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Final Project

For my final project I decided to make an address book that is set up kind of like a car GPS. What I mean by that is it sorts the locations by type; Business, Residential, or Restaurant. In fact this is the first thing read in by the file. The file includes type of location (Business, Residential, or Restaurant), name of the location and lastly the address. The program reads in the entire file separated by semicolons into an array. After that a for loop and several if statements decide which binary search tree to add it to, one tree for each type of location. In the location class it gets the numerical value of the name and sorts the binary tree accordingly. There is then an option presented to the user to search for a location.

The other option given to the user is to open the favorites list. Here the user has the option to print the favorites, add a favorite and delete a favorite. The favorites list is a double linked list. It has a class called Fav. When adding a new node to the list it searches the appropriate tree and get the name and address from that location and adds it to favorite. Adding an address does not remove the node from the tree. At no point can the user remove a location from any of the trees.

So in total we have three classes (Fav, Location and a tree class), at least 4 Data structures (3 trees, array, and a double linked list). The program reads in from a file to put the locations in the tree. An example line of the file is something like Business;Apple;123 Infinity Loop. Lastly I have the operations counter that is in the main function and in the tree class.