

Final Project: Feature Walkthrough

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CS499- Computer Science Capstone

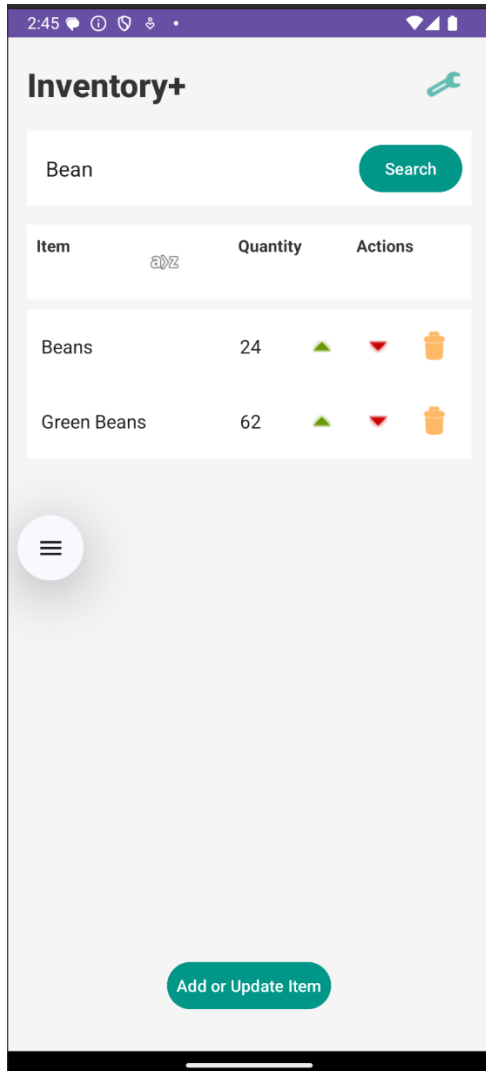
Dr. Maciosek

February 17, 2025

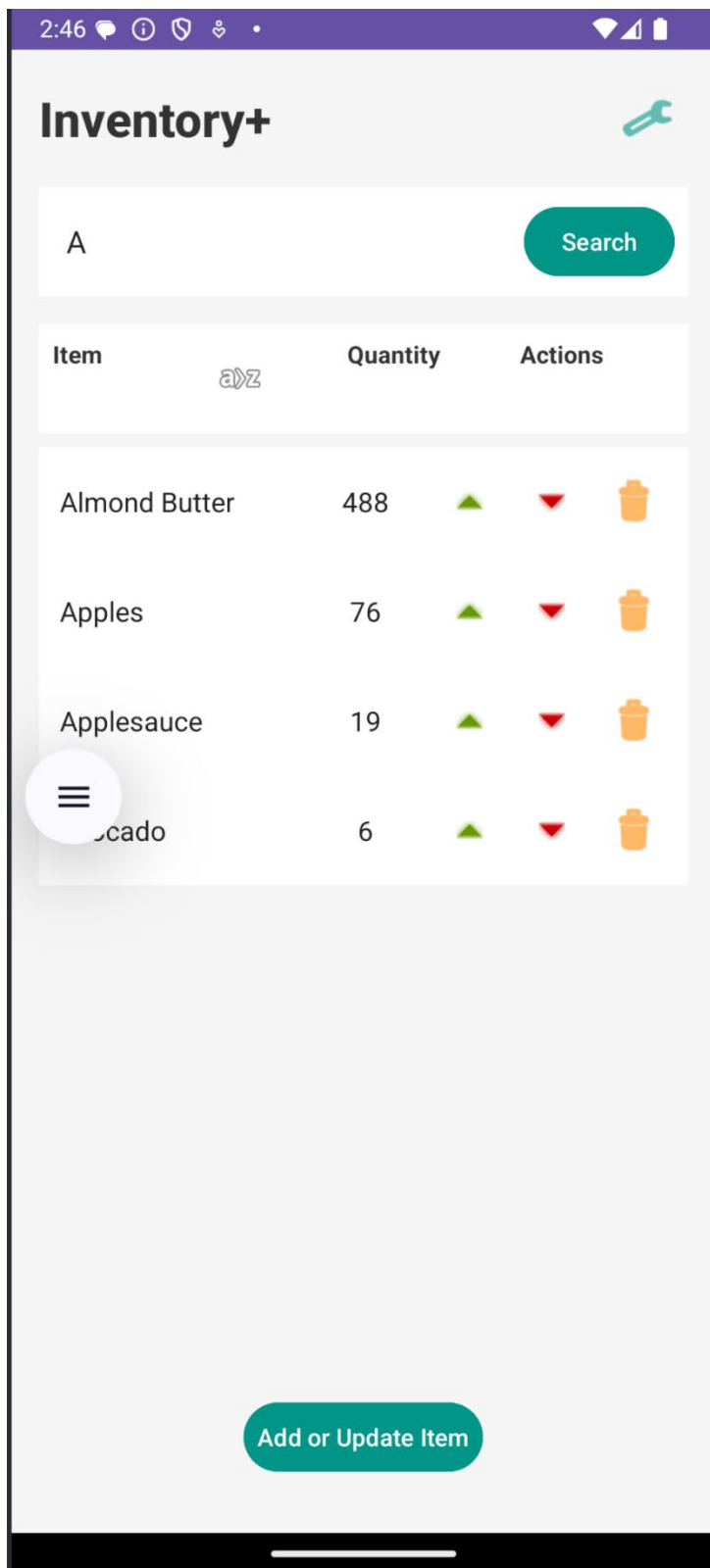
## Enhancement 1: Java to Kotlin and project refactoring

This enhancement can be observed by looking at the source code files for this project in Android Studio.

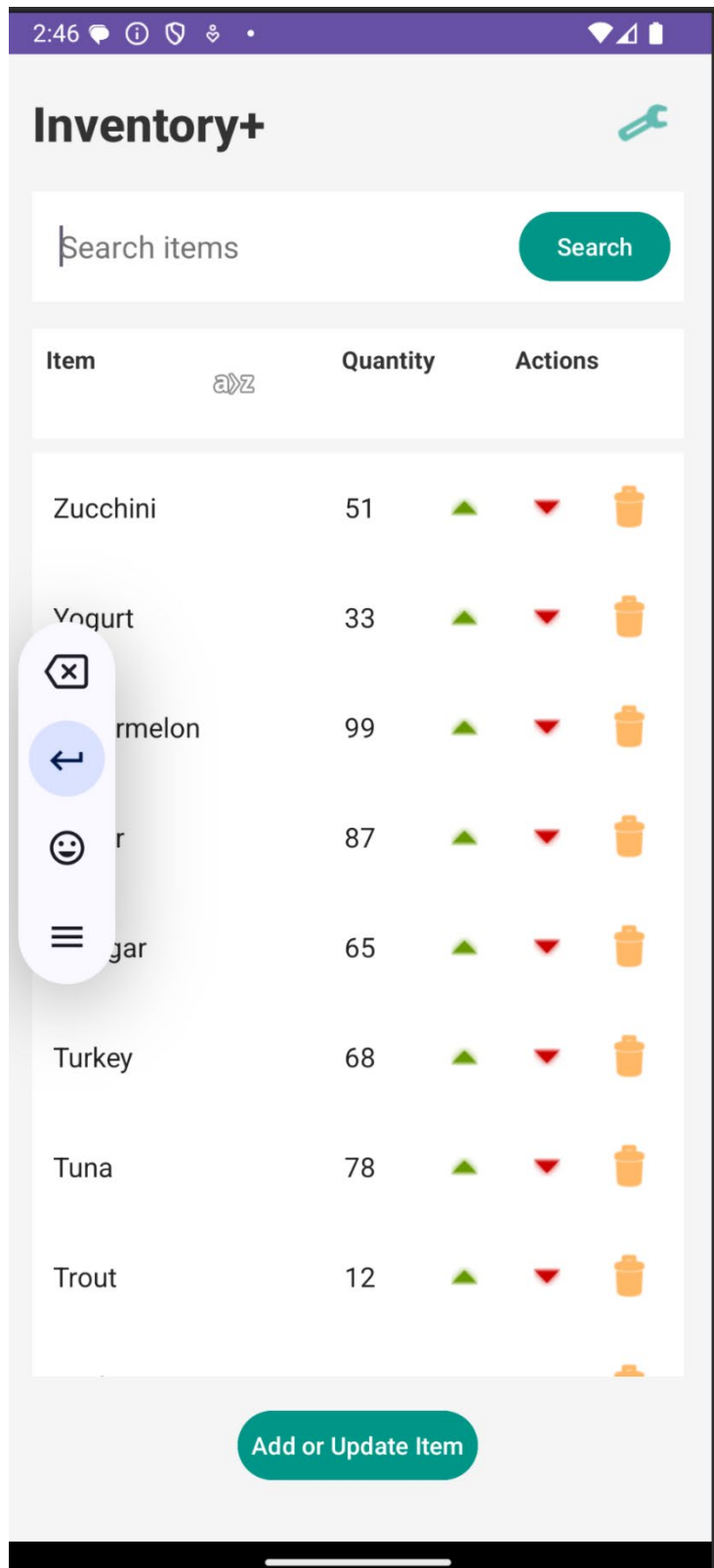
## Enhancement 2: Added Sort and Search Features using Data Structures and Algorithms



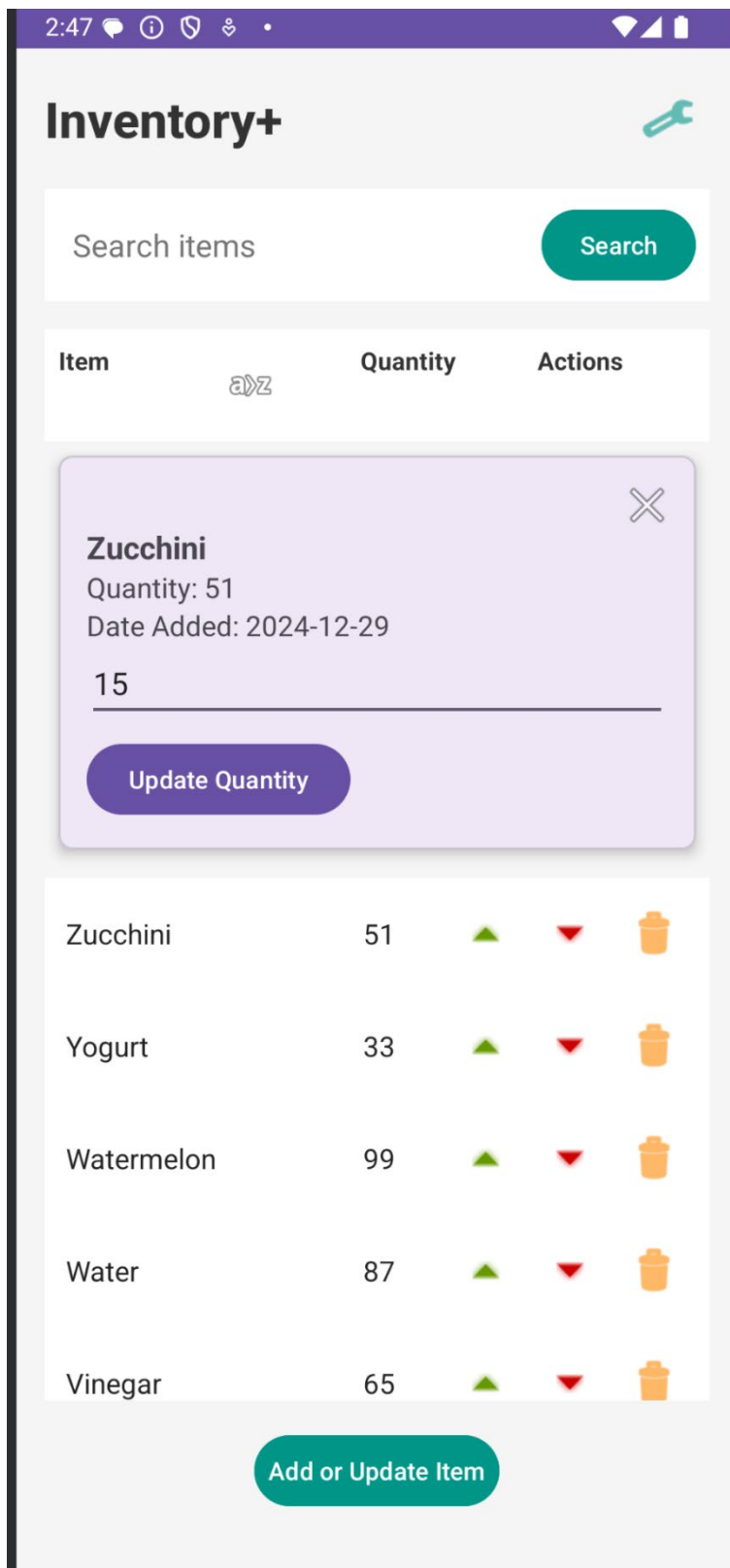
*A query for “Beans” is performed. This test reflects the logic where the more than just the first word of a string is searched.*



*A query is performed showcasing the usability of the feature to search for items starting with an "A".*



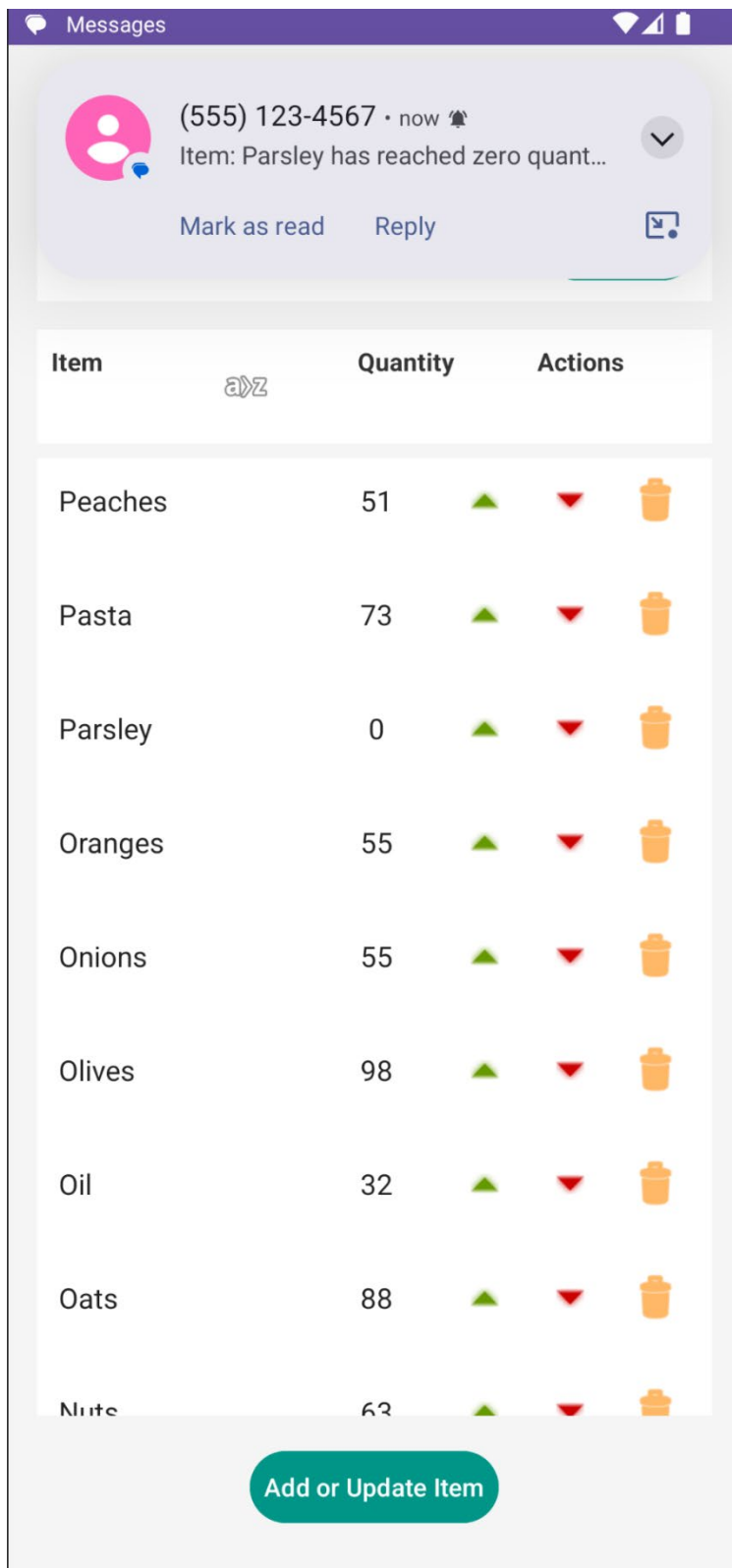
*The main inventory table has been sorted (descending) alphabetically using Heap Sort.*



*Upgrading the UI included the addition of cards for each item that is selected. This offers the user a convenient option for updating quantities.*

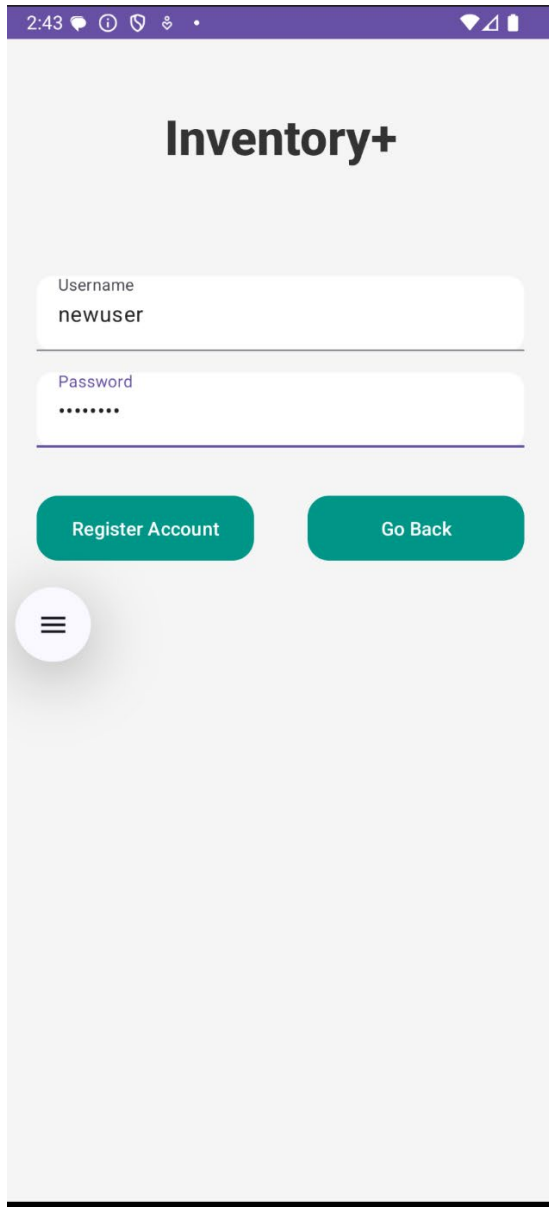


*After updating the quantity on the item card, this change is reflected back in the main table.*



*While this is not a new enhancement, SMS notifications still remain as part of the app's features.*

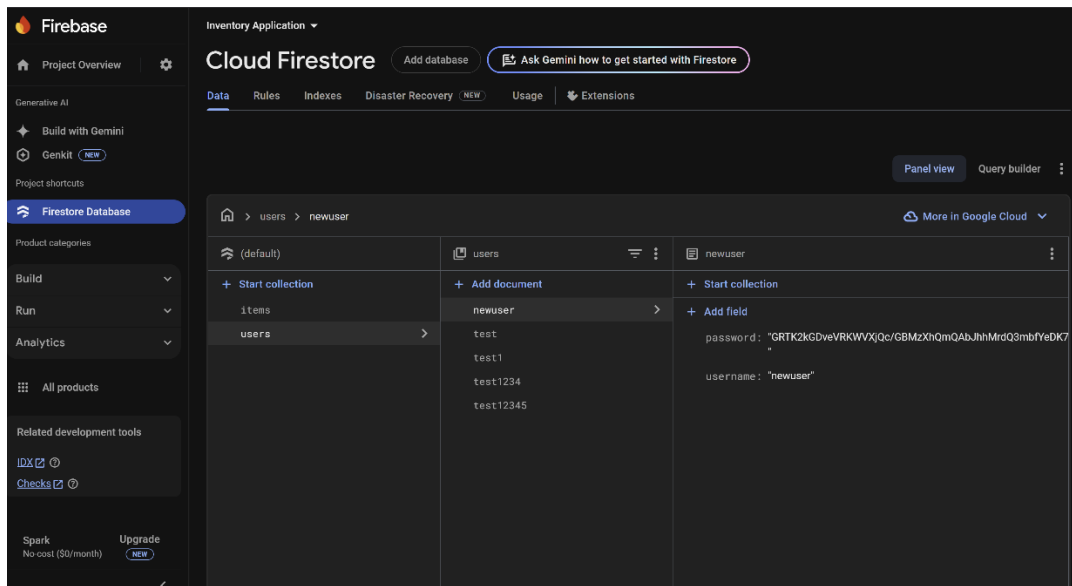
### Enhancement 3: Upgraded the database to use Firestore, a cloud-based NoSQL solution



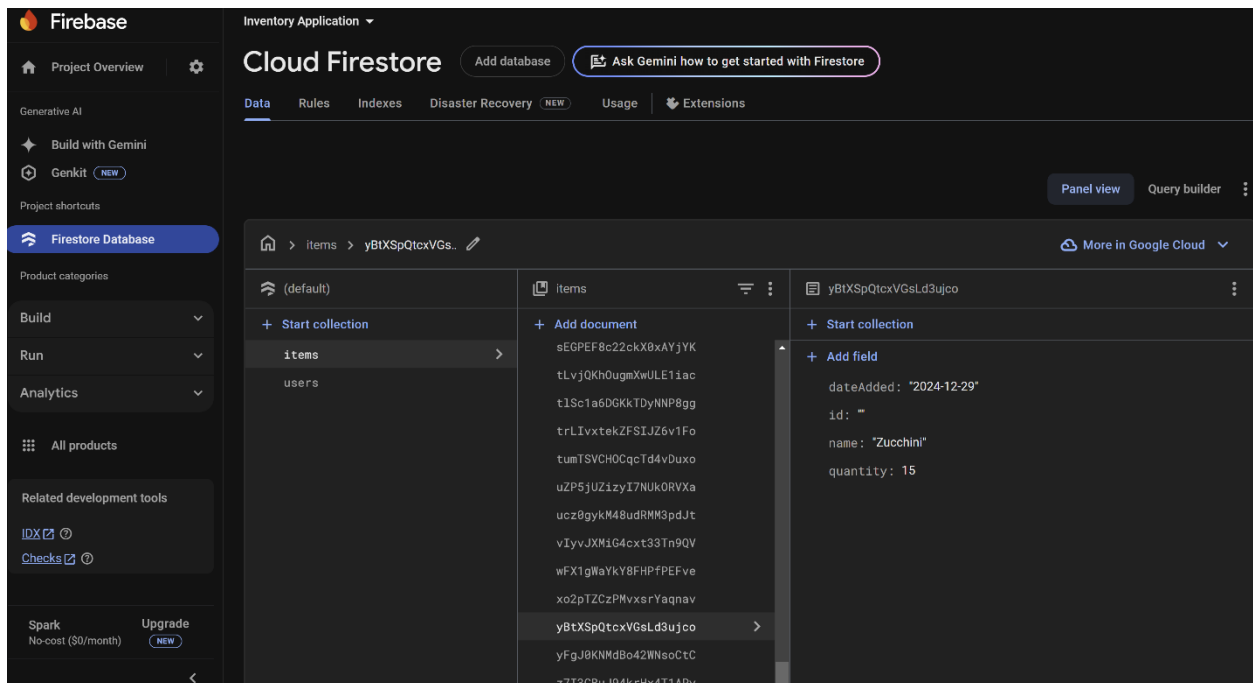
The screenshot shows a mobile application interface for 'Inventory+'. At the top, there is a status bar with the time 2:43 and various icons. The app title 'Inventory+' is displayed in a large, bold, black font. Below the title, there are two input fields: 'Username' with the text 'newuser' and 'Password' with masked characters '\*\*\*\*\*'. Both fields have a light gray border and a thin purple underline. Below the input fields, there are two teal-colored buttons with white text: 'Register Account' and 'Go Back'. To the left of these buttons, there is a circular menu icon with three horizontal lines. The background of the app is a light gray color.

*A new user account is registered.*





*Firestore reflects that the new user account has been added to the database.*



*The previously changed quantity for “Zucchini” is also reflected in the Firestore Database.*

2:49

Inventory+

Add/Update Item

Item Name

NEW ITEM TEST

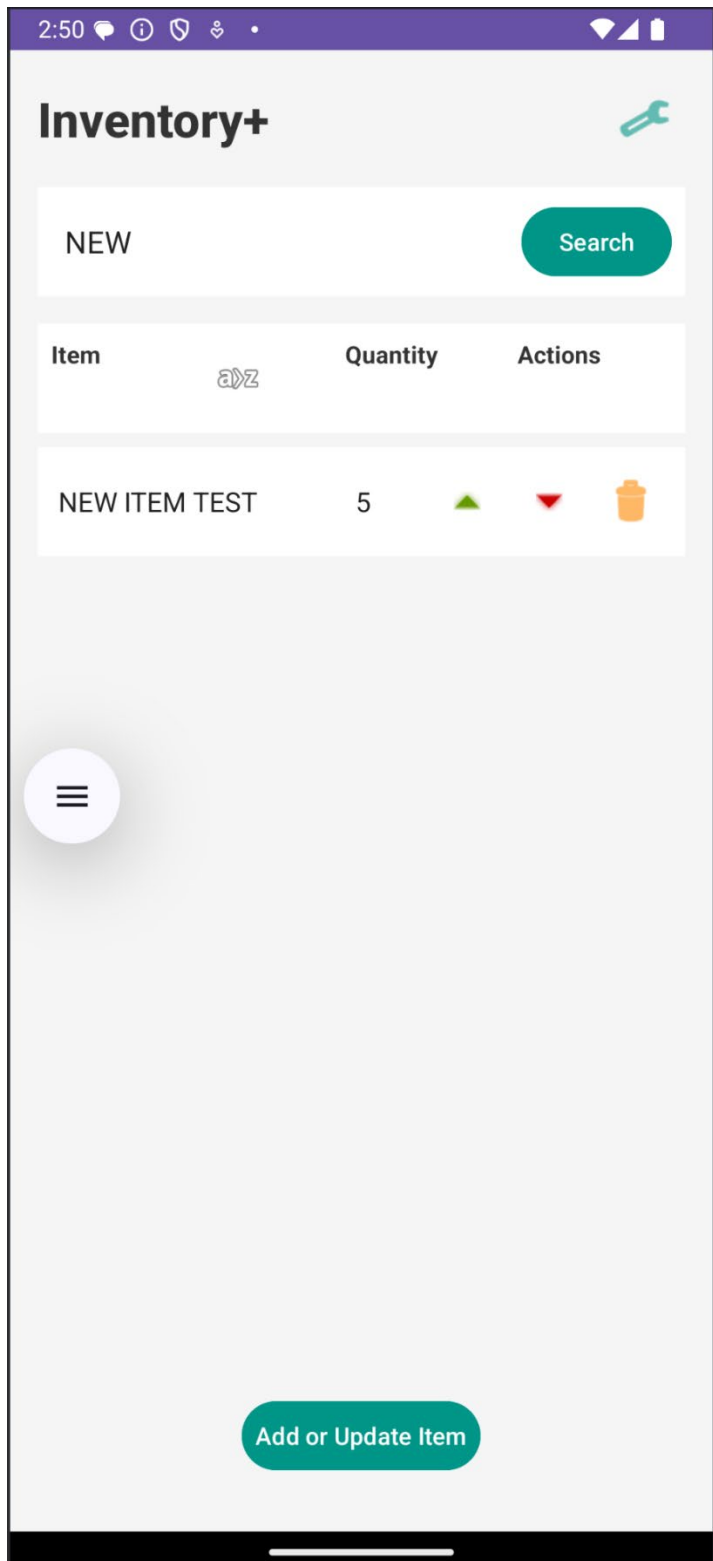
Quantity

5

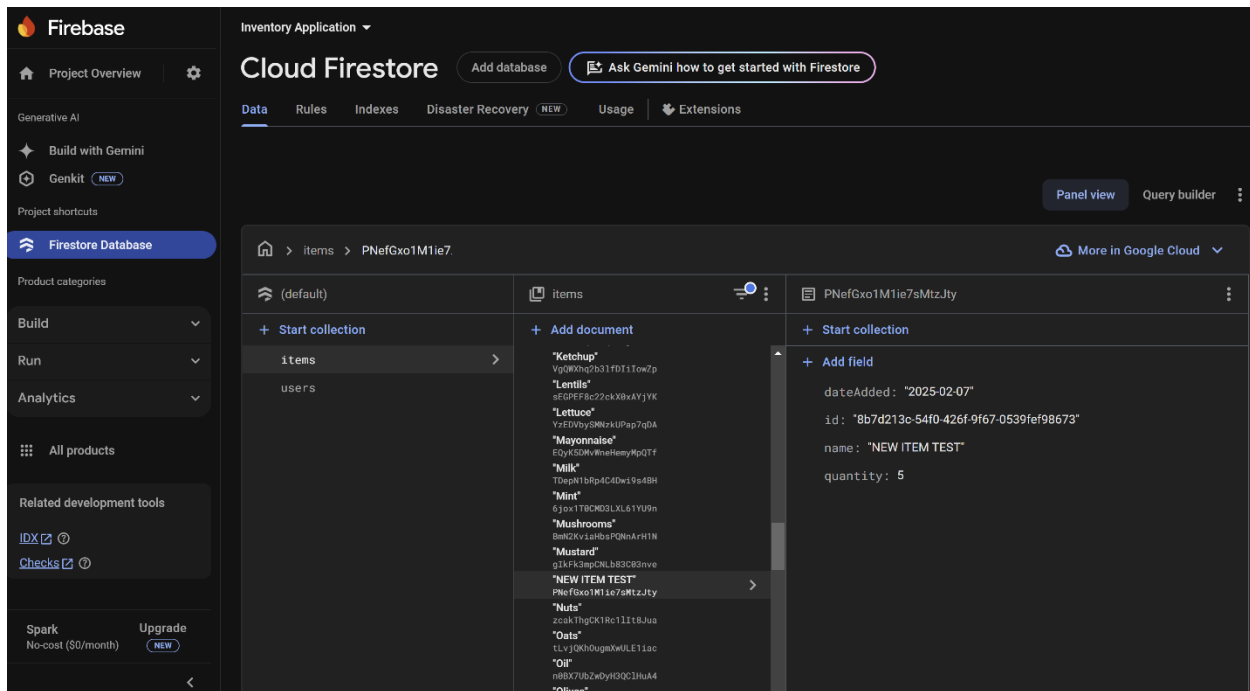
Save/Update Item

↩

*A new item is added to the inventory.*



*The new item is reflected in the inventory, also showcasing the search feature.*



*The newly added item also appears in the items collection of the cloud-based database.*