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7-3 Project submission

**Grocery Analyzer: Design and Functionality**

This document describes the design and functionality of a C++ program named 'Grocery Analyzer'. The program reads data from an input file, CS210\_Project\_Three\_Input\_File.txt, which contains a list of grocery items and their frequencies. The program provides users with four main options to interact with the data. These options include finding the frequency of a specific item, printing all item frequencies, printing a histogram of the frequencies, and exiting the program. The class also includes functionality to back up data to a file.

## Design and Functionality

The core of the program is encapsulated in a class named 'GroceryAnalyzer'. This class contains the following key components:

**Private Attributes**: The 'itemFrequencies' map stores grocery items and their associated frequencies. The private methods include 'ReadFile()', which reads data from the input file, and 'BackupFrequencies()', which creates a backup of the data in a file named 'frequency.dat'.

**Public Methods**: The class has methods that allow users to find the frequency of a specific item, print all items and their frequencies, print a histogram representing the frequency of each item, and display a main menu that interacts with the user.

**Menu Options:** The program provides a simple menu-based interface where users can choose an action by entering a number corresponding to their desired option.

## Screenshots

