send notifications to donors when a donated item is close to its expiry date, ensuring that the food is distributed and consumed before it goes to waste.

Volunteers and recipients can filter donation requests based on the proximity of the expiry dates, helping them prioritize and distribute food items that need immediate attention.

The app can also generate reports and analytics on food waste reduction, showing the impact of the Food Share community in reducing food waste over time. If the food is expired and not suitable for donation it is given to animal farmers.

### 3. **API**

#### List of API

##### - REST API:

RESTful APIs are commonly used for communication between the mobile app and the server. It allows us to perform CRUD (Create, Read, Update, Delete) operations on resources like user profiles, foods, donors, volunteers, and more.

Examples of endpoints:

- users: To create, read, update, or delete user profiles.
- donations: To list available food donations.
- volunteers: To manage volunteer information.

##### - Google Map API

Using the Google Maps API can find the donation and distribution location for "Food Share".

#### 4. **Firestore**

Using the Firestore for push notification

