Name: Rafael Wang
USC Student ID: 6189106477
Email: rafaelwa@usc.edu

Name: Anthony Chandra
USC Student ID: 1245854914
Email: ac68801@usc.edu

Name: Xinsong Fan
USC Student ID: 7072371273
Email: fanr@usc.edu

Program Summary: In this program, we created a Network that allows the user to import .txt files, add their own users, delete users, search users, and write the network information to a .txt output file. To accomplish this, we created and used multiple source files, including Date, Contact, Person, Network, and Misc.

C++ version: C++11

Explanation:
In terms of structure, Contact has Email and Phone as derived classes of Contact and various methods that we use. Date also maintains the day, month and year as attributes and has various methods such as getters and a printing function. Person maintains all the information of each individual as attributes and has methods for setting, printing and comparing. Network maintains a doubly linked list as a network, and has important methods such as loading and saving files, as well as searching, removing and pushing to front or back.

References:
One reference we used was https://en.cppreference.com/w/cpp/utility/program/system. This was primarily for the Network.cpp file where we had to display each of the available .txt files in the directory, so I used the system() function to use Unix commands. We also were not too sure how Regex syntax was used specifically in C++, so we also referenced https://en.cppreference.com/w/cpp/regex for that part too.

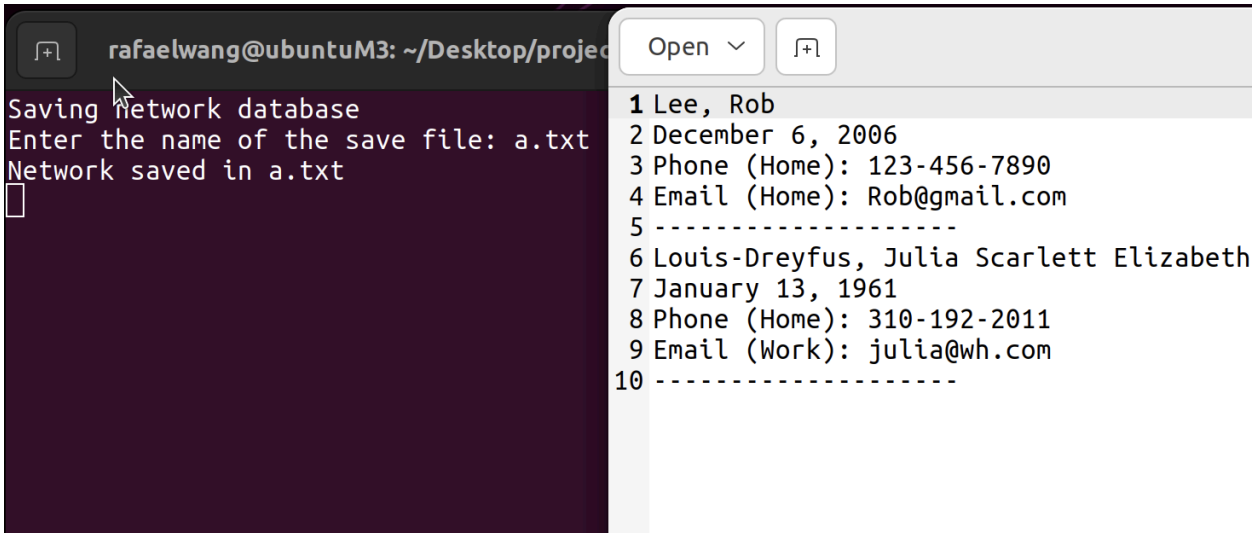
Instructions:
To run this, first ensure all files are in the same directory. Then, based on what the main program is (assuming here it's test_network.cpp), then we run in terminal after locating the correct directory:

g++ -std=c++11 test_network.cpp network.cpp person.cpp contact.cpp date.cpp misc.cpp

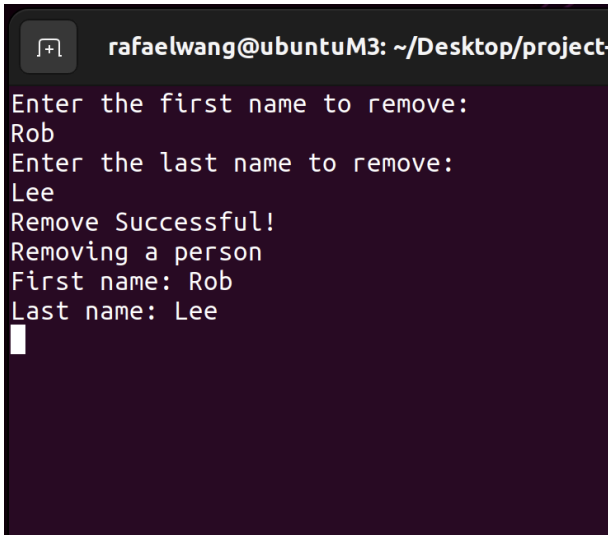
./a.out

This will bring up the menu and the user can choose which option to select.

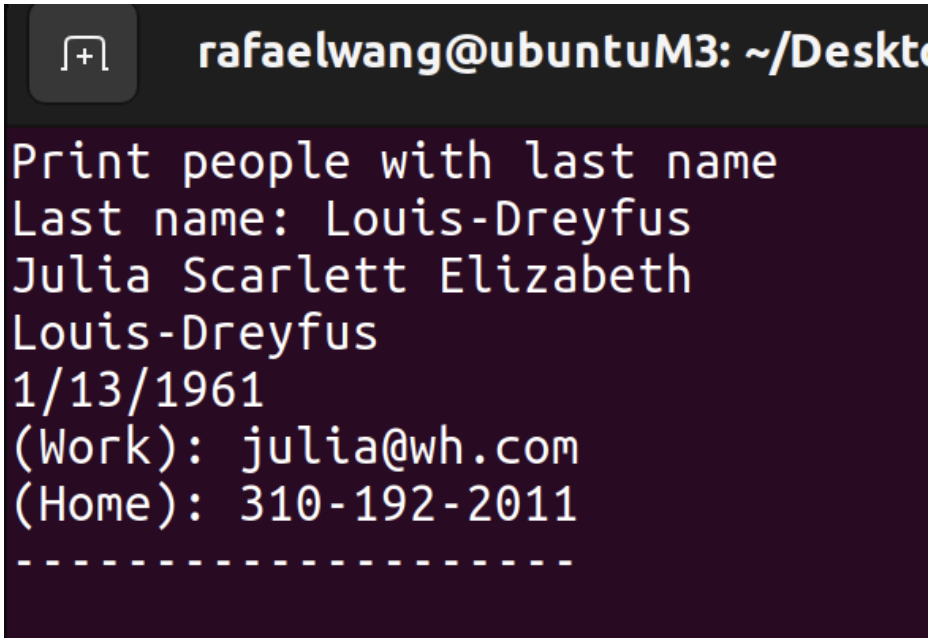
Test cases and results:
One test case we tried is first loading the input person_template.txt file then adding a person, and then saving it to a txt file, which is shown below.



Below shows us using the remove function to remove a person in the network.



Lastly, here is a test case printing people with a last name:


rafaelwang@ubuntuM3: ~/Deskt
Print people with last name
Last name: Louis-Dreyfus
Julia Scarlett Elizabeth
Louis-Dreyfus
1/13/1961
(Work): julia@wh.com
(Home): 310-192-2011
