# Corner Grocer: Design & Functionality

This program analyzes grocery purchase logs to report item frequencies. It is implemented in C++ using a single class, ItemTracker, that encapsulates file I/O, parsing, normalization, counting with std::map, and report generation. The console UI presents a menu with four options: (1) query a single item's frequency, (2) print all item frequencies, (3) print a text histogram using asterisks, and (4) exit. On startup, the program loads data from CS210\_Project\_Three\_Input\_File.txt and immediately writes a backup file, frequency.dat.

Key design choices:

• Class with public/private sections (ItemTracker.h/.cpp).

• std::map<std::string,int> for deterministic ordering and simple lookups.

• Input normalization: lowercase and trim punctuation to avoid duplicates like “Apples” vs “apples”.

• Input validation for the menu accepts only 1–4 and recovers from bad input.

How to run (Codio / g++): g++ -std=c++17 -Iinclude src/\*.cpp -o CornerGrocer && ./CornerGrocer

How to run (Visual Studio): Create a Console App, add the provided .cpp/.h files, add 'include' to Additional Include Directories, and copy the data file to a 'data' folder next to the executable.

Screenshots: Insert screenshots of your console showing (a) Option 2 list output and (b) Option 3 histogram after you run the app on your machine.