

Option [A]: add a contact to the address book

When option A is selected from the main menu, the user should be prompted for all the fields one by one. If the user does not want to provide a value for the field, he/she should be able to press enter (without providing any content) and be prompted for the next field. If the user provides no email address when prompted for the first email address, he/she should not be asked for the second email address. The same applies for first and second telephone number. After creating the contact, a `-----` of the contact should be displayed followed by the display of the *main menu*.

```
----- DETAILED VIEW -----  
Last Name:      Ligorio  
First Name:     Tiziana  
Nickname:  
Email 1:        tligorio@hunter.cuny.edu  
Email 2:  
Phone 1:  
Phone 2:  
Address:        695 Park Ave, New York, NY, 10065  
Website:        www.hunter.cuny.edu/csci  
Birthday:  
Notes:          CSci 135 Professor  
-----
```

If the user does not provide one of the first four fields, or if a field is invalid (*see Data validation below*) instead of asking for more data, an *error message* should warn that the entry is invalid and that the contact was not created. The main menu should then be displayed.

```
----- ERROR -----  
Invalid entry: the contact could not be created.  
Please try again providing at least one of the following:  
Last Name  
First Name  
Nickname  
Email  
-----
```

Project 3: Address Book

Due: Wednesday May 16, 11:59 PM EST

Program description:

You will develop a program for an **address book**. A single entry in an address book is called a **contact**, which can have any of the following fields:

- | | | | |
|---------------|--------------|-------------|------------|
| 1. First name | 2. Last name | 3. Nickname | 4. Email 1 |
| 5. Email 2 | 6. Phone 1 | 7. Phone 2 | 8. Address |
| 9. Website | 10. Birthday | 11. Notes | |

A contact **MUST HAVE AT LEAST** one of the first four fields to be considered a valid entry. E.g., a phone number by itself is not a valid entry, but an email address by itself is a valid entry.

The address book is a list of contacts. The user should be able to perform the following operations on an address book:

- Add a contact.
- Display all contacts sorted by a chosen field.
- Display details of a single contact
- Remove a contact.
- Find all contacts matching a keyword in a given field.
- Modify a contact. (*Extra credit*)
- Export the address book to csv format file (the user provides the file name). (*Extra credit*)
- Exit the program.

When the program is executed, it takes a single command-line argument: the name of the input file from which it reads an address book. When the program terminates (i.e., the user selects the exit option), all the modifications made to the address book are saved to the same file from which it was created. The input file is in csv format (described below).

User Interface:

This program has a menu interface. The `main` function displays the list of options available to the user:

```
----- MAIN MENU -----
[A] add a contact to the address book
[D] display all contacts sorted by ...
[C] display details of contact ...
[R] remove contact
[F] find contacts matching ...
[M] modify contact
[E] export to csv format
[Q] quit the program
-----
```