Project 3: Corner Grocer

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The program that I have designed is a menu driven app that will display information about a list of items depending on user needs. The program will read the file “CS210\_Project\_Three\_Input\_File.txt” and create a backup of the file as “Frequency.dat”. The data in the file will be read into a useful object called a map. This map allows for two items, a key and a value. I have used the item name as the key and the value to be the count that can be updated as the list of items in the file is traversed.

A screenshot of a computer program

AI-generated content may be incorrect.

The user will then be presented with a menu containing four options. These options include searching counts for specific items, getting a list of all items as a count, getting a list of all items as a histogram, and exiting the program. The user may select from the menu, and the application will ensure that the selection by the user contains valid data.

A computer code on a white background

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Option one calls a function to request user input of the item being searched for. It will provide an accurate count based on the data provided for the application.

A screenshot of a computer code

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Option two provides a count of all the items in the generated list.

A computer code with text

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Option three provides a count of all items in the generated list as a histogram display.

A screen shot of a computer code

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For cleanliness, the screen is cleared prior to executing an option and then results are then displayed on the screen. Each function will then wait for the user to complete reviewing the visual results and press any key to continue. Where they will be presented with the menu again to continue reviewing the data.

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The important functions are all stored in a class Grocer. This class contains a private value of the list of items. A class was created to allow for a more robust application wherein only the main function would need to be updated without affecting the display functions. For instance, if the file to be referenced changes, we would simply need to update that in the main() function without having to make any updates to the Grocer class. Keeping everything encapsulated ensures easier to read code and reduces the size of main().

A screenshot of a computer program

AI-generated content may be incorrect.

Building this application has allowed me to not only help with Corner Grocer’s request, but also improve my coding skills through research of new object types like “map”, and the creation of useful sub functions like anyKey() to help keep the screen uncluttered and easy to read. More functions were used in the development of this application, but the most important ones have been discussed in this document.