rentasst.cpp Design

Program details: This is a program designed for renters, and landlords and its main functions revolve around rental properties. The program greets the user with an initial question for importing data before starting, then the user is shown a menu in which they can choose whatever operation they like. The user has tools that are useful for both renters and landlords through features like the rent increase checker to see if a rent increase is allowed in regards to laws protecting tenants. Other features include calculating fair rental prices based on the market value of property. Lastly there is a resources option that provides resources for either the tenant or the landlord which is printed out on an output file for them to "take" with them.

1. Property class definition/declaration
    a. Default constructor
    b. Two parameter constructor Param: Address, Market Value(value)
    c. get accessor functions for: Address, Market Value(value)
    d. set mutator function for: Address, Market Value(value)
    e. A print function to print: Address, Market Value(value)
    f. A read function that reads in new values for: Address, Market Value(value)
    g. Second read function to load info from file stream
    h. Write function to write info to the file stream
    i. Private data members for: Address and Value(market value)

2. Public member functions definitions for: constructors, accessor, mutators
    a. Accessor functions return a data member variable value
    b. Mutators read into data member variables
    c. Print function uses setw to format output of data member variables
    d. Read function asks for input for data member variables using getline and cin
    e. Second read function uses input file stream class along with getline
    f. Write function uses output file stream class and setprecision along with fixed number mutators to output info

3. Non-member function prototypes for:
    a. listProperties function to display property list using a for loop and print function
    b. addProperty function to add a property to list using read function and push_back
    c. deleteProperty function to delete a property using for loops and pop_back
    d. changeValue function to change a property's market value using cin and .at
    e. rentIncreaseChecker function checks if the increase in rent is legal
    f. rentPriceCalc function calculates the a fair rental price based on market value of property.
    g. loadProperties function loads property data from input file into a vector of Property objects using 2nd read function, if statement for test, and while loop to load vector

h. saveData function writes property data to output file using write function, if statement for fail test, and for loop to write into file
i. writeResources function writes properties and helpful resources onto a different output file using if statement for output file stream test, and setw, as well as for loop to output in correct format.

4. Main Function
   a. Create a vector of Property objects
   b. Asks user to either import property data from file or input data manually
   c. Use addProperty function to add data to vector of Property objects
   d. Use a while loop to create a menu system with 6 choices, using if statements
      i. Choice 0 exits program
      ii. Choice 1 calls listProperty function
      iii. Choice 2 calls addProperty function
      iv. Choice 3 calls deleteProperty function
      v. Choice 4 calls changeValue function
      vi. Choice 5 calls rentIncreaseChecker function
      vii. Choice 6 calls rentPriceCalc function
      viii. Choice 7 calls loadResources and writeResources functions
   e. If 0 is selected above then while loop test returns false so it quits out
   f. saveData function calls last to save current property list onto output/input file
5. Non-member functions definitions at bottom
6. End of program