



KitchenSync

Team **Neon** Nomads

Agenda



Improvements
from last feedback



Project Description



Teamworking
Agreement



MVP



Algorithms



Sprint 2 Recap



Introduction



Team Members
Roles and
Responsibilities



Personas



Technologies and
Languages



Diagrams



User Stories



Agenda



Acceptance Criteria



Test Cases



Stories Not Completed



Burndown Chart



WebApp Screenshots



Live Application



Sprint 3 Backlog



Stories Completed



Team Velocity and Committed Ratio

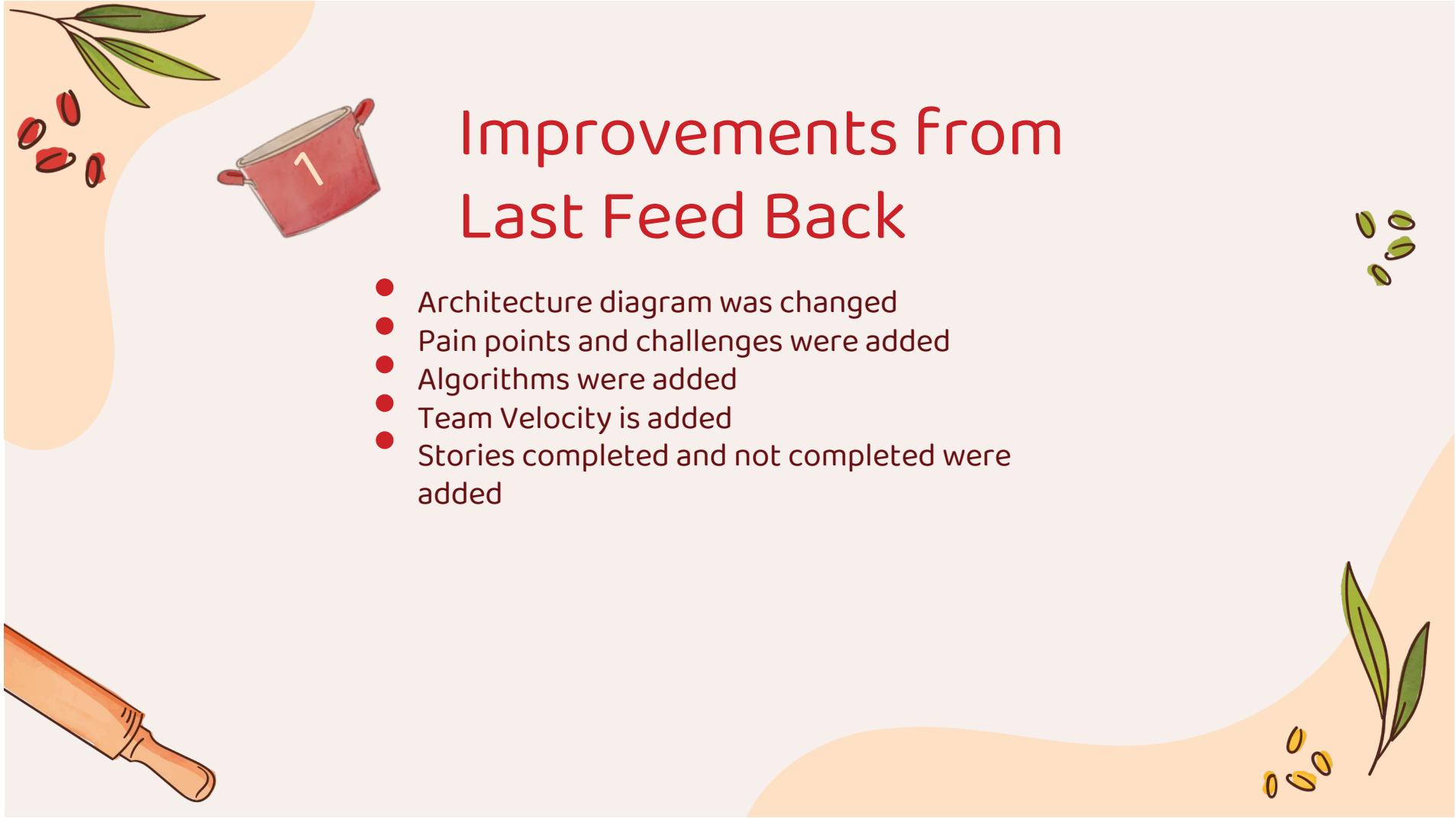


Retrospective



GitHub Link





Improvements from Last Feed Back

- Architecture diagram was changed
- Pain points and challenges were added
- Algorithms were added
- Team Velocity is added
- Stories completed and not completed were added



Introduction

KitchenSync is a comprehensive platform designed to make meal planning and pantry management a simple part of your daily routine. It's not just another tool for organizing the kitchen. Whether you're a working professional with a hectic schedule or a parent balancing the obligations of family life, KitchenSync is here to make your kitchen experience more efficient.





Project Description

KitchenSync streamlines your pantry management and meal planning seamlessly.

For those with active lifestyles and families
who find it challenging to keep up with their pantry inventory and curb food disposal,
the KitchenSync
is a sophisticated kitchen assistance platform,
that enhances the management of your pantry and offers recipe options that fit your available ingredients, organizes meal plans, and reminds you of the shelf life of your food items,
unlike conventional inventory systems and static shopping list apps
our application intelligently adapts to your dietary preferences and schedule,
guaranteeing the optimal use of your groceries and simplifying the meal preparation process.



04

Team Members & Roles



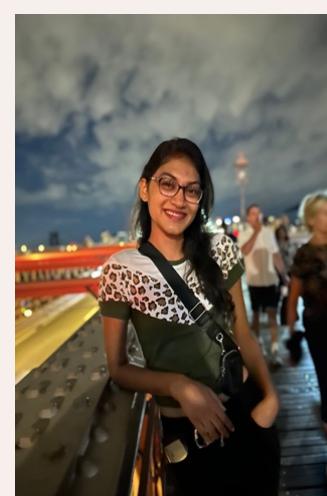
**Hemanvitha
Mylapalli**
Frontend Developer
Team Leader



**Shashank
Akavaram**
Frontend Developer
Scrum Master



**Yuga Kapil Krishna
Maytheramatla**
Backend Developer



**Neha
Srinivasaiah**
Devops Engineer



Team Members & Roles



Sasank
Nannapaneni
Software Developer



Bala Sahithi
Kamana
Backend Developer



Aditya Gadhave
Software Developer



Sujitha
Chethireddy
Software Test
Engineer





Teamwork Agreement

The goal of our Teamwork Agreement is to establish expectations for behavior in an attempt to foster collaboration and productivity.

Agendas are distributed beforehand by WhatsApp or email.

The specific roles and responsibilities of each member may vary as the project progresses.

One meeting per week is scheduled for Saturdays, and daily meetings are held for Scrum. Important decisions will be made collectively, documented, and shared with all participants.





06

Personas

A persona is an imaginary client that personifies the traits of a subset of your customers. For the purpose of creating your product or service, the Persona provides useful information about those clients' demographics. Their objectives, driving forces, and constraints.

Persona 1

Cael

21 years old,
freshman

Background:

A freshman at Pace University from a low-income family living in a dormitory. He's on a tight budget and needs to make his grocery shopping as efficient as possible.

Personality:

Cheerful, disciplined, hardworking, initiative

Pain points:

Limited budget, inexperience in meal planning, difficulty in finding recipes.

Challenges:

Unnecessary purchase, eating healthy, managing a small food storage.



Persona 2

Ella

32 years old,
Advocate

Background:

Ella is an advocate who is leading a busy lifestyle. She is health conscious and enjoys cooking nutritious meals at home.

Personality:

Altruistic, organized, passionate, perseverance

Pain points:

Managing her schedule, locating recipes that meet specific dietary preferences, keeping track of expiration dates

Challenges:

Efficiently organizing pantry items, meal planning



Persona 3

Michelle

44 years old,
Busy Mom

Background:
Michelle is a working mom of four. She juggles between a demanding job and household responsibilities.

Personality:

Empathetic, forgiving, nurturing, patience

Pain points:

Balancing a demanding job and household responsibilities, over-purchasing, and desire for a system to assist with a recipe suggestion

Challenges:

Coordinating meals to fit into a busy schedule, managing a large and diverse food inventory, and reducing food wastage.



Persona 4

Diego

49 years old,
Restaurant Manager

Background:

Diego manages a small restaurant specializing in local cuisine. He's constantly balancing various tasks and often overlooks inventory management, leading to occasional food wastage.

Personality:

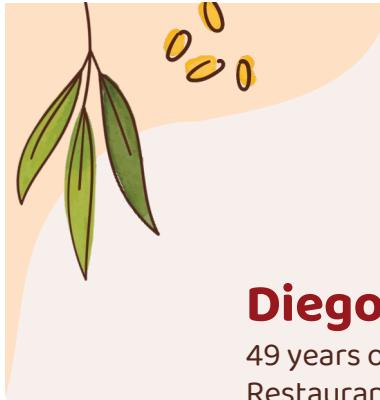
Creative, Community-Minded,
Entrepreneurial, Passionate

Pain points:

overlooking inventory
management due to
multitasking, the need for a
system to suggest recipes and
expiration alerts.

Challenges:

Streamlining inventory
management and reducing food
wastage.





07

MVP(Minimal Viable Product)

The MVP of KitchenSync aims to streamline pantry management for busy individuals and families, organizing ingredients, and sending food expiry reminders. It aims to reduce food waste and make cooking easier by adapting to users' dietary needs and schedules.

Benefits: KitchenSync aims to reduce food waste and costs, increase meal prep efficiency, improve nutritional goal adherence, and decrease expired food consumption through smart pantry tracking, tailored recipes, meal planning, and freshness reminders.

08

Technologies and Languages



Python



HTML



CSS



JavaScript



Flask



SQLite



Visual Studio
Code



GitHub



Jira Board



Anaconda



Algorithms and Libraries



Tensorflow



Scikit Learn



Keras

Algorithms and Libraries

- MobileNet Models are deep learning models optimized for mobile and edge devices. In our project, we used MobileNet for image recognition tasks, such as identifying recipe and nutritional value of the food item from the uploaded image.
- K-Nearest Neighbors is a simple, versatile machine-learning algorithm used for classification and regression. We used KNN to suggest recipes by finding the closest match to the uploaded image.
- VGG16 is a convolutional neural network model known for its effectiveness in image recognition. VGG16 was utilized for analyzing images of food to help with recipe generation.

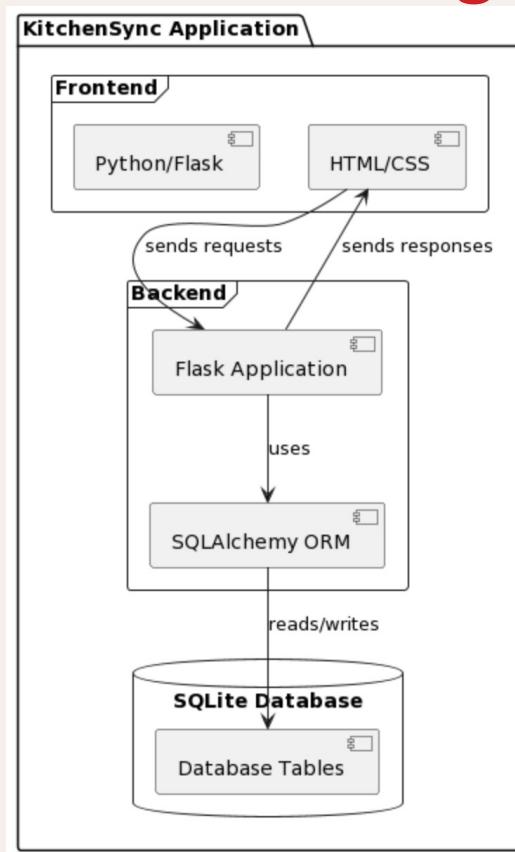
Algorithms and Libraries

- Random Forest is an ensemble learning method used for classification and regression. This algorithm is deployed to predict the nutritional values of uploaded items of food.
- Web Scraping was used to gather recipes from the internet to find appropriate recipes and their nutritional values.

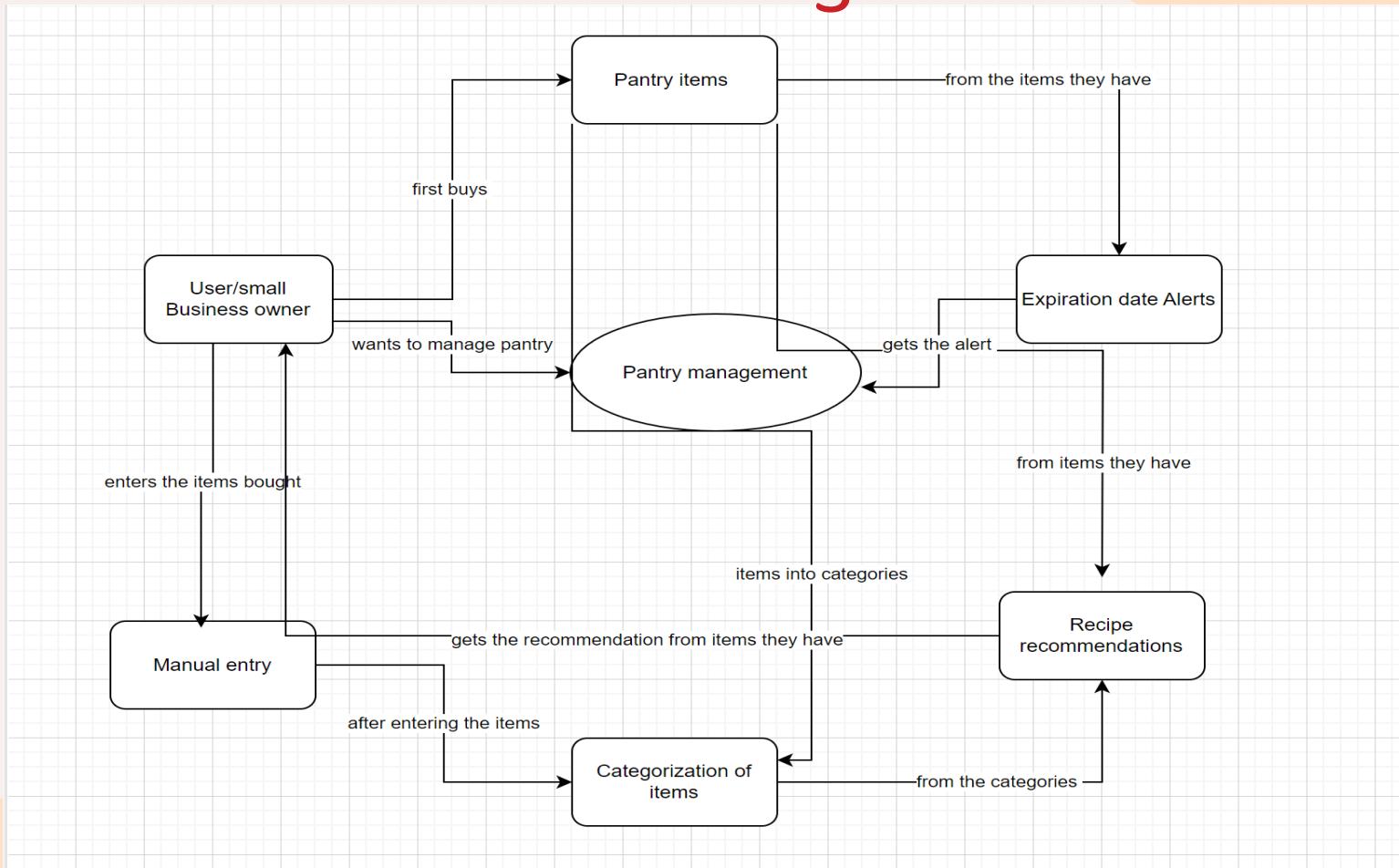
Diagrams

- Architecture Diagram
- Context Diagram
- ER Diagram
- Sequence Diagram
- State Diagram
- Class Diagram

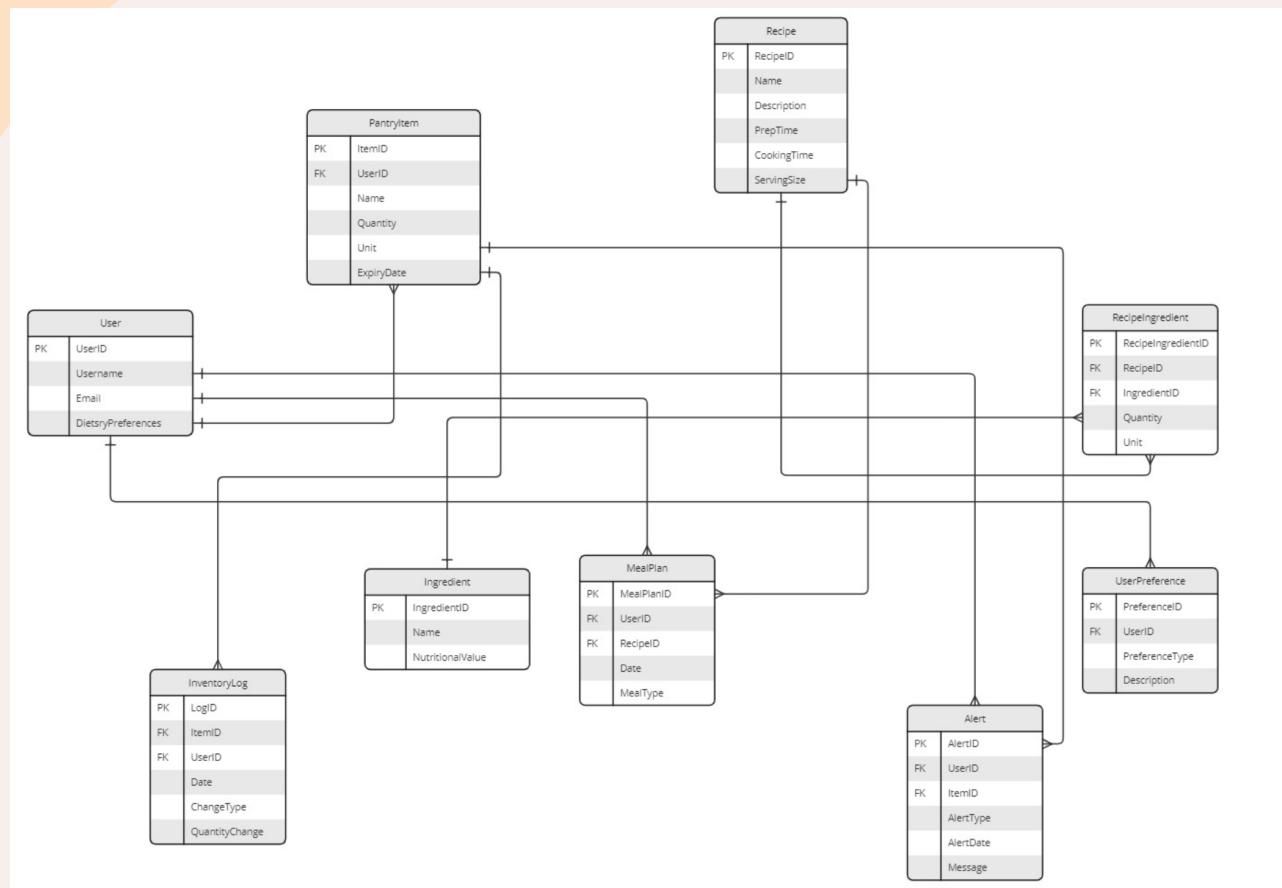
Architecture Diagram



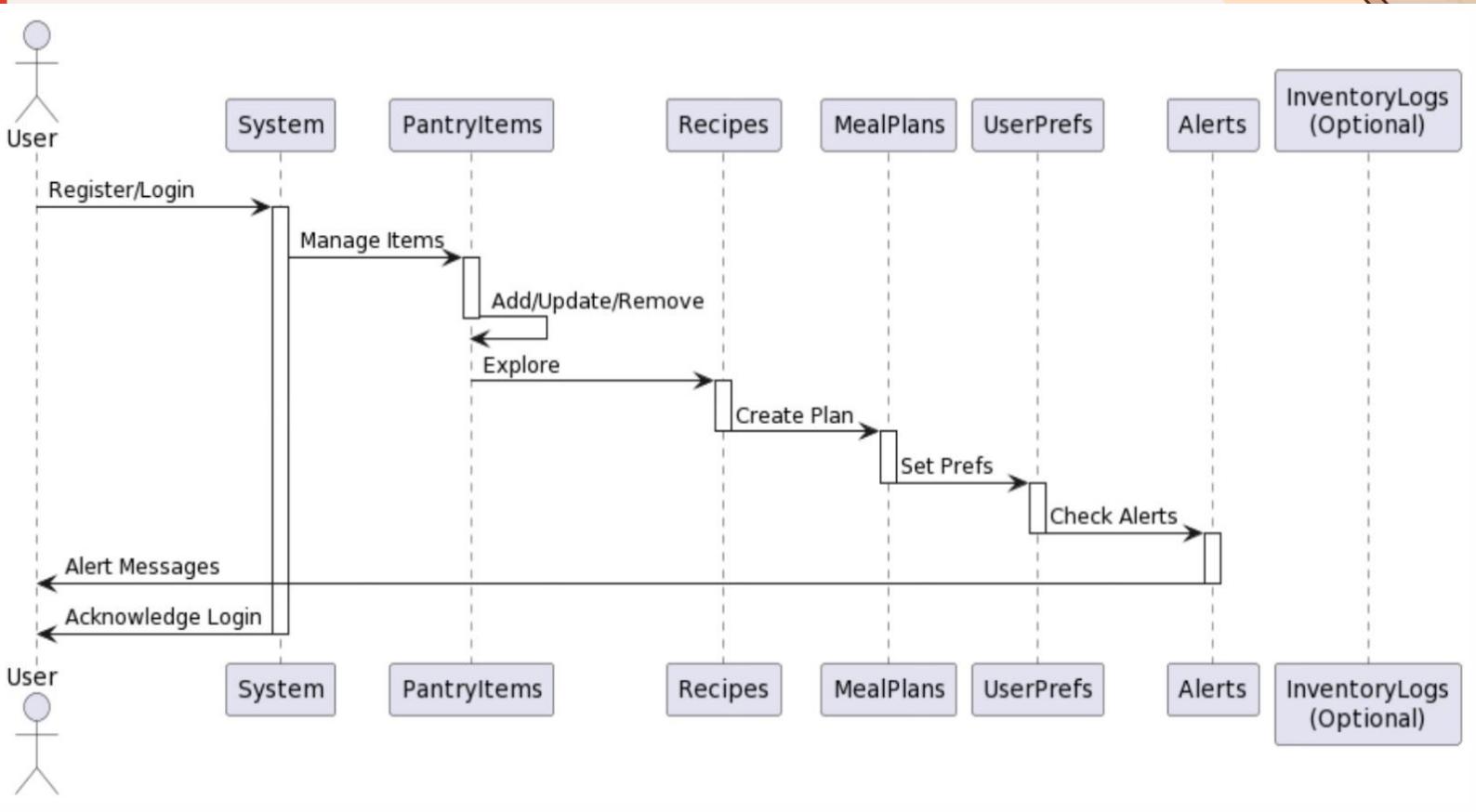
Context Diagram



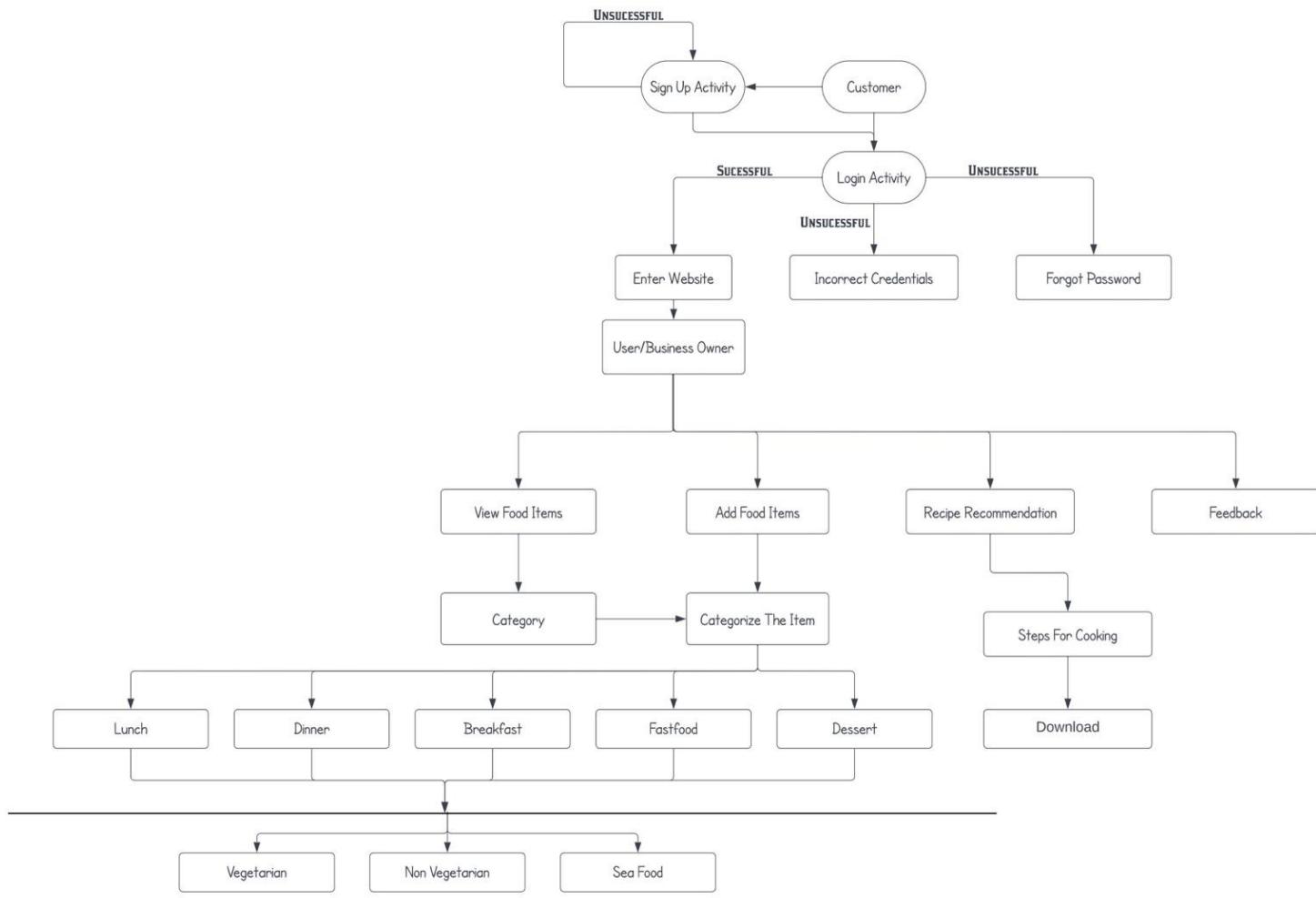
ER Diagram



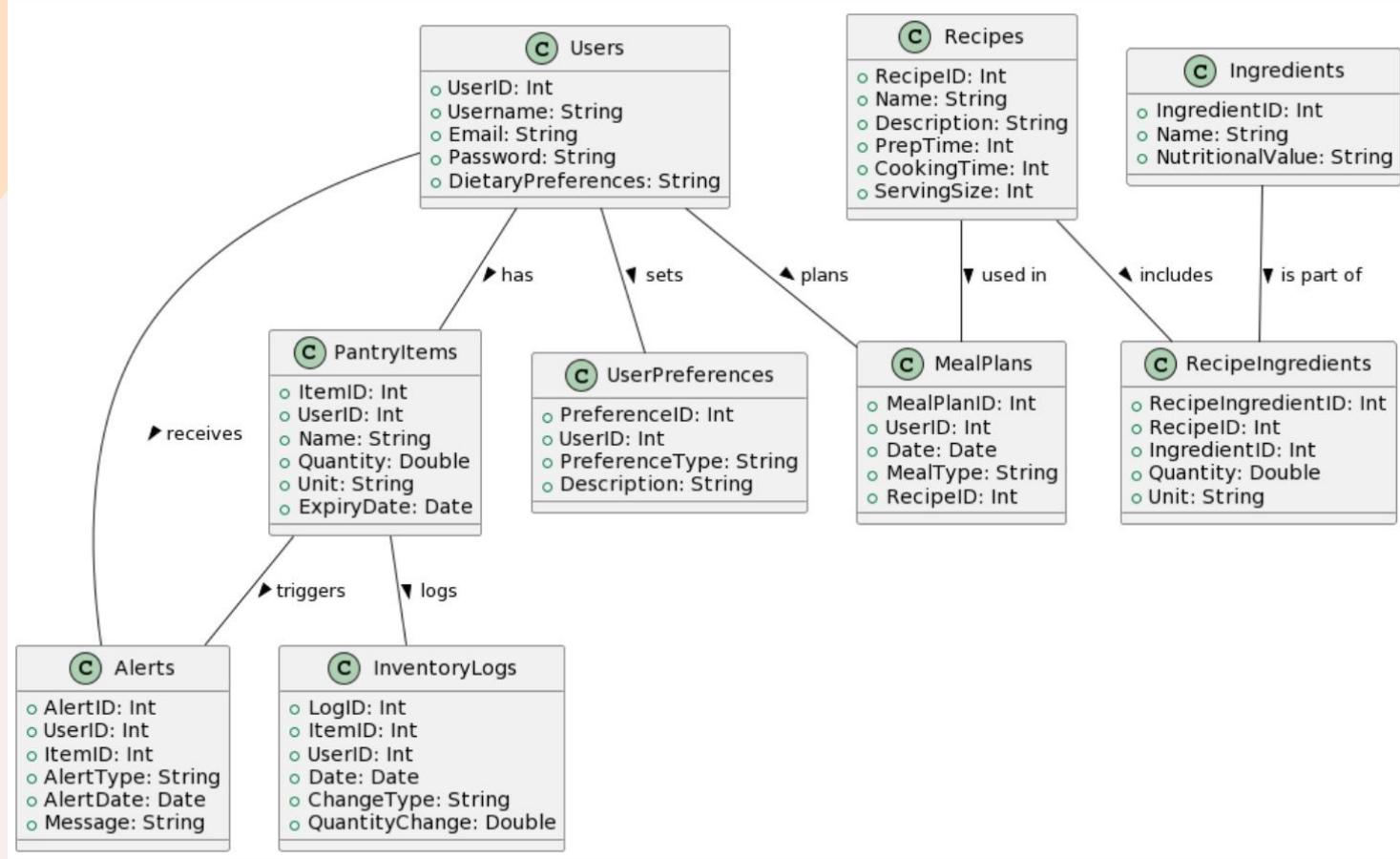
Sequence Diagram



State Diagram



Class Diagram



Sprint 2 Recap

Sprint 2 (Feb 15-mar 13)

Projects / Neon Nomads

Backlog

1	SCRUM-25 Decide on MVP	DONE	23 FEB	10	HM			
2	SCRUM-26 Work on Architecture Diagram	DONE	05 MAR	3	BK			
3	SCRUM-27 Work on Class Diagrams	DONE	03 MAR	3	SA			
4	SCRUM-28 Work on State Diagram	DONE	04 MAR	3	AG			
5	SCRUM-29 Work on ER diagrams	DONE	29 FEB	3	YM			
6	SCRUM-30 Work on Context Diagram	DONE	28 FEB	3	S			
7	SCRUM-31 Work on Sequence Diagram	DONE	01 MAR	3	N			
8	SCRUM-32 Work on User Stories	DONE	07 MAR	5	HM			
9	SCRUM-33 Login Page	DONE	10 MAR	6	SA			
10	SCRUM-34 Home Page	DONE	11 MAR	6	HM			
11	SCRUM-35 Backend Tables	DONE	29 FEB	5	YM			
12	SCRUM-36 Presentation	DONE	11 MAR	7	N			
13	SCRUM-37 Test Cases	DONE	11 MAR	3	HM			
14	SCRUM-38 Retrospective	DONE	11 MAR	8	HM			
15	SCRUM-39 Wikipage	DONE	13 MAR	8	HM			
16	SCRUM-41 Acceptance Criteria	DONE	11 MAR	3	HM			



Sprint 2 Recap

Sprint 2 (Feb 15-Mar 13)

- We've worked on User Stories, Acceptance Criteria, Test cases, and UML Diagrams, and we also started working on building our MVP.
- We finished the pages of inventory management which allows the user to add or update the items in their inventory.

User Stories

Estimation	User Id	As a	I want to	So that	Feature	Sprint	Status
13	1	Student on a budget	track my food expense	I can manage my budget more effectively	Expense Tracking	Sprint 4	to do
8	2	Busy Parent	easily upload my grocery receipts	I can automatically update my pantry inventory	Receipt Upload	Sprint 4	to do
5	3	Health-conscious Individual	check the nutritional value	I can maintain my dietary regimen without hassle	Nutritional Value	Sprint 3	done
8	4	Environmentally Aware User	be alerted about food nearing expiration	I can reduce food waste	Expiry Notifications	Sprint 4	to do
2	5	Gourmet Cook	access a wide variety of recipes	I can explore new dishes and cuisines	Recipe Recognizer	Sprint 3	done
8	6	Parent with multiple kids	plan meals for the whole week	I can organize my shopping and cooking schedule better	Recipe Recognizer	Sprint 3	done
8	7	Novice Cook	have step-by-step cooking guides	I can learn to cook with more confidence	Recipe Recognizer	Sprint 3	done
8	8	Recipe Enthusiast	upload my own recipes and share them	I can contribute to the community and save my favorites	Recipe Upload	Sprint 4	to do

User Stories

Estimation	User Id	As a	I want to	So that	Feature	Sprint	Status
1	9	College Student	find recipes based on the ingredients I have	I can avoid buying extra groceries	Recipe Recognizer	Sprint 3	done
5	10	Bakery Owner	manage my inventory of baking ingredients	I can prevent shortages and reduce excess waste	Inventory Management	Sprint 2	done
8	11	Restaurant Manager	track the freshness of my perishable stock	I can ensure the quality of the dishes served	Freshness Tracking	Sprint 4	to do
3	12	Pastry Chef	receive alerts when specific ingredients are low	I can reorder supplies in time for baking	Expiry Notifications	Sprint 4	to do
2	13	Restaurant Chef	access a wide variety of recipes	I can quickly offer my dishes	Recipe Recognizer	Sprint 3	done
5	14	Head Chef	update my inventory	I can keep track of what I have	Inventory Management	Sprint 2	done
1	15	Restaurant Owner	I want to create an account	I can add items to my inventory	Inventory Management	Sprint 2	done
5	16	Seafood Market Manager	track the sell-by dates of seafood	we can guarantee the freshness and safety of our products	Expiry Notifications	Sprint 4	to do
8	17	Food Festival Organizer	manage multiple vendor inventories in one platform	I can oversee and ensure all vendors are adequately stocked	Multi-Vendor Inventory System	Sprint 4	to do

Acceptance Criteria

User Id	User Story	Summary	Criteria
1	As a student on a budget I want to track my food expenses so that I can manage my budget more effectively	Given I have entered my monthly budget into the KitchenSync app, When I put each food purchase, Then the app should deduct the amount from my budget and warn me if I am close to exceeding it.	The app must allow the user to set a maximum budget for food spending. The app must track the user's food purchases against the budget.
2	As a busy parent I want to easily upload my grocery receipts so that I can automatically update my pantry inventory	Given I am logged into the KitchenSync app, When I take a picture of my grocery receipt and upload it, Then the app should automatically identify and update the inventory with the purchased items.	The app must display a current inventory of the pantry. The app must allow updating of inventory in real-time.
3	As a Health-conscious Individual I want to have meal suggestions based on my dietary needs so that I can maintain my dietary regimen without hassle	Given I am a health-conscious individual who requires meal suggestions based on my dietary needs, When I input my dietary preferences into the KitchenSync app and ask for meal suggestions, Then the app should provide me with recipes that use ingredients currently in my inventory and fit my dietary restrictions.	The app must have a filter feature for allergies and dietary preferences. Recipe search results must reflect the user's dietary filters. The app should offer alternative ingredient suggestions for recipes that don't initially meet dietary needs.
4	As a Environmentally Aware User I want to be alerted about food nearing expiration so that I can reduce food waste	Given I want to minimize food waste due to expired products, When I check the KitchenSync app, Then it should provide a prioritized list of items to use based on their expiration dates, with recipes suggestions when applicable.	The app must allow user to input their current pantry items. The app must suggest recipes based on entered ingredients, prioritizing those that use perishable items. The app must allow users to save and track commonly used ingredients and their quantities.
5	As a Gourmet Cook I want to access a wide variety of recipes so that I can explore new dishes and cuisines	Given I am planning to cook a meal, When I use the filtering and search tools on the KitchenSync app, Then I should be able to find recipes based on specific cuisines ingredients, cooking techniques.	The app must provide an accessible database of recipes. The app must offer a feature for users to input available ingredients and get recipe suggestions. The app must have multi-language support or easy-to-follow instructions with visuals.
6	As a Parent with multiple kids I want to plan meals for the whole week so that I can organize my shopping and cooking schedule better	Given I have selected meals for each day of the week, When I finalize my weekly meal plan on the KitchenSync app, Then the app should generate a comprehensive shopping list that includes all the ingredients needed for the selected meals.	The app must have a section for quick and healthy recipes. The app should estimate cooking time for each recipe. The app could allow the user to set breaks and remind them to cook.

Acceptance Criteria

User Id	User Story	Summary	Criteria
7	As a Novice Cook I want to have step-by step cooking guides so that I can learn to cook with more confidence	Given I am logged into the KitchenSync app When I select a recipe to cook, Then the app should provide a detailed step-by-step cooking guide that I can follow.	The app must offer a clear and concise interface to track expiry dates. The app should provide quick meal suggestions based on products nearing expiry. The app must sync with the student's calendar for meal planning.
8	As a Recipe Enthusiast I want to upload my own recipes and share them so that I can contribute to the community and save my favorites	Given I am registered in the KitchenSync app as a Recipe Enthusiast, When I create a new recipe and select the options to upload it, Then the app should allow me to enter the recipe details and save it to my profile and the community recipe database.	The app allows users to upload recipes. The app should offer a database of healthy, family-friendly recipes. The app must allow saving and printing of meal plans.
9	As a College Student I want to find recipes based on the ingredients I have so that I can avoid buying extra groceries	Given I have entered my ingredient inventory into the KitchenSync app, When I ask the app to suggest recipes based on my current inventory, Then the app should filter and present recipes that I can cook without needing to buy more groceries.	The app must provide a weekly meal planner that can be customized. The app should offer a database of healthy, family-friendly recipes. The app must allow saving and printing of meal plans.
10	As a Bakery Owner I want to manage my inventory of baking ingredients so that I can prevent shortages and reduce excess waste	Given I am a bakery owner who must keep track of various baking ingredients, When I check my inventory levels on the KitchenSync app, Then the app should display the current stock levels and notify me and when it's time to reorder.	The app must recommend recipes based on the bakery's inventory of perishable ingredients. The app should allow bakery owners to save preferred recipes. The app must update recommendations based on seasonal ingredients or trends.
11	As a Restaurant Manager I want to track the freshness of my perishable stock so that I can ensure the quality of the dishes served	Given I am a restaurant manager responsible for maintaining the freshness of perishable goods, When I store new stock in the inventory using the KitchenSync app, Then the app should track the shelf life and alert me a few days before the expiration date.	The app must allow chefs to input their current pantry items. The app must suggest recipes based on entered ingredients, prioritizing those that use perishable items. The app must allow chefs to save and track commonly used ingredients and their quantities.
12	As a Pastry Chef I want to receive alerts when specific ingredients are low so that I can reorder supplies in time for baking	Given I need to ensure continuous availability of baking ingredients, When I review my upcoming baking schedule and current inventory in the KitchenSync app, Then the app should provide a forecast of ingredient usage and alert me in advance if I need to reorder to meet demand.	The app must track the history of purchased items and used recipes. The app should provide statistics on frequently used ingredients. The app must suggest new recipes based on the user's pantry history and preferences.

Acceptance Criteria

User Id	User Story	Summary	Criteria
13	As a Restaurant Chef I want to easily access and modify digital menus so that I can quickly update our offerings based on available inventory	Given I am updating the menu for the day, When I open the KitchenSync app to review our current inventory, Then the app should display the ingredients available and suggest menu items that can be prepared.	The app must categorize foods by nutritional value. The app should track the freshness of items to ensure peak nutritional quality. The app could integrate with health apps to recommend foods based on workout intensity or recovery needs.
14	As a Head Chef I want to update my inventory so that I can keep track of what I have.	Given the Head Chef is on the inventory update page, When they edit the quantity or details of an item, Then the system should immediately reflect the changes in the inventory list.	The app must allow user to update their current pantry items.
15	As a Restaurant Owner I want to create an account so that I can add items to my inventory.	Given the Restaurant Owner has logged into their new account, When they navigate to the inventory section and choose to add new items, Then they should be able to input and save item details to their inventory.	The app must allow user to create an account using valid credentials.
16	As a Seafood Market Manager I want to track the sell-by dates of seafood so that we can promote the freshness and safety of our products	Given a seafood product is approaching its sell-by date, When I check the inventory in the KitchenSync app, Then the app should highlight the product and alert me so I can prioritize its sale to ensure freshness and safety.	The app must allow setting alerts for products nearing their expiry dates. The app should provide suggestions on how to use these products creatively in the kitchen. Alerts should be customizable in terms of frequency and notification type.
17	As a Food Festival Organizer I want to manage multiple vendor inventories in one platform so that I can oversee and ensure all vendors are adequately stocked	Given I am logged into the KitchenSync Platform as a Food Festival Organizer, When I access the multi-vendor inventory management dashboard, Then I should be able to view and manage the inventory levels of all participating vendors in one consolidated view.	The app must allow festival organizers to access multiple inventory lists.



Sprint 3 Backlog

Sprint 3 (Mar 15-Feb 11)

Estimation	User Id	As a	I want to	So that	Feature
5	3	Health-conscious Individual	check the nutritional value	I can maintain my dietary regimen without hassle	Nutritional Value
2	5	Gourmet Cook	access a wide variety of recipes	I can explore new dishes and cuisines	Recipe Recognizer
8	6	Parent with multiple kids	plan meals for the whole week	I can organize my shopping and cooking schedule better	Recipe Recognizer
8	7	Novice Cook	have step-by-step cooking guides	I can learn to cook with more confidence	Recipe Recognizer
1	9	College Student	find recipes based on the ingredients I have	I can avoid buying extra groceries	Recipe Recognizer
5	10	Bakery Owner	manage my inventory of baking ingredients	I can prevent shortages and reduce excess waste	Inventory Management
2	13	Restaurant Chef	access a wide variety of recipes	I can quickly offer my dishes	Recipe Recognizer
5	14	Head Chef	update my inventory	I can keep track of what I have	Inventory Management
1	15	Restaurant Owner	I want to create an account	I can add items to my inventory	Inventory Management





Test Cases

Test Id	Description	Outcome
USER_SGN	Verify sign-up process with valid data.	User successful sign-up
USER_LGN	Verify login process with valid credentials.	User successful login
USER_SGN_ERR	Verify sign-up process with invalid data.	User Sign-up error
USER_LGN_ERR	Verify login process with invalid credentials.	User Login error
USER_PASS_RCV	Verify password recovery process.	User password recovery process
USER_ADD_PNY	Verify adding items to the pantry.	Successful adding of items in pantry
USER_DEL_PNY	Verify updating and deleting items in the pantry.	Successful updating or deleting items in pantry
USER_VIEW_PNY	Verify searching and sorting the pantry items.	Successful viewing of pantry items
USER_ALT_GEN	Verify alert generation for items that are approaching expiry dates.	Successful alert generation
USER_ALT_TIME	Time frames for when the alerts should be sent.	Successfully setting Time frames for alerts
USER_REC	Test recipe recogniser when you upload an image	Successful recipe recognizer

Stories Completed

Estimation	User Id	As a	I want to	So that	Feature
5	3	Health-conscious Individual	check the nutritional value	I can maintain my dietary regimen without hassle	Nutritional Value
2	5	Gourmet Cook	access a wide variety of recipes	I can explore new dishes and cuisines	Recipe Recognizer
8	6	Parent with multiple kids	plan meals for the whole week	I can organize my shopping and cooking schedule better	Recipe Recognizer
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5	10	Bakery Owner	manage my inventory of baking ingredients	I can prevent shortages and reduce excess waste	Inventory Management
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5	14	Head Chef	update my inventory	I can keep track of what I have	Inventory Management
1	15	Restaurant Owner	I want to create an account	I can add items to my inventory	Inventory Management

Stories Not Completed

Estimation	User Id	As a	I want to	So that	Feature
13	1Student on a budget	track my food expense		I can manage my budget more effectively	Expense Tracking
8	2Busy Parent	easily upload my grocery receipts		I can automatically update my pantry inventory	Receipt Upload
8	4Environmentally Aware User	be alerted about food nearing expiration		I can reduce food waste	Expiry Notifications
8	8Recipe Entusiast	upload my own recipes and share them		I can contribute to the community and save my favorites	Recipe Upload
8	11Restaurant Manager	track the freshness of my perishable stock		I can ensure the quality of the dishes served	Freshness Tracking
3	12Pastry Chef	receive alerts when specific ingredients are low		I can reorder supplies in time for baking	Expiry Notifications
5	16Seafood Market Manager	track the sell-by dates of seafood		we can guatantee the freshness and safety of our products	Expiry Notifications
8	17Food Festival Organizer	manage multiple vendor inventories in one platform		I can oversee and ensure all vendors are adequately stocked	Multi-Vendor Inventory System



Team Velocity and Committed Ratio

Team Velocity = Total number of story points completed in this sprint

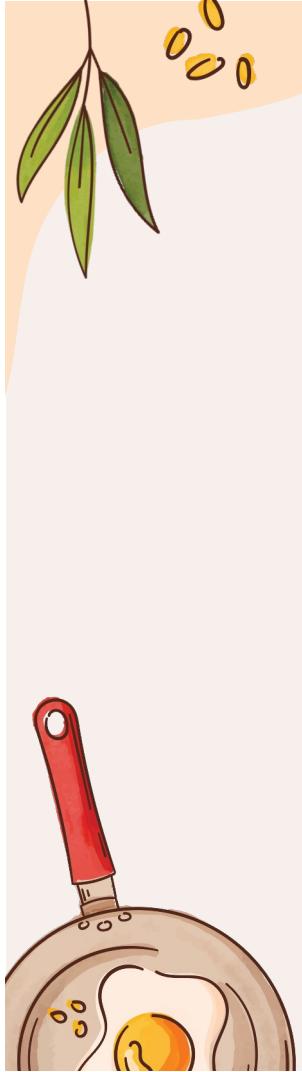
Team Velocity = 26

Historical Team Velocity = Average of previous sprint's velocity

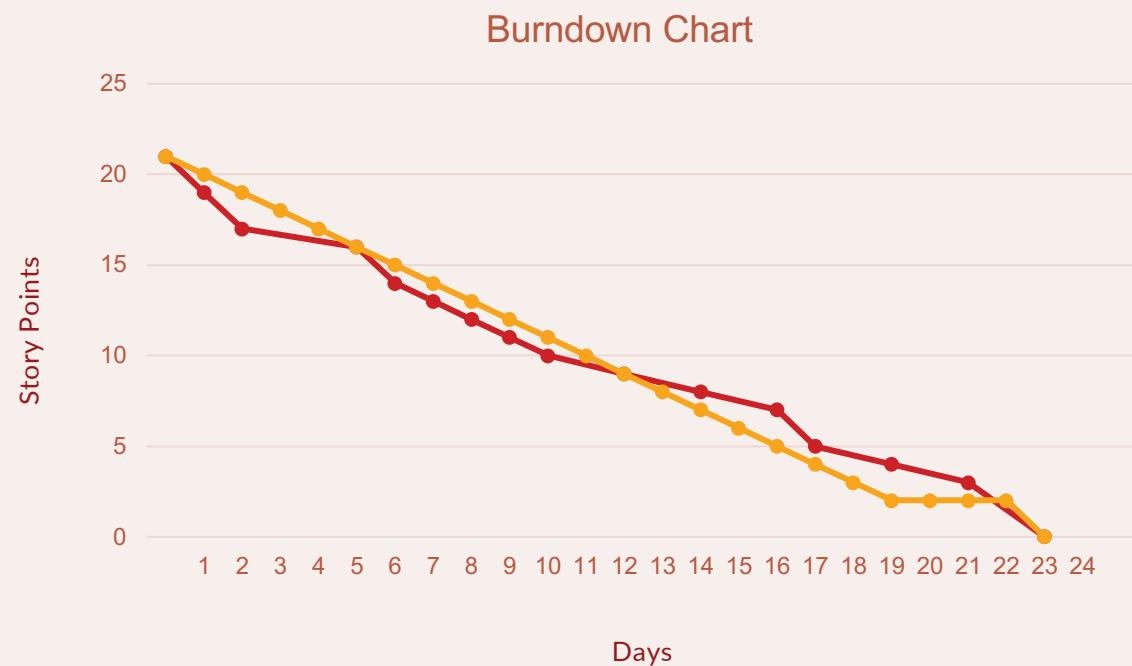
Historical Team Velocity = 18.5

Committed Ratio

Committed Ratio = 26/32 = 81.25%



Burndown Chart – Sprint 3



Retrospective – Sprint 3

What went well +

teamwork and productivity + 2	distribution of task + 3
communication between team members + 6 Communications with the team and understanding all the deliverables + 6	Adaptability to Changes and Feedback + 4
Managing unplanned items during the sprint. + 1	Feedback sessions among each other and helping each other + 1

Retrospective

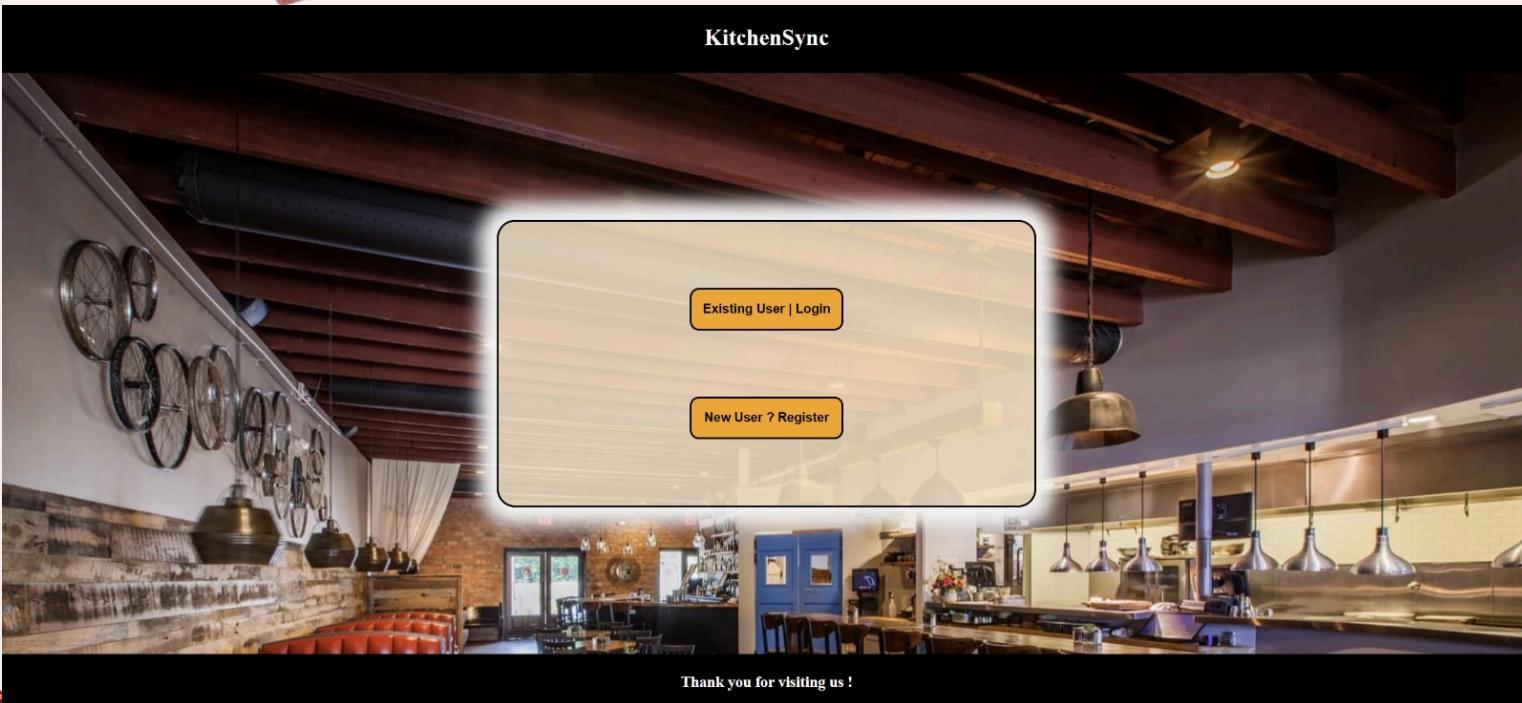
What can be improved +

task Monitoring + 3	Regular updates on ongoing tasks + 2
Scheduling Team Meetings frequency of group meeting Everyone joining meetings at planned time + 3	self reflection on completion of tasks + 1
Review sessions of completed tasks + 7	

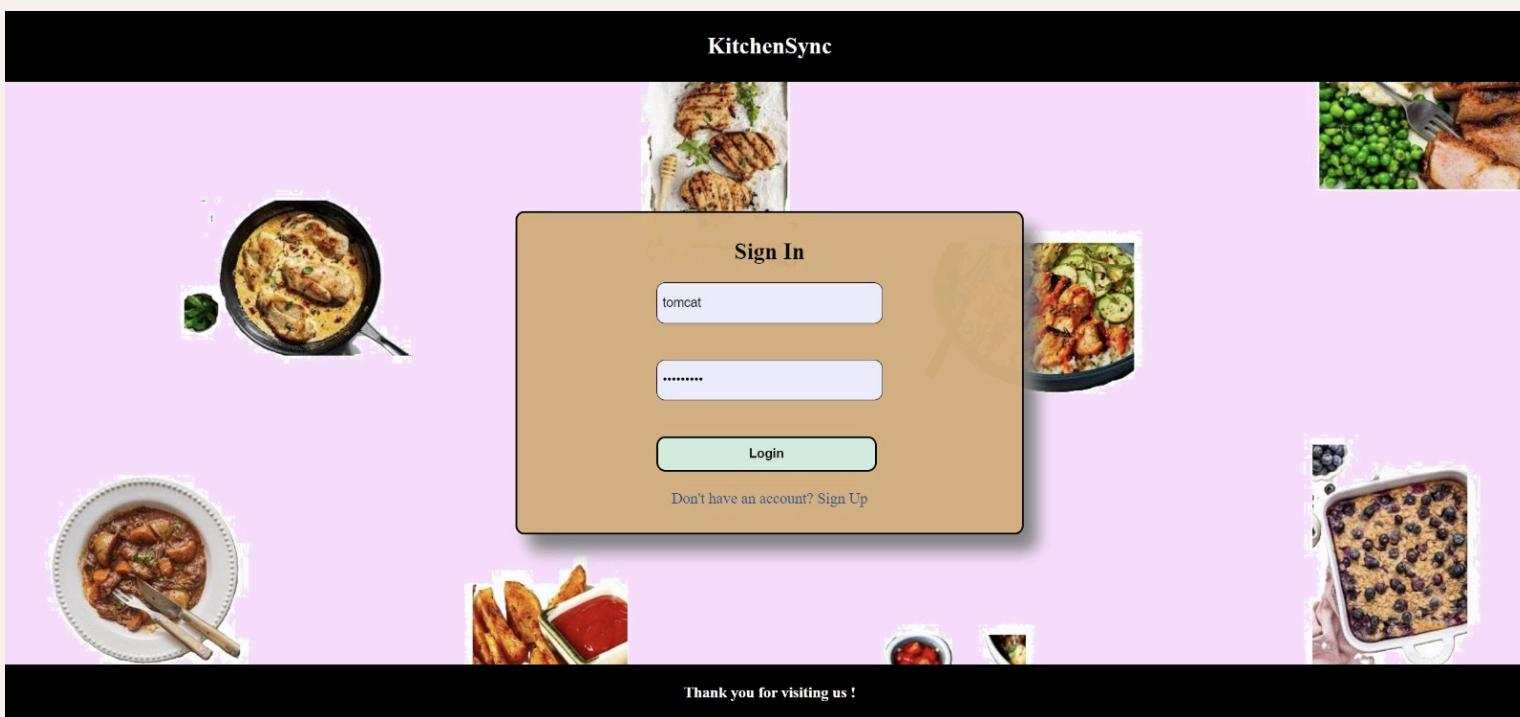
Action Items +

discussing what success/outcome looks for each sprint + 0	Fix upon a schedule. When someone can't join the scheduled meeting please inform before hand or changing the mode of connecting as per situation demands + 0
Communicate with other teammates or your classmates if you feel like lagging behind on your part. + 0	

Webapp Screenshots

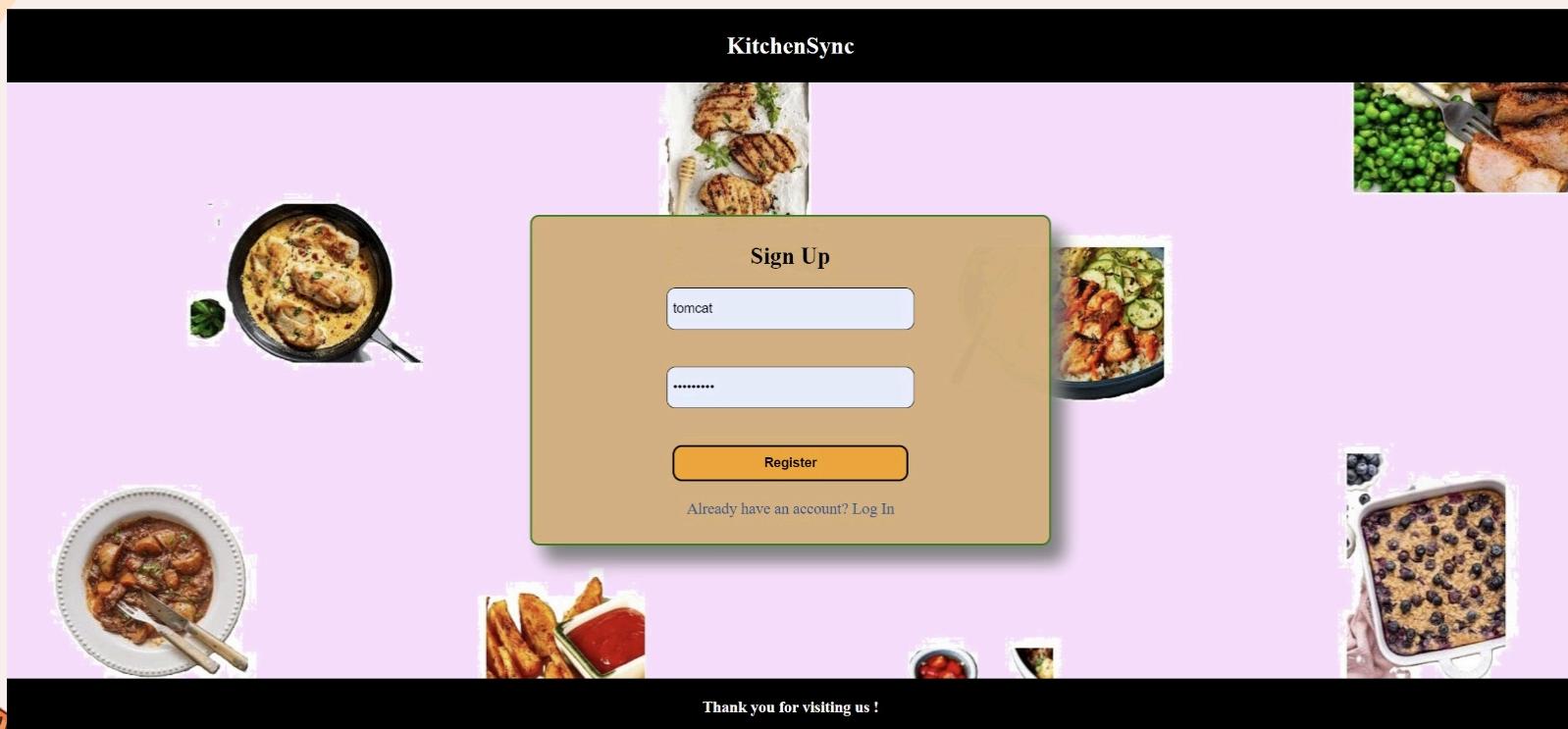


Webapp Screenshots

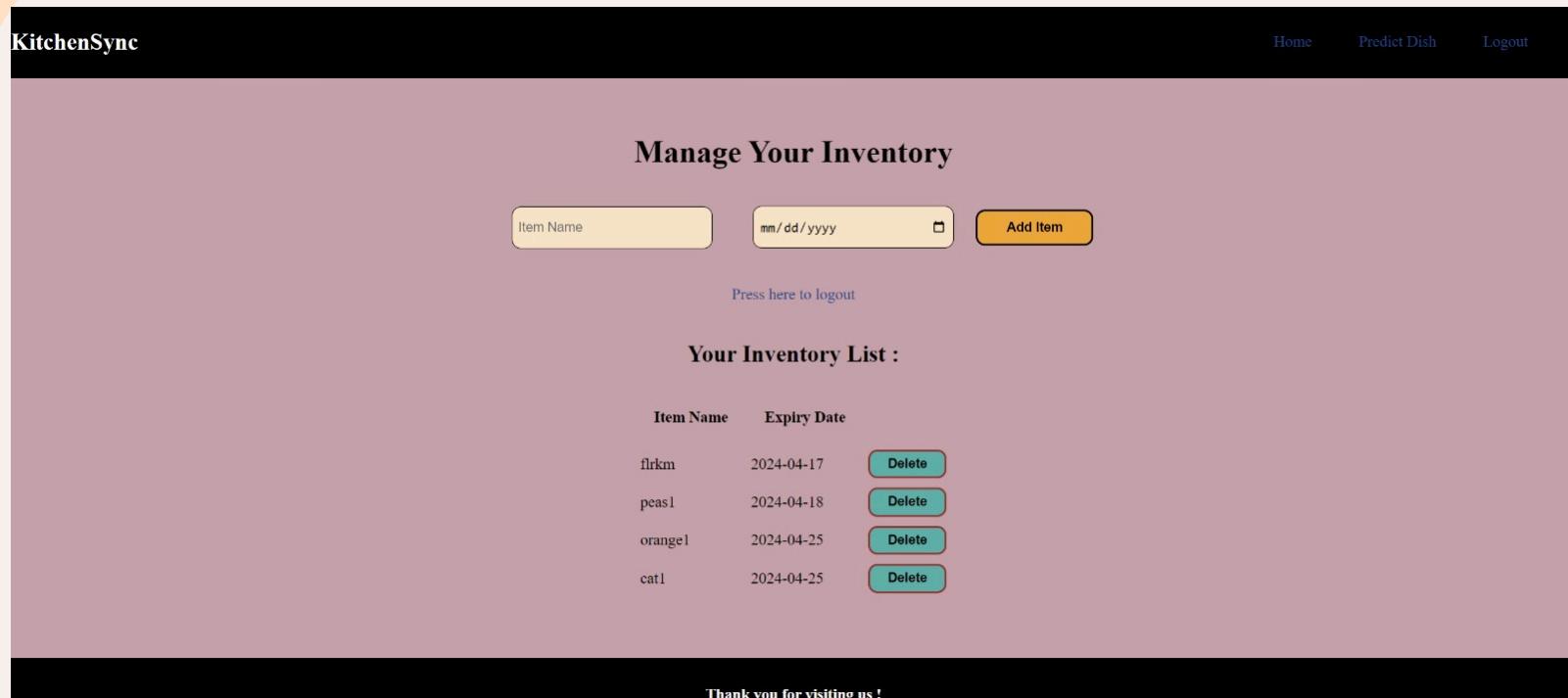


Thank you for visiting us !

Webapp Screenshots



Webapp Screenshots



KitchenSync

Manage Your Inventory

Item Name mm/dd/yyyy Add Item

Press here to logout

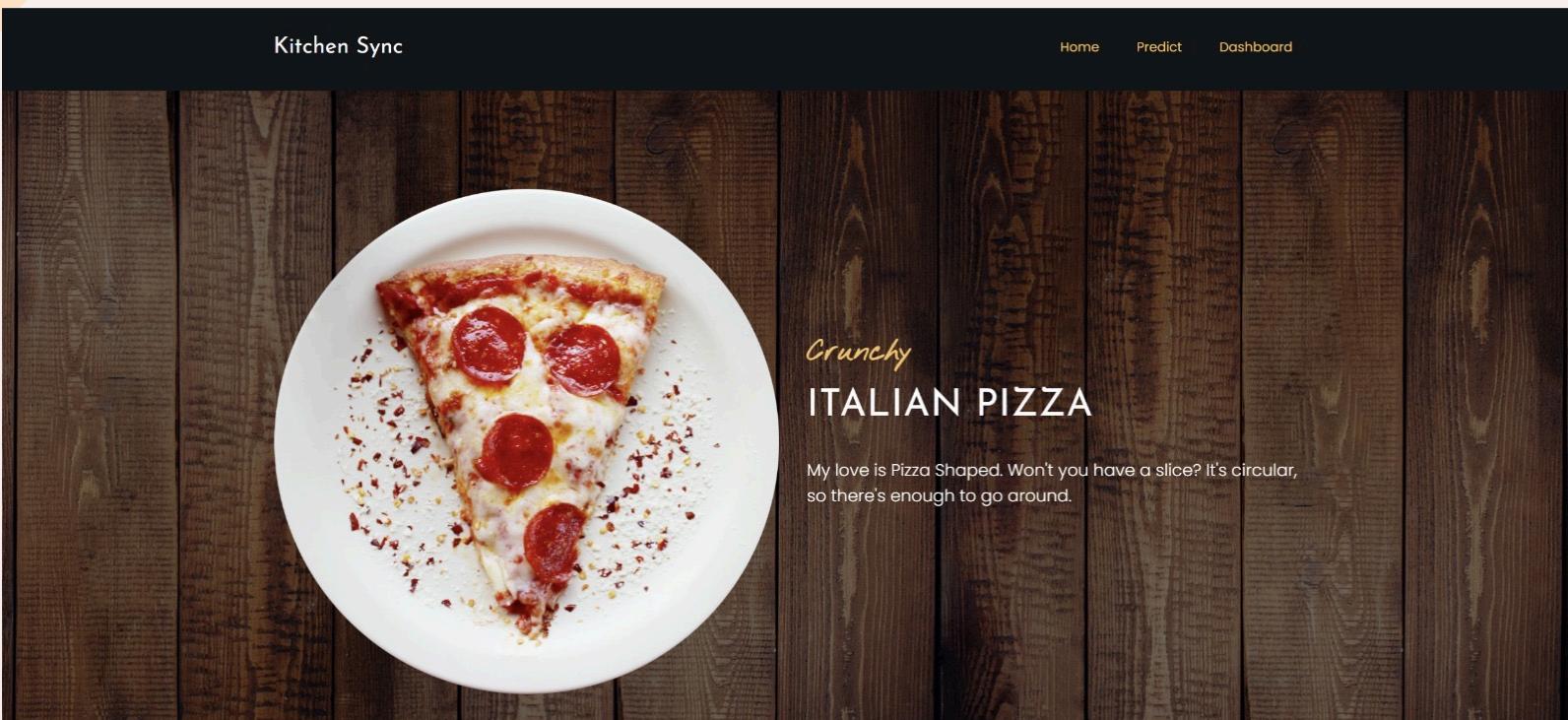
Your Inventory List :

Item Name	Expiry Date	
flrkm	2024-04-17	Delete
peas1	2024-04-18	Delete
orangel	2024-04-25	Delete
cat1	2024-04-25	Delete

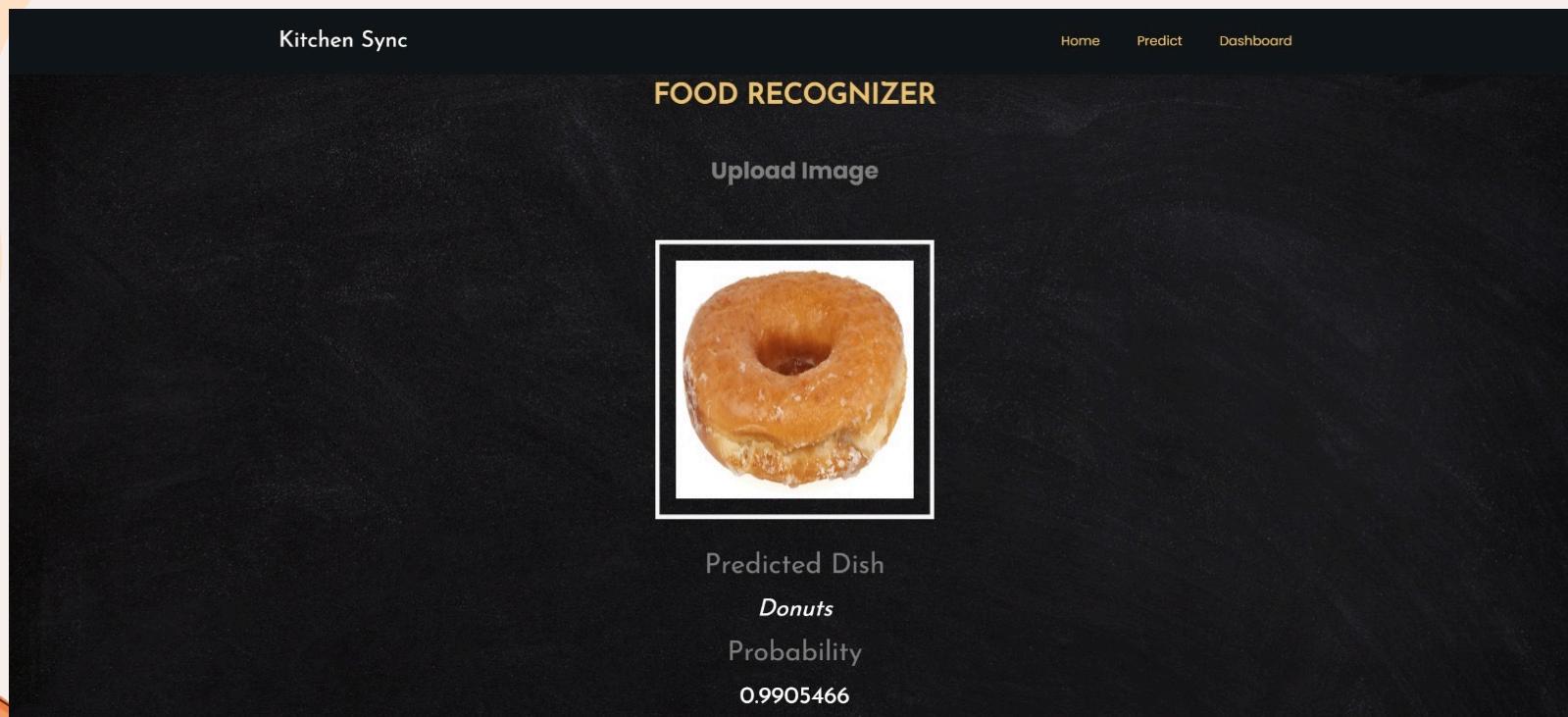
Thank you for visiting us !

This screenshot shows the 'Manage Your Inventory' page of the KitchenSync web application. At the top, there are input fields for 'Item Name' and 'Expiry Date' (mm/dd/yyyy), and a yellow 'Add Item' button. Below these, a link says 'Press here to logout'. The main section is titled 'Your Inventory List :'. It displays a table with four rows of data. Each row contains an item name, its expiry date, and a blue 'Delete' button. The items listed are 'flrkm' (expiry 2024-04-17), 'peas1' (expiry 2024-04-18), 'orangel' (expiry 2024-04-25), and 'cat1' (expiry 2024-04-25). A black bar at the bottom contains the text 'Thank you for visiting us !'.

Webapp Screenshots



Webapp Screenshots



Webapp Screenshots

Kitchen Sync

Home Predict Dashboard

NUTRITIONAL FACTS

Nutritional Value - Min (kcal) : [190]

Nutritional Value - Max (kcal) : [270]

Avg Calories : [230]

Unit : ['1 piece']

RECIPE - COOKBOOK

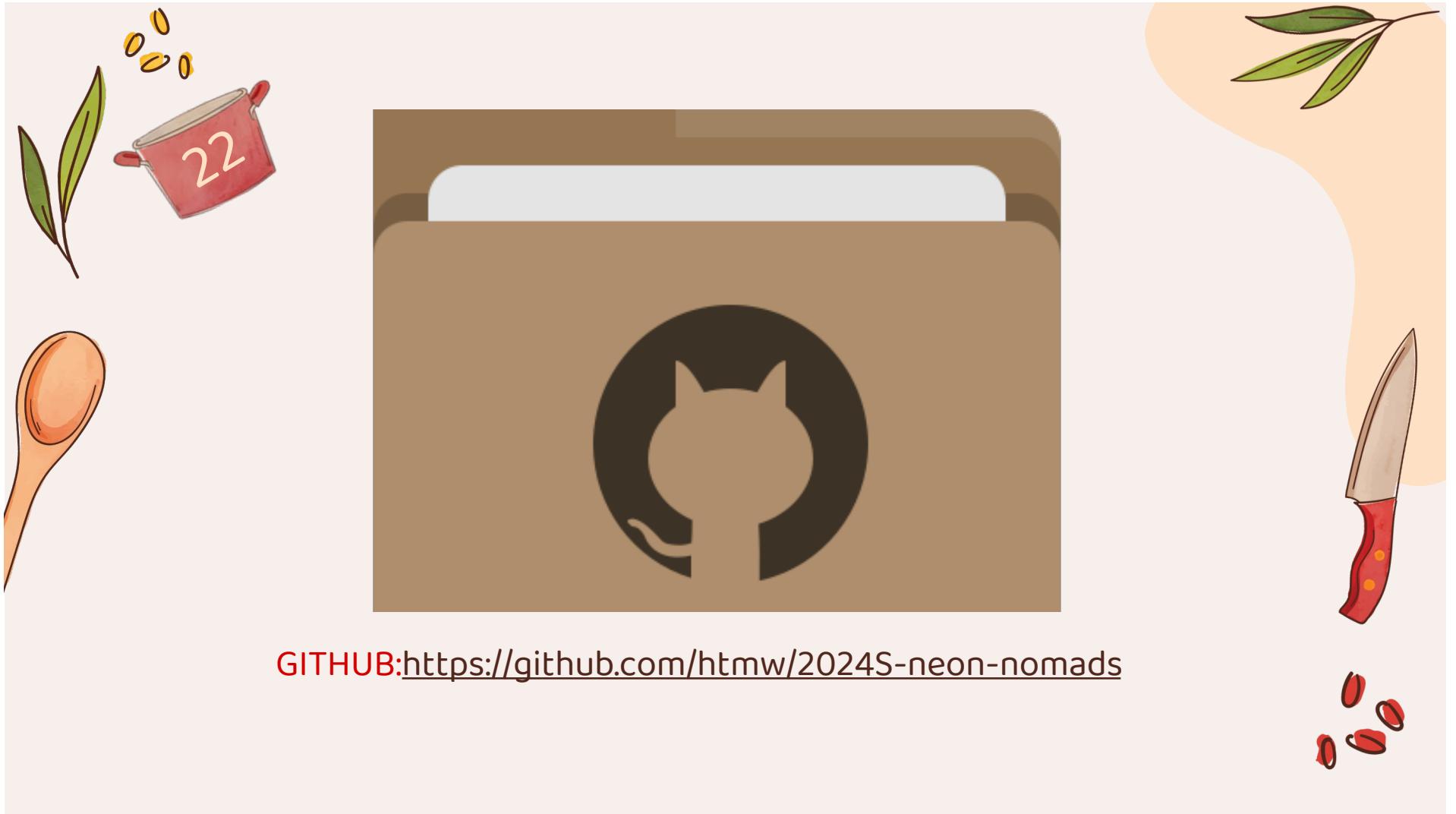
Doughnut



A **glazed**, yeast-raised, American-style ring doughnut

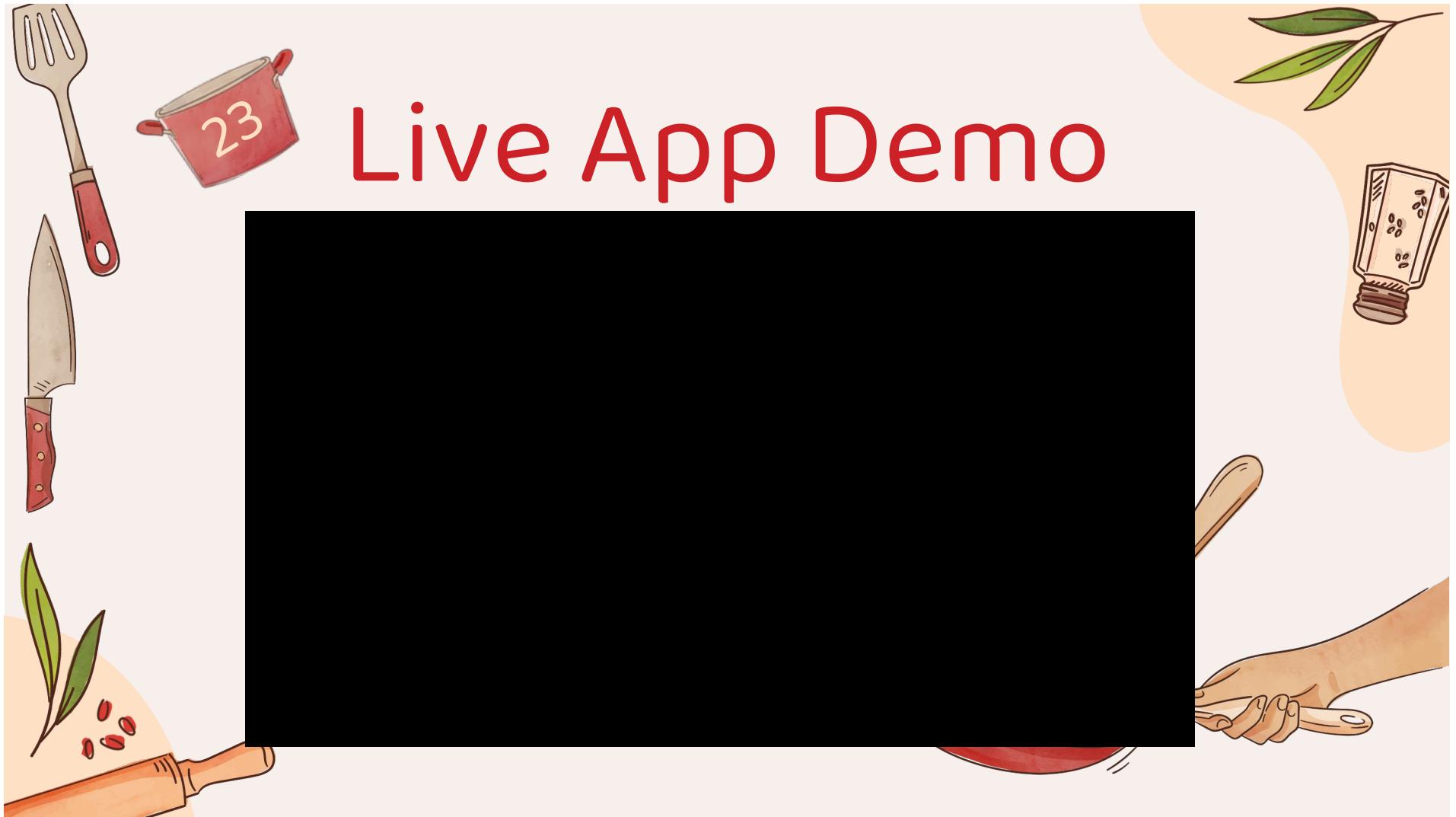
Alternative names

Donut



GITHUB:<https://github.com/htmw/2024S-neon-nomads>

Live App Demo



Thanks Bon Appétit!

