PA1 Bonus - Software Development Method (to be commented into code):

1. specify the problem: The pet store data from a csv file type needs to be read into the data stream with a “progression” timeline, stored in vectors, and utilized for necessary calculations. Then the new data needs to be output to another file in a summary report, all the while, making use of functions for organization.
2. inputs: pet store data (column names, store names, pet names, pet types, days at store)

outputs: file reading progress (to console), pet store names, total count of pets, store with most pets, number of pets at that store, average days pets spend at stores combined, pet of the month choice

additional requirements: take an average of the days each pet spends at store, choose a randomized pet of the month, parse for number of pets at each store

1. algorithm design:

Open input/output files

* use only one function by passing fstream parameter in function definition

Read all pet store information into the main() function

* include output to console of progress made
* use reference variables
* use parallel vectors
* read data from csv file line-by-line

Track certain data for use/output later

* unique pet store names (store name vector)
* total # of pets in the file (increment a variable each time a loop iterates)
* pet store with most pets
* number of pets at store with most pets (increment each time vector matches store type)
* pet average days on site across all stores
* random pet of the month choice (choose number between 1 and number of pets)

Write all data to output file

* formulate in a summary report given at bottom of prompt

Close input/output files

1. implementation:
2. test/verify the completed program with provided input file
3. maintain/update program through incremental coding