Lab Report
Summer'20

Project Name : PhoneBook Application

Under the guidance of
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CONTENT

Phone book application that is able to meet all the needs of a user. We are always thinking about how to make it more attractive to the users. We have tried to give everything that needs to be in the phonebook application. Now let's talk about the features of our application. The most interesting feature of our application is its registration and login options. Which are able to fully capture a user's security. You need to register to enter our application. There you have to register with your required information such as name, email, user ID and password. When logging in, you have to login with your registered user ID and password. Otherwise you cannot log in without logging in. After logging in a user phonebook. Can add contacts. Can see his added contact list. He will be able to search the contact list by name or mobile number. He can also modify by name, phone, or email if he accidentally saves somewhere in the contact list. User can do these three things together by calling the serial number. There is also a delete option. You can delete your contact by searching by name or mobile number. Another special feature of this phonebook is that you can erase the whole phonebook with delete all contact at once. You can log out of the system. No one will be able to access it without your ID and password.

Objective is really the reason why we want to work on this project. Among the projects that were on the project list, the reason for choosing this project is because of its requirements. Looking at the requirements, we understood that everything we wanted to work on in the project, the requirements were mentioned. Everyone in our team wanted to work on the project with link lists, structures, files, strings. These issues are very important in C. Through this we can improve our skills. And I will be able to gain more knowledge on these issues.

We have used link list, file, structure, string in our project. Through the link list we have been able to take unlimited data from the user. We have also been able to unlimited data read and write from file. Linked list has also played a role in add record, modify, search, delete data entry or removal. We use structure to log-in and registered. Through which we have worked with the information of our users. Through the file we have kept all the records in our phonebook which has helped in printing. Through the string we have recorded all the data records in the phonebook starting from our user info.

It has been asked to make the application with all the features like Ad Record, List in Ascending Order, Modified Record, Delete Record mentioned in the project list. We have added all these features and added login, log out and register options as a security reason. Which will take the user's security to another level.`

Here are the functions of our program with these features.

```c
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <stdbool.h>
#include <conio.h>
#include <process.h>
#include <windows.h>

//Function Prototype
void registersys();
void login();
void page_1();
void aboutinfo();
void mainsystem();
void logout();
void addrecord(int k);
void viewrecord();
void searchrecord(int k);
void modifyrecord(int k);
void deleterecord(int k);
void printfile(int k);
void insertfromfile();
void page_2();
```

Sample input output of each of the features of our program is shown below :

Add Record :

```
=====> [01] Add Record Phone Book

            ::::: Data Insert Operation ::::::
      How many mobile you want to add: 2
1 ) Input Name     : chandu
Input Email        : chan@mail.com
Input Mobile mobile : 01700000000
2 ) Input Name     : forhad
Input Email        : forhad420@mail.com
Input Mobile mobile : 01700000420
==Data insert successfully==

        Any key to continue .....
```

View Phone Book List :

```
=====> [02] View Phone Book List
```

```
"C:\Users\DECENT COMPUTER\Desktop\PHONEBOOK V6.0\bin\Debug\PHONEBOOK V6.0.exe"              —  □  ×

######## All Contact :

***********************************************************************************************
No .          Name                      Email                         Mobile
===============================================================================================
1      Mahfuz                     mafu@gmail.com                 017
2      Taj                        taj@mail.com                   018
3      rahan                      rah@mail.com                   019
4      Jack                       jack@mail.com                  01777777777
5      chandu                     chan@mail.com                  01700000000
6      forhad                     forhad420@mail.com             01700000420

      Press any Key to go operation mood .....
```

Search in Phone Book Record :

```
=====> [03] Search in Phone Book Record
```

Search By Name:

```
          ::::: Search Operation :::::
     Press 1: For Search By Name
     Press 2: For search By Phone mobile
     Press 0: For go back
     Choice : 1


     Enter Name You want to Search : forhad


     Contact Details Found
          serial   : 6
          Name     : forhad
          Email    : forhad420@mail.com
          Phone NO.: 01700000420
Press any key to go back .........
```

Search by number :

```
          ::::: Search Operation :::::
     Press 1: For Search By Name
     Press 2: For search By Phone mobile
     Press 0: For go back
     Choice : 2


     Enter Phone mobile You want to Search : 01700000000


     Contact Details Found
          serial   : 5
          Name     : chandu
          Email    : chan@mail.com
          Phone NO.: 01700000000
Press any key to go back .........
```

This message will show you if you search for a name or mobile number that does not include your contact

```
            ::::: Search Operation :::::
     Press 1: For Search By Name
     Press 2: For search By Phone mobile
     Press 0: For go back
     Choice : 1


     Enter Name You want to Search : zufham

                    Data does not exist in the List


Press any key to go back .........
```

```
            ::::: Search Operation :::::
     Press 1: For Search By Name
     Press 2: For search By Phone mobile
     Press 0: For go back
     Choice : 2


     Enter Phone mobile You want to Search : 0179999999999

                    Data does not exist in the List


Press any key to go back .........
```

Modify Phone Book Record

```
            ::::: Modify/Update Operation :::::

########  All Contact :

**************************************************************************
No .            Name                    Email                    Mobile
==========================================================================
1       Mahfuz                  mafu@gmail.com              017
2       Taj                     taj@mail.com                018
3       rahan                   rah@mail.com                019
4       Jack                    jack@mail.com               01777777777
5       chandu                  chan@mail.com               01700000000
6       forhad                  forhad420@mail.com          01700000420


     Press any key to start operation...

     Which No. Data You want to Modify : 1


     Position valid-->
     Press 1: Modify  Name
     Press 2: Modify  Email
     Press 3: Modify  Phone mobile
     Press 4: Modify All record on that position
     Press 0: For go back
     Choice :
```

Modify Name

```
o********************************************************************************
No .            Name                        Email                       Mobile
================================================================================
1       Mahfuz                      mafu@gmail.com                      017
2       Taj                         taj@mail.com                        018
3       rahan                       rah@mail.com                        019
4       Jack                        jack@mail.com                       01777777777
5       chandu                      chan@mail.com                       01700000000
6       forhad                      forhad420@mail.com                  01700000420


        Press any key to start operation...

     Which No. Data You want to Modify : 1


        Position valid-->
        Press 1: Modify  Name
        Press 2: Modify  Email
        Press 3: Modify  Phone mobile
        Press 4: Modify All record on that position
        Press 0: For go back
        Choice :


         1 No. Dataset -> Enter Name : Mdmahfuzur


        Data update successfully!


        Press Any Key to continue.....
```

Modify Phone Number:

```
########  All Contact :

********************************************************************************
No .            Name                        Email                       Mobile
================================================================================
1       Mdmahfuzur                  mafu@gmail.com                      017
2       Taj                         taj@mail.com                        018
3       rahan                       rah@mail.com                        019
4       Jack                        jack@mail.com                       01777777777
5       chandu                      chan@mail.com                       01700000000
6       forhad                      forhad420@mail.com                  01700000420


        Press any key to start operation...

     Which No. Data You want to Modify : 1


        Position valid-->
        Press 1: Modify  Name
        Press 2: Modify  Email
        Press 3: Modify  Phone mobile
        Press 4: Modify All record on that position
        Press 0: For go back
        Choice :


         1 No. Dataset -> Enter Mobile : 01794202020


        Data update successfully!


        Press Any Key to continue.....
```

Modify Email:

```
           ::::: Modify/Update Operation :::::

########  All Contact :

*****************************************************************************
No .           Name                    Email                   Mobile
============================================================================
1      Mdmahfuzur              mafu@gmail.com                  01794202020
2      Taj                     taj@mail.com                    018
3      rahan                   rah@mail.com                    019
4      Jack                    jack@mail.com                   01777777777
5      chandu                  chan@mail.com                   01700000000
6      forhad                  forhad420@mail.com              01700000420


    Press any key to start operation...

   Which No. Data You want to Modify : 1


    Position valid-->
    Press 1: Modify  Name
    Press 2: Modify  Email
    Press 3: Modify  Phone mobile
    Press 4: Modify All record on that position
    Press 0: For go back
    Choice :


    1 No. Dataset -> Enter Email : mafu13@yahoo.com


   Data update successfully!
```

Modify all record by position

```
########  All Contact :

*****************************************************************************
No .           Name                    Email                   Mobile
============================================================================
1      Mdmahfuzur              mafu13@yahoo.com                01794202020
2      Taj                     taj@mail.com                    018
3      rahan                   rah@mail.com                    019
4      Jack                    jack@mail.com                   01777777777
5      chandu                  chan@mail.com                   01700000000
6      forhad                  forhad420@mail.com              01700000420


    Press any key to start operation...

   Which No. Data You want to Modify : 2


    Position valid-->
    Press 1: Modify  Name
    Press 2: Modify  Email
    Press 3: Modify  Phone mobile
    Press 4: Modify All record on that position
    Press 0: For go back
    Choice :

    2 No. Dataset -> Enter Name : Tanfijur

    2 No. Dataset -> Enter Email : taj99@hotmail.com

    2 No. Dataset -> Enter Mobile : 01820202020


   Data update successfully!


   Press Any Key to continue.....
```

```
########  All Contact :

********************************************************************************************
No .            Name                          Email                         Mobile
==========================================================================================
1       Mdmahfuzur                  mafu13@yahoo.com                 01794202020
2       Tanfijur                    taj99@hotmail.com                01820202020
3       rahan                       rah@mail.com                     019
4       Jack                        jack@mail.com                    01777777777
5       chandu                      chan@mail.com                    01700000000
6       forhad                      forhad420@mail.com               01700000420

        Press any Key to go operation mood .....
```

This will give you the result or message if you give wrong input while doing these tasks.

```
            ::::: Modify/Update Operation :::::

########  All Contact :

****************************************************************************
No .          Name                      Email                   Mobile
============================================================================
1       Mdmahfuzur                  mafu13@yahoo.com         01794202020
2       Tanfijur                    taj99@hotmail.com        01820202020
3       rahan                       rah@mail.com             019
4       Jack                        jack@mail.com            01777777777
5       chandu                      chan@mail.com            01700000000
6       forhad                      forhad420@mail.com       01700000420

        Press any key to start operation...

        Which No. Data You want to Modify : 8


        Invalid position !!! Sorry this operation unsuccessful

        Press any key to get back ....
```

```
            ::::: Modify/Update Operation :::::

########  All Contact :

****************************************************************************
No .          Name                      Email                   Mobile
============================================================================
1       Mdmahfuzur                  mafu13@yahoo.com         01794202020
2       Tanfijur                    taj99@hotmail.com        01820202020
3       rahan                       rah@mail.com             019
4       Jack                        jack@mail.com            01777777777
5       chandu                      chan@mail.com            01700000000
6       forhad                      forhad420@mail.com       01700000420

        Press any key to start operation...

        Which No. Data You want to Modify : 3


        Position valid-->
        Press 1: Modify  Name
        Press 2: Modify  Email
        Press 3: Modify  Phone mobile
        Press 4: Modify All record on that position
        Press 0: For go back
        Choice :


        Invalid Key....

         operation exit....
```

Delete Contact from Phonebook record

Delete by name:

```
########  All Contact :

***************************************************************************************************
No .           Name                          Email                         Mobile
===================================================================================================
1       Mdmahfuzur                    mafu13@yahoo.com              01794202020
2       Tanfijur                      taj99@hotmail.com             01820202020
3       rahan                         rah@mail.com                  019
4       Jack                          jack@mail.com                 01777777777
5       chandu                        chan@mail.com                 01700000000
6       forhad                        forhad420@mail.com            01700000420


        Press any key to start operation...

     Press 1: For Delete By Name
     Press 2: For delete By Phone mobile
     Press 0: For go back
     Choice :


     Enter Name You want to Delete : rahan



     Data Deleted successfully !!


     Press any key to go back .........
```

Delete by phone number

```
           ::::: Delete/Remove Operation :::::

########  All Contact :

***************************************************************************************************
No .           Name                          Email                     Mobile
===================================================================================================
1       Mdmahfuzur                    mafu13@yahoo.com          01794202020
2       Tanfijur                      taj99@hotmail.com         01820202020
3       Jack                          jack@mail.com             01777777777
4       chandu                        chan@mail.com             01700000000
5       forhad                        forhad420@mail.com        01700000420


        Press any key to start operation...

     Press 1: For Delete By Name
     Press 2: For delete By Phone mobile
     Press 0: For go back
     Choice :


     Enter Phone mobile You want to Delete : 01820202020



     Data Deleted successfully !!


     Press any key to go back .........
```

Wrong Message

```
              ::::: Delete/Remove Operation :::::

########  All Contact :

************************************************************************************
No .            Name                    Email                   Mobile
====================================================================================
1       Mdmahfuzur              mafu13@yahoo.com                01794202020
2       Jack                    jack@mail.com                   01777777777
3       chandu                  chan@mail.com                   01700000000
4       forhad                  forhad420@mail.com              01700000420


        Press any key to start operation...

        Press 1: For Delete By Name
        Press 2: For delete By Phone mobile
        Press 0: For go back
        Choice :


        Invalid Key....

         operation exit....

        Press any key to go back .........
```

After Delete

```
########  All Contact :

************************************************************************************
No .            Name                         Email                    Mobile
====================================================================================
1       Mdmahfuzur                  mafu13@yahoo.com                01794202020
2       Jack                        jack@mail.com                   01777777777
3       chandu                      chan@mail.com                   01700000000
4       forhad                      forhad420@mail.com              01700000420

        Press any Key to go operation mood .....
```

We have tried a lot before making this application, how to make the application more beautiful by writing code in less time. We have been thinking a lot about time complexity and we have paid special attention to flow chat to find out how to reduce time complexity. Even after these plans, we encountered a bug while working on the link list memory. I also encountered bugs while working on Ad Contact, Search, Modify, Delete. As a result of working as a group and repeatedly coming to Google Meet to help each other, it didn't take us long to find a way to solve this problem.

We have tried to give what a person uses in the phonebook application in their daily life. Since it is a console application, any user can easily use it without any problem. Everything is instructed about how and where to go and what to do. At the end of the day, it is able to meet all the needs of the user's daily life.

Note: We will definitely suggest, for better user experience please read/see our user manual.

~~Thank you for using our application~~

Phonebook Application © Fantastic Four