Pantry Raid

SW Engineering CSC648/848 Fall 2019

Team 101

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Milestone 1

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Version 1.0

1. Executive Summary

Pantry Raid is a revolutionary web application that allows its users to keep live track of their refrigerator’s inventory list; leading to healthier life choices and improving the quality of food consumption for all. The application can also improve a person's lifestyle by providing healthier food options which improves that person's overall health. The improvement of life is made possible by helping users buy food, store food, and keep consistent track of food.

One of the many advantages of Pantry Raid include: allowing users to store food history, helping keep track of what is available for consumption in their home through our mobile application, as long as utilizing a built in Optical Character Recognition tool, which will allow users to seamlessly input their inventory data by taking a picture of their grocery receipts.

Our team is filled with 6 talented software developers who are well versed within the technology industry. Brian Nguyen is our team lead, Jeffery Piercey is our backend lead, Yiyu Zhang is our assistant backend developer, JianQiao Xie is our frontend lead, Malik Iscandari is our Scrum Master, and Vincent Wu is our Github Master.

2. Personas And User Stories

Janey, a forty-eight-year-old woman, is a single mother of two children. She works in the emergency room at the local hospital. She is very busy with her job. She is new to technology, but she is interested in learning how to become more technical. Two weeks ago, she moved to a new house, which is more far away from her work place than before. She knows that she needs good time management. She is looking for a refrigerator that can make her life more convenient. Janey doesn't have a good memory, and she doesn't like to use notes for recording everything. She wants to manage her groceries and shopping list. She wants to know what is in the refrigerator at any time and the condition of food because she has several times forgetting to cook the food that is about to expire, which finally expired. She wants a personal account profile so that she has information of groceries in her refrigerator currently. She can add and remove items from the list manually. She can upload an image of a receipt to add items. The picture will then be analyzed and brings up the list of items to be added. She can look at previous grocery receipts to see what was bought in the past. Moreover, Janey wants to learn to create new, healthier recipes so that she can cook for her family. She hopes the product that she can see what recipes can be made with current items or recipes missing 1-3 ingredients.

3. Data Definitions

a. Registered Users
    i. Add items to list
    ii. Retrieve past lists
b. Recipes list
    i. Shows a list of available recipes with known ingredients
    ii. Shows a list of recipes with minimal missing ingredients
    iii. Search function to browse total list of recipes
c. Inventory
    i. Shows the current inventory in the refrigerator
    ii. Add or remove items
    iii. Has a table of expiration dates of each item
d. Shopping List
    i. Contains a list of groceries that is needed
    ii. Can be updated from the recipes list for missing ingredients for the recipe
    iii. Remove button for last minute changes

4. Initial List of function requirements

a. Add function **(1)**
    i. Allows the user to upload an image
    ii. Allows the user to manually input and edit items
b. Store function **(2)**
    i. Stores ingredients into the fridge and counts how many items you have in there
c. Remove function **(3)**
    i. Removes ingredients from the list and decrements the number of items in the fridge
d. FindRecipe **(4)**
    i. Let's the user to search through a database of recipes to find the one desired
e. Notify function **(5)**
    i. Notifies the user for the food that is going to be expired
    ii. Notifies the user for expired food
    iii. Budgeting
    iv. Notifies user to update refrigerator
f. Evaluate function **(6)**
    i. Track the food that the user uses frequently, remind the user to make a plan before shopping

5. List of non-functional requirements

a. Application shall be developed, tested and deployed using tools and servers reviewed by Class TA in M0.
b. Application shall be optimized for mobile browsers.
    i. Bootstrap use
c. Data shall be stored in the team's chosen database technology on the team's deployment server.
    i. MySQL
d. Privacy of users shall be protected and all privacy policies will be appropriately communicated to the users.
    i. Before using the product, users need to agree with the privacy policies.
e. Application shall be very easy to use and intuitive.
    i. Users log in
    ii. Noticeable buttons with easy to understand symbols
f. Pay functionality, if any, (e.g. paying for goods and services) shall not be implemented.
g. Site security: basic best practices shall be applied
h. Modern SE processes and practices shall be used as specified in the class, including collaborative and continuous SW development
i. The website shall prominently display the following exact text on all pages "SFSU Software Engineering Project CSC 648-848, Fall 2019. For Demonstration Only" at the top of the WWW page. (Important so as to not confuse this with a real application).

6. Competitive Analysis

Description	Competitor's Product	Our Product
Refrigerator Tracker	Takes pictures of contents inside the refrigerator and keeps track of expiration dates and shelf life..	User manually inputs items
Recipes List	Shows a list of recipes that can be made provided with a list of available ingredients. Can create a shopping list based on missing ingredients.	Shows a list of recipes that can be made provided with a list of available ingredients. Can create a shopping list based on missing ingredients or other factors like health concerns.
User Friendliness	Barcode scanners to add to the list of ingredients or to check if already have	Allows the user to take a picture of shopping receipt to add items

Compare to the features from competitor's product, our product's features are target to some users like Janey. Our product allows users input items manually. Once users input the item, the item will store to the database, and users can review all of them. Moreover, our product shows a list of recipes that can be made with a list of available ingredients. If some ingredients missed, it will create a shopping list for users. Our product also can allow the user to take a picture of shopping receipt for adding items.

7. High-Level System Requirements

a. MILESTONE 0
    i. SOFTWARE TECHNOLOGY
b. API GOOGLE OCR 00
c. Spoonacular API
d. Supported browsers
    i. Safari
    ii. Samsung Internet
    iii. Google Chrome
    iv. Firefox for Android
    v. Opera Mini
e. ServerHost: RamNode (ramnode.com)
f. Server Domain Name: Cryptoflipit.com
g. CPU: AMD EPYC PROCESSOR DUAL CORE 2.1GHz
h. OS: Gentoo GNU/LINUX
i. Database: MySQL 5.7
j. Web server: Node.js 8.12
k. Server-Side Language: Python 3.6
l. Web Application FrameWork: React.js

8. Team Members

a. Brian Nguyen - Team Lead
b. Malik Iscandari - Scrum Master
c. Jeffrey Pierce - Backend Lead
d. Vincent Wu - Github Master
e. JianQiao Xie - FrontEnd Lead
f. Yiyu Zhang - Backend Assistant

9. Checklist

a. Team Found a time slot to meet outside of class
    i. DONE
b. Github Master Chosen
    i. DONE
c. The team decided and agreed together on using the listed SW tools and deployment server
    i. DONE
d. Team ready and able to use the chosen back and front end frameworks and those who need to learn and working on it, along with study schedule
    i. DONE with using back and frontend frameworks
    ii. STUDY SCHEDULE TUES/THURSDAY 2-W/E
e. Team Lead ensured that all team members read the final M1 and agree/understand it before Submission
    i. ON TRACK