

# TELEPHONE BOOK PROJECT

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# Telephone Book

## **1-Introduction:**

The program main purpose is to create and maintain a phone directory. Each entry of the directory includes the name – first and last, birth date, the address, phone number, and email. The user will have a menu eight option (**Load, Search, Add, Delete, Modify, print, Save and Exit**) to choose between them.

## **2-Discussion:**

### **2.1 Description of work:**

When the user runs the program, a menu with will be opened with these options:

#### ***-Load***

It reads in a file name and loads the phone directory from this file. The file is a text file that is comma delimited in which each entry is found on a separate line. Each entry must contain the first name, last name, date of birth, address, phone number and email.

#### ***-Search***

In this function the system should process a request by the user to look up information about the last name. The user must supply the person's last name, and the system should provide the first name, address, email and phone number for all users of that last name.

#### ***-Add***

In this function the system should prompt the user field by field for the data of a single record and add it to the directory. The data must contain the first name, last name, date of birth, address, phone number and email respectively.

### ***-Delete***

The user should be prompted for the name – last and confirm the contact number to be deleted then all records associated with that name should be deleted from the directory.

### ***-Modify***

The user should be prompted for a last name. Then the user should be prompted field by field to modify the information for one of the records (selected by user) that have that last name.

### ***-Print (sort)***

It Prints the entire directory, in sorted order. It prompts the user to choose if sort should be done based on either last name or Date of Birth.

### ***-Save***

It Saves the directory by writing it out to an external file in a format similar to that explained in the Load command as.

### ***-Exit***

without saving the directory in the external file it displays a warning to the user about all of his/her changes will be discarded.

## **2.2 user manual**

### ***-Load***

In load function the user enter the file name (e.g.phonebook.txt) if it was loaded successfully a message **(Load is Done)** will appear to the user as shown in fig1, otherwise the user will be asked to re-check the file name and try again.

### ***-Search***

In search function the user enters the contact's last name then the program provides the contact's information (the first name, last name, address, email and phone number for all users of that last name) as shown in fig1.

```

Phonebook
Operations:
1-Load
2-Search
3-Add
4-Delete
5-Modify
6-Print
7-Save
8-Exit
Enter number of operation:
1
Please enter file name in format filename.txt: Phonebook.txt
**Load is Done**

Operations:
1-Load
2-Search
3-Add
4-Delete
5-Modify
6-Print
7-Save
8-Exit
Enter number of operation:
2
Enter the last name: Thomas

** Found contacts:- **
*First name: Vindahl
Last name: Thomas
Date of birth: 1-10-1982
Address: 362 11th street brooklyn
phone number: 01208877955
E-mail: tvindahl@gmail.com

```

fig1

### ***-Add***

In Add function the user will be asked to enter the contact's first name, last name, date of birth, address, phone number and email respectively and then a new contact will be added to the file as shown in fig2.

### ***-Delete***

In Delete function the user will enter the last name of the contact then he will enter the contact number to complete the delete process as shown in fig2.

```

Enter number of operation:
3
Enter the first name: Ahmed
Enter the last name: test
Enter the Date Of Birth (day month year): 20 1 2000
Enter the address: 12 alex
Enter the phone number: 01022344556
Enter the email : test@gmail.com
**Add is done successfully!**

Operations:
1-Load
2-Search
3-Add
4-Delete
5-Modify
6-Print
7-Save
8-Exit
Enter number of operation:
4
Enter the last name: test

Found contacts :-
Contact number 10
First name: Ahmed
Last name: test
Date of birth: 20-1-2000
Address: 12 alex
phone number: 01022344556
E-mail: test@gmail.com

Please a Enter valid Contact number: 10

**Delete complete!**

```

fig2

## ***-Modify***

In Modify function the user will enter the contact's last name then enter the contact number to insure it is the right contact and then re-enter the data as shown in fig3.

## ***-Print (sort)***

In Print function the user could sort the contacts by last name or by date of birth then the contacts will be printed ascendingly as shown in fig3.

```
Enter number of operation:
5
Enter the last name: Thomas

**Found contacts :-
Contact number 0
First name: Vindahl
Last name: Thomas
Date of birth: 1-10-1982
Address: 362 11th street brooklyn
phone number: 01208877955
E-mail: tvindahl@gmail.com

Please a Enter valid Contact number: 0
Please re-enter the data
Enter the first name: Vindahl
Enter the last name: Thomas
Enter the Date Of Birth (day month year): 1 12 1988
Enter the address: 362 12th street brooklyn
Enter the phone number: 01208877955
Enter the email : tvindahl@gmail.com

**Modification complete!**

Operations:
1-Load
2-Search
3-Add
4-Delete
5-Modify
6-Print
7-Save
8-Exit
Enter number of operation:
6
1/Sort by last name
2/Sort by date of birth
Enter your choice: 2
Simpson, Philippe, 10-10-1981, 33 hudson street jersey city, 01248488895, psimpson@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
Vindahl, Thomas, 1-12-1988, 362 12th street brooklyn, 01208877955, tvindahl@gmail.com
Adam, Mark, 12-10-1990, 48 washington ave chelsea ma, 01231213588, mark.adam@icloud.com
```

fig3

## ***-Save***

In save function the user will be asked to enter the file name in which data will be saved and then his work will be saved successfully as shown in fig4.

## ***-Exit***

In Exit function the user will be asked if he is sure that he wants to exit and will have two option (yes or no) if he chose yes, the program will exit as shown in fig4 and if he chose no, the menu will appear again to let him choose the save operation or another operation.

```

Operations:
1-Load
2-Search
3-Add
4-Delete
5-Modify
6-Print
7-Save
8-Exit
Enter number of operation:
7
Please enter a file name in which data will be saved e.g(filename.txt): Phonebook.txt
Saving...
**Your work has been saved!**
Operations:
1-Load
2-Search
3-Add
4-Delete
5-Modify
6-Print
7-Save
8-Exit
Enter number of operation:
8
Are you sure you want to exit? (Any unsaved data will be lost!)
1-yes
2-no
1
**program exit successfully!**
Process returned 0 (0x0)   execution time : 263.346 s
Press any key to continue.

```

fig4

## 2.3 main algorithms

### -Search algorithms

In search function we used linear search and it is a method of finding an element within a list. It checks each element of the list sequentially until a match is found or the whole list has been searched.

### -Sort algorithms

In sort function we used bubble sort and it is a sorting algorithm where we repeatedly iterate through the array and swap adjacent elements that are unordered. We repeat this until the array is sorted.

### 3-conclusion:

The phonebook program provides the user to load, search, Add, Delete, Modify, print(sort), Save and Exit. The user could save 100 records every record includes the contact's first name, last name, date of birth, address, phone number and email.