Deliverable 4: Final Report

SEG 2105 A – Introduction to Software Engineering
Fall 2016

School of Electrical Engineering and Computer Science
University of Ottawa

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Introduction

Munchies is a simple electronic cookhelper application for the average Android device user who needs meal ideas for ingredients which are available to them while also providing the user with an avenue for recording new recipes.

The aim of this document is to outline the main functionalities of the Munchies application and the various software engineering processes involved in the reaching the final result. It includes a list of functional and nonfunctional requirements, use cases, system and domain diagrams, state and sequence diagrams as well as screenshots of the application's UI in the different states.

In addition, all modifications to the requirements, use cases and diagrams which were made during the implementation process and based on the marker's feedback have been documented.

Contribution and Corrections

Contributions

	Deliverable 1	Deliverable 2	Deliverable 3	Deliverable 4
Wilson Ly	25%	20%	20%	20%
Mohammad Sheikh	25%	20%	20%	20%
Felix Singerman	25%	20%	20%	20%
Eyob Tilaye	25%	20%	20%	20%
Victory Esim	Was with another group	20%	20%	20%

Corrections

	Deliverable 1
CORRECTIONS CHANGED:	Requirements: Removed requirements that were outside the scope of the system. Use Case: Fixed the structure to show the system response and the interaction between the system and user.

	Deliverable 2
CORRECTIONS CHANGED:	Sequence Diagrams: Added a boolean *bycategory* as a condition in Alt and added a condition (0 .numIngredients) for the Loop for the first and third Sequence Diagrams respectively. Also changed the Search and Add diagrams to better match the current application. State Machine Diagram: Removed the dead ends from ViewFavourite, AddToFavourite, and Delete.

	Deliverable 3
CORRECTIONS CHANGED:	Updated UI to new specifications. Version 2.0

Software Requirements

Functional Requirements

1) The Cook Helper application must allow the user to edit a recipe.
2) The Cook Helper application must allow the user to delete a recipe.
3) The Cook Helper application must allow searching of recipes.
4) The Cook Helper application must allow searching of recipes by ingredient AND category OR by type.
5) The Cook Helper application should sort search results by relevance to the search terms.
6) The Cook Helper application must allow the user to access a set of easy to follow instructions.
7) The Cook Helper application must allow the user to reset their search results.
8) The Cook Helper application must give detailed step by step instructions on how to make the recipe.
9) The Cook Helper application must give a list and the quantity of all required ingredients for the chosen recipe.
10) The Cook Helper application must display the cook time of the chosen recipe.
11) The Cook Helper application must display the preparation time of the chosen recipe.
12) The Cook Helper application must have search queries that are done using Boolean operators.
13) The Cook Helper application must display all relevant recipes from the memory when the user enters their ingredients.
14) The Cook Helper application must automatically update itself after a search, add or deletion.
15) The Cook Helper application should show search results in less than 5 seconds after the search is submitted.
16) The Cook Helper application must only search recipes less than a certain number of boolean operators.
17) The Cook Helper must show the users a help page.
18) The Cook Helper shall display the specific ingredients and instructions when a user clicks a recipe from the list.

19) The Cook Helper shall have access to the help page from any activity the user is currently viewing.
20) The Cook Helper must open to a search activity when user clicks the application.

Non-functional Requirements

1) The application must be compatible to run on an android mobile device.
2) The application's local storage must not exceed 500 MB by any means.
3) The application should be convenient and readily available for the user to use.
4) The application must be written in Java and built using Android Studio.
5) The application must be submitted on the week of November 30 to Dr. Miguel A. Garzón.

UML Design

Use Cases

Use Case 1

Name: Searching for a recipe
Actors: Main users
Goals: To provide the user with a list of recipe suggestions corresponding to the criteria which they have specified.
Preconditions: The user must be on the application page.
Summary: Find a recipe according to search terms and save it to the phone's local storage
Related use cases: Deleting a recipe
Steps:

USER ACTION	**SYSTEM RESPONSE**
User selects “Search for Recipes” from the main menu	
User enters search terms (e.g. milk and dessert) and clicks search button	System displays a list of recipes corresponding with the search terms
User selects a desired recipe from the displayed search	System opens a new page showing the particular recipe, required ingredients and cooking instructions

Postconditions: The user is able to view a list of recipes corresponding to search results.

Use Case 2

Name: Deleting a recipe
Actors: Main users
Goals: Delete a specified recipe from the recipe list.
Preconditions: The user must have recipes saved in the application’s database.
Summary: Delete a recipe off of the phone’s local storage.
Related use cases: Searching and saving of a recipe
Postconditions: Recipe is deleted and no longer shows up in searches.

Steps:

USER ACTION	SYSTEM RESPONSE
Enters search terms (e.g. milk and dessert)	Keyboard pops up and drop-down menu is opened
Chooses recipe from search results	System redirects user to the chosen recipe's details (ingredients & instructions)
Taps a button to remove the recipe from local storage	Pop-up screen is displayed asking "Are you sure you want to delete this recipe" Yes or No
Clicks Yes	Recipe is deleted from local storage

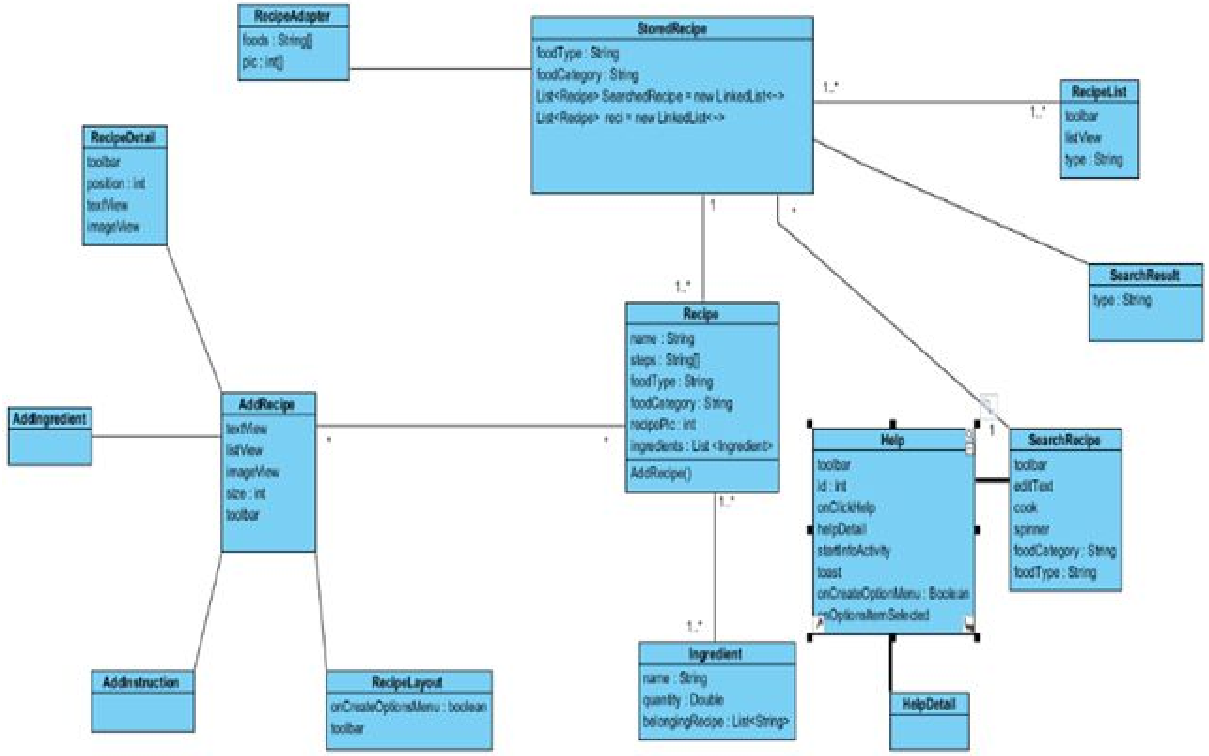
Use Case 3

Name: Add a new recipe
Actors: Main users
Goals: To have a new recipe added to the recipe list.
Preconditions: The user must be on the application page.
Summary: When the user wishes to add a new recipe to their account, he or she must follow a set of required steps.
Related use cases: Saving a recipe
Steps:

USER ACTION	SYSTEM RESPONSE
Click on "add recipes"	User is redirected to "add recipes" page
Enter recipe name	
Enter ingredient name and quantity	
Add instructions	Pop-up message informs the user that the recipe has been saved
	Redirects user to recipe list

Postconditions: A new recipe is added to the user recipe list

Class Diagram

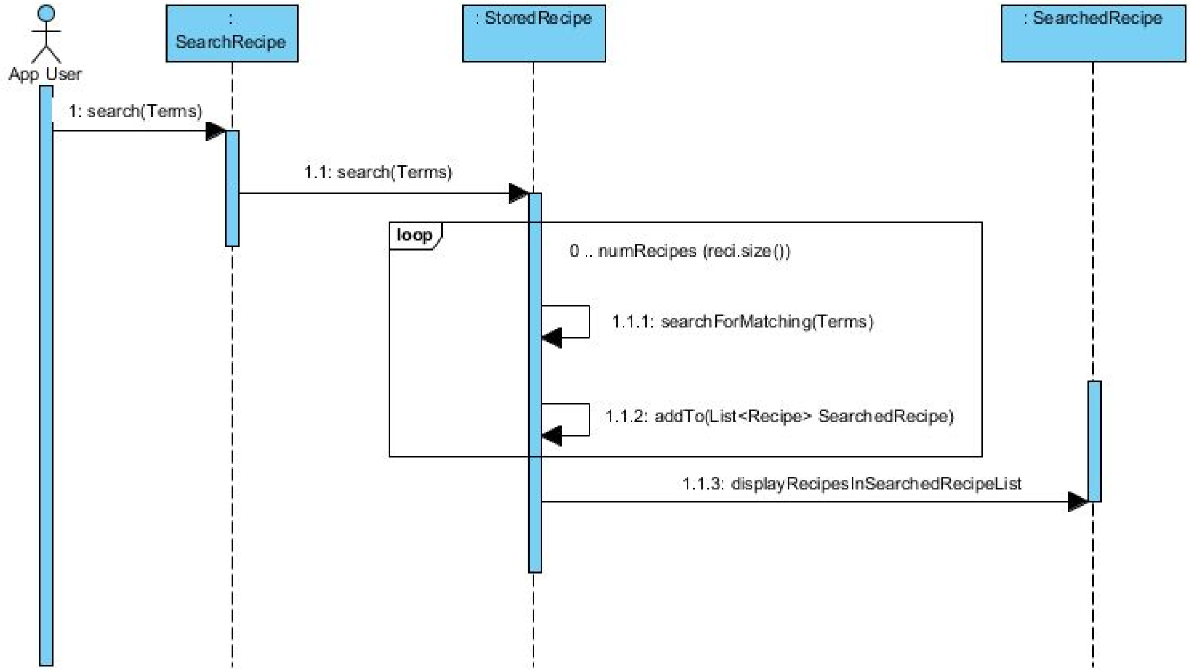


Missing Multiplicities in the diagram

1 RecipeAdapter and 1..* StoredRecipe
1 RecipeDetail and 1 AddRecipe
1…* AddIngredient and
* AddIngredient and 1 addRecipe
1 RecipeLayout and 1 AddRecipe

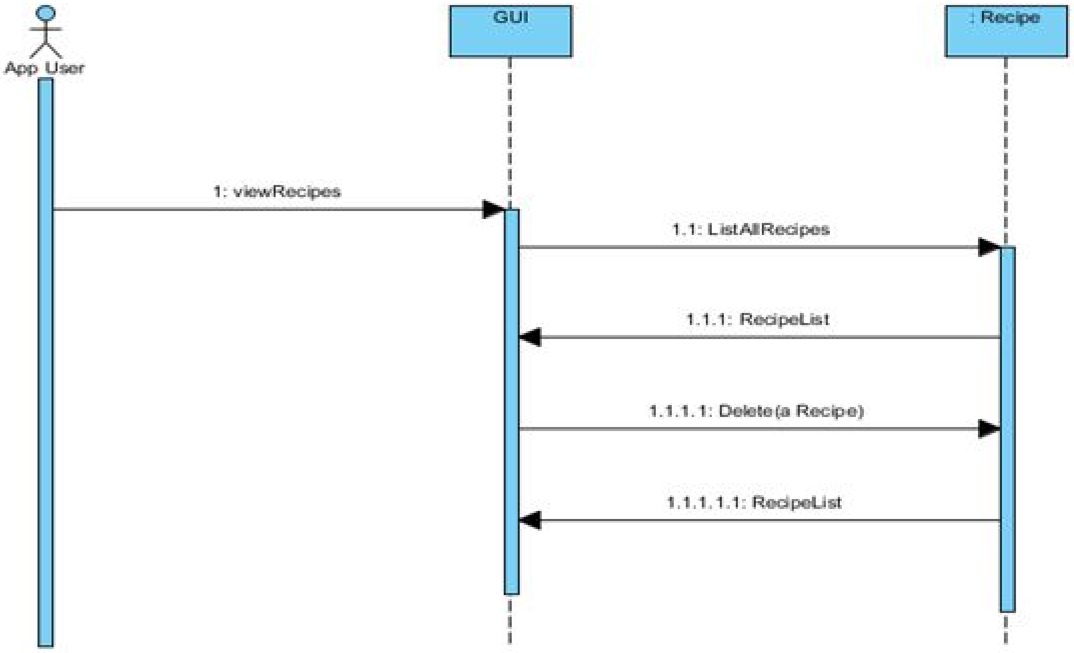
Sequence Diagrams

Sequence Diagram 1: Search for a Recipe


App User
: SearchRecipe
: StoredRecipe
: SearchedRecipe
1: search(Terms)
1.1: search(Terms)
loop
0 .. numRecipes (reci.size())
1.1.1: searchForMatching(Terms)
1.1.2: addTo(List<Recipe> SearchedRecipe)
1.1.3: displayRecipesInSearchedRecipeList

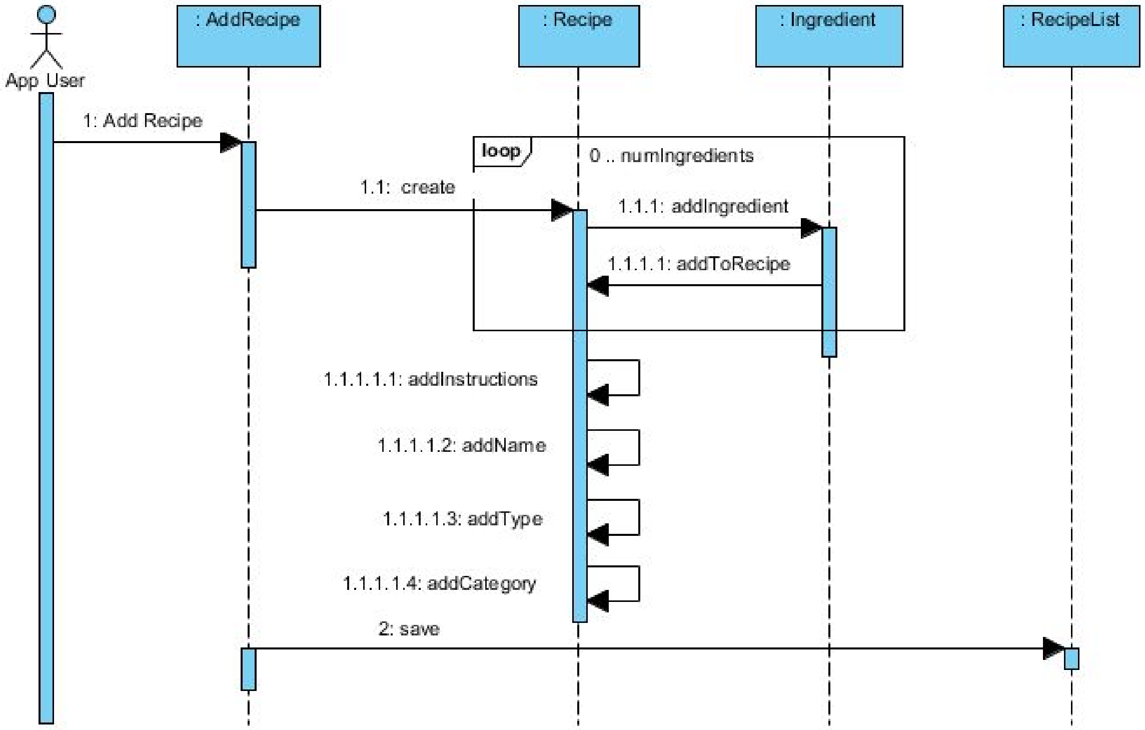
GUI class *(SearchRecipe)* gets search query and sends it to Singleton Class *(StoredRecipe)*. A method searches through list of recipes and addes the matching recipes from *Terms* to searchedRecipe List. Then displays the matching recipes in *SearchedRecipe.*

Sequence Diagram 2: Delete a Recipe



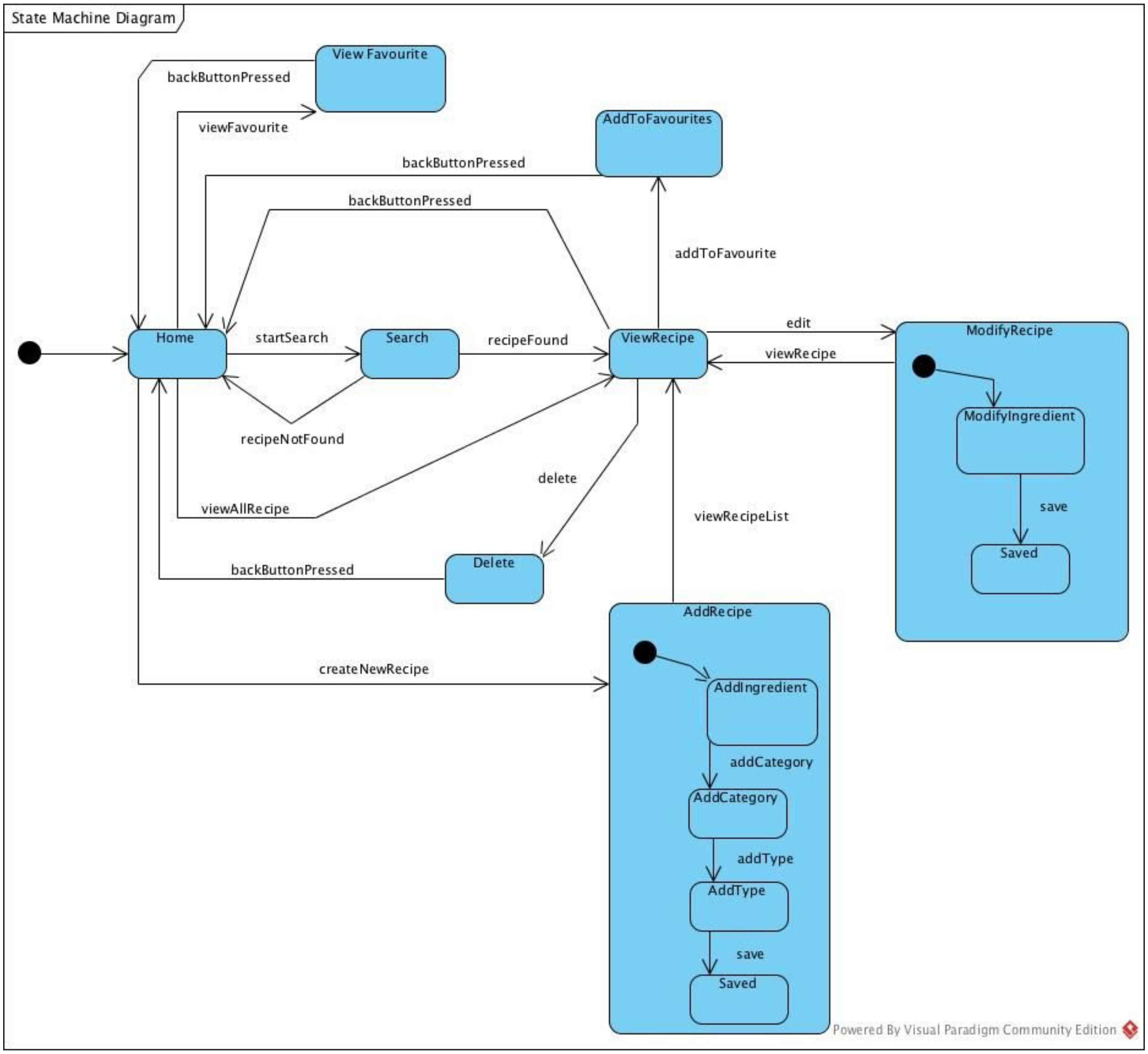
User selects which recipe to delete from *RecipeList* and confirms deletion. Then the specific recipe is deleted from *reci* (list of all recipes). User then manually refreshes the list of all recipes and the deleted recipe is no longer displayed.

Sequence Diagram 3: Add a Recipe



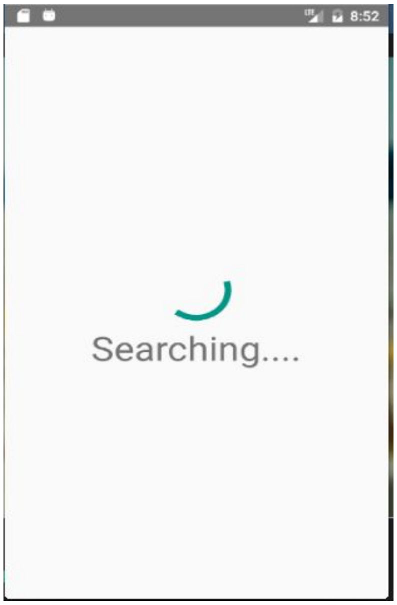
User clicks add button and gets directed to AddRecipe page. They enter the name,category,type, ingredients and instructions for their recipe. Once they click save they can then click View All button to see their newly added recipe in the list of all recipes.

State Machine Diagram

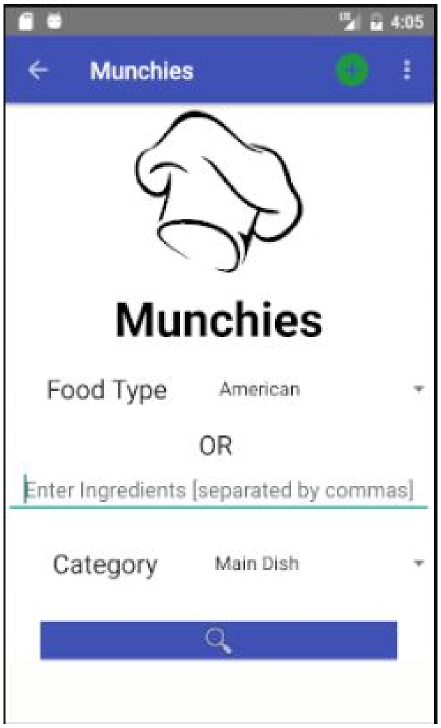


Screenshots of UI

Loading Screen



Home Page (Search Activity)



Munchies

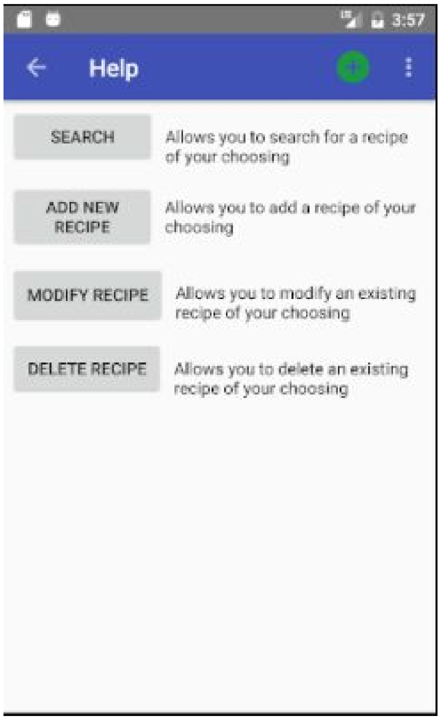
Food Type American

OR

Enter Ingredients [separated by commas]

Category Main Dish

Help Activity



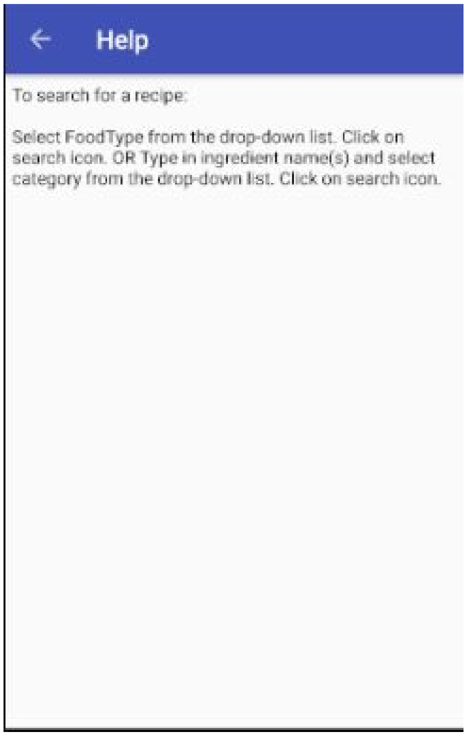
SEARCH Allows you to search for a recipe of your choosing

ADD NEW RECIPE Allows you to add a recipe of your choosing

MODIFY RECIPE Allows you to modify an existing recipe of your choosing

DELETE RECIPE Allows you to delete an existing recipe of your choosing

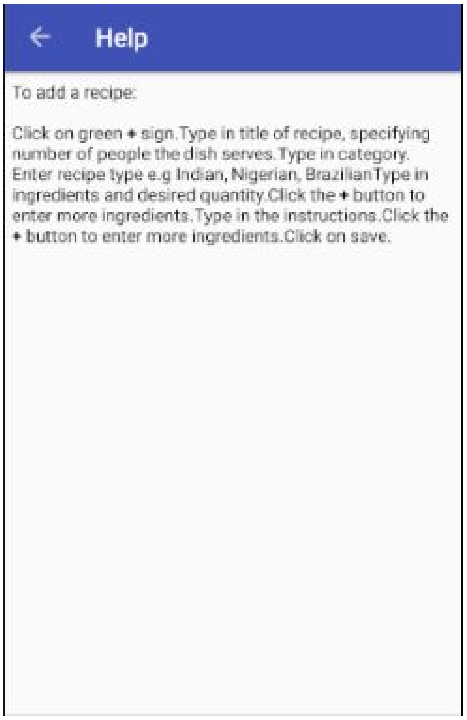
Search Recipe Help



To search for a recipe:

Select FoodType from the drop-down list. Click on search icon. OR Type in ingredient name(s) and select category from the drop-down list. Click on search icon.

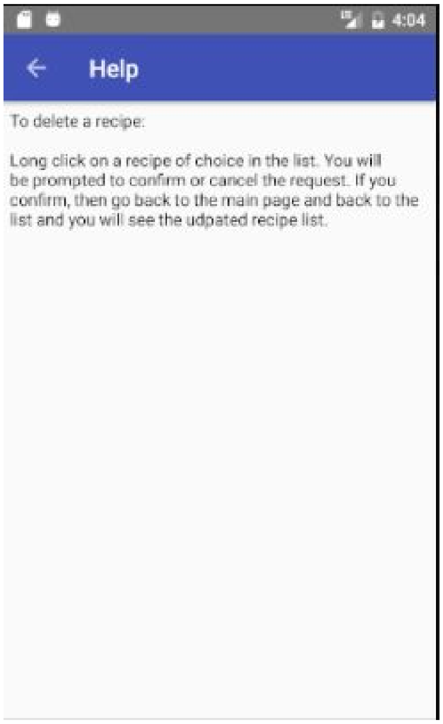
Add New Recipe Help



To add a recipe:

Click on green + sign.Type in title of recipe, specifying number of people the dish serves.Type in category. Enter recipe type e.g Indian, Nigerian, BrazilianType in ingredients and desired quantity.Click the + button to enter more ingredients.Type in the instructions.Click the + button to enter more ingredients.Click on save.

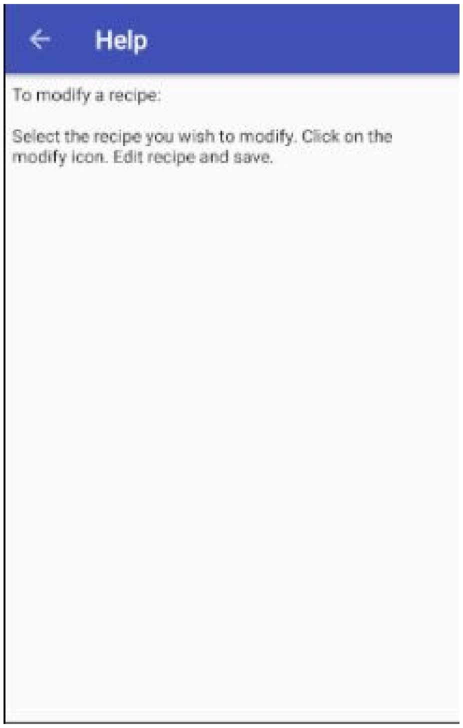
Delete Recipe Help



To delete a recipe:

Long click on a recipe of choice in the list. You will be prompted to confirm or cancel the request. If you confirm, then go back to the main page and back to the list and you will see the udpated recipe list.

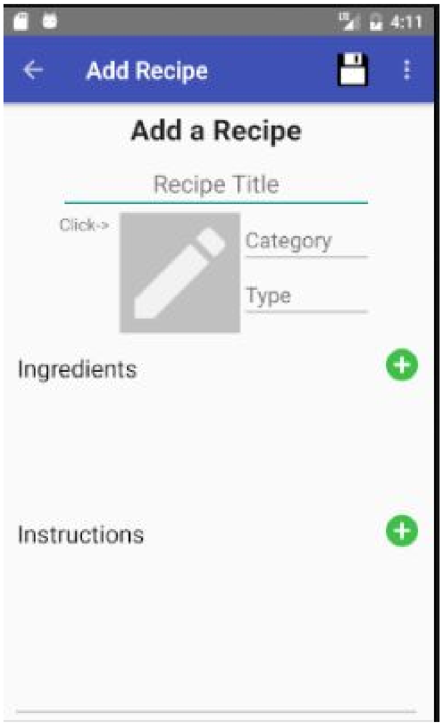
Modify Recipe Help



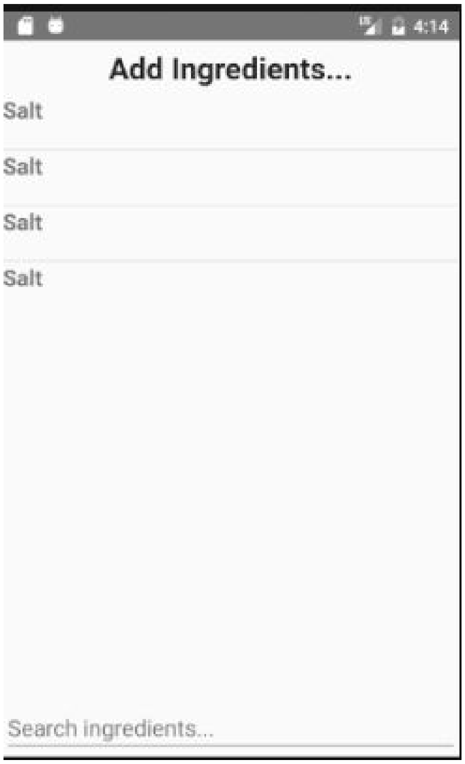
To modify a recipe:

Select the recipe you wish to modify. Click on the modify icon. Edit recipe and save.

Edit/Add Recipe Activity



Add Ingredient Activity



Add Ingredients...

Salt

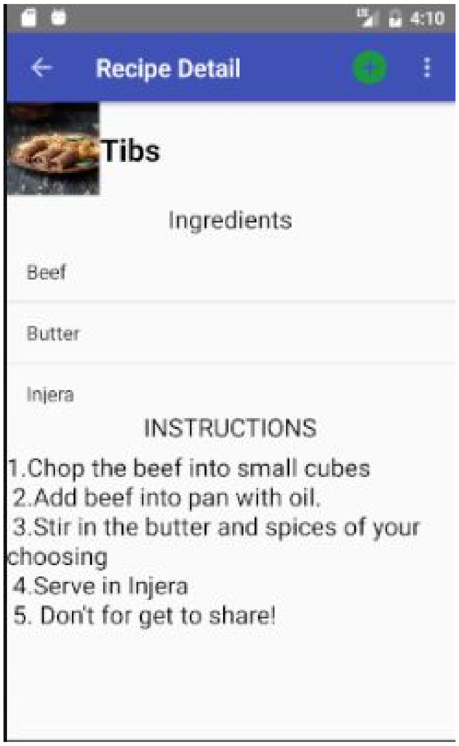
Salt

Salt

Salt

Search ingredients...

Recipe Detail Activity



Tibs

Ingredients

Beef

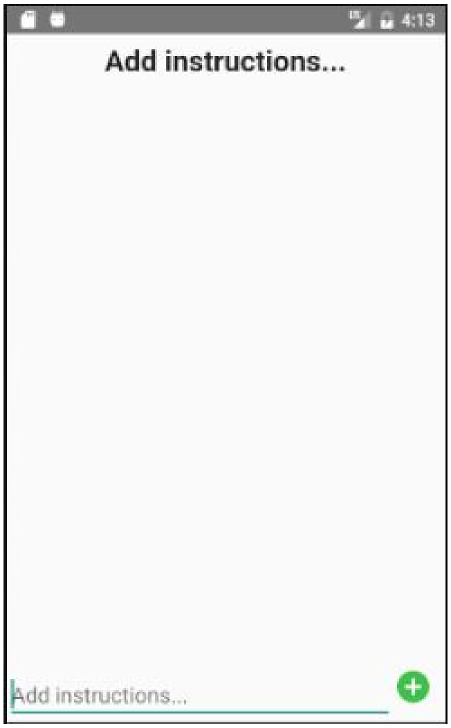
Butter

Injera

INSTRUCTIONS

1.Chop the beef into small cubes
2.Add beef into pan with oil.
3.Stir in the butter and spices of your choosing
4.Serve in Injera
5. Don't for get to share!

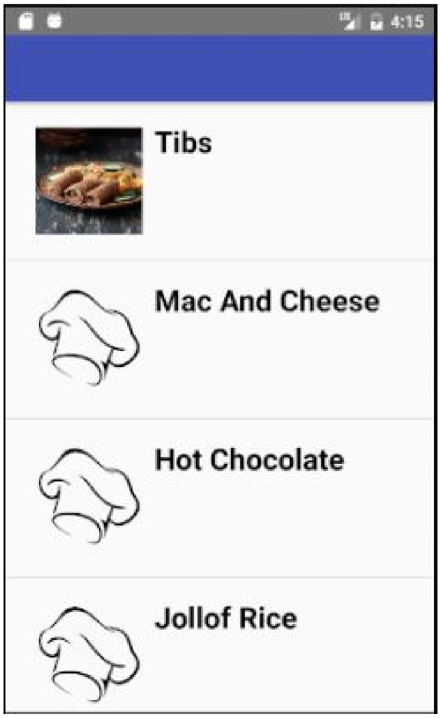
Add Instructions Activity



Add instructions...

Add instructions...

Recipe List Activity



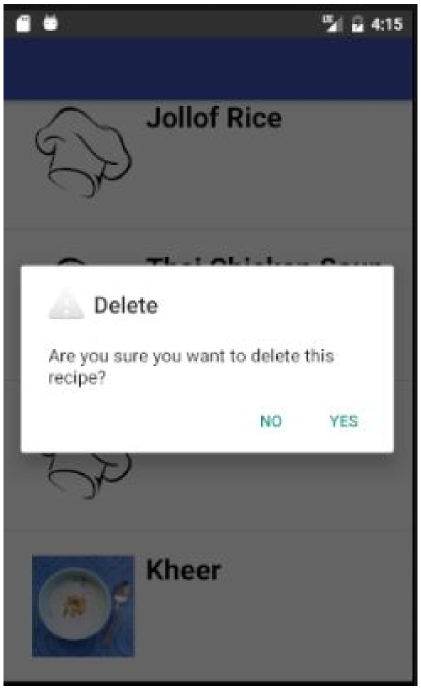
Tibs

Mac And Cheese

Hot Chocolate

Jollof Rice

Delete Recipe Activity



Delete

Are you sure you want to delete this recipe?