**CS 210 Project Three: Corner Grocer**

Amelia Sivick

Southern New Hampshire University

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Professor Kutscher

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I have created a program, ItemTracker, designed to manage item purchase records from a text file. The program analyzes items and item quantities, searches for them, prints item frequencies (amounts), and generated histograms. The ItemTracker class manages items. The purpose is to call ‘LoadDataFromFile()’ to intialize the item tracker with the data when an ItemTracker object is created. The constructor (‘ItemTracker()’): loads the data and initialize the tracker. The destructor (‘~ItemTracker()’): will save all of the data to a backup file. The member functions as depicted in the attached image below, will open the input file, read each line and extracts item name and count, updates the data, and handles file reading errors. The class also calls

A screen shot of a computer program

Description automatically generated

The print functions included also allow for readable and clear output, for example:

A black screen with white text

Description automatically generated

As well as the print function correlating to the histograms, so output can appear like so:  
A screen shot of a computer screen

Description automatically generated

Included, is the option to search for frequencies of specific items:

A screenshot of a computer program

Description automatically generated

The ‘main()’ functions allow for the program to execute and display the below output:

A screenshot of a computer screen

Description automatically generated

The LoadDataFromFile opens the input files, reads names and amounts, and will populate the itemFrequency map. See code below:

A computer screen with colorful text

Description automatically generated

The SaveDataToFile takes contents of the itemFrequency map and writes them the the backup file. See code below:

A screen shot of a computer code

Description automatically generated

SearchItem will prompt the user to enter an item and will print the frequency so long that it exists in the map. The PrintItem functions prints all items and their frequencies stored in the map and can also print a historgram using asteruks to represent the amount of each item. See code below:

A screen shot of a computer program

Description automatically generated

The main function includes header files that include class definitions and finction prototypes. The ItemTracker class interacts with the item tracking functionalities. The menu loop displays the menu (as seen in the attached screenshots from earlier), and read the user’s menu choice. The switch statement allows the output to reflect which input the user decided to chose, i.e Case 1, Case 2, etc. This calls specific items to output. It was important to also include a default case, which handles invalid menu choices as well as a loop continiation and exit message. See the main function below:

A screen shot of a computer program

Description automatically generated