PROG6221 POE P3

ST10194321

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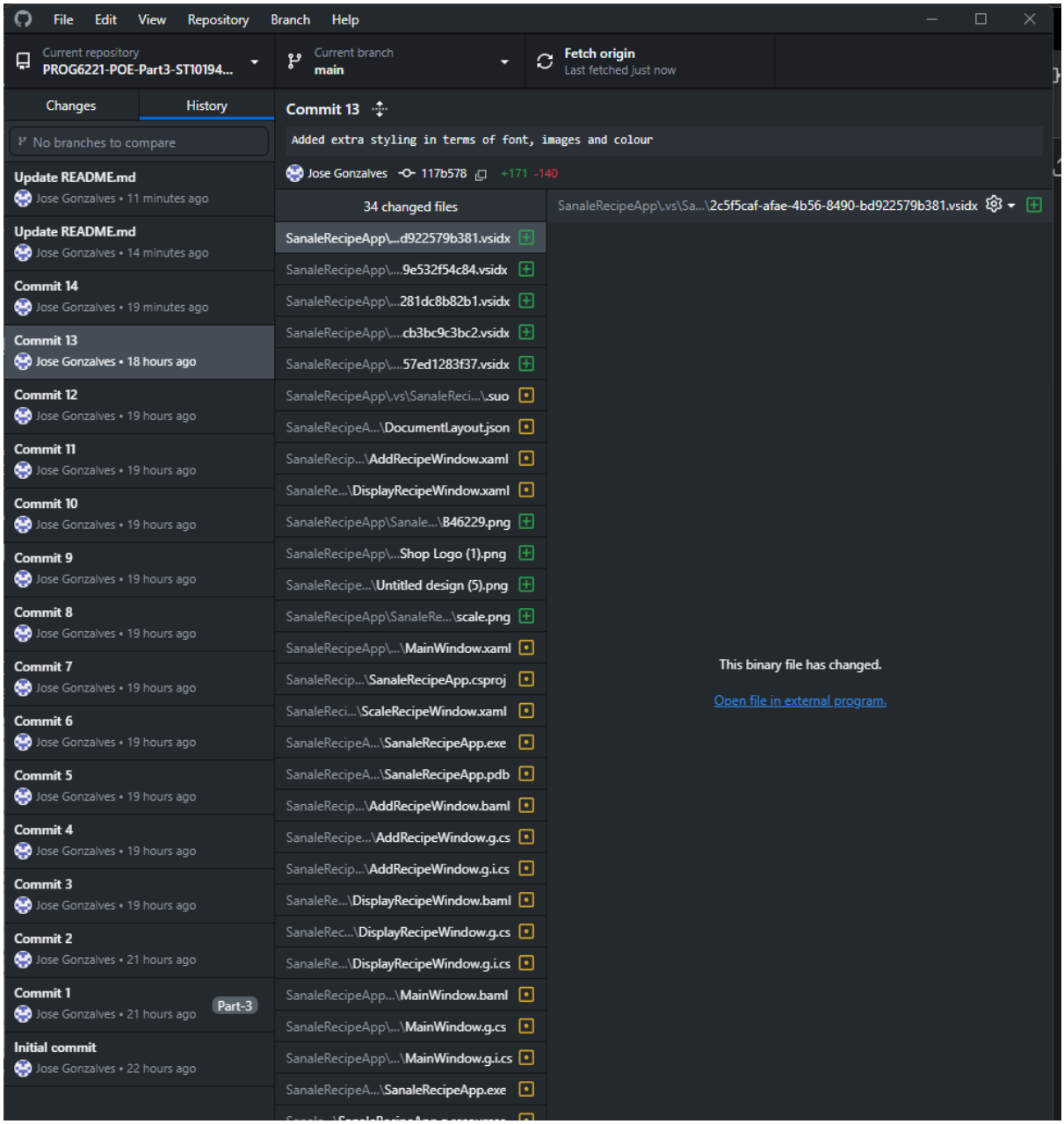
GitHub link: https://github.com/ST10194321/PROG6221-POE-Part3-ST10194321.git

YouTube link: https://youtu.be/huzrqalW_UA

Commit History:



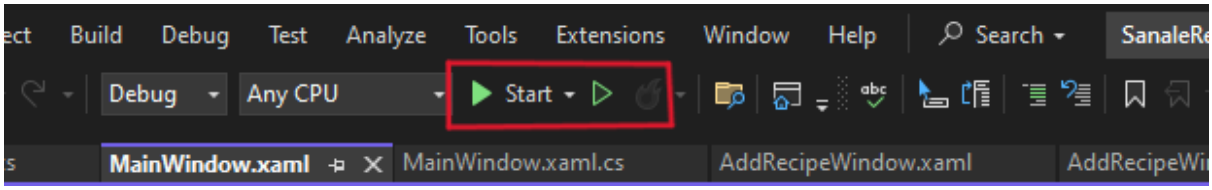
(Troelsen & Japikse, 2022)

Sanele’s Recipe Management Application How-to-Guide

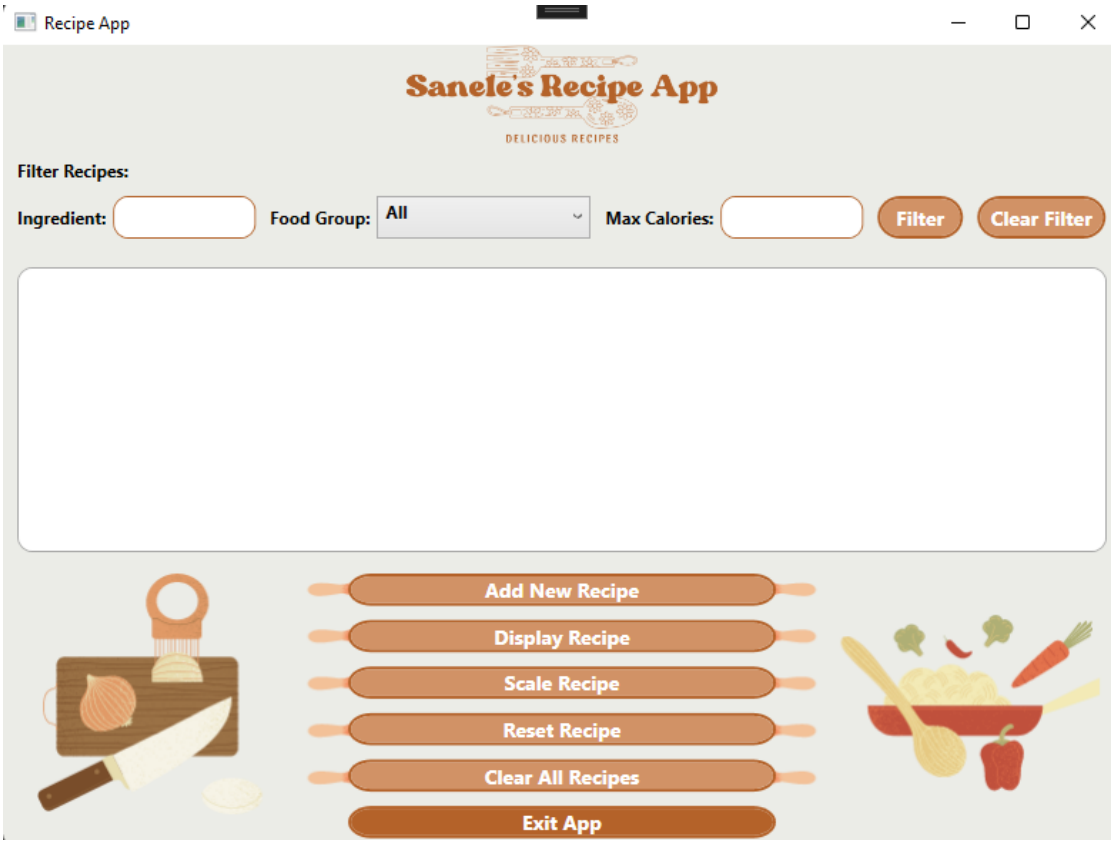
This guide is a comprehensive walkthrough how to use the recipe management application developed for Sanele. This guide will go through each page instructing the user on how to input, display, scale and reset recipes

Running Application

1. Open the application on your respective IDE (Visual Studio) by clicking the start button



2. The application will start up and a window will pop up, This is the main window which is the start page of the application. You are greeted with buttons to Add a Recipe, Display a Recipe, Scale a Recipe, Reset a Recipe, Clear all Recipes and an exit application button. The large white space in the middle represents the area where a list of inputted recipe names will be present. The main page also has functionality to allow you to filter through recipes by ingredient, food group or setting a max calories.

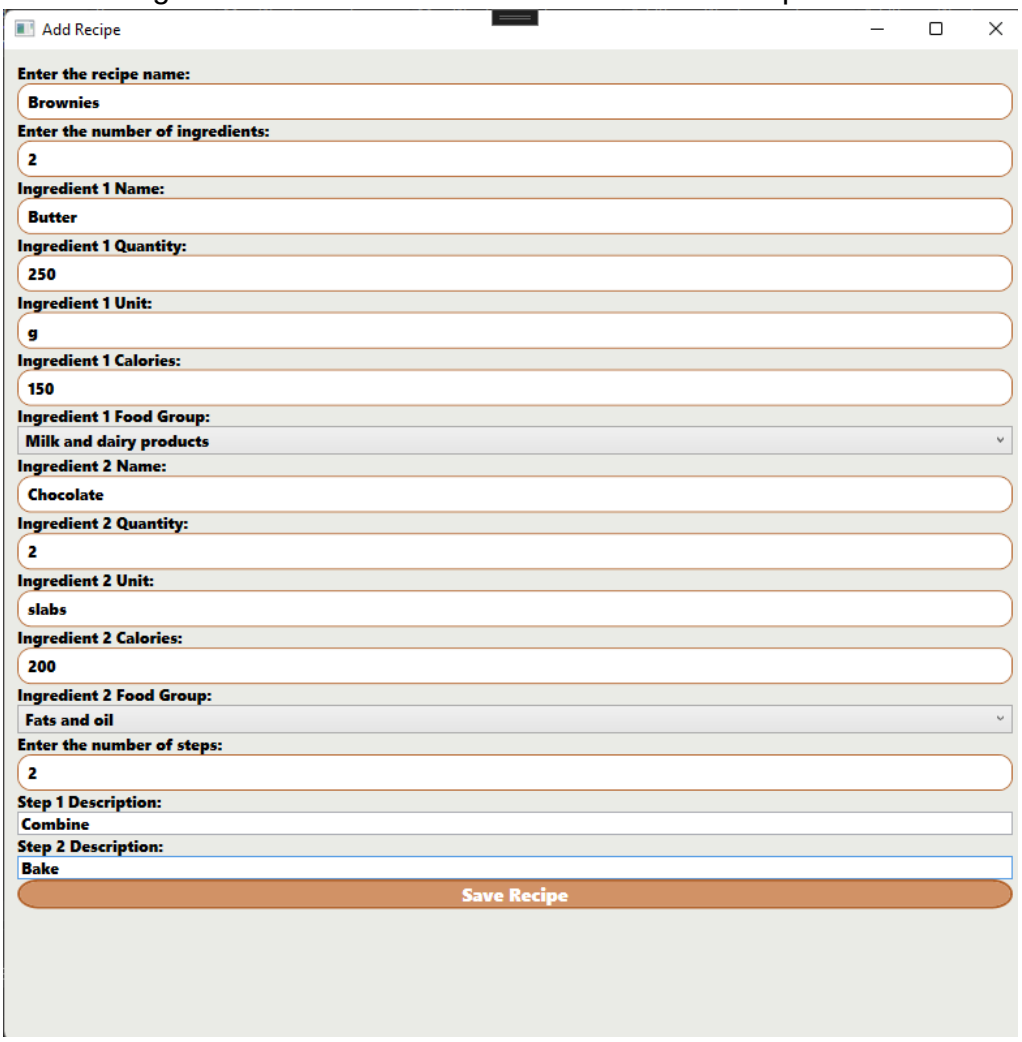


Using the Application

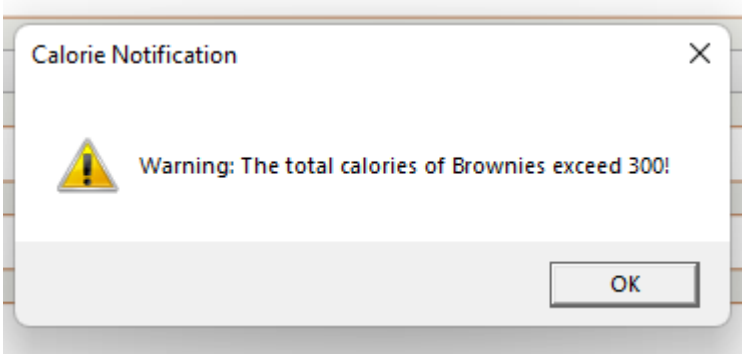
Lets take a look at how you use the application by breaking down each window and button. **Add Recipe Button**

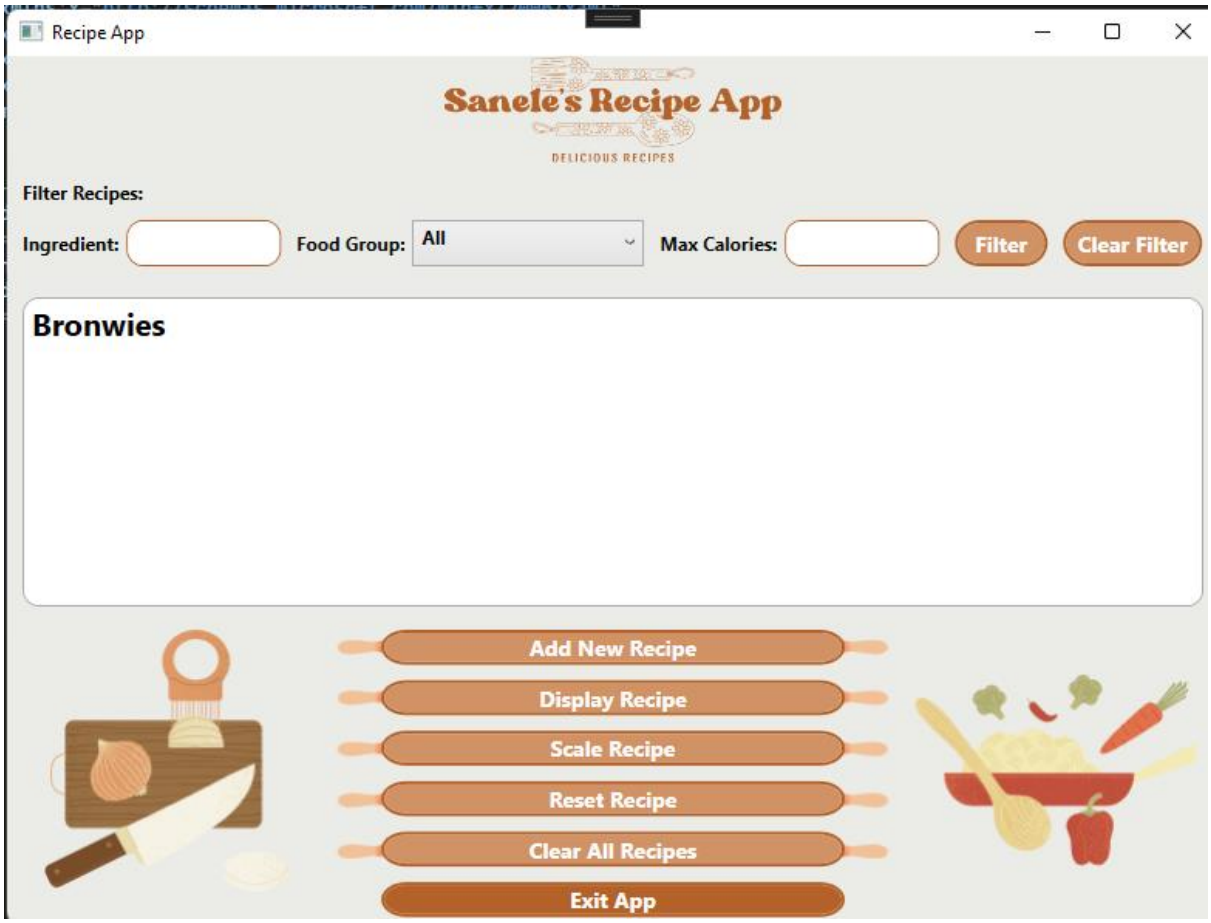
1. If you click the add recipe button a window with fields to enter a recipe name, Enter number of ingredients and enter the number of steps will open on your screen. (Troelsen & Japikse, 2022)

2. When you enter the number of ingredients and the number of steps that your recipe has, auto generated fields will display asking you to input the details for the ingredients such as name, quantity, unit and calories with each ingredient numbered. The same occurs for steps.



3. Once you have completed filling in all the details for the recipe, you click the Save Recipe Button which will save your recipe to the list box on the main page. If your recipe exceeds a caloric value of 300 you will be prompted with an automatic pop-up message.

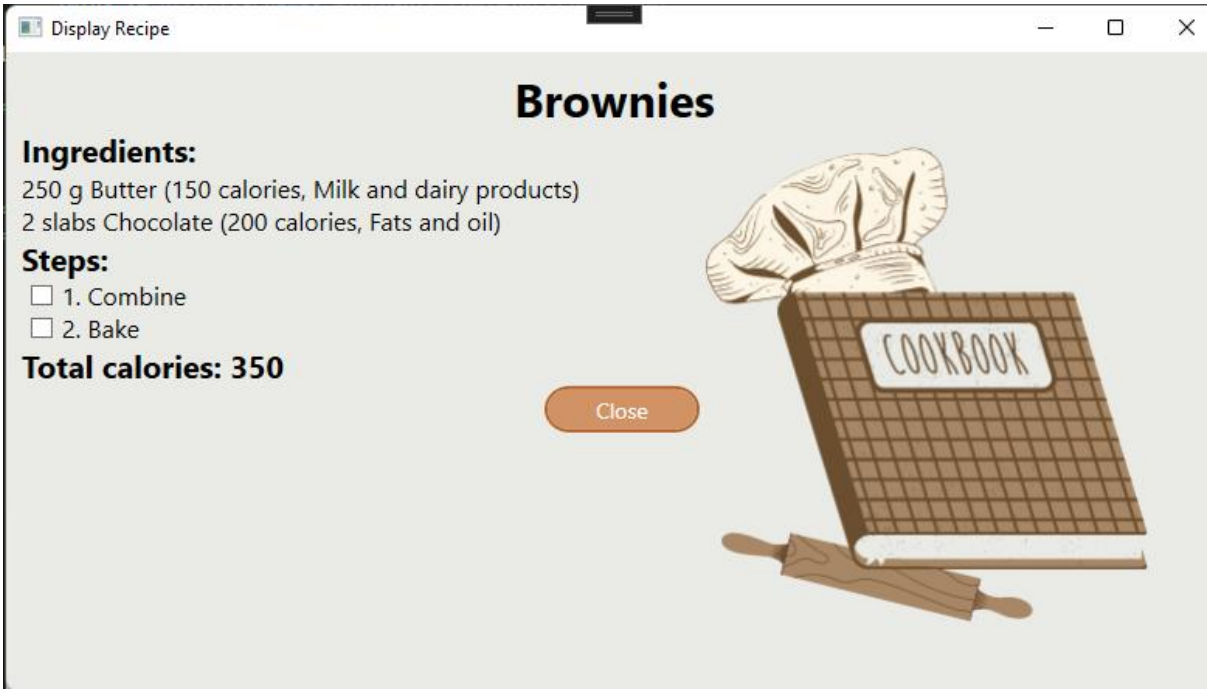




(Troelsen & Japikse, 2022)

Display Recipe Button

1. When you click the Display Recipe button you must first select a recipe from the list box for example Click on Brownies then Click the Display Recipe Button. If not you will be prompted to select a recipe first.
2. Once you have Clicked the Display Button a window will pop up showing the recipe name , a list of all ingredients with details and the steps you have inputted for your recipe.

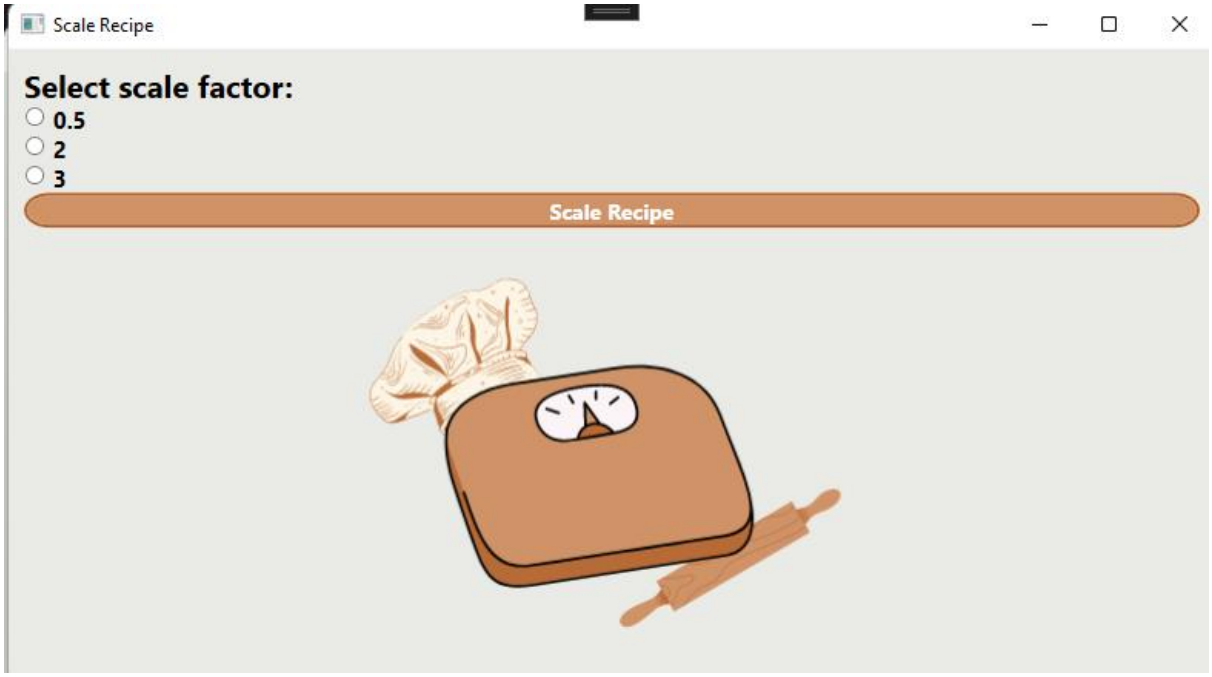


3. There are check boxes next to the steps for you to check off which step you have completed
4. Click the close button to close the display window and be returned to the main window.

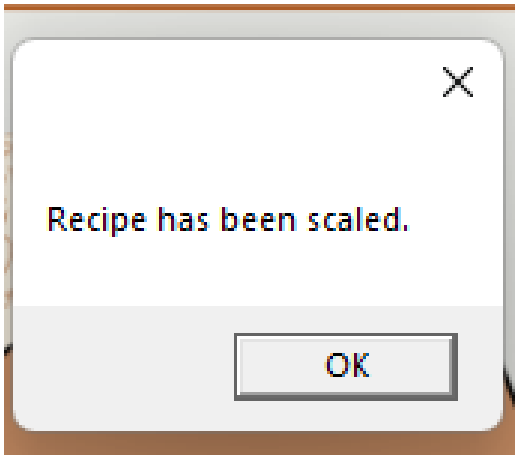
(Troelsen & Japikse, 2022)

Scale Recipe Button

1. Make sure the recipe is still selected and Click the Scale Recipe Button. This will pop up a window that has 3 scaling factors which you can choose by clicking the round buttons.



2. Once selection made, click the scale recipe Button and you will receive a notification stating the recipe has been scaled. Click OK to return to main window

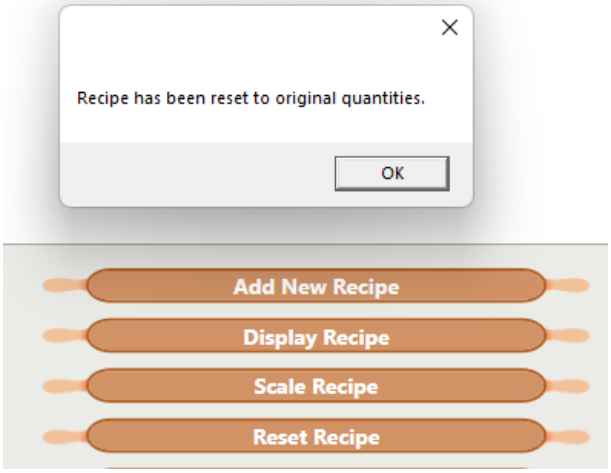


3. To display the new scaled values of the recipe, Click the Display Recipe Button

(Troelsen & Japikse, 2022)

Reset Recipe Button

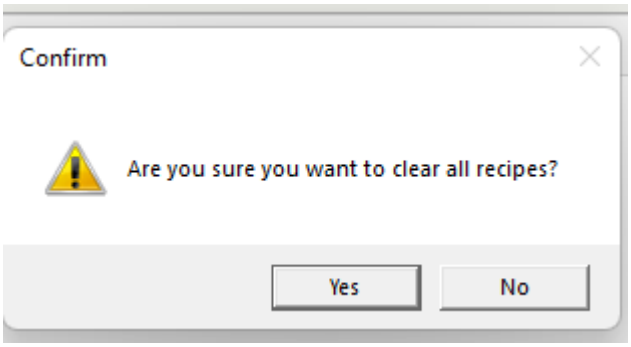
1. If you want to reset the recipe values back to their original quantities, Click the Reset Recipe button.
2. Once you click this button you will be notified that the recipe has been reset.



3. To display the recipe original values after resetting Click the Display recipe button.

Clear All Recipes Button

1. Click the Clear all recipes button in order to remove all of your inputted recipes. Beware the recipes will be gone forever therefore make sure before clearing.



2. Once you have clicked the button you will be asked if you are sure you want to clear. If you select yes all recipes will be cleared

Enjoy The Application!

(Troelsen & Japikse, 2022)

ReadMe File:

Sanele's Recipe Management Application

This WPF application allows users to manage recipes by adding, displaying, scaling, resetting, and clearing recipes. It offers a user-friendly interface for inputting recipe details, including ingredients, quantities, units, calories, and food groups. The application also features functionality for scaling ingredient quantities and notifying users when the total calories of a recipe exceed 300.

Installation Instructions

1. Install the latest version of Visual Studio or Visual Studio Code
2. Install these relevant packages. Follow this guide if lost with installation.
    - .NET Core
    - WPF
3. Download the zipped file named SanaleRecipeApp from the GitHub repository and unzip it on your computer.
4. Open Visual Studio and select "Open a local project". Select the .sln file to open the application.

Usage Instructions

Adding a New Recipe

1. Click the "Add New Recipe" button.
2. Enter the recipe name, number of ingredients, and details for each ingredient.
3. Select the appropriate food group for each ingredient from the provided list.
4. Enter the number of steps and descriptions for each step.
5. Click the "Save Recipe" button to save the recipe.

Displaying a Recipe

1. Click the "Display Recipe" button.
2. The application will list all recipes in alphabetical order.
3. Select the recipe you want to display from the list.

Scaling a Recipe

1. Click the "Scale Recipe" button.
2. Select the recipe you want to scale from the list.
3. Choose the scaling factor (0.5, 2, or 3).

Resetting a Recipe

1. Click the "Reset Recipe" button.
2. Select the recipe you want to reset from the list.

Clearing All Recipes

1. Click the "Clear All Recipes" button.
2. Confirm the action by clicking "Yes" or "No".

Exiting the Application

1. Click the "Exit App" button.

Class Structure

RecipeMethods.cs

Fields:

- List<Recipe> recipes: Stores all recipes.
- List<string> foodGroups: Predefined list of food groups.

Methods:

- AddRecipe(Recipe recipe): Adds a new recipe to the list.
- DisplayRecipe(): Displays a selected recipe.
- ScaleRecipe(): Scales a selected recipe.
- ResetRecipe(): Resets a selected recipe.
- ClearRecipes(): Clears all recipes.
- CalculateTotalCalories(Recipe recipe): Calculates the total calories of all ingredients in a recipe.

Recipe.cs

Fields:

- string Name: Recipe name.
- List<Ingredient> Ingredients: List of ingredients.
- List<string> Steps: List of steps.

Ingredient.cs

Fields:

- string Name: Ingredient name.
- double Quantity: Ingredient quantity.
- string Unit: Unit of measurement.
- int Calories: Calorie content.
- string FoodGroup: Food group.
- double OriginalQuantity: Original quantity.

MainWindow.xaml.cs

Methods:

- MainWindow(): Initializes the main window.
- AddRecipeButton_Click(object sender, RoutedEventArgs e): Opens the Add Recipe window.
- DisplayRecipeButton_Click(object sender, RoutedEventArgs e): Opens the Display Recipe window.
- ScaleRecipeButton_Click(object sender, RoutedEventArgs e): Opens the Scale Recipe window.
- ResetRecipeButton_Click(object sender, RoutedEventArgs e): Opens the Reset Recipe window.
- ClearAllRecipesButton_Click(object sender, RoutedEventArgs e): Clears all recipes.
- ExitAppButton_Click(object sender, RoutedEventArgs e): Exits the application.

AddRecipeWindow.xaml.cs

Fields:

- RecipeMethods recipeMethods: Instance of RecipeMethods for managing recipes.

Methods:

- AddRecipeWindow(RecipeMethods recipeMethods): Initializes the Add Recipe window.
- NumIngredientsTextBox_TextChanged(object sender, TextChangedEventArgs e): Handles changes in the number of ingredients.
- NumStepsTextBox_TextChanged(object sender, TextChangedEventArgs e): Handles changes in the number of steps.
- AddIngredientControls(int index): Adds input controls for an ingredient.
- AddStepControls(int index): Adds input controls for a step.
- SaveRecipeButton_Click(object sender, RoutedEventArgs e): Saves the recipe.

DisplayRecipeWindow.xaml.cs

Methods:

- DisplayRecipeWindow(Recipe recipe): Initializes the Display Recipe window and displays the recipe.
- DisplayRecipe(Recipe recipe): Displays the recipe's details.

ScaleRecipeWindow.xaml.cs

Methods:

- ScaleRecipeWindow(RecipeMethods recipeMethods): Initializes the Scale Recipe window.
- RecipeListBox_SelectionChanged(object sender, SelectionChangedEventArgs e): Handles recipe selection.
- ScaleButton_Click(object sender, RoutedEventArgs e): Scales the selected recipe.

ResetRecipeWindow.xaml.cs

Methods:

- ResetRecipeWindow(RecipeMethods recipeMethods): Initializes the Reset Recipe window.
- RecipeListBox_SelectionChanged(object sender, SelectionChangedEventArgs e): Handles recipe selection.
- ResetButton_Click(object sender, RoutedEventArgs e): Resets the selected recipe.

ClearRecipesWindow.xaml.cs

Methods:

- ClearRecipesWindow(RecipeMethods recipeMethods): Initializes the Clear Recipes window.
- ClearButton_Click(object sender, RoutedEventArgs e): Clears all recipes.

(Troelsen & Japikse, 2022)

Scaling Functionality

The ScaleRecipe method allows users to scale ingredient quantities by a factor of 0.5, 2, or 3. The application updates each ingredient's quantity based on the selected factor and ensures accurate scaling.

Error Handling

The program handles invalid inputs using if statements. If a user enters an invalid number, the program prompts the user to enter a valid number.

```
if (!int.TryParse(NumIngredientsTextBox.Text, out int numIngredients))
{
    MessageBox.Show("Please enter a valid number for ingredients.", "Invalid Input",
MessageBoxButton.OK, MessageBoxImage.Error);
    return;
```

```
}

if (!int.TryParse(NumStepsTextBox.Text, out int numSteps))
{
    MessageBox.Show("Please enter a valid number for steps.", "Invalid Input",
MessageBoxButton.OK, MessageBoxImage.Error);
    return;
}
```

(Nyakundi, 2021) (Troelsen & Japikse, 2022)

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