**Programming Project Report**

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**Academic Integrity Statement:** I pledge that I have neither given nor received unauthorized help on this programming assignment.

**Problem Statement:**

The goal of this programming assignment was to give me more experiences in reading and writing text files and storing and processing information in vectors of objects. The program's inputs are read in from two different files one is big\_houses.txt and the other one is small\_houses.txt. The inputs will be stored in a vector with the same format as well.

The output of this program will be to display the information onto a separate csv file where the data will be separated in by commas. The error handling of this program was to make sure no unnecessary information such as extra strings or spaces would be transferred into the output file.

**Design:**

The design of this program was to first create a vector to store the address objects into it. A readFile() function will be created in order to read in the file and based on the inputs the function will trim unnecessary information. The program will read house number, house address, city, state, zip code, asking price, number of bedrooms, number of bathrooms, square footage of the house, and the acre lot size.

Once the program reads the file and stores all the RealEstate objects,the vector’s objects will have the data stored in the same order that it appears in the input file. a while loop will be implemented into the vector to produce an output file in CSV format. The output file should have all the information separated by commas with no spaces, with a comma at the end of every object's information.

**Implementation:**

The program was split into three files: main.cpp, realEstate.h, realEstate.cpp.. I began by implementing a skeleton for the object class in this case it is the address information in the RealEstate class. The way the file input information will be in correct format will be to send the specific variables into a trim() function, this way unnecessary commas and strings will be removed.

Once the methods have been implemented, I created a menu interface where the user can select to read the big\_houses.txt file or the small\_houses.txt file, and after selecting an option the address information is also outputted into a CSV file. The development timeline of this project was around five days

**Testing:**

The way I tested my program was to have an output every time my variable changed, this way debugging my code could become easier. In the end this has helped me because without it I would have never figured out how to get the information form the input back onto the CSV file. Everything was working as expected, the read and write methods are all in the same function because the vector that has the information stored was having a hard time passing the information back on the write file, so I decided to implement both functions together and have the user menu call the houses\_big.txt and the houses\_small.txt.

**Sample Input/Output:**

Welcome to the Bonus Project!!!

<><><><><><><><><><><><><><><><><><><>

1. read and write for big houses

2. read and write for small houses

3. To exit the program

Selection: 1

The number of properties stored in the small house vector is: 253

Welcome to the Bonus Project!!!

<><><><><><><><><><><><><><><><><><><>

1. read and write for big houses

2. read and write for small houses

3. To exit the program

Selection: 2

The number of properties stored in the small house vector is: 42

Welcome to the Bonus Project!!!

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1. read and write for big houses

2. read and write for small houses

3. To exit the program

Selection: 3

Thank you for using the real estate bonus Project!

**Sample from CSV file:**

2174,Riverfront Ln,Fayetteville,AR,72703,815000,4,3,4285,1,

1009,S Happy Hollow Rd,Fayetteville,AR,72701,324900,3,1,874,0.31,

1415,W Mount Comfort Rd,Fayetteville,AR,72703,350000,3,1.5,1444,0.47,

792,W Foothills Dr,Fayetteville,AR,72701,389000,5,2.5,2562,0.29,

833,E Birwin Dr,Fayetteville,AR,72703,389000,3,2.5,1917,0.21,

**Conclusions:**

The result of this assignment was a success, I have managed to successfully read a file and have outputted the information as well as adding the data into a vector. What I would do differently next time would be to start off by reading a small file of the same information. That way debugging the code would be easier since I will not have to be looking at 1000 lines to figure out a problem.