

Criterion B: Design

Algorithms

Editing and Adding Firestore Data:

Connect back to the Firestore Database and use DocumentSnapshot to access the data allowing the user to add and update. Only call the updating function on the push of a button to prevent any accidental uploading from happening.

Searching and Displaying Menu/Inventory Data: Use StreamBuilder to traverse through a Firestore collection, and display the contents of the chosen collection through a method with parameters

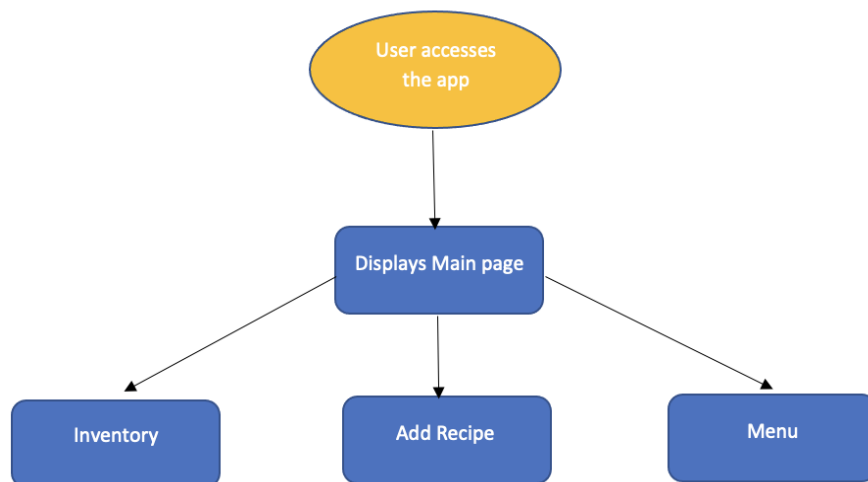
Data Structures

- Firestore Database: The program requires me to store a large inventory of food items as well as a large number of recipes. Databases are also best for when you need to regularly retrieve the information, which I would need to do in the program.
- StreamBuilder: This acts as temporary storage, where I can extract data from the database and pass it through a method.

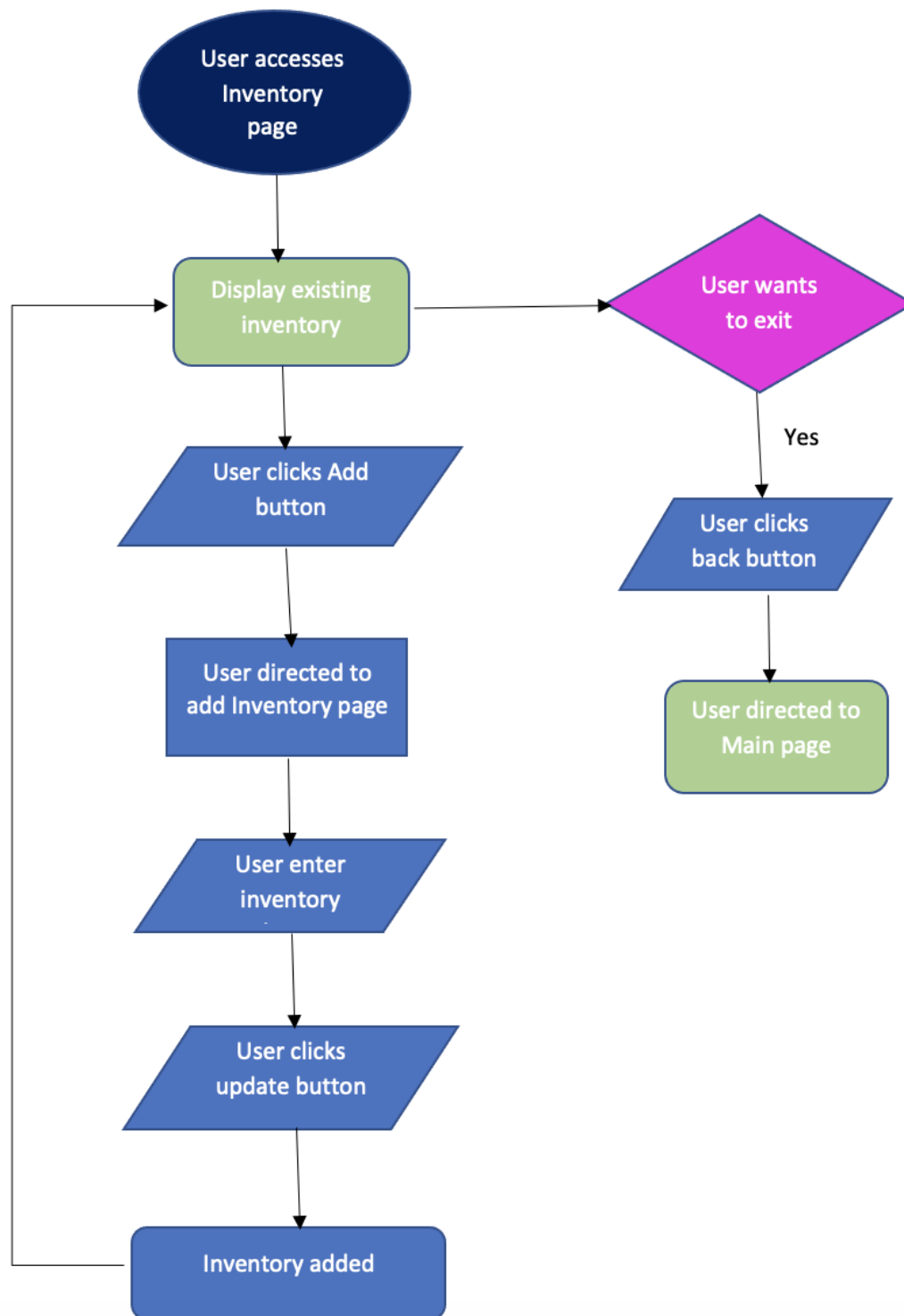
Flowchart(s)

See Appendix C.1 for initial flowcharts

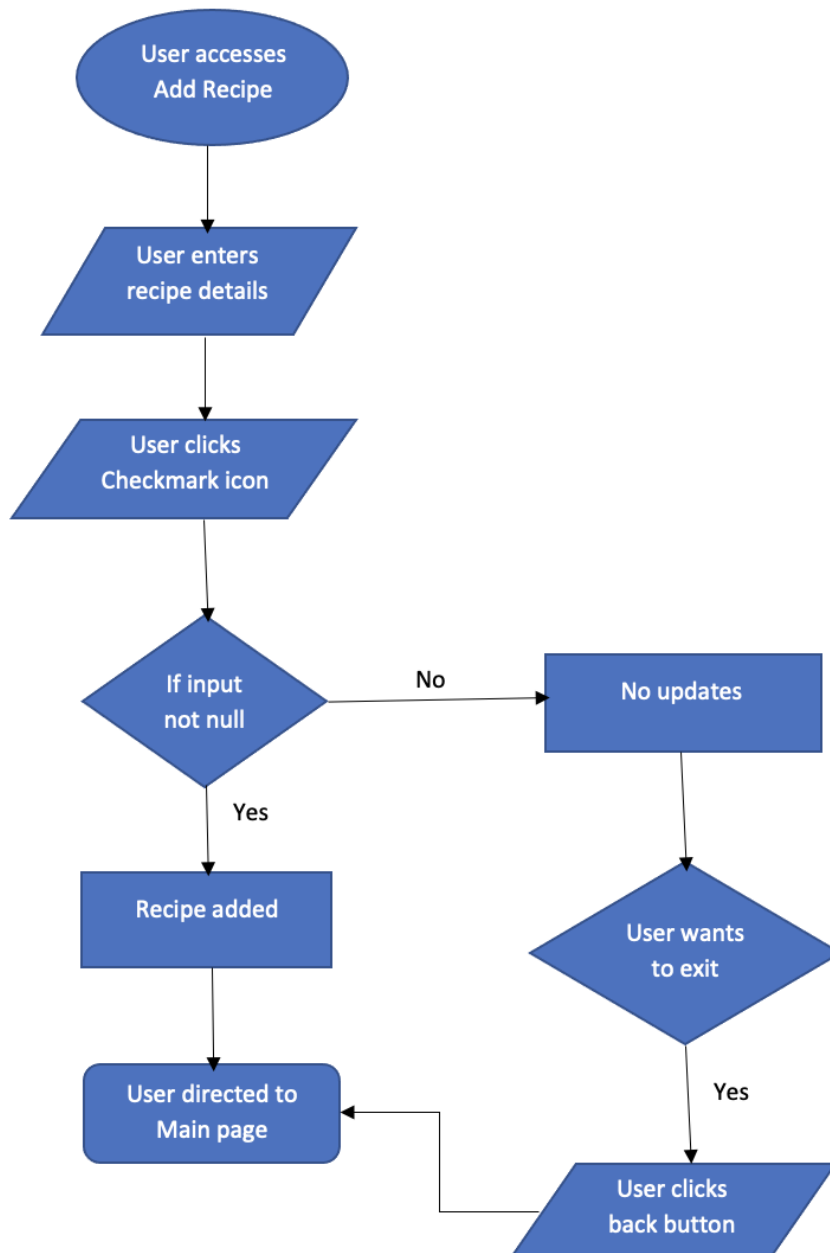
Main Page:



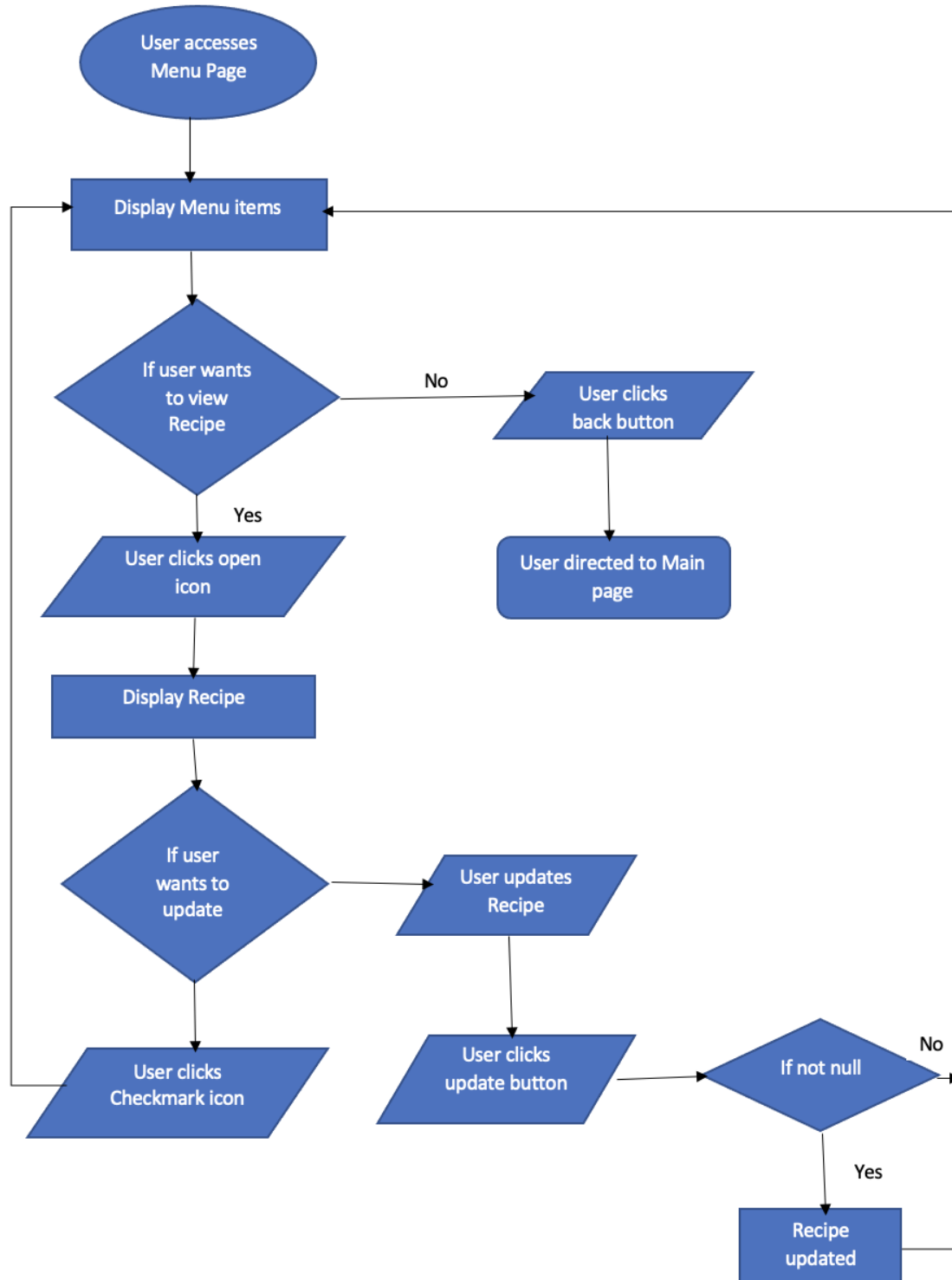
Inventory:



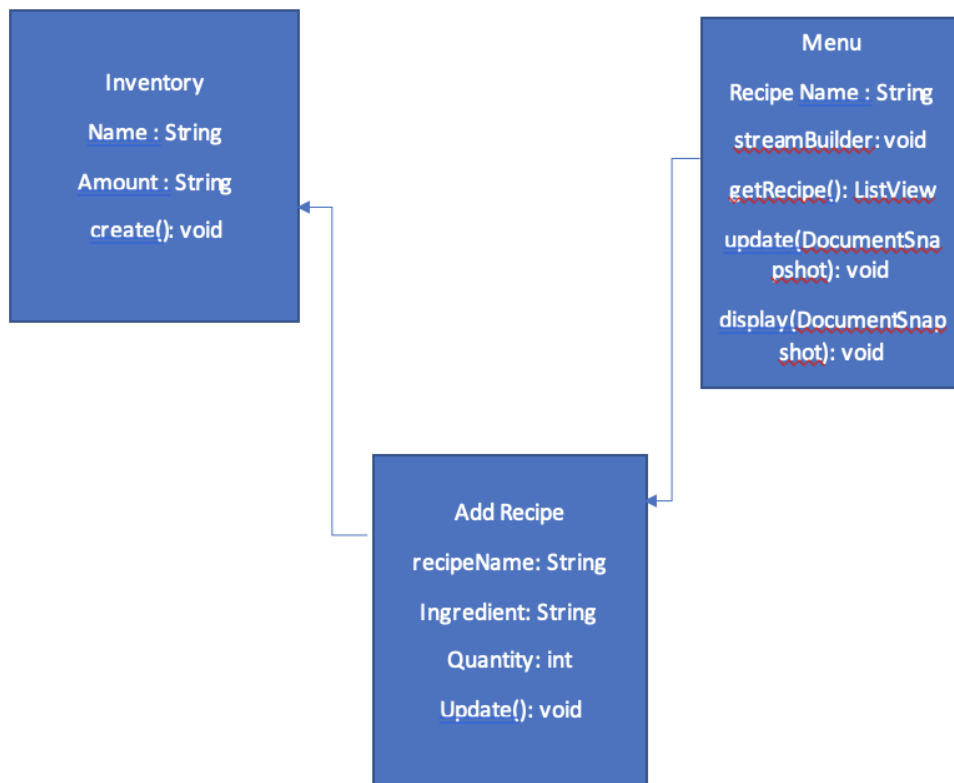
Add Recipe:



Menu Page:



Objects/ UML diagram



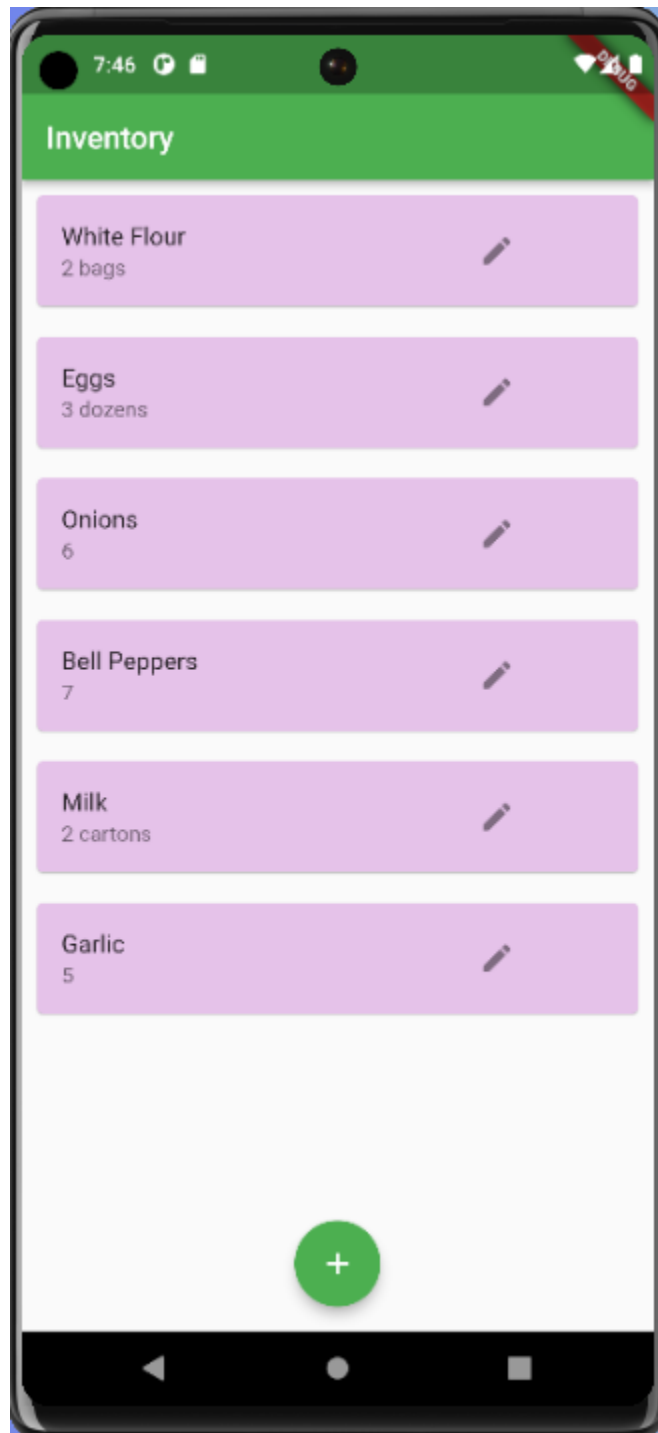
UI flows

See Appendix D for initial UI Flows, and Appendix B.5 for the discussion

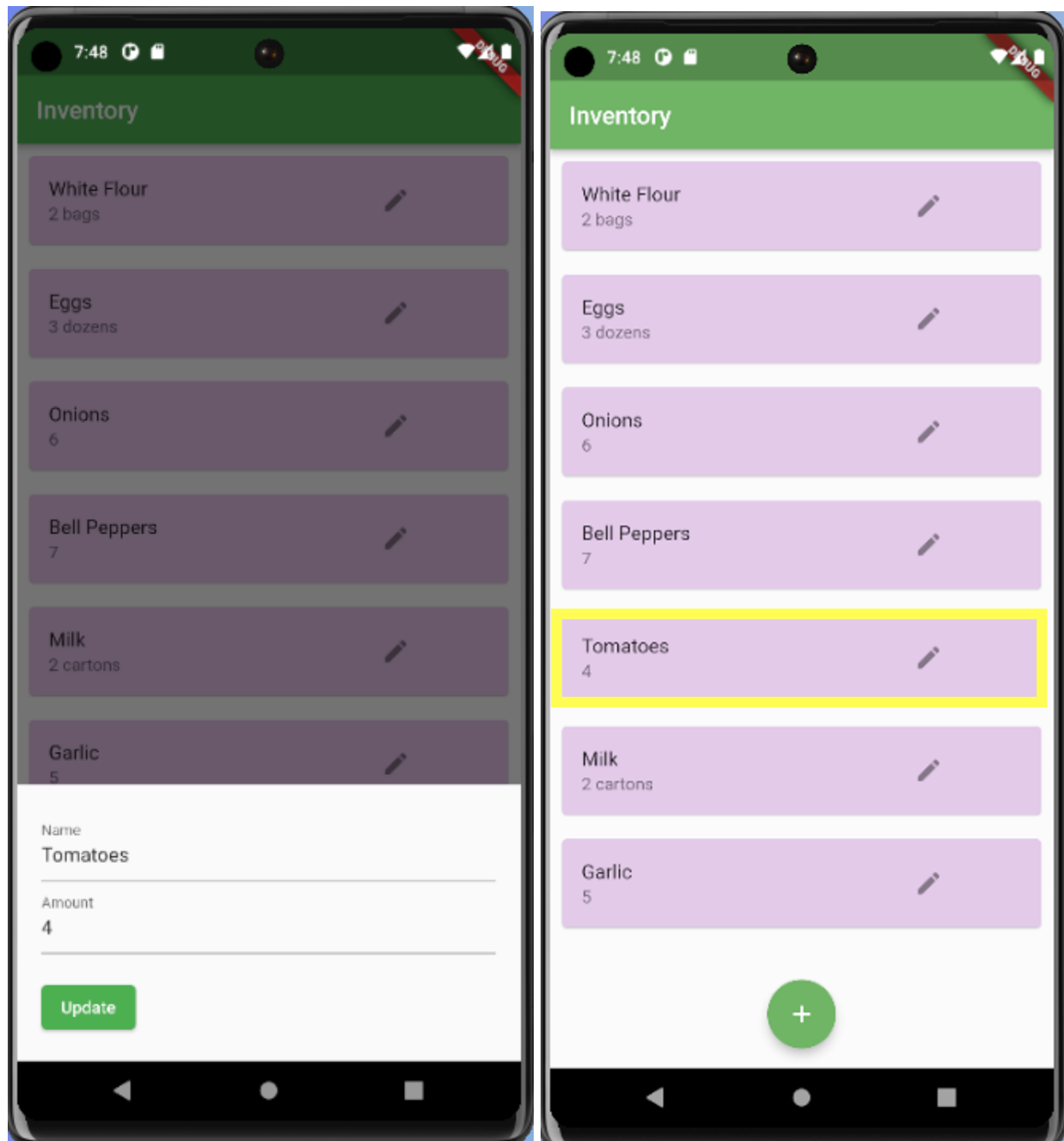
This is the homepage of the app.



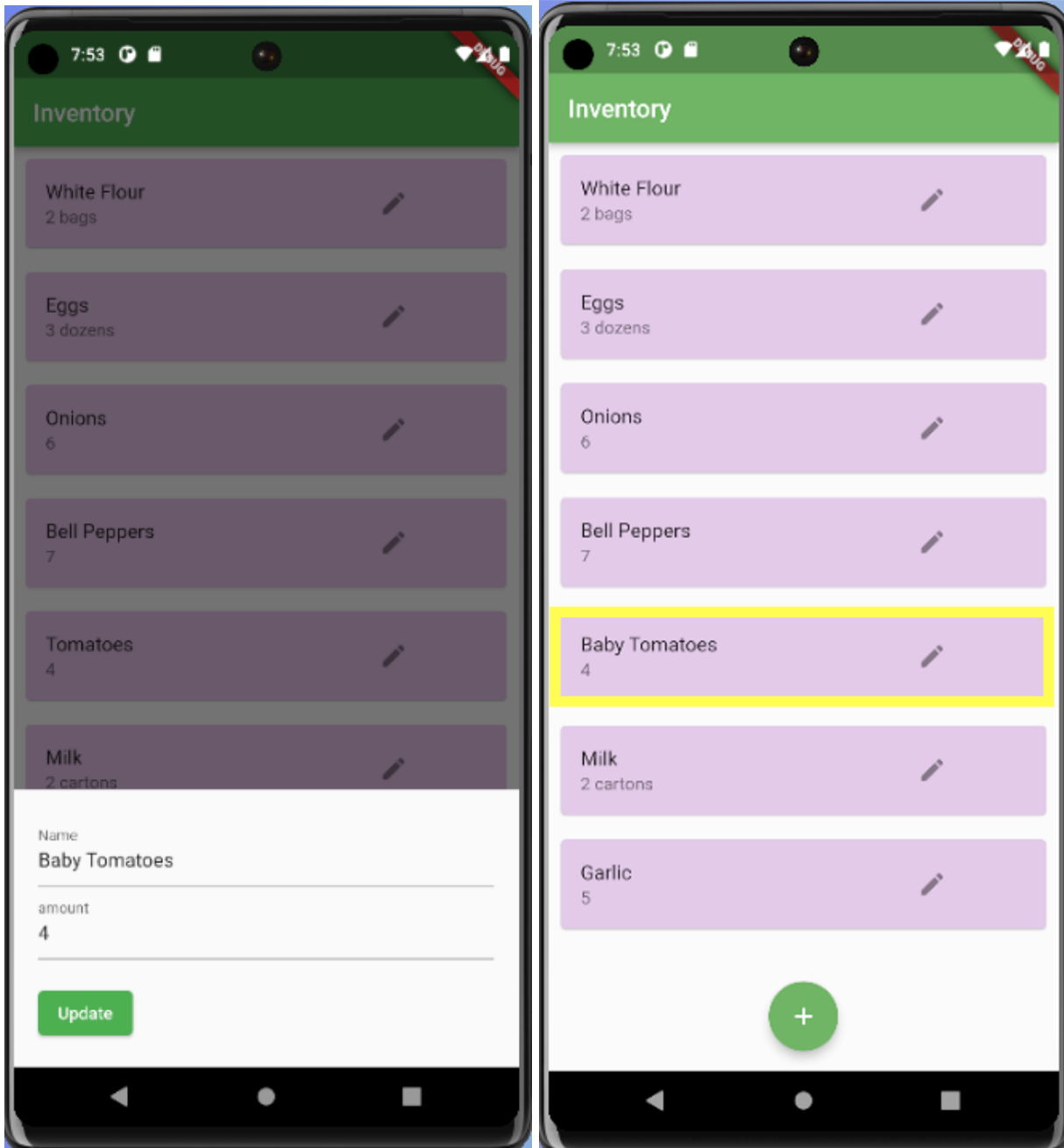
When the user presses, “Inventory”, they are directed to this page. Existing items are displayed.



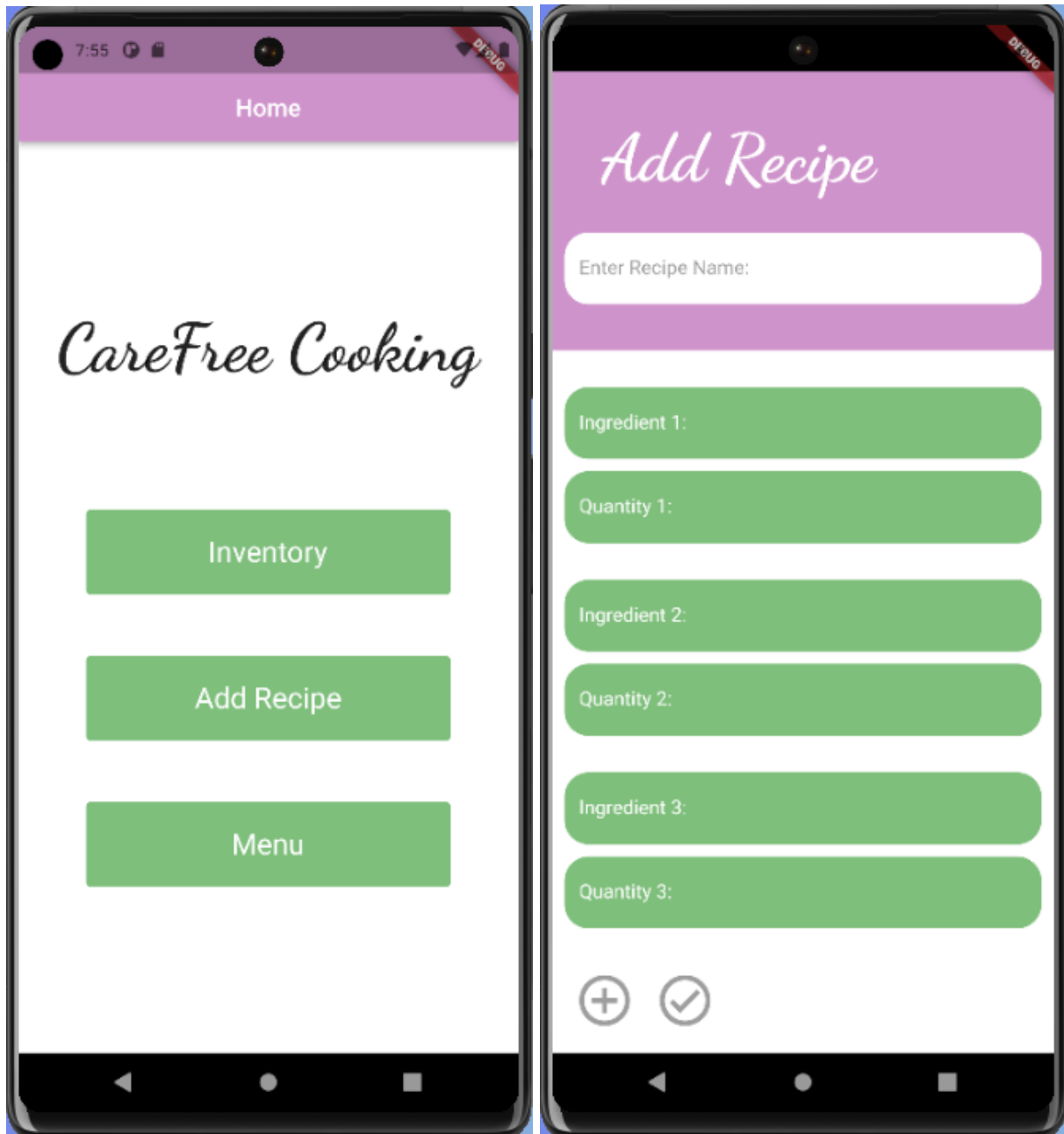
If the user presses the Plus icon, they can enter a new item. Upon pressing update, the item is added and will appear on the previous screen.



If the user presses the edit icon, they can edit. Once they have pressed update, the change appears in the inventory.



If the user presses “Add Recipe” on the homepage, they are directed to the page.



Once information is added, it goes back to the database.

Add Recipe

PB & J

Peanut Butter

1 Tablespoon

Jelly

1 Tablespoon

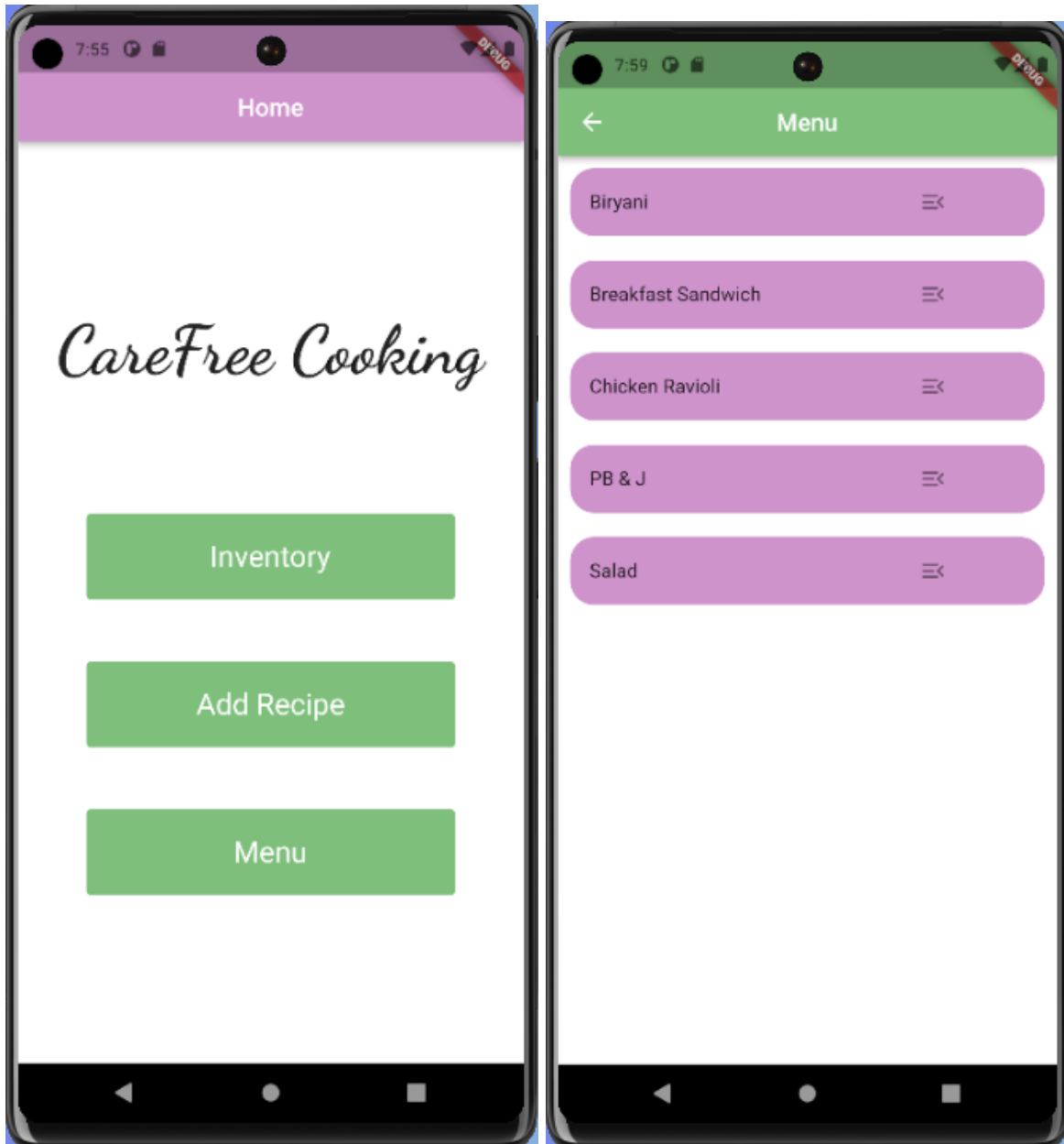
Bread

2 slices

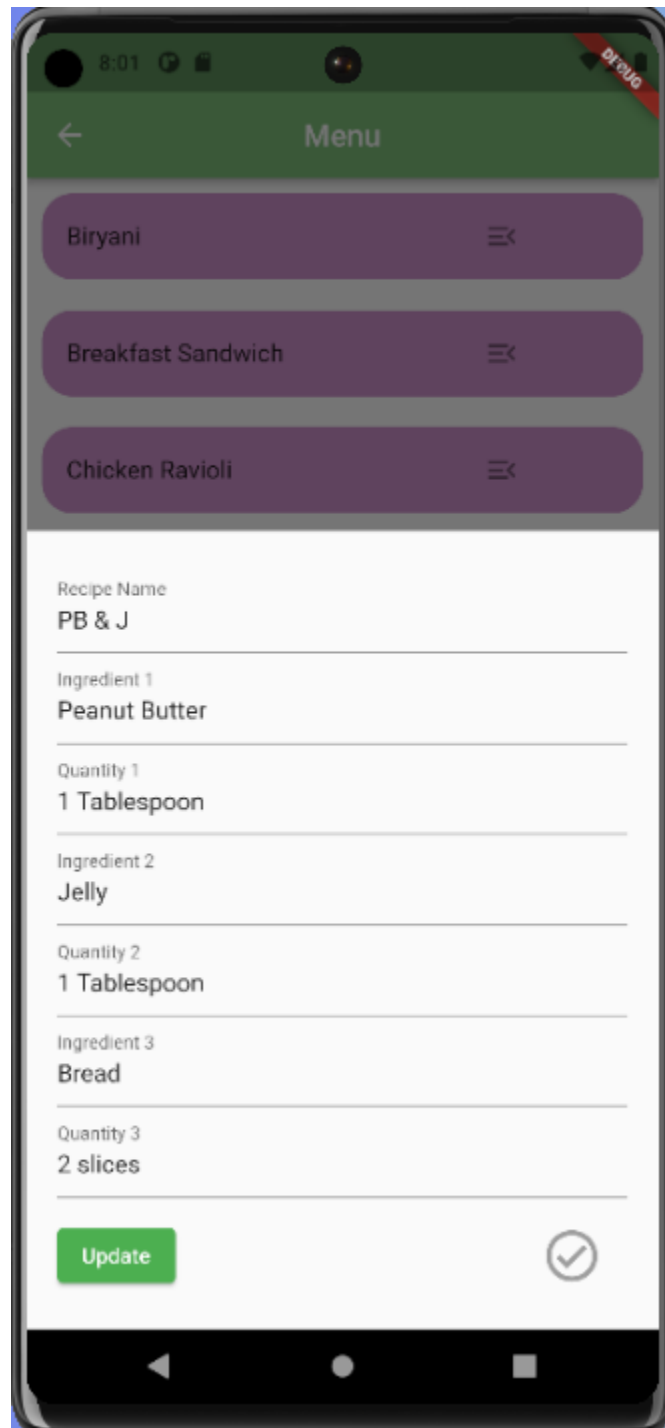
+

✓

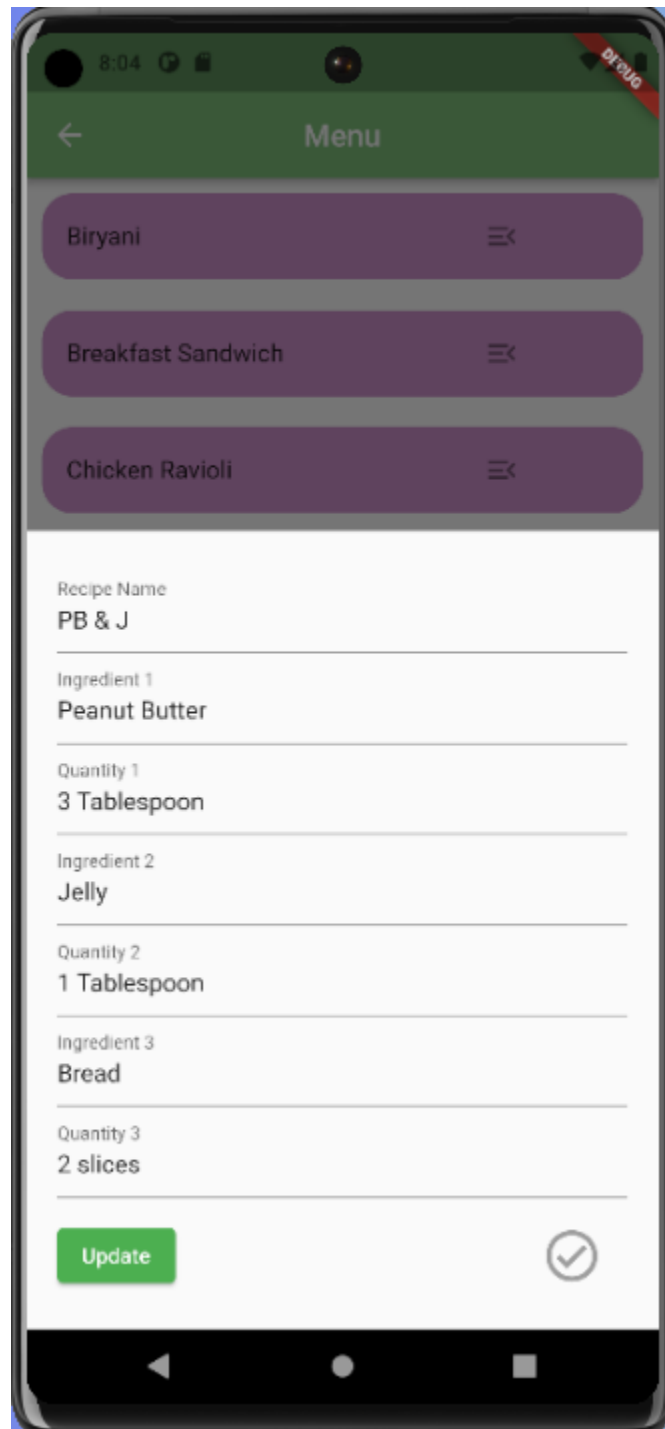
If they press the Menu button on the home page, they can see all the recipes.



If the user presses the open icon by the recipe, they can see the ingredients.



The user can edit the recipe here. Upon pressing the Update button, the changes are stored, or they can press the checkmark icon and leave the page.



Test Plan

Action to be Tested	Test Method	Expected Result
Client can enter Inventory	Press “Inventory” button on the homepage. Input name and quantity. Press Update .	Inventory is updated
Client can update inventory items	Press Edit icon. Input needed updates. Press Update.	Updates food item
Client can view inventory	Press on “Inventory” button on the homepage.	Items in inventory are displayed
Client can add recipe	Press on “Add Recipe” button on the homepage. Input all needed information. Press checkmark icon	Recipe is added
Client can view recipes in menu	Press the “Menu” button on the homepage of the app.	All recipes are displayed
Client can view more info about chosen recipe	Press open icon on recipe of choice	Display all ingredients and quantities in the recipe
Client can update recipe	Press open icon. Input wanted changes in text boxes. Press update button.	Updates recipe.