Problem Statements

1. There is no immediate, and accessible way to find out about ingredients in a product while or after shopping.

2. Consumers cannot quickly verify the health benefits/implications of certain ingredients included in a product while shopping easily.

3. Consumers must manually type ingredients on product packaging to search for information about them online, repeating for each other substance.

4. There is not an easy way to compare the types of ingredients in two packaged products without manual entry and comparison.

5. Travellers or consumers shopping for packaged products in another language don't have an easy way to translate the ingredients list.

6. It may be difficult to determine if a product contains allergens or substances they might not be able to consume if product packaging is not clear.

7. Finding synonyms for ingredients' names on product packaging is not intuitive and easy while shopping or reviewing items.

8. There is no way of categorising and sorting ingredients in packaged products automatically so that consumers can intuitively review what they are purchasing.

9. When searching for ingredient/substance information online, the quality and type of information is not always relevant or reliable when needed.

Requirements/Features

REQ1. User must be able to take picture of packaged good and obtain a list of ingredients

REQ2. User must be able to take pictures of foreign goods, or packaged goods in a foreign language, and obtain an ingredients list in English.

REQ3. User must be able to obtain descriptions and brief overviews of the ingredients in a list from a packaged product.

REQ4. Ingredients obtained from packaged goods must be categorised such that a user is able to infer more information about how they are used, or their purpose in the product.

REQ5. Users must be able to filter categories of ingredients for highlighting

REQ6. Users must be able to highlight categories or certain ingredients in packaged products when obtaining the ingredients list.

REQ7. Users must be able to save ingredients lists from a packaged product somewhere for later viewing or comparisons.

REQ8. Users must be able to compare packaged products' ingredients lists'.

REQ9. Users must be able to save and load their preferences/filters, highlighting and ingredient lists.

REQ10. Users must be able to infer serious health implications that may result from normal consumption of a listed ingredient.

REQ11. Users must be able to search for allergens or ingredients that may have a specific health implication for them.

REQ12. If a user doesn't want to save preferences and product profiles, they can still use the OCR and ingredient search features of the application.

REQ13. Users have the ability to login into the website which allows them to save ingredient lists for specific items and have highlighting settings that are personalised. Also users should be able to log out once they have finished using the site.

User stories

 # US-1

Feature: Scan packaging with Camera (REQ1, REQ12)
As a Guest
So that I can find information about ingredients in a product
I want to take a picture of the ingredients on a product

Scenario: Take a picture of an ingredients list to receive information about each ingredient

GIVEN: I am on the default landing page
AND: I have not logged in
WHEN: I click the camera icon
THEN: I should be on the camera preview page
WHEN: I take a picture of the product ingredient details
AND: Confirm the picture I took is the one I want to use

THEN: I see a page with details about the ingredients in the picture

US-2

Feature: Scan packaging with Uploaded image (REQ3)
As a Guest
So that I can find information about ingredients in a product
I want to upload a picture of the ingredients on a product

Scenario: Upload a picture of an ingredients list to receive information about each ingredient\

GIVEN: I am on the default landing page\
AND: I have not logged in\
WHEN: I click the upload icon\
THEN: I should be on a file selection window/page\
WHEN: I select an image\
AND: I click submit\
THEN: I see a page with details about the ingredients in the picture

US-3

Feature: Scan packaged item with Camera (REQ2, REQ11)
As a Member
So that I can view categorised information about the usage\
or purpose of ingredients in a product.
I want to take a picture of the ingredients on a product

Scenario: Take a picture of an ingredients list to receive information about each ingredient\

GIVEN: I am on the default landing page\
AND: I am logged in\
WHEN: I click the camera icon\
THEN: I should be on a camera preview page\
WHEN: I take a picture of the packaging\
AND: I confirm the picture I took is the one I want to use\
THEN: I should be on a page with information about the ingredients in the picture

US-4

Feature: Scan an Uploaded Image of product packaging (REQ10)
As a Member
So that I can view categorised information about the usage
or purpose of ingredients in a product.

I want to upload an image of the ingredients on a product

Scenario: Upload an image of an ingredients list to receive information about each ingredient

GIVEN: I am on the main page
AND: I am logged in
WHEN: I click the upload icon
THEN: I should be in a file selection window/page
WHEN: I select a picture
AND: I press upload
THEN: I should be on a page with information about the ingredients in the picture

US-5

Feature: Log In (REQ13)
As a Member
So that I can set my own personal preferences, create custom categories of ingredients to highlight and access additional app features.
I want to log into the app

Scenario: Log In

GIVEN: I am on any page within the web app
AND: I am not logged in
WHEN: I click the 'Log In' button
THEN: I should be on a Login page
WHEN: I correctly enter my credentials
THEN: I should be on the user home page, logged in

US-6

Feature: Log Out (REQ13)
As a Member
So that I can return to the default landing page of the web app.
I want to log out of the app

Scenario: Log Out

GIVEN: I am on any page within the web app
AND: I am logged in
WHEN: I click the 'Logout' button
THEN: I am taken to the default landing page and am not longer logged in

US-7

Feature: Select pre-set highlighting preferences for ingredients (REQ4, REQ6)
As a Member
So that I can easily identify ingredients of common preferences
I want to choose a pre-set to highlight these ingredients

Scenario: Select a pre-set in my ingredients preferences

GIVEN: I am logged in
AND: I am on the 'settings' page
WHEN: I click the 'highlighting' drop-down menu
AND: Select a preference from the group of pre-defined settings
THEN: Future ingredient scans should colour code certain ingredients

US-8

Feature: Define custom highlighting rules for viewing ingredient (REQ5, REQ9)
As a Member
So that I can easily identify ingredients
I want to create a pre-set to highlight chosen ingredients or ingredient categories

Scenario: Create a highlighting rule set in my preferences

GIVEN: I am logged in
AND: I am on the settings page
AND: I have opened the 'highlighting' drop-down menu
WHEN: I click "Create new highlighting rules"
THEN: I should be on a 'custom highlighting' page
WHEN: I give my pre-set a name
AND: I Assign colours to ingredients and/or ingredient categories
AND: I press save
THEN: I should be on the settings page with the 'highlighting' drop-down open
AND: My new pre-set should be selected

US-9

Feature: Compare the ingredients of two packaged items (REQ8)
As a Member
So that I can make a well-informed decision about which product to buy
I want to obtain a side-by-side comparison of the ingredients list of two chosen products

Scenario: Chose two products to receive a detailed description and an ingredients list of both products for comparison

GIVEN: I am on the user homepage
AND: I am logged in

AND: I have scanned, then saved, at least two items
WHEN: I click the "compare" menu item
THEN: A page appears with all the items I have saved
WHEN: I select two items from the modal
THEN: I see a page with a side-by-side comparison of the two items.

US-10

Feature: Save ingredient lists for later viewing (REQ7)
As a Member
So that If I am not connected to the internet I can still view the ingredients of saved items
I want to Be able to know the ingredients of items I use regularly even without a data connection

Scenario: I am at the shops and I don't have access to the internet but still want to check the ingredients of an item I'ved previously scanned

GIVEN: I am a user on the mobile app
AND: I have previously saved the ingredients of the item
WHEN: I click on my saved item list
THEN: I see the ingredients of item in the list I click on