

Phonebook project

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This is the phonebook interactive interface where you have seven options to choose from.

```
###PHONE BOOK###  
  
please choose a process from below  
  (1) Add a contact  
  (2) Search for a contact  
  (3) Modify a contact  
  (4) Delete a contact  
  (5) sort and print the phonebook  
  (6) Save changes  
  (7) Quit
```

- **Menu**

-User manual:

1-Add:

This function allows you to add additional contacts to your phonebook. **[sample run in next page]**

```
1
please fill the following details:
Last Name: Muhammed

First Name: Mazen

Date of birth:-
  Day: 24

  Month: 7

  Year: 2001

Address: adib maakd st. - elsyouf shamaa

Phone Number: 01067218362

E-mail: mezomohamed888@gmail.com

contact added successfully!
```

2-Search for a contact:

This function allows you to look for a specific contact within your data base according to his last name and prints all contacts with that last name.

2

Enter The Last Name of the Contact you are looking for: simpson

The Information of the last name you have searched for as following :

The First Name is : Bethany

The Date of Birth is : 1 - 11 - 1982

The Address is : 11 greenway plaza houston tx

The Phone Number is : 01255987895

The Email is : bsimpson@gmail.com

The Information of the last name you have searched for as following :

The First Name is : Philippe

The Date of Birth is : 10 - 10 - 1981

The Address is : 33 hudson street jersey city

The Phone Number is : 01248488895

The Email is : psimpson@gmail.com

ILLUSTRATION BOOKS

3-Modify:

This function allows you to modify certain information of a certain contact.

```
3
Please enter required last name for modification: muhammed
Do you want to modify first name? (Y/N)n
Do you want to modify last name? (Y/N)n
Do you want to modify date of birth? (Y/N)y
New date of birth: 24-5-2000
Do you want to modify address? (Y/N)n
Do you want to modify email? (Y/N)y
New email: msptjz@hotmail.com
Do you want to modify phone number? (Y/N)y
New phone number: 01227286801
```

4-Delete a contact:

This function allows you to delete a certain contact from your data base

```
4
Enter the last name :
muhammed
Enter the first name :
mazen
    contact deleted successfully
```

.

5-Sort and print the phone book:

This function sorts the contacts according to either last name or date of birth, then prints the entire list of contacts sorted according to your choice.

```
5
Enter (1) to sort by lastname or (2) to sort by date of birth
2
###Phone book sorted##
Simpson,Philippe,10 - 10 - 1981,33 hudson street jersey city,01248488895,psimpson@gmail.com
Vindahl,Thomas,1 - 10 - 1982,362 11th street brooklyn,01208877955,tvindahl@gmail.com
Simpson,Bethany,1 - 11 - 1982,11 greenway plaza houston tx,01255987895,bsimpson@gmail.com
Graves,Steve,1 - 12 - 1982,47 newbury st peabody ma,3046646454,sgraves@yahoo.com
Graves,Daniel,2 - 12 - 1982,48 washington ave chelsea ma,303554564,dgraves@outlook.com
Cook,Bethany,3 - 10 - 1983,13 texas street jersey city,30345566,bcook@hotmail.com
Jason,Michael,10 - 3 - 1984,21 Drydock Ave #410,0100050506,jmichael@icloud.com
Jason,Mark,10 - 4 - 1988,23 sip Ave #410w,01232165564,mjason@gmail.com
Adam,Mark,12 - 10 - 1990,48 washington ave chelsea ma,01231213588,mark.adam@icloud.com
Brian,Mark,10 - 12 - 1990,160 W Addison St.,01565465468,mcanfield@icloud.com
```

```
5
Enter (1) to sort by lastname or (2) to sort by date of birth
1
###Phone book sorted##
Adam,Mark,12 - 10 - 1990,48 washington ave chelsea ma,01231213588,mark.adam@icloud.com
Brian,Mark,10 - 12 - 1990,160 W Addison St.,01565465468,mcanfield@icloud.com
Cook,Bethany,3 - 10 - 1983,13 texas street jersey city,30345566,bcook@hotmail.com
Graves,Steve,1 - 12 - 1982,47 newbury st peabody ma,3046646454,sgraves@yahoo.com
Graves,Daniel,2 - 12 - 1982,48 washington ave chelsea ma,303554564,dgraves@outlook.com
Jason,Michael,10 - 3 - 1984,21 Drydock Ave #410,0100050506,jmichael@icloud.com
Jason,Mark,10 - 4 - 1988,23 sip Ave #410w,01232165564,mjason@gmail.com
Simpson,Bethany,1 - 11 - 1982,11 greenway plaza houston tx,01255987895,bsimpson@gmail.com
Simpson,Philippe,10 - 10 - 1981,33 hudson street jersey city,01248488895,psimpson@gmail.com
Vindahl,Thomas,1 - 10 - 1982,362 11th street brooklyn,01208877955,tvindahl@gmail.com
```

6-Save changes:

This function saves any changes done by the user.

```
6  
your changes are saved successfully
```

7-Quit:

This function closes the program and terminates any unsaved changes.

```
7  
All your unsaved changes will be discarded. If sure press (1), To return to phonebook press (0)
```


• **Algorithms used.**

1. **Search**

Linear search have been used in the program to find whether a given number in an array and if it is present at any location it occurs. It is also known as sequential search. It is straightforward and works as follows: We keep on comparing each element to the element until it is found or the list ends.

2. **Sort**

Bubble sort is used to sort the phone book from the smallest to the greatest. It makes the phone book act like a bubble as by every iteration there is a contact that rises up like a bubble. It compares between each two contacts either by lastname or date of birth, then if the first contact is greater than the next contact it swaps the two contacts and it is repeated until all contacts are sorted.