Dan Pham

Professor Chan

CS 210

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Project Three: Corner Grocer

The code showcases my implementation of a menu-driven program in C++ that effectively manages item frequencies. The design of the code reflects my understanding of good programming practices and adherence to modular and organized code structure. The code consists of two main parts: main.cpp and frequency.dat.

In main.cpp, I begin by handling the opening of an input file, ensuring that it is successfully opened without any errors. I then proceed to initialize a map called itemFrequencies, which serves as a fundamental data structure for storing the frequencies of different items. Through reading items from the input file, I update and maintain their frequencies within the map. Following the completion of reading from the input file, I open an output file to write the item frequencies, providing a backup of the data. To enhance user experience and facilitate interaction, I have implemented a user-friendly menu system. The menu presents various options, including looking up the frequency of a specific item, printing all item frequencies, and generating a histogram for visualizing the frequencies. To ensure code modularity and ease of maintenance, I have implemented separate functions for each menu option.

The second part of the code, frequency.dat, functions as a standalone program that initializes the itemFrequencies map with predetermined item frequencies. It then writes these frequencies to an output file, which can later be utilized as an input file for the main program. This approach provides flexibility and customization in defining initial item frequencies. Throughout the code, I have made effective use of standard C++ library functions such as iostream, fstream, and map to handle input/output operations and manipulate data efficiently. This demonstrates my grasp of core C++ concepts and proficiency in leveraging the language's A screenshot of a computer program

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