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Project 3 Week 7

**This program defines a class called ItemTracker that tracks the frequency of items.**

• The ItemTracker class has a private member variable itemFrequencies, which is a map that stores the frequency of each item.

• The ItemTracker class has three member functions: getItemFrequency, printItemFrequencies, and printHistogram.

• The main function is responsible for interacting with the user through a menu-driven interface.

**Functionality**:

• The ItemTracker constructor reads an input file named "input.txt" and populates the I temFrequencies map with the frequency of each item.

• The constructor also creates a backup file named "frequency.dat" and writes the initial data (item frequencies) to it.

• The getItemFrequency function takes an item as input and returns its frequency. It performs a case-insensitive search by converting the input item to lowercase before looking it up in the itemFrequencies map.

• The printItemFrequencies function prints all the items and their frequencies in the itemFrequencies map.

• The printHistogram function prints a histogram representation of the item frequencies. It prints the item name followed by asterisks (\*) equal to the frequency of the item.

• The main function creates an instance of the ItemTracker class and presents a menu to the user.

• The user can choose options 1, 2, 3, or 4 from the menu.

• Option 1 allows the user to look up the frequency of a specific item by providing its name.

• Option 2 prints all the items and their frequencies.

• Option 3 prints a histogram representation of the item frequencies.

• Option 4 exits the program.

Overall, this program creates an ItemTracker class that reads item frequencies from an input file, allows the user to interactively query and display the frequencies, and provides a histogram representation of the frequencies.