¼ Cup ?
Product Backlog

Problem Statement

- There are many existing grocery list apps for Android, however, these apps either lack many useful functionalities or are overcomplicated. Many are often filled with intrusive advertising and lack an intuitive, pleasant design. Our application aims to improve upon existing applications by providing a core set of truly useful features with an intuitive design. Users will be able to sort their lists by category, search for recipes either through the API or recipes created by other users, and share their lists with other users.

Background Information

- As stated before, there are many grocery list apps, but most only act as a basic list with some categorical functions. The problem with this is that the grocery list apps could do a lot more to make the user experience better. Instead of being a glorified list, these apps could help with sorting, searching, and adding ingredients from recipes directly. Also, only a few existing apps provide list sharing functionality, and syncing lists with those apps often requires manually refreshing each list to see changes.

Environment

This application will be written in Java, using the Android SDK. Firebase will be used as the backend, for authenticating users and storing data.

Functional Requirements

ID	Functional Requirement	Hours	Status
1	As a user, I would like to be able to create an account and sign in with an email address and password.	10	Sprint 1
2	As a user, I would like to be able to sign in with my Google account.	4	Sprint 1
3	As a user, I would like to create shopping lists.	5	Sprint 1
4	As a user, I would like to add an item to a list.	4	Sprint 1
5	As a user, I would like to assign a category to an item.	4	Sprint 1

6	As a user, I would like to create category sort orders.	10	Sprint 1
7	As a user, I would like to assign category sort orders to a list.	8	Sprint 1
8	As a user, I would like items to be categorized automatically.	8	Sprint 1
9	As a user, I would like to share lists with other users.	10	Sprint 1
10	As a user, I would like to be able to browse and search recipes.	7	Sprint 1
11	As a user, I would like to add ingredients from one recipe to a shopping list.	10	Sprint 1
12	As a user, I would like to create my own recipes.	5	Sprint 2
13	As a user, I would like to be able to delete shopping lists.	5	Sprint 1
14	As a user, I would like to check items off from the list.	8	Sprint 1
15	As a user, I would like to delete items from a list.	5	Sprint 1
16	As a user, I would like to create custom categories.	7	Sprint 1
17	As a user, I would like to use autocomplete suggestions to add items to lists.	8	Sprint 2
18	As a user, I would like to see when an item was last purchased.	7	Sprint 2
19	As a user, I would like to revoke list sharing rights.	7	Sprint 2
20	As a user, I would like to save recipes to my personal collection.	8	Sprint 2
21	As a user, I would like to view my saved recipes.	10	Sprint 2
22	As a user, I would like to see which recipe a list item was added for.	10	Sprint 2
23	As a user, I would like to see the progress of each recipe as items are checked off.	10	Sprint 2
24	As a user, I would like to receive a notification whenever a shared list was changed.	7	Sprint 2
25	As a developer, I would like no duplicate ingredients added from recipes.	10	Sprint 2
26	Total:	187	

Non-functional requirements

ID	Functional Requirement	Hours	Status
27	As a developer, I would like changes to lists be persisted across devices in real time.	4	Sprint 1
28	As a developer, I would like users to only have access to their own lists and lists shared with them.	6	Sprint 1
29	As a developer, I would like my application to handle errors gracefully.	6	Sprint 1/2
30	As a developer, I would like to track and review bugs.	4	Sprint 1/2
31	As a developer, I would like a database to store data.	6	Sprint 1
32	As a user, I would like to know when an error occurs.	4	Sprint 1/2
33	As a user, I would like the application to look appealing	6	Sprint 1/2
34	As a user, I would like the application fit to any device screen.	6	Sprint 1/2
	Total:	42	

Use cases

User Action	System Response
Create Account: user opens app for first time	Sign-in or create account UI is displayed
User chooses to create an account with email address and password	Email/password account creation UI is displayed
User enters email address and password and presses the create account button	Account is created and the main view is displayed
Google Sign-in	

User opens the app for the first time	Sign-in or create account UI is displayed
User presses the Google sign in button	The app prompts the user to grant permissions if necessary
User grants necessary permissions	The user is signed in and the main view is displayed
Create Shopping Lists	
User presses the new list button	Create list view is displayed
User enters a name for the list and presses create	List is created, create list view disappears
Add Items to List	
While viewing a list, user presses add item button	The add item view displays
User enters the item name and either presses the add button or choose an autocomplete suggestion	The item is added to the list and the "add item" UI closes
Assign Item Category	
User chooses item from list	Edit item toolbar is displayed
User taps on the item category icon in toolbar	A list of categories is displayed
User chooses a new category and presses the save button	The list item is updated and the edit item UI is closed
Create Category Sort Order	
User presses settings button	Settings UI is displayed
User chooses add category sort order option	Category sort order creation is displayed
User enters a name for the sort order	
User drags and drops the available categories to set the sort order	
User presses the save button	The sort order is created and the sort order creation UI is closed
Assign Sort Order to List	
User presses list settings button	List settings UI appears
User chooses the sorting option	List sort order options dropdown appears

User chooses a sort order and presses save	List sort order is updated and settings UI closes
Automatic Categorization	
User presses add item button while viewing a list	Add item UI appears
User begins typing and chooses an autocomplete option	Item is added to list with the appropriate category
Share Lists with Others	
User presses list settings button	List settings UI appears
User chooses "add user" option under the "sharing" section	Add shared user UI appears
User enters the email address of the person they would like to share the list with and presses share	The list is shared and the add shared user UI closes.
Search and Browse Recipes	
User chooses recipes option from menu	Recipe UI appears
User presses search button	Recipe search UI appears
User enters a search terms and presses the search button	Search results are displayed
User chooses a recipe from the search results	Recipe details UI is displayed
Add Ingredients From Recipe	
From recipe details view, press add to list button	System displays the user's lists
Select the list to add ingredients to	Ingredients are added to the selected list
Create Recipes	
From, "my recipes" view, press add button	New recipe UI is displayed
Enter recipe title and ingredients	
Press save button	New recipe is saved and viewable in "my recipes"
Delete Shopping List	
From a shopping list, press list settings button	List settings are displayed

Press delete list button	Prompt for confirmation
Press "DELETE" button	List is deleted, settings UI closes
Check off Item from List	
From list view, user swipes item to side	Item disappears and is marked as completed
Delete Items From List	
From list view, user taps on an item	The item is selected and the toolbar appears
User presses delete button on toolbar	Selected items are deleted from list
Create Custom Categories	
User presses app settings button	App settings are displayed
User chooses category settings	Categories are displayed
User presses add button	Category creation UI is displayed
User enters category name and submits it	Category creation UI closes
Autocomplete Suggestions	
From list view, tap add item	Add item UI and keyboard display
User begins typing	Autocomplete suggestions display beneath EditText
User selects autocomplete suggestion	Item is added to the list
See When Items Were Purchased	
User presses "show purchased" button in list options menu	Items that have been checked off the list are displayed, with most recently purchased items at the top of the list
Revoke Sharing Rights	
User taps list settings button	List settings are displayed
User taps remove button next to shared user email in sharing section	User is removed from shared users list and can no longer access list
Save Recipes to Collection	
From recipe search results details view, user presses save button	Recipe is saved and accessible from "my recipes" tab
View Saved Recipes	

From recipe section of app, user presses "my recipes tab"	A list of saved recipes is displayed
See which recipe a list item was added for	
User views a shopping list	List items that were added from recipes have subtitles indicating which recipe they were added for
See the progress of each recipe as items are checked off	
User views "my recipes" section	If recipe has items on list, the progress is shown as a percentage of (checked off items / total items)
Shared List Change Notification	
User changes shared list	Push notification is sent to users with with the list is shared
No Duplicate Ingredients	
User imports two recipes with overlapping ingredients	Duplicated ingredients are only added to the list once