**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 |