Lab 1 – LivelyShelfs Product Description

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1   Introduction

One of the largest problems our society faces is that an enormous amount of food is wasted per year: "One-third of all the food intended for human consumption – valued at roughly US$1 trillion – is wasted or lost each year" (Igini, 2022). However, it would be disingenuous to put the blame entirely on consumers. Sometimes busy people, like single parents, don't have the time to keep track of exactly what they have in their kitchen and whether it expires or simply sits unused. In order to save money and time for the consumer, there has to be some way to remotely and automatically track a kitchen's inventory. LivelyShelfs is designed to take care of this issue by removing the mental burden from their minds. LivelyShelfs is a complete food management

system that can track and remind users of the expiration dates of their food items. The overall

goal of LivelyShelfs is to reduce household waste and promote a green, safer environment.

2   Product Description

In essence, LivelyShelfs is a web app that functions as a catalog of all the food items

users have entered into it. It removes the need for them to constantly go through their fridge to

see if they have a food item or whether that item is expired. If necessary, it will alert them to

expired food items and remind users to buy them again. It also has a share and request feature

that will allow their Shelf Friends to share/request food if they or the user sees an item they need.

2.1   Key Product Features and Capabilities

LivelyShelfs solves a problem that a lot of busy household owners have. Many people

don't have the luxury of time to be able to sort and manage their food stores, single parents

especially. They don't have time to think about what they have at home and how long it has until

expiration or whether it has already expired. They're busy with the more important aspects of

their lives, like their kids or job. LivelyShelfs takes care of this for them. All they need to do is

input the food item and its expiration date and then they'll be able to see what they have

available, wherever they are. It'll also notify them about the status of the food, providing

warnings for expiration or reminders to purchase more.

2.2   Major Components (Hardware/Software)

Two major pieces of hardware will be needed for LivelyShelfs: the database server

designed to store and run all the information associated with the app, and the client side

hardware to access the app, which will be platformed on a phone or computer. The software will

include the database meant to handle all incoming and outgoing data from the app, the web

application framework, and the app itself. The web application framework has several API's involved in its operation, the core of which would consist of the web-crawling API, meant to find information on a product from the web, a camera API to support the usage of a camera in cataloging the food items, and a Shelf Friends API to manage shared items and requests from others.

3   Identification of Case Study

This product is for people looking to reduce the footprint and impact they have from food waste, whether financially or ecologically. The case study for LivelyShelfs will consist of a small group of users who will provide feedback on the prototype. This feedback will be invaluable in refining and perfect the final product. Ideally, a future audience for LivelyShelfs would include not just household users, but also restaurants and small business owners.

4   Glossary

API: "Application Programming Interface", allows different software applications to communicate with each other.

Database: An electronic storage system.

Web-Crawler: An application that automatically sifts through the internet looking for data.

5   References

Igini, M. (2022, November 23). 10 food waste statistics in America. Earth.org. Retrieved from https://earth.org/food-waste-in-america/