CSE 2017 Data Structure
Project#1, Fall 2022

Everyone might have a friend who never forgets important dates in the lives of his or her friends. Let's write a program to

1. read your address book to a list;
2. update the list from the keyboard;
3. write the current list into an output file;
4. when a month is given, display the names and phone numbers of all the people who have birthdays within the given month, so you can make phone calls to your friends.

INPUT

1. Prompt the user for the name of a file (address book) containing a list of names, phone numbers and birth dates. Entries in this file are in the form

> John Arbuthnot
> (493) 384-2938
> 01/21/1970

> Mary Smith
> (123) 123-4567
> 10/05/1960

> Jeff Taylor
> (493) 385-2966
> 01/12/1966

2. Prompt the user for an update (adding or removing an entry).
3. Prompt the user for the name of an output file for writing the list.
4. Prompt the user for selected month to be displayed.

OUTPUT

1. After reading the file or an update, a statistical summary is displayed with the following information:
   - Total number of entries in the list
   - Number of birthdays in each of 12 months
2. When the name of an output file is given, the current list is written into the file.
3. For a selected month, a list of the names and phone numbers of any friends whose birthdays are within the month is displayed.

A sample run of the program (user input bold):

Commands:

     R: read from a file

     +: add a new entry

     -: remove an entry

     W: write to a file

     M: select a month

     Q: quit the program

     R

     Enter the name of the file: **FriendFile**

     Total number of entries in the list: 3

     Number of birthdays in

          January: 2

          October: 1

Commands:

     R: read the name of a file

     +: add a new entry

     -: remove an entry

     W: write to a file

     M: select a month

     Q: quit the program

     M

     Enter the selected month: **January**

     Total number of birthdays in January: 2

     John Arbuthnot

     (493) 384-2938

     01/21/1970

     Jeff Taylor

     (493) 385-2966

     01/12/1966

Commands:

     R: read the name of a file

     +: add a new entry

     -: remove an entry

     W: write to a file

     M: select a month

     Q: quit the program

     +

     Add an entry:

     Name: **Amy Benson**

     Phone: **(312) 567-6789**

     Birthday: **02/14/1980**

     Total number of entries in the list: 4

Number of birthdays in

        January: 2

        February: 1

        October: 1

Commands:

    R: read the name of a file

    +: add a new entry

    -: remove an entry

    W: write to a file

    M: select a month

    Q: quit the program

    -

    Remove an entry:

    Name: **John Arbuthnot**

    Total number of entries in the list: 3

    Number of birthdays in

        January: 1

        February: 1

        October: 1

Commands:

    R: read the name of a file

    +: add a new entry

    -: remove an entry

    W: write to a file

    M: select a month

    Q: quit the program

    W

    Enter the name of the file: **FriendFileUpdate**

    The list is written into FriendFileUpdate

Commands:

    R: read the name of a file

    +: add a new entry

    -: remove an entry

    W: write to a file

    M: select a month

    Q: quit the program

    Q