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Question 2, Lab 3

CS 162

### **Design**

For this program, I will design a struct with 2 variables. One for the name of the person by a string, and one for the room number, which is an integer.

Down in the main function, I will have 4 loops, 2 while loops and 2 for loops to run the program. The first for loop is nested in the first while loop, and the second for loop nested in the 2nd while loop. The first while loop is mainly just for inputting, and the for loop inside of that is the actual cin and cout statements asking for inputs. I will have a vector set up to take in information in the for loop of name and room numbers.

After the name and room numbers are stored in the vector, I will have another for loop to display the list of occupants in the building. The next while loop will be to begin deleting names. The for loop inside this while loop will be using an erase function from vectors. Users will be prompted to type in a name that matches with the list of occupants. If the name entered matches, then a conditional statement will set the erase function according to the name entered, and the name will be deleted from the list. The while loop will ask if user wants to keep deleting names. When this loop exits via conditional statement, Another loop will display an updated list of names after the deletion

### **Testing**

Testing this was simple as there are only two variables to enter. After entering a set of data, the list is then displayed and to test the deletion portion, I simply typed in the names I wanted to delete. The delete works as intended. It deletes not only the name, but the room number as well because since the name and room number are stored on the same vector, entering just the name is enough for the erase function to get rid of that spot in the vector

### **Reflection**

This program was similar to question 1 except I used a struct and it had much less variables. The hard part was finding a way to work the erasing function of vectors into my program. It took a great deal of hours to find a way that worked for me, but eventually after scouring cplusplus.com I was able to come up with a way to utilize this function.