

Smart Fridge Inventory System (SFIS)

Group 13

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Big User Stories

Iteration 1 Big Stories

Add Contents of Fridge

As a user, I would like to be able to add the current contents of my fridge to the program.

Priority: High

Cost: 14

Remove Contents of Fridge

As a user, I would like to be able to remove the current contents of my fridge in the program.

Priority: High

Cost: 12

Viewing Contents of Fridge

As a user, I would like to be able to view the current contents of my fridge to the program.

Priority: High

Cost: 22

Search Contents of Fridge

As a user, I would like to search the current contents of my fridge.

Question: Search by food group?

Priority: Medium

Cost: 8

Iteration 2 Big Stories

Assign Expiry Dates to Food

As a user, I would like to assign expiry dates to food in my fridge

Priority: High

Cost: 22

Defining Weekly Consumption Habits

As a user, I would like to have a consistent list of items I need week to week so I know what to get from the grocer.

Priority: High

(Adjusted Cost: 25) Cost: 40

Generate Grocery List

As a user, I need to be able to create a list of items that I may need to restock on during my next trip to the grocery store.

Priority: High

(Adjusted Cost: 47) Cost: 32

Sorting Contents of Fridge

As a user, I would like to be able to sort the current contents of my fridge to the program.

Priority: Medium

Cost: 18

Iteration 3 Big Stories

Personalised Recipe Recommendation

As a user, I want to see a list of suggested recipes that take into account what is in my fridge.

Priority: Medium

Cost: 30

Export/Import Tracking Data

As a user, I want to be able to export/import a backup for my application.

Priority: High

Cost: 14

Recent Food Consumption History

As a user, I want to be able to see what I have recently added or deleted from my fridge.

Priority: High

Cost: 24

Self-Adjusting Consumption

As a user, I want my apps tracking to adjust for my habits of food consumption so that it can better generate grocery recommendations.

Priority: Medium

(Adjusted Cost: 32) Cost: 44

[New] User Preferences

As a user, I would like to be able to adjust some of the application parameters such as: how many days before an item's expiry should I be notified, under what quantity threshold should items be automatically put into my grocery list, etc.

Priority: Medium

Cost: 12

Detailed User Stories (Iteration 1)

Adding New Fridge Items

As a user, I want to permanently add a new item to the fridge.

Priority: High

Cost: 7

Increment Item Stock

As a user, I want to increase the number of certain items in my fridge.

Priority: High

Cost: 3

Remove Used Items

As a user, I want to permanently remove an item from the fridge.

Priority: High

Cost: 8

Decrement Item Stock

As a user, I want to decrease the number of certain items in my fridge while still keeping them in the fridge.

Priority: High

Cost: 4

Expressive View Layout

As a user, I want to see the items in my fridge in a view layout alongside corresponding images and stock numbers to easily see through items.

Priority: Medium

Cost: 16

Compressed View Layout

As a user, I would like to see the items in my fridge in a minimal format with just its name, so that I can view more of my fridge at once and to reduce scrolling.

Priority: Medium

Cost: 6

Food Item Search

As a user, I would like to easily find certain items in the fridge to see how much of it is left.

Priority: High

Cost: 8

Personally Defined Items

As a user, I would like to add unique and uncommon items to my tracker.

Priority: Low

Cost: 4

Detailed User Stories (Iteration 2)

Set Favourite Fridge Items

As a user, I want to set the items and quantities for a 'Favourites List' which contains the items and associated quantities that I would ideally want in my fridge.

Priority: High

Cost: 10

View Favourite Items List

As a user, I want to view the list of the items I have favorited and adjust their quantities to adapt to my changing desires.

Priority: High

Cost: 15

Compile Grocery List

As a user, I like to handpick items from the fridge that may be running low in quantity into a grocery list so that I know what to purchase from the grocery store.

Priority: High

Cost: 15

Manually Adjust Grocery List

As a user, I would like to remove some unnecessary items on my grocery list set by the application.

Priority: Medium

Cost: 10

Export Grocery List

As a user, I want to export my grocery list to an external file so that when I go shopping, I will have either a physical reference list or be able to view the list on my mobile device.

Priority: Medium

Cost: 8

Assign Expiry Dates

As a user, I would like to assign expiry dates to items as I add them to the fridge to keep track of items as they near expiry.

Priority: High

Cost: 7

Alert Expired Items

As a user, I want to be notified about items that have expired or are nearing their expiry, so that I can make the necessary food consumption/procurement adaptations in advance.

Priority: High

Cost: 15

Sort Items by Depletion

As a user, I would like to sort items based on how close they are to being depleted (from most to least depleted) to be reminded about which items may need replenishing in the near future.

Priority: Medium

Cost: 10

Sort by Item Name

As a user, I would like to sort items alphabetically by their names to more easily find the items I am looking for.

Priority: Low

Cost: 8

Adjust Grocery List Generation Policy

As a user, I would like to choose how my grocery list is generated (whether it is generated based on the 'Favorited Items List' or based on the original quantity of each item) in order to generate a list that is more suited to my needs.

Priority: Medium

Cost: 14

[CLIENT STORY] Browse Catalogue Food Items

As a user, I would like to freely look through all the possible items that are available in the application's catalogue when I am looking to add a new item to the fridge so that I can find the most applicable item.

Priority: High

Cost: 10

Detailed User Stories (Iteration 3)

Recipe Browsing

As a user, I want to see some interesting recipes that I can potentially use to make my own meals at home.

Priority: High

Cost: 12

Recipe Recommendations

As a user, I would like to receive some suggestions on what recipes that I should try out based on if I have the sufficient ingredients in my fridge to follow the recipe.

Priority: Medium

Cost: 18

Export Fridge Backup

As a user, I would like to be able to export a backup of all data on the application in the case that if something were to happen to the database or my computer I would be able to recover my data. I would also be able to load my data onto another computer.

Priority: Medium

Cost: 6

Exported Data Selection

As a user, I would like to be able to choose explicitly what data that I want to export to my computer so that I can start a fresh instance of the application without unnecessary old data or even share some data with other users such as my Favourites List or Grocery List.

Priority: Low

Cost: 3

Import Fridge Backup

As a user, I want to be able to import previously exported backups or data files so that I can backup my data on a new system or view data from other users such as other Favourites Lists or Grocery Lists.

Priority: Medium

Cost: 5

Automatic Low Stock Restocking

As a user, I would like for low stock items to be automatically added to the grocery list so that generating grocery lists becomes more convenient.

Priority: Medium

Cost: 12

Automatic Consumption-based Stock Adjustments

As a user, I would like the stock of items in my fridge to be automatically adjusted based on my previous consumption history so managing my fridge daily becomes easier for me.

Priority: High

Cost: 20

User Fridge History

As a user, I would like to view the changes made to the fridge over the past week so that I can track how much I am consuming and how often I restock on items,

Priority: Medium

Cost: 24

Setting User Preferences

As a user, I would like to set certain user preferences such as when expiring items should be highlighted, when items should be added to the grocery list automatically and toggling some extra features of the application

Priority: Low

Cost: 12

Vision Statement

Title: "Smart Fridge Inventory System" (SFIS)

Summary: Our project aims to develop a fridge inventory system to help households manage their fridge groceries more efficiently and effectively. This is achieved by keeping track of fridge items, allowing users to add, remove, and search food items. Additionally SFIS generates grocery lists for shopping, notifies users about expired items, provides recipes of meals that can be made from the readily available ingredients from the user's fridge, and promotes healthy food consumption habits.

The project: Our software, "Smart Fridge Inventory System", is a smart inventory management application that targets households. The primary users of the application are families, and Students/Individuals that can benefit from managing and improving their grocery tracking and purchasing needs. The system will be fully run locally, with no dependencies or connections over the internet.

Unique features: The application will have a wide array of special/unique features such as, notifying users of empty or expired items, providing users with a personalised grocery list according to depleted items, as well as recipes and food consumption data/health tracking according to their available groceries. Additionally, the software will include a large default list of common grocery items for the user to search and add from to their fridge inventory, as well as the ability for users to add unique items (such as homemade, ethnic foods, etc). The software will keep track of food depletion by predicting the average food consumption of the user's household according to the number of family members and average depletion time of a food item, this future is also enhanced by the ability to learn about the food consumption patterns of the specific user to provide more accurate grocery lists, recipes and more.

Timeline: The software will be released in 3 stages of complexity, the first iteration will include basic inventory functionalities such as add, remove, and search. The second will provide users with weekly grocery lists according to depleted items, notify users of depleted or expired items, and filter/group food types for easier search. Finally our last iteration will include more advanced functionalities such as recipe generators, health & food consumptions tracking, backup of food inventory and data, as well as a history log of recently added and deleted items.

Value: Our application is designed to reduce food waste, and improve the quality of life in households regarding their groceries purchases and consumption. This can be achieved by providing easy-to-use, comprehensive, and intuitive software that can help families keep track of their fridge groceries more efficiently, and ultimately make better decisions about what to buy, how much to buy, and how to use their fridge groceries.

Success Criteria: Our project will be successful if it can reduce food waste, allow users to make better decisions about what groceries to buy, how much to buy, and how to use their fridge groceries appropriately. Additionally, the system will be successful if it can be adopted to a wide range of households, individuals and the general consumer market, and if it can be user-friendly, easy to use, and maintain long term recurring users.