Recipe Project

By Sharon Tender

# Overview

This document outlines design requirements, use case scenarios and UML diagram for calculating nutrition values for a user-entered recipe program.

# User Story

**Summary:** Need an app that calculates the nutrition values for my personal recipes. Ability to save the ingredient data to a table/relation database for future use/update. Optionally, I would like to have ingredients saved to a separate table/relation in the database so I don’t have to re-type in values for frequently used ingredients. Finally, I would like to print the nutrition values and table of ingredients.

**Details:** I want a place to save my recipes and that calculates the nutrition values. I would like to be able enter the recipe name and be able to edit the name if I want to later. I want the app to have two nutrition labels that have the look and feel as current food nutrition labels. The first one is for the user to input values for each ingredient, the second one is for the live running totals of each of the nutrition values entered from the ingredient. The app should display a chart to hold each ingredient and its values as it is added.

The first label (it could be a pop-up window) is for me to input the ingredient name and each of the nutrition values listed on the ingredient labels. If I don’t know or don’t want to calculate the value of a particular nutrient, I want the app to ignore that value and/or place a “0” as a place holder. (Optionally, if an ingredient that has been used before, would like to be able to access it and have it automatically populate the nutrient fields.) It will continue to accept data until I indicate that all ingredients for the recipe have been entered. After I enter all the values, the table/chart will show the list of all ingredients I entered with all the nutrition values in columns beside them. This list should be editable for deleting or updating ingredient name and/or nutrient value.

The second label will show all the totals. It will display a running total of all the nutrition values entered from the ingredients (the first label). It should have a place to enter the total weight of the finished completed and/or cooked dish in ounces, pounds, or grams. It should have a servings area where the user can input the number of servings in the recipe. The serving size can then be calculated so I can determine nutrient values per serving and measure out the appropriate weight.

Finally, I would like to print the recipe ingredients chart and the nutrition label. The label should look one you see on a store box food item.

## User Requirements

An app that calculates the nutrition values for personal recipes.

* Need #1: Place to enter recipe name
  + Make it editable
* Need #2: Ingredient Label for user input
  + has look and feel of nutrition labels
  + displays each nutrient name with input area for user to enter values
  + have the option to include a value or skip over it
  + button to indicate done with that ingredient
  + button to indicate done with all ingredients
  + display ingredient in chart
  + OPTION A: search option to see if ingredient is already in database/ then load it if it is
* Need #3: Chart for reviewing each ingredient and its’ value
  + display a title over the chart: “Ingredients for \_\_\_\_\_\_ Recipe”
  + display a column heading over each of the nutrient values
  + have an option or a button to delete ingredient
  + have an option or a button to edit ingredient
    - re-opens Ingredient Label with the current ingredient nutrition values
    - focus goes to ingredient name user input field
    - button to accept updated information
    - button to cancel and keep ingredient as it was
    - chart should update the ingredient list
  + the Totals Label should have a running calculation of the values entered after each ingredient is added
* Need #4: Totals Label for displaying total calculations for all ingredients
  + Have look and feel of nutrition label
  + Display each nutrient name and the running total value
  + Have a place the user can input the total weight of the finished/cooked food dish
  + Have a place the user can input the number of servings
    - The user should be able to change the number of servings
    - The running total values should automatically update values depending on the number of servings
  + Have a place to display the weight per serving
* Need #5: Print chart
  + Print a formatted Nutrition Totals Label
  + Print the ingredient’s chart
  + All on one page
* Optional Need A: table/chart of all ingredients ever entered
  + A window that shows the list of ingredients
  + A way to edit or delete an ingredient
  + A way to search database of ingredients

# Use-Case scenerios

## Use Case – Chef

### Use Triggers

* Need to track specific nutrient values in recipes to satisfy dietary needs
* Need to supply nutrient values to a person with a diet restriction
* Need to manipulate recipes to satisfy dietary needs
* Need to calculate the conversion rate of weight and volume for the ingredient amounts

### Pre-Conditions

* Must have a database

### Post-Conditions

* Recipes must be able to save, access, edit, delete, and print recipe ingredients chart/table

### Normal Flow for Chef Creating New Recipe Nutrition Label

1. Select from file menu, “New Recipe”
   1. Pop-up window opens
   2. Enter recipe name next to the field, “Recipe Name”
   3. Click “OK” to accept
   4. Click “Cancel” to exit window
2. Click on “Add Ingredient”
   1. Pop-up window opens
   2. Enter Ingredient name next to the field, “Ingredient”
      1. OPTIONAL:   
         search for ingredient in database.
      2. Select ingredient, it will then populate all the fields
         1. Edit fields if needed
   3. Enter amount of ingredient specified by the recipe
      1. Selects measurement type: oz., grams, volume (cups, bunch, etc.)
      2. Software calculates/converts measurements to grams
   4. Enter amount of each nutrition value next to its’ field label exactly as it appears on the label
   5. Select “Add Ingredient” to recipe
      1. OPTIONAL:   
         Pop-up Window, if selected ingredient from search in database
      2. If ingredient was edited, ask to “Replace/update” or “Create New”
         1. If “Create New”, verify ingredient has different name
   6. Pop-up window closes, file automatically saves ingredient data
   7. This step repeats until all ingredients are entered
3. Chef decides one of the ingredient amounts is wrong or wants to make an adjustment
   1. Selects “Edit” button next to the ingredient in the chart/table that requires editing
   2. Pop-up Window opens with ingredient label
   3. All fields are populated with current values
   4. Makes the needed edits
   5. Repeat steps 2e – 2f
4. Chef enters the number of servings in the Nutrition Totals Graphic
   1. The nutrition values are calculated/totaled based on the number of servings
   2. After cooking, the Chef enters the total weight in oz. or grams
   3. The label displays the total weight per serving along with revised nutrition values
   4. Chef changes the number of servings
   5. Serving weight changes based on revised number of servings
5. Chef saves recipe
   1. If there is already a recipe with that name, error message prompts for new name
   2. Has the option to save and overwrite, save with new name, or cancel to return to recipe
6. Chef prints recipe
   1. User is given a choice for what to print: label, chart/table of ingredients, or both
   2. Nutrition label prints with the look and feel of a nutrition label
   3. On the same page is a table/chart of ingredients are formatted

# Functional Requirements

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Specify inputs including source, accuracy, range of values, and frequency.

Specify outputs including their destination, accuracy, range of values, frequency and format

Specigy output formats for web pages

External hardware requirements

Software requirements

Specify external communication interfaces such as handshaking, error-checking, and Communication protocols

Specify all the tasks the user wants to perform

Specify the data used and resulting data from each task

# Performance Requirements

Specify Response time for all necessary operations

Specify timing considerations for processing, data transfer rate, and system throughput

Specify the level of security

Specify reliability including the consequences of software failure, the vital information that needs to be protected from failure, and the strategy for error detection and recovery

Specify miimum machine memory and free disk space

Specify maintainability of the system including its ability to adapt to changes in specific functionality, changes in the operating environment, and changes in its interfaces with other software… (web browsers)

Define what success and failure looks like

Title of project

# Product Definition

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What problem does the software solve

# Technologies

Platform – Web application, HTML/CSS3

Language – Java, Java Servlets and JSP

IDE – NetBeans

Limitations/Risks anticipated

# Schedule

|  |  |  |
| --- | --- | --- |
| Component | Description | Delivery Date |
| COMP-01 | Proposal/Requirements Document | Sept. 8, 2017 |
| COMP-02 | Test Matrix | Sept. 8, 2017 |
| COMP-03 | Preliminary Design Document | Sept. 29, 2017 |
| COMP-04 | Detailed Design | Oct. 13, 2017 |
| COMP-05 | Unit Test Suite | Oct. 27, 2017 |
| COMP-06 | Implementation | Nov. 20, 2017 |
| COMP-07 | Final Project Demo and Presentation | Nov. 27, 2017 |
| COMP-08 | Case Study | Dec. 3, 2017 |

# Documentation

Estimated lines of code

Delivery/Installation plan

User Training