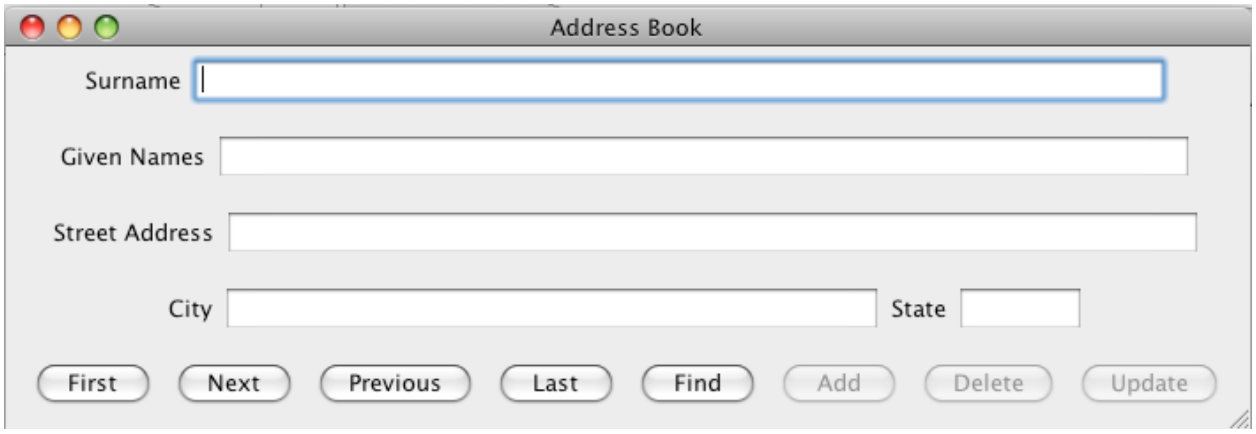
Lab 3 COSC 20203 Spring 2023
Due: Thursday, 13 April

Write a Java program to access entries in an address book. The user interface looks like this:



The program starts by displaying a FileDialog for the user to select the address book file and then another FileDialog to select the index file.

The "Find" button should find and display the entry matching the surname and given names. If it does not exist, the entry that is alphabetically next should be displayed. If it comes after the last entry, display the last entry. If it comes before the first entry, display the first entry.

You will be given two files:

- addressbook.dat —contains entries in which the five fields have been written using the writeUTF() method.
- index.dat — contains entries written using the writeLong() method. That value is the offset in the addressbook.dat file where the corresponding entry starts. Successive entries in this file provide alphabetical access to the address book entries.

Note:

- You must write a recursive binary search using the index and address book files.
- As in previous assignments, you will be given code for the GUI. You may add variables and methods but do not change the code that you are given.
- The two files that you will be given are merely an example. I may use files that are much larger. Thus, using a linear search or reading everything into memory is not acceptable.

Extra Credit: Enable one or more of the disabled buttons and add code to implement that feature.