

ShelfSense

Platform – Android Studio - Java

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Date – 08-07-2025

Welcome to ShelfSense!

ShelfSense is your easy-to-use mobile app designed to help you manage the food items you keep at home, whether in your pantry, fridge, or shelves. It helps you track what you have, reminds you when food is about to expire, and encourages you to donate unused food to those in need.

This guide will walk you through how to use all the features of ShelfSense step-by-step.

Getting Started

When you open the app for the first time, the main screen will show an empty list if you haven't added any food items yet. Don't worry! Adding items is quick and simple.

Main Screen Overview

- **Food List:** Displays all your saved food items with their name, quantity, and expiry status.
- **Add Food Button:** Located at the bottom — tap this to add a new food item.
- **Empty List Message:** If you have no items, a friendly message encourages you to add some food.

How to Add a Food Item

1. **Tap the "Add Food" button** on the main screen.
2. You will be taken to the **Add Item** screen, where you will see three input fields:
 - **Food Name:** Type the name of your food item (e.g., "Milk," "Rice," "Apples").
 - **Quantity:** Enter the amount or quantity (e.g., "2 liters," "1 pack," "500g").
 - **Expiry Date:** Tap this field to open a calendar.
3. **Select the expiry date:**
 - When you tap the expiry date field, a calendar will pop up.
 - Scroll through the months and tap on the expiry date for your item.

- The selected date will appear in the format day/month/year (e.g., 15/8/2025).
4. After filling in all fields, **tap the "Save" button** at the bottom.
 5. Your new food item will be saved and you will return to the main screen where the item now appears in the list.

Important: All fields are required. If you leave any field empty, you will get a message asking you to fill all fields.

Understanding the Food List

Each food item in the list shows:

- **Name** — The food item's name.
- **Quantity** — The amount or quantity entered.
- **Expiry Status** — How soon the item will expire, with color coding:

Status	Color	What It Means
Fresh — more than 3 days	Green	The food is good to use and not close to expiring.
Expiring soon — 1 to 3 days	Yellow	The food will expire soon, consider using it quickly.
Expires today	Yellow	The food expires today.
Expired	Red	The food is past its expiry date.

This helps you quickly identify which items need your attention.

How to Remove a Food Item

If you have used, discarded, or donated a food item and want to remove it from the list:

- **Long press** (press and hold) the item in the list.
- The item will be immediately removed.
- The updated list will be saved automatically.

Donating Food

To encourage helping others, ShelfSense provides an easy way to donate unused or unopened food:

- Each food item in the list has a **Donate** button.
- Tap this button to open a trusted food donation website in your phone's browser.
- The default website used is **Feeding America** — a leading hunger relief organization.
- There, you can find information on how and where to donate food in your area.

Saving and Data Persistence

- Your food list is saved automatically on your phone.
- Even if you close or restart the app, your saved food items will still be there when you open ShelfSense again.
- No internet connection is required to add, view, or delete items.
- Internet is only needed when using the Donate button to open the donation website.

Tips for Using ShelfSense

- Regularly update your list by adding new food items as you buy them.
- Use the expiry status colors to prioritize what to use first.
- Donate any unopened, unneeded food to avoid waste and help your community.
- Remove items promptly once used or discarded to keep your list accurate.

Troubleshooting

- **Cannot save item:** Make sure you have filled all fields — name, quantity, and expiry date.

Additional Notes

- The app saves your food list automatically, so your data stays even if you close the app.

- The app reminds you by showing clear expiry information and colors, so you never forget what food you have.

Development Environment

- Language: Java (Android)
- IDE: Android Studio
- Build System: Gradle (Kotlin DSL)
- Min SDK: 21
- Libraries Used:
 - Gson for JSON serialization

External Resources Used

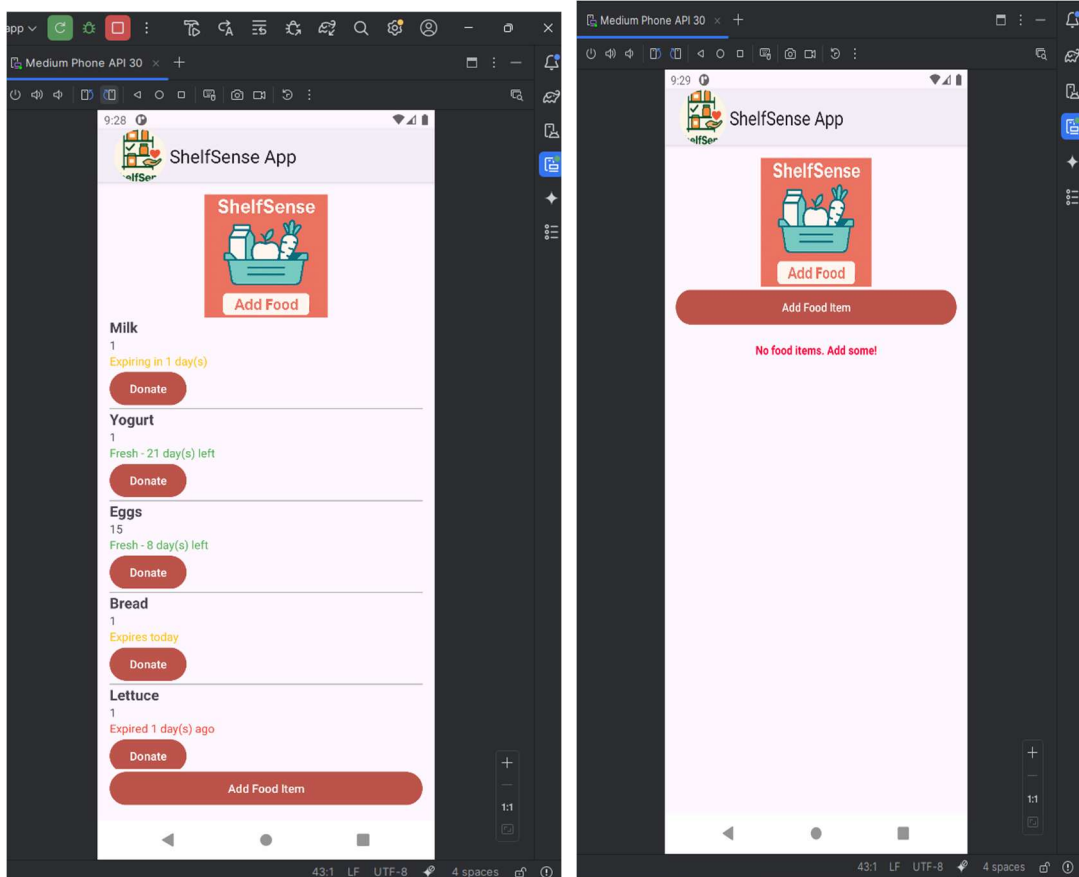
- **Feeding America donation website**
URL: <https://www.feedingamerica.org/take-action/give-food>
Used in the Donate button to connect users to food donation resources.
- **Icons and images**
 - Ic-launcher app icon (default Android launcher icon)
 - Drawable images main and donate included in the app resources for UI
(*These images should be included in the project drawable folders.*)

App screens

1. Main Screen

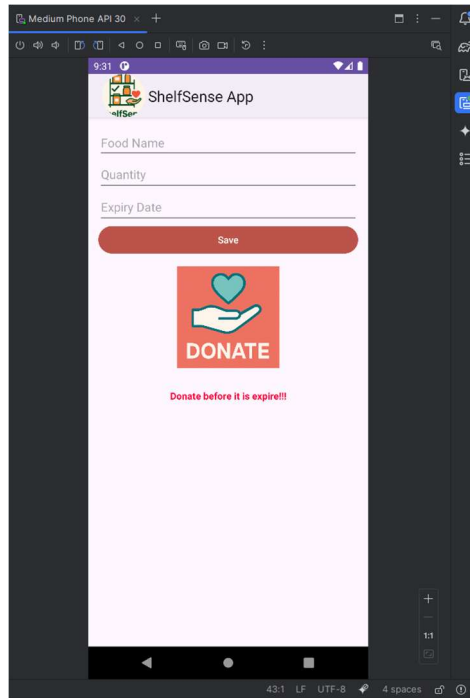
Description:

This is the main screen where you see the list of your stored food items. You can add new items using the Add Food button.

Screenshot:**2. Adding a Food Item****Description:**

Tap the Add Food button to open this screen. Enter the food name, quantity, and tap the expiry date field to select the date from the calendar.

Screenshot:

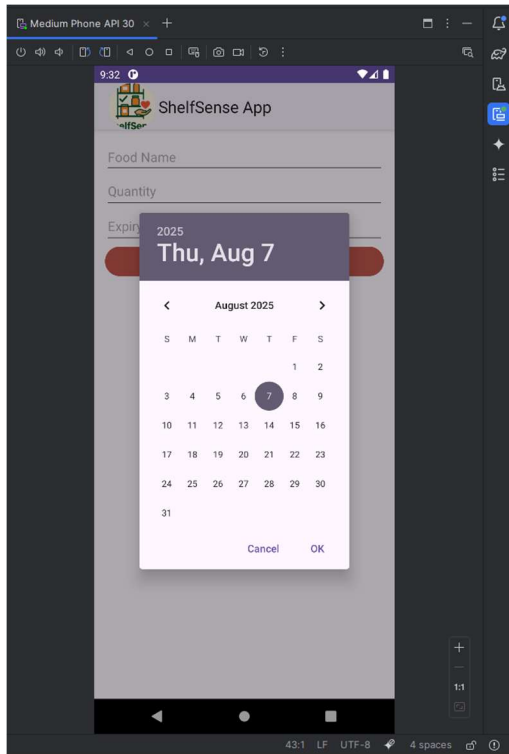


3. Selecting Expiry Date

Description:

The date picker allows you to select the expiry date easily. Tap your desired date and confirm.

Screenshot:

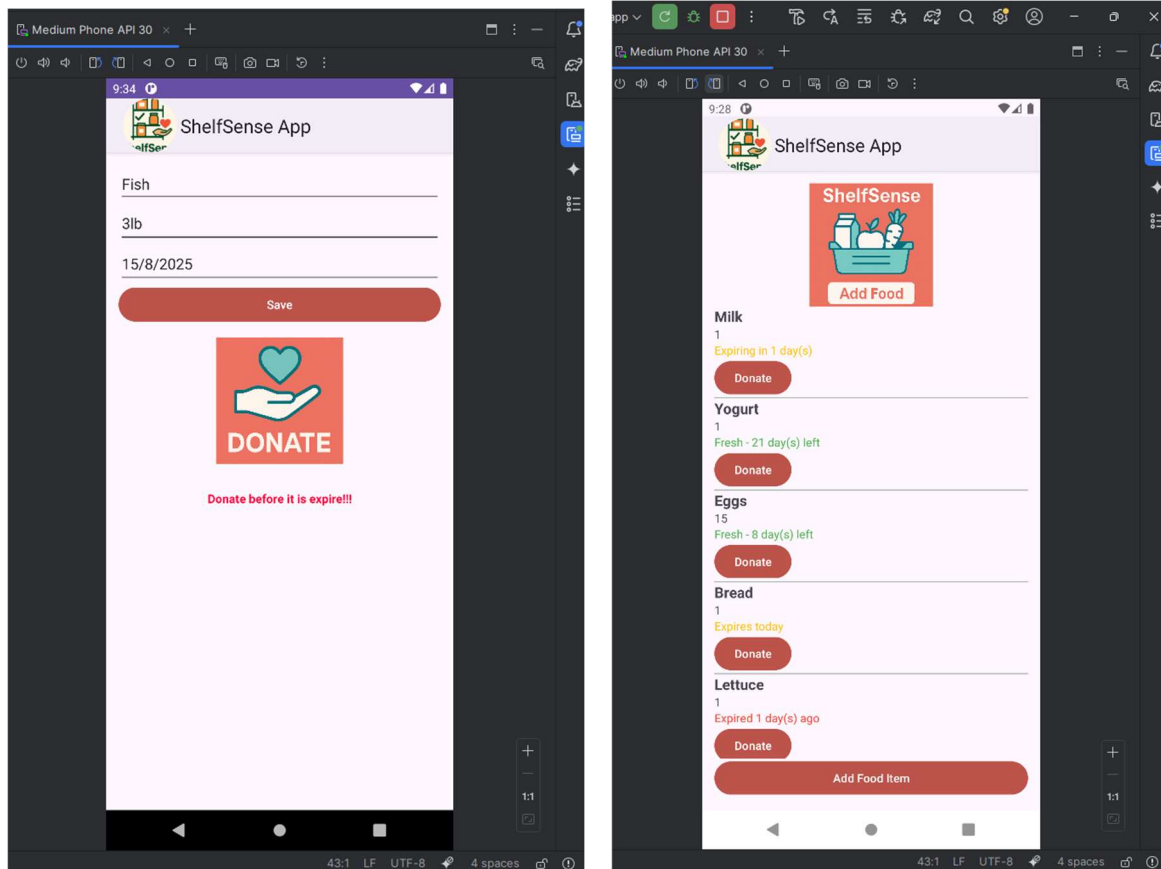


4. Food Item in the List

Description:

After adding, the food item appears in the list with its name, quantity, and expiry status color-coded for quick reference.

Screenshot:

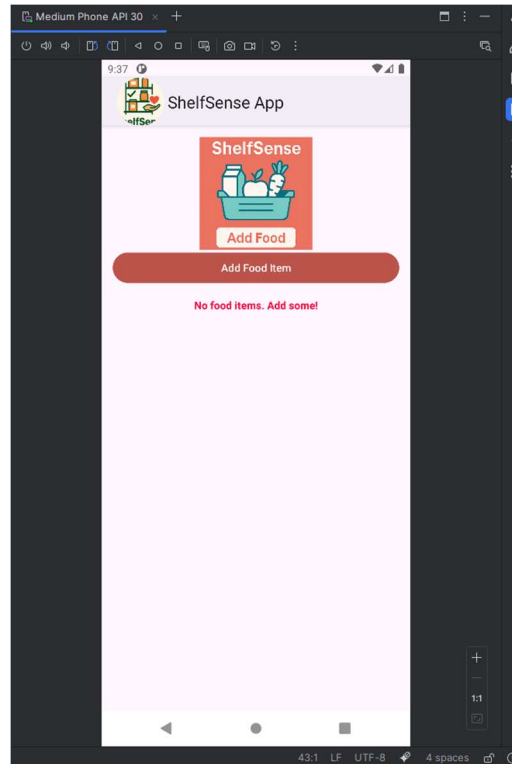
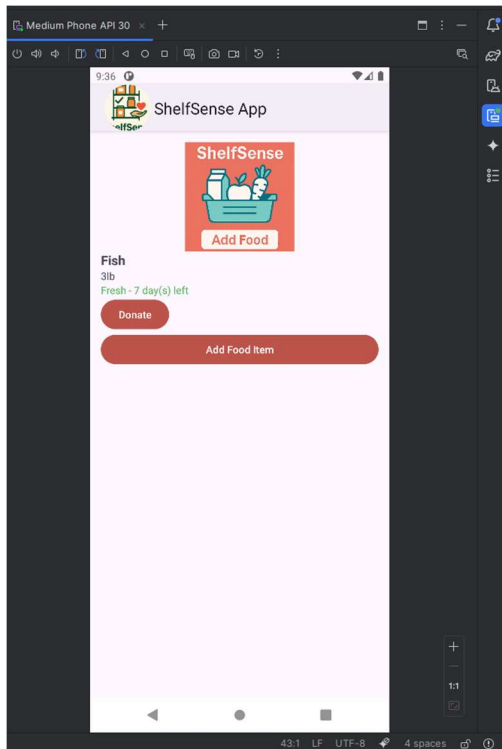


5. Deleting a Food Item

Description:

Long press on any item in the list to delete it from your inventory.

Screenshot:



6. Donating Food

Description:

Tap the Donate button next to a food item to open a food donation website in your browser.

Screenshot:

