

# PHONEBOOK APPLICATION

A project in C Programming Language

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# ABSTRACT

Phone book application is primarily meant for keeping the records of the persons. Phone-book application will provide the basic set of features of adding a new contact, searching, updating, deleting a contact .This mini project in C Phonebook allows to perform simple Phonebook operations like in the mobile. One can add, list, modify, search and delete Phonebook-related records. File handling and data structure concepts has been extensively used for almost all functions in this mini project. Phonebook in C is a console application without graphics. The source code is complete and totally error-free. It is compiled in Code Blocks with GCC compiler. Functions, file handling and data structure are used. This application contains how to add, list, modify or edit, search and delete data to/from the file. Adding new records, listing them, modifying them and updating, search for contacts saved, and deleting the phonebook records are the basic functions which make up the main menu of this Phonebook application .Personal information such as name, gender, father's name, phone number, citizenship number Email and address are asked while adding a record into the Phonebook. These records can then be modified, listed, searched for and removed.

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## INTRODUCTION

Phonebook is a very simple mini project in C that can help you understand the basic concepts of functions, file handling and data structure. This application will teach you how to add, list, modify or edit, search and delete data to/from the file.

Adding new records, listing them, modifying them and updating, searching for contacts saved, and deleting the phonebook records are the basic functions which make up the main menu of this Phonebook application (as shown in the main menu screenshot below).

Personal information such as name, sex, father's name, phone number, citizenship number, email and address are asked while adding a record into the Phonebook. These records can then be modified, listed, searched for and removed. It is estimated that there are more than 600 million mobile phone users around the world - and the number is increasing. The success of mobile phones seems easy to explain: being available anytime and anywhere. If a businessman moves from one place to another he is available for his company at no extra effort. If the son will be late at home he can inform his parents. If you have trouble with your car you can call the

breakdown service. Mobile phones are used for communication but also for coordination between people. Informal meetings between people (e.g. going to a pub) are often not planned anymore in advance - they are arranged on time by mobile communication. Altogether there are a lot of opportunities using mobile phones. But there are also some emerging problems. Being reachable always and everywhere is solved by technology - but being reachable does not necessarily mean being available to all potential callers! Sharing information about the real world context of users is a solution to this problem . But until now

the user interfaces of mobile phones are still very much based on legacy. In particular UIs and standard applications are not context dependent and therefore the caller has very little chance to know when making a call in what situation the called party will be interrupted.

The main idea of the program is to increase the awareness of working with computer systems and utilize computer resources for better result orientation.

The main target behind the creation of this package is to remove the pressure from the user to learn about computers & software.

It helps to maintain an automatic communication between the computer and the user. This Program "My Phonebook" facility the user with different records can add and Search easily by using Button tools & Search options.

There are some features also like: -

Viewing Data in Data grid, and Logout.

Our Project has following :-

Login form "ADD" button for adding data in Database.

"DELETE" button for deleting data in Database.

"UPDATE"button for updating data in Database.

"SEARCH" button for searching data in Database.

## PROGRAMMING LANGUAGE-C

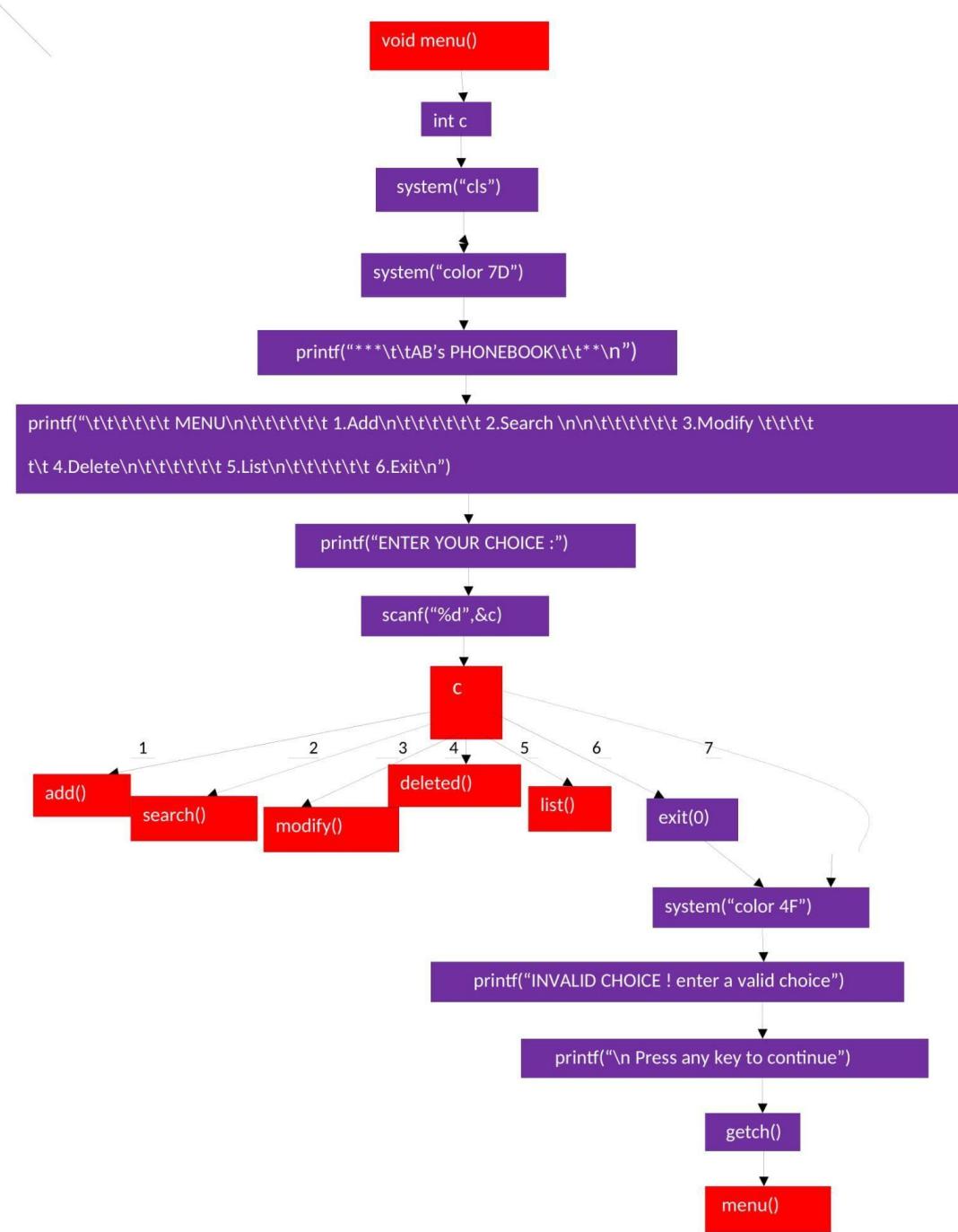
C is a general-purpose, high-level language that was originally developed by Dennis M. Ritchie to develop the UNIX operating system at Bell Labs. C was originally first implemented on the DEC PDP-11 computer in 1972.

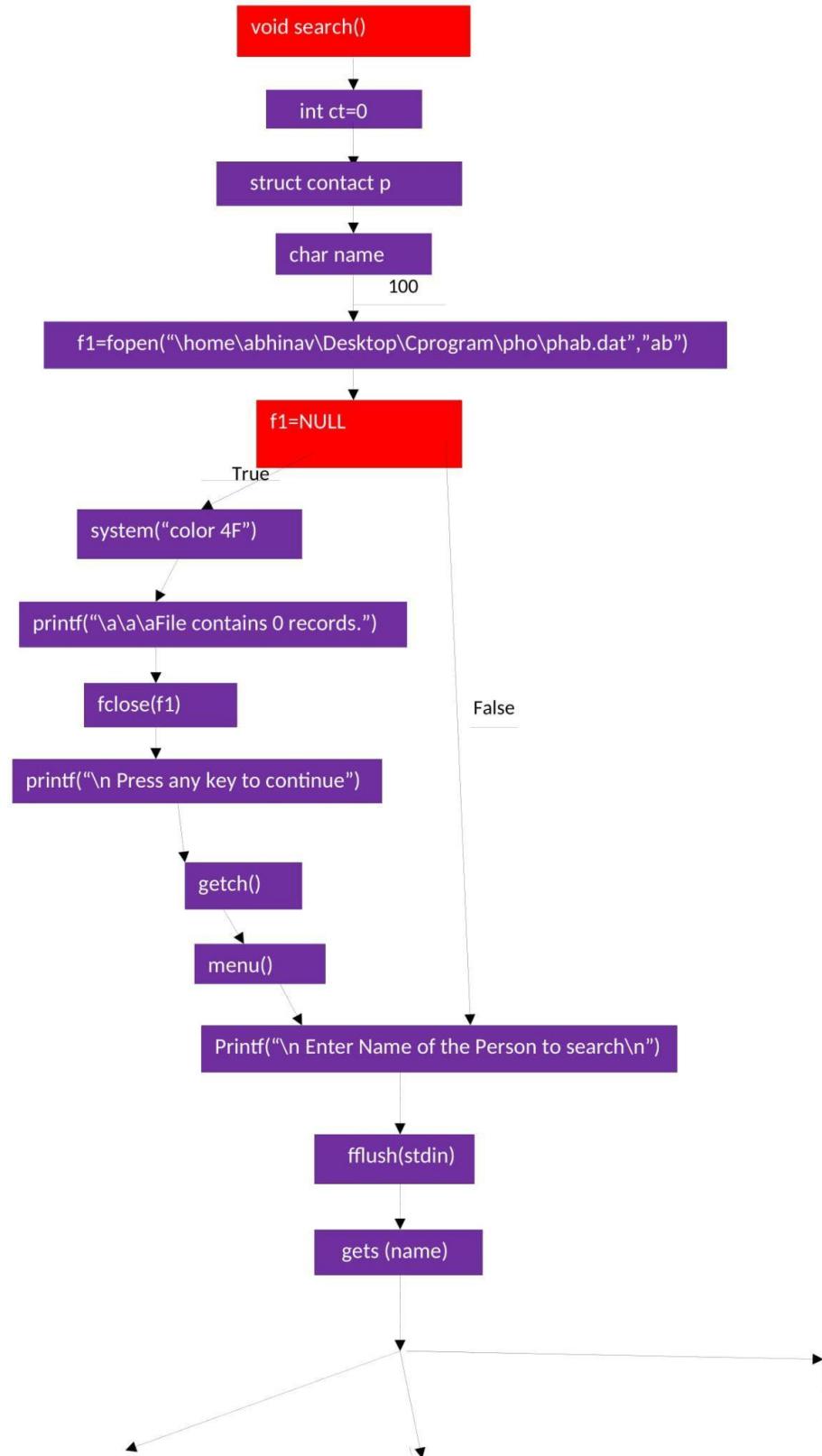
In 1978, Brian Kernighan and Dennis Ritchie produced the first publicly available description of C, now known as the K&R standard.

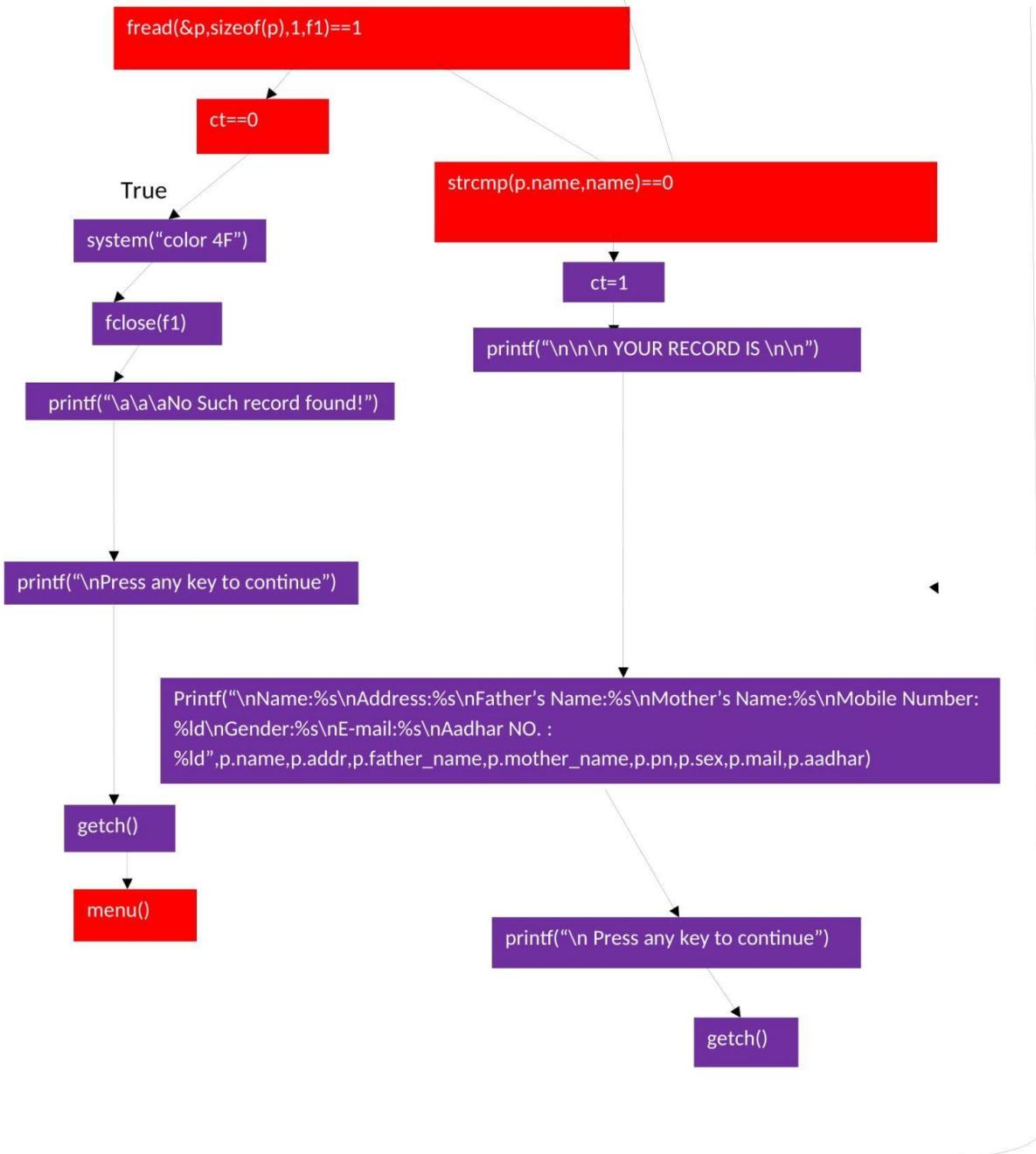
The UNIX operating system, the C compiler, and essentially all UNIX application programs have been written in C. C has now become a widely used professional language for various reasons –

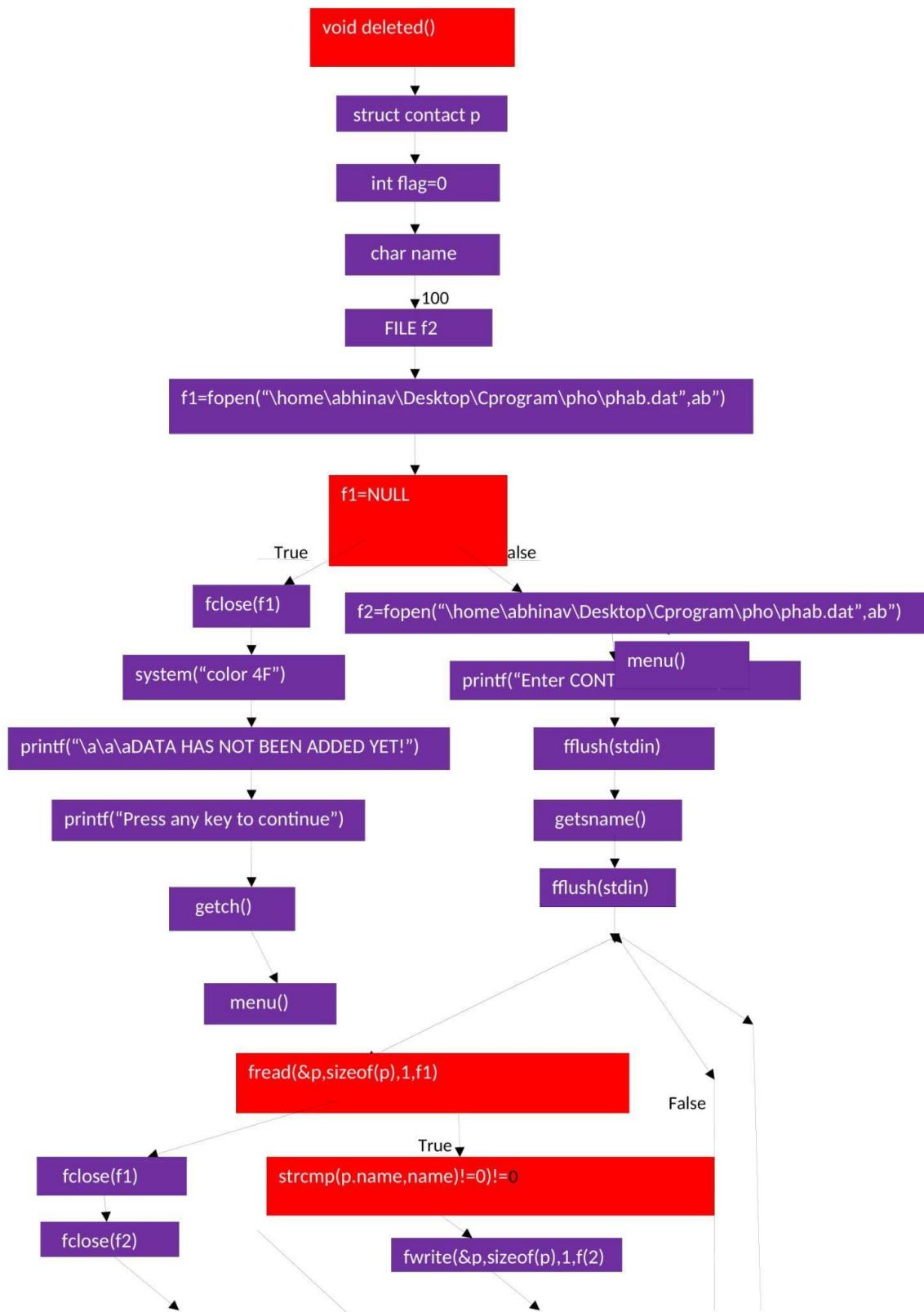
- Easy to learn.
- Structured language.
- It produces efficient programs.
- It can handle low-level activities
- It can be compiled on a variety of computer platforms.

# Flow-Chart

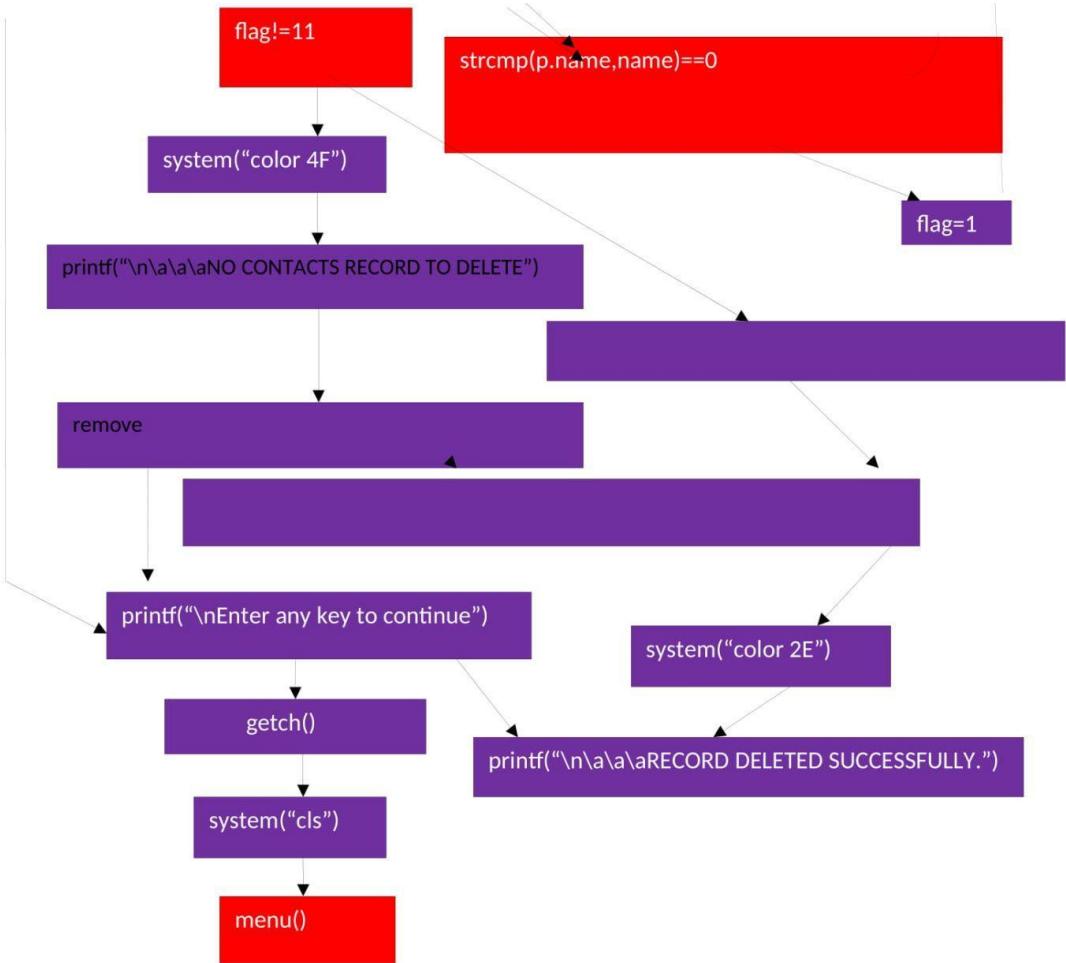


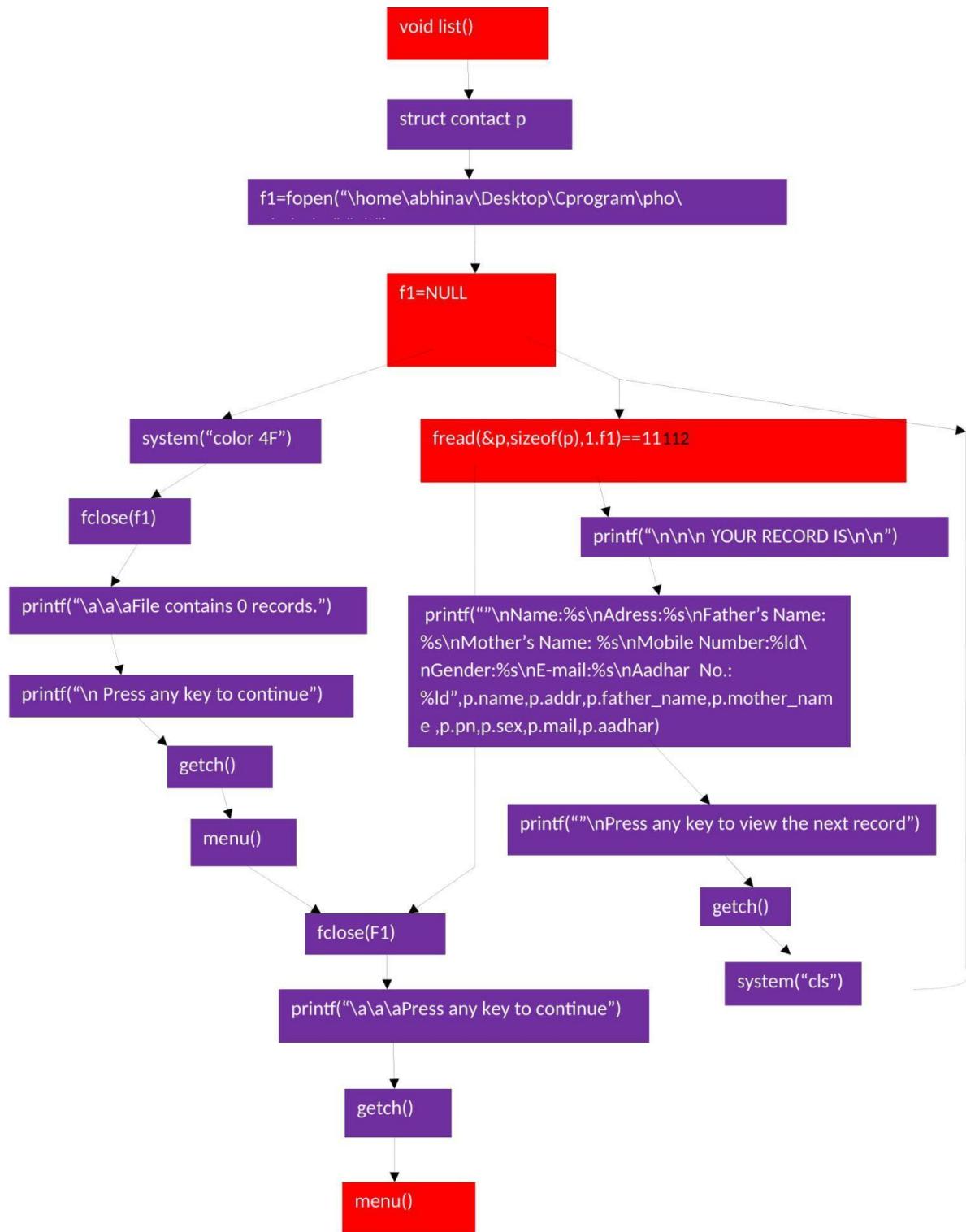












## Source-Code

```
#include<stdio.h>
#include<stdlib.h>
#include<string.h>
#include<ncurses.h>
#include <stdlib.h>

int getabhi()
{
    int c;
    scanf("%d",&c);///wph font size change temporary tha
    return c;
}
void errorcol();
void successcol();
void reset();
void errorcol()
{
    printf("\033[1;31m");

}
//these colors are not looking very good

void successcol()
{
    printf("\033[1;32m");
}
void reset()
{
    printf("\033[1;33m");
}
void menu();
void add();
void search();
void list();
void deleterec();
void modify();
FILE *f1;
struct contact
```

```

{
    char name[30];
    long int pn;
    char addr[40];
    long int aadhar;
    char sex[8];
    char mail[100];
    char father_name[35];
    char mother_name[30];
};

void menu()
{
    int c;
    system("clear");
    reset();

    printf("*****AB's
PHONEBOOK*****
**\n");
    printf("\t\t\t\t MENU\n\t\t\t\t\t 1.Add\n\t\t\t\t\t 2.Search\n\t\t\t\t\t 3.Modify\n\t\t\t\t\t 4.Delete\n\t\t\t\t\t 5.List\n\t\t\t\t\t 6.Exit\n");
    printf("ENTER YOUR CHOICE : ");
    scanf("%d",&c);

    switch(c)
    {
        case 1:
            add();
            break;
        case 2:
            search();
            break;
        case 3:
            modify();
            break;
        case 4:
            deleterec();
            break;
        case 5:
            list();
            break;
        case 6:
            exit(0);
        default:
    }
}

```

```

    {
        errorcol();
        printf("INVALID CHOICE ! enter a valid choice");
        printf("\n Press any key to continue ");
        getabhi();
        menu();
    }
}

void add()
{
    system("clear");

f1=fopen("/home/abhinav/Desktop/C program/pho/phab.dat","ab");
struct contact c1;
system("clear");
printf("Enter the following data : \n");
fflush(stdin);
printf("Enter Contact name : ");
scanf("%s",c1.name);
fflush(stdin);
printf("\nEnter Contact no. : ");
scanf("%ld",&c1.pn);
fflush(stdin);
printf("Enter Sex : ");
scanf("%s",c1.sex);
fflush(stdin);
printf("Enter Email-id : ");
scanf("%s",c1.mail);
fflush(stdin);
printf("Enter Father's name : ");
scanf("%s",c1.father_name);
fflush(stdin);
printf("Enter Mother's name : ");
scanf("%s",c1.mother_name);
fflush(stdin);
printf("\nEnter Aadhar no. : ");
scanf("%ld",&c1.aadhar);
fflush(stdin);
printf("\nEnter Address : ");
scanf("%s",c1.addr);
fflush(stdin);
fwrite(&c1,sizeof(c1),1,f1);
system("clear");
}

```

```

successcol();
printf("\aRECORD ADDED SUCCESSFULLY!");
fclose(f1);
printf("\n Press any key to continue ");
getabhi();
menu();
}
void modify()
{
int flag=0,e=0;
char name[30];
struct contact s,c1;
f1=fopen("/home/abhinav/Desktop/C program/pho/phab.dat", "rb+");
if(f1==NULL)
{
errorcol();
printf("\a\a\aDATA HAS NOT BEEN ADDED YET !");
printf("\n Press any key to continue ");
getabhi();
menu();
}
else
{
system("clear");
printf("Enter name of contact which has to be modified : ");
fflush(stdin);
scanf("%s",name);
fflush(stdin);

while(fread(&s,sizeof(struct contact),1,f1))
{
if(strcmp(s.name,name)==0)
{
flag=1;
printf("Enter the new data for this record :\n");
printf("Enter Contact name : ");
scanf("%s",c1.name);
fflush(stdin);
printf("\nEnter Contact no. : ");
scanf("%ld",&c1.pn);
fflush(stdin);
printf("Enter Sex : ");
scanf("%s",c1.sex);
fflush(stdin);
}
}
}
}

```

```

printf("Enter Email-id : ");
scanf("%s",c1.mail);
fflush(stdin);
printf("Enter Father's name : ");
scanf("%s",c1.father_name);
fflush(stdin);
printf("Enter Mother's name : ");
scanf("%s",c1.mother_name);
fflush(stdin);
printf("\nEnter Aadhar no. : ");
scanf("%ld",&c1.aadhar);
fflush(stdin);
printf("\nEnter Address : ");
scanf("%s",c1.addr);
fflush(stdin);
fseek(f1,-sizeof(c1),SEEK_CUR);
fwrite(&c1,sizeof(c1),1,f1);
fclose(f1);
system("clear");
successcol();
printf("\aRECORD MODIFIED SUCCESSFULLY!");
printf("\n Press any key to continue ");
getabhi();
menu();

}

else
    e++;
}

if(flag==0)
{
    errorcol();
    printf("\a\a\aNo Such record found!");
    fclose(f1);
    printf("\n Press any key to continue ");
    getabhi();
    menu();

}

}

```

```

void deleterec()
{
    struct contact p;
    int flag=0;
    char name[100];
    FILE *f2;
    f1=fopen("/home/abhinav/Desktop/C program/pho/phab.dat","rb");
    if(f1==NULL)
    {
        fclose(f1);
        errorcol();
        printf("\a\a\DATA HAS NOT BEEN ADDED YET !");
        printf("\n Press any key to continue ");
        getabhi();
        menu();
    }
    else
    {
        f2=fopen("/home/abhinav/Desktop/C program/pho/temp.dat","wb+");
        printf("\nEnter CONTACT'S NAME: ");
        fflush(stdin);
        scanf("%s",name);
        fflush(stdin);
        while(fread(&p,sizeof(p),1,f1))
        {
            if(strcmp(p.name,name)!=0)
                fwrite(&p,sizeof(p),1,f2);
            if(strcmp(p.name,name)==0)
                flag=1;
        }
        fclose(f1);
        fclose(f2);
        if(flag!=1)
        {
            errorcol();
            printf("\n\a\NO CONACT'S RECORD TO DELETE.");
            remove("/home/abhinav/Desktop/C program/pho/temp.dat");
        }
        else
        {
            remove("/home/abhinav/Desktop/C program/pho/phab.dat");
            rename("/home/abhinav/Desktop/C
program/pho/temp.dat","/home/abhinav/Desktop/C program/pho/phab.dat");
        }
    }
}

```

```

        successcol();
        printf("\n\a\a\RECORD DELETED SUCCESSFULLY.");

    }

}

printf("\nEnter Any Key to continue");

    getabhi();
    system("clear");
menu();
}

void list()
{
    struct contact p;
f1=fopen("/home/abhinav/Desktop/C program/pho/phab.dat","rb");
if(f1==NULL)
{
    errorcol();
    fclose(f1);
    printf("\a\file contains 0 records:");
    printf("\n Press any key to continue ");
    getabhi();
    menu();
}
else
{
while(fread(&p,sizeof(p),1,f1)==1)
{
    printf("\n\n\n YOUR RECORD IS\n\n ");
    printf("\nName: %s\nAdress: %s\nFather Name: %s\nMother Name: %s\nMobile Number:
%ld\nGender: %s\nE-Mail: %s\nAadhar No:
%ld",p.name,p.addr,p.father_name,p.mother_name,p.pn,p.sex,p.mail,p.aadhar);
    printf("\nPress any key to view the next record ");
    getabhi();
    system("clear");
}
}
fclose(f1);
printf("\a\Press any key to continue ");
getabhi();
menu();
}

```

```

void search()
{
int ct=0;
struct contact p;
char name[100];

f1=fopen("/home/abhinav/Desktop/C program/pho/phab.dat","rb");
if(f1==NULL)
{
    errorcol();
    printf("\a\a\aFile contains 0 records:");
    fclose(f1);
    printf("\n Press any key to continue ");
    getabhi();
    menu();
}
printf("\nEnter Name of the Person to Search\n");
fflush(stdin);
scanf("%s",name);
while(fread(&p,sizeof(p),1,f1)==1)
{
    if(strcmp(p.name,name)==0)
    {
        ct=1;
        printf("\n\n\n YOUR RECORD IS\n\n ");
        printf("\nName: %s\nAdress: %s\nFather Name: %s\nMother Name: %s\nMobile Number:
%ld\nGender: %s\nE-Mail: %s\nAadhar No:
%ld",p.name,p.addr,p.father_name,p.mother_name,p.bn,p.sex,p.mail,p.aadhar);
        printf("\n Press any key to continue ");
        getabhi();
        menu();
    }
}
if(ct==0)
{
    errorcol();
    fclose(f1);
    printf("\a\a\aNo Such record found!");
    printf("\n Press any key to continue ");
    getabhi();
    menu();
}

```

```
        }
    }
int main()
{
    char title[]="*****\t\tAB's
PHONEBOOK\t*****\n";
    reset();
    menu();
    return 0;
}
```

## Output-Screen

```
/home/abhinav/Desktop/C program/pho/main
*****AB's PHONEBOOK*****
MENU
1.Add
2.Search
3.Modify
4.Delete
5.List
6.Exit
ENTER YOUR CHOICE : █
```

```
/home/abhinav/Desktop/C program/pho/main
Enter the following data :
Enter Contact name : █
```

```
/home/abhinav/Desktop/C program/pho/main
Enter the following data :
Enter Contact name : Abhinav-Dagar
Enter Contact no. : 9910438709
Enter Sex : Male
```

```
/home/abhinav/Desktop/C program/pho/main
Enter Address : RECORD ADDED SUCCESSFULLY!
Press any key to continue
```

```
/home/abhinav/Desktop/C program/pho/main
*****AB's PHONEBOOK*****
MENU
1.Add
2.Search
3.Modify
4.Delete
5.List
6.Exit
ENTER YOUR CHOICE : 2
Enter Name of the Person to Search
Abhinav-Dagar

YOUR RECORD IS

Name: Abhinav-Dagar
Adress: XYZ-ABC
Father Name: GSD
Mother Name: KSD
Mobile Number: 9910438709
Gender: Male
E-Mail: abhinav@gmail.com
Aadhar No: 140720632892688
Press any key to continue
```

```
/home/abhinav/Desktop/C program/pho/main
*****AB's PHONEBOOK*****
MENU
1.Add
2.Search
3.Modify
4.Delete
5.List
6.Exit
ENTER YOUR CHOICE : 4
Enter CONTACT'S NAME: AA
NO CONACT'S RECORD TO DELETE.
Enter Any Key to continue
```

```
/home/abhinav/Desktop/C program/pho/main
*****
*****AB's PHONEBOOK*****
*****
MENU
1.Add
2.Search
3.Modify
4.Delete
5.List
6.Exit

ENTER YOUR CHOICE : 4

Enter CONTACT'S NAME: Abhinav-Dagar

RECORD DELETED SUCCESSFULLY.
Enter Any Key to continue
```

```
/home/abhinav/Desktop/C program/pho/main
*****
*****AB's PHONEBOOK*****
*****
MENU
1.Add
2.Search
3.Modify
4.Delete
5.List
6.Exit

ENTER YOUR CHOICE : 5

YOUR RECORD IS

Name: ABHINAV-DAGAR
Address: GG
Father Name: GSD
Mother Name: KSD
Mobile Number: 12312
Gender: male
E-Mail: abhidagar@gmail
Aadhar No: 21321
Press any key to view the next record
```

```
/home/abhinav/Desktop/C program/pho/main
*****
*****AB's PHONEBOOK*****
*****
        MENU
        1.Add
        2.Search
        3.Modify
        4.Delete
        5.List
        6.Exit

ENTER YOUR CHOICE : 6

Process returned 0 (0x0)    execution time : 247.204 s
Press ENTER to continue.
```

## CONCLUSION

The application software has been implemented successfully by using test cases. And the language is C language. This application is used to search, delete, modify and some functions which is used to remember our friends' details more easily.