

PHONE BOOK MANAGEMENT SYSTEM

USING C

SOURCE CODE

```

#include<stdio.h>
#include<conio.h>
#include<string.h>
#include<stdlib.h>
#define FILENAME "PHONEBOOK.PHN"

/* structure of PhoneBook datatype */

struct PhoneBook{

    char name[100];
    char address[200];
    int phoneNo;
    char email[100];

};

void mainMenu ();           /*display main menu*/
void addContact(FILE *fp); /*add new contact*/
void readContacts(FILE *); /*read contacts from file*/
void deleteContact(FILE *); /*delete contacts from file*/
void modifyContact(FILE *); /*modify contacts from file*/
PhoneBook basicDetails(char[]); /*takes input for one contact object*/
void searchContact(FILE *); /*search contact from file*/
int checkForMatch(char[],char[]); /*helper method for searchContact()*/
void menuDesign(char[]); /*display header */
void showMessage(char[]); /*display message*/
void pressForMainMenu(); /* returns to main menu */
void fileOpen(FILE *);
void fileClose(FILE *);

main(){

    system("cls");
    mainMenu();

}

void mainMenu(){

printf("\n\n\n\n\n\t\tLOADING . PLEASE WAIT....");
FILE *fp;
fp=fopen(FILENAME,"rb+");
    if(fp==NULL){

        fp=fopen(FILENAME,"wb+");
        if(fp==NULL){

            printf("CANNOT OPEN THE FILE");

        }

    }

    system("cls");

```

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int choise;
char ch;
int result;
printf("\n\n");
menuDesign("PHONEBOOK MANAGEMENT SYSTEM");
printf("\n\t\t1. ADD NEW CONTACT");
printf("\n\t\t2. VIEW ALL CONTACTS");
printf("\n\t\t3. SEARCH CONTACTS");
printf("\n\t\t4. MODIFY CONTACTS");
printf("\n\t\t5. DELETE CONTACT");
printf("\n\t\t6. EXIT");

printf("\n\n\n\t\t ENTER YOUR CHOISE : ");
fflush(stdin);
ch=getche();

system("cls");

switch(ch){

case '1' :

    addContact(fp);
    break;

case '2':

    readContacts(fp);
    break;

case '3':

    searchContact(fp);
    break;

case '4':

    modifyContact(fp);
    break;

case '5':

    deleteContact(fp);
    break;

case '6':

    exit(0);
    break;

default:

    system("cls");
    showMessage("ERROR !! PRESS 1-6 ONLY");
    pressForMainMenu();
    getch();
}

```

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}

void searchContact(FILE *fp){
    menuDesign("SEARCH CONTACT");
    PhoneBook ph;
    int result;
    int count=0;
    char item[50];
    printf("\n\t\tEnter Some text to be Searched : ");
    scanf("%s",&item);
    while(fread(&ph,sizeof(ph),1,fp)==1){

        result=checkForMatch(ph.name,item);
        if(result==1){
            count++;
            printf("\n \t\t Name : %s \n\t\t Address : %s \n\t\t E-Mail
:s\n\t\t Phone No %d \n\n",ph.name,ph.address,ph.email,ph.phoneNo);
        }

    }
    fclose(fp);
    if(count==0)
        printf("\n\t\tNothing found for Name : %s",item);
    else
        printf("\n\t\tTotal %d no of Contact(s) found for : %s",count,item);

    pressForMainMenu();
}

int checkForMatch(char a[],char b[])
{
    int i,k;
    char *p,temp[strlen(b)];
    if(strlen(a)>=strlen(b)){
        for(i=0;i<=(strlen(a)-strlen(b));i++)
        {
            p=&a[i];

            k=0;

            while(k!=strlen(b))
            {
                temp[k]=*(p+k);
                k++;
            }

            temp[k]='\0';
            //printf("\nOriginal : %s ~~~~~ Temp : %s\n",b,temp);
            if(strcmp(strupr(temp),strupr(b))==0)
            {
                return 1;
            }
        }
    }
}

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        return 0;
    }

PhoneBook basicDetails(char level[200]){

    PhoneBook ph;
    menuDesign(level);
    printf("\n\t\tEnter Name : ");
    scanf("%s",&ph.name);

    printf("\n\t\tEnter Address : ");
    scanf("%s",&ph.address);

    printf("\n\t\tEnter E-Mail : ");
    scanf("%s",&ph.email);

    printf("\n\t\tEnter phoneNo : ");
    scanf("%d",&ph.phoneNo);

    return ph;
}

void addContact(FILE *fp){

    char another='Y';
    PhoneBook ph;
    while((another=='Y')||(another=='y')){
        system("cls");
        ph=basicDetails("ADD NEW CONTACT");
        fseek(fp,0,SEEK_END);
        fwrite(&ph,sizeof(ph),1,fp);
        printf("\n\n\t\t-----");
        printf("\n\t\tAdded Successfully");
        printf("\n\n\t\t-----");
        printf("\n\n\t\tWant to add Another Contact ( Y / Any Key ) : ");
        fflush(stdin);
        another=getche();

    }

    if(another!='Y'&&(another!='y')){
        fclose(fp);
        system("cls");
        mainMenu();
    }
}

void readContacts(FILE *fp){

    int count=0;
    char keyPress;

```

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rewind(fp);
PhoneBook ph;
menuDesign("ALL CONTACTS");
while(fread(&ph,sizeof(ph),1,fp)==1){
    count++;
    printf("\n \t\t Name : %s \n\t\t Address : %s \n\t\t E-Mail :%s\n\t\t
Phone No : %d \n\n",ph.name,ph.address,ph.email,ph.phoneNo);
}
if(count==0){
    showMessage("Nothing To Display ..... ");
}
fclose(fp);
pressForMainMenu();

}

void deleteContact(FILE *fp){

    system("cls");
    menuDesign("DELETE CONTACT");
    PhoneBook ph;
    FILE *temp;
    int count=0;
    char name[50];
    temp=fopen("TEMP.DAT","wb+");
    printf("\n\t\tEnter Contant Name to Delete : ");
    scanf("%s",&name);
    rewind(fp);
    while(fread(&ph,sizeof(ph),1,fp)==1){
        if(strcmp(strupr(ph.name),strupr(name))!=0){

            fwrite(&ph,sizeof(ph),1,temp);
        }else{
            count++;
        }
    }
    fclose(fp);
    fclose(temp);
    remove ( FILENAME );
    rename ( "TEMP.DAT", FILENAME );
    fp = fopen ( FILENAME, "rb+" );
    printf("\n\n\t\t-----");
    if(count!=0)
    printf("\n\t\tDeleted Successfully");
    else
    printf("\n\t\tNo entry found with Name : %s",name);
    printf("\n\n\t\t-----");
    fclose(fp);
    pressForMainMenu();

}

void modifyContact(FILE *fp){

    system("cls");
    menuDesign("MODIFY CONTACT DETAILS");

```

```

rewind(fp);
int count=0;
PhoneBook ph;
char name[50];
printf("\n\t\tEnter Name to be Modified : ");
scanf("%s",&name);

while(fread(&ph,sizeof(ph),1,fp)==1){
    if(strcmp(strupr(ph.name),strupr(name))==0){
        count++;
        ph=basicDetails("MODIFY CONTACT ");
        fseek(fp,-sizeof(ph),SEEK_CUR) ;
        fwrite(&ph,sizeof(ph),1,fp);
        break;
    }
}
printf("\n\n\t\t-----");
if(count!=0)
printf("\n\t\tModified Successfully");
else
printf("\n\t\tNo entry found with Name : %s",name);
printf("\n\n\t\t-----");
fclose(fp);
pressForMainMenu();
}

void menuDesign(char topic[]){
    char *pattren;

    printf("\n\t\t=====");
    printf("\n\t\t%s",topic);
    printf("\n\t\t=====\\n\\n");
}

void showMessage(char message[]){

    printf("\n\t\t-----");
    printf("\n\t\t%s",message);
    printf("\n\t\t-----");
}

void pressForMainMenu(){
    char keyPress;
    printf("\n\n\t\tPress Any Key For Main Menu ... ");
    keyPress=getche();
    if(keyPress!=' ')
    system("cls");
    mainMenu();
}

```


SCREENSHORTS

Main Menu



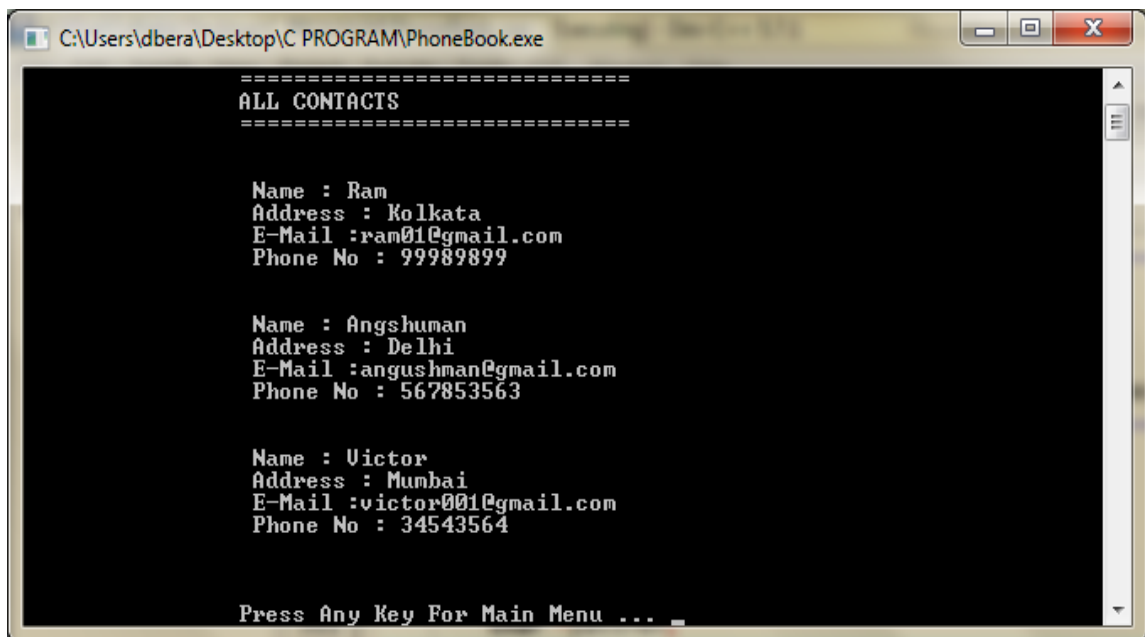
A screenshot of a Windows application window titled "C:\Users\dbera\Desktop\C PROGRAM\PhoneBook.exe". The window displays a text-based menu for a "PHONEBOOK MANAGEMENT SYSTEM". The menu options are: 1. ADD NEW CONTACT, 2. VIEW ALL CONTACTS, 3. SEARCH CONTACTS, 4. MODIFY CONTACTS, 5. DELETE CONTACT, and 6. EXIT. Below the menu, it prompts the user to "ENTER YOUR CHOISE : _".

```
=====
PHONEBOOK MANAGMENT SYSTEM
=====

1. ADD NEW CONTACT
2. VIEW ALL CONTACTS
3. SEARCH CONTACTS
4. MODIFY CONTACTS
5. DELETE CONTACT
6. EXIT

ENTER YOUR CHOISE : _
```

All Contacts



A screenshot of the same Windows application window, now displaying the "ALL CONTACTS" screen. It lists three contacts with their details: Name, Address, E-Mail, and Phone No. At the bottom, it prompts the user to "Press Any Key For Main Menu ... _".

```
=====
ALL CONTACTS
=====

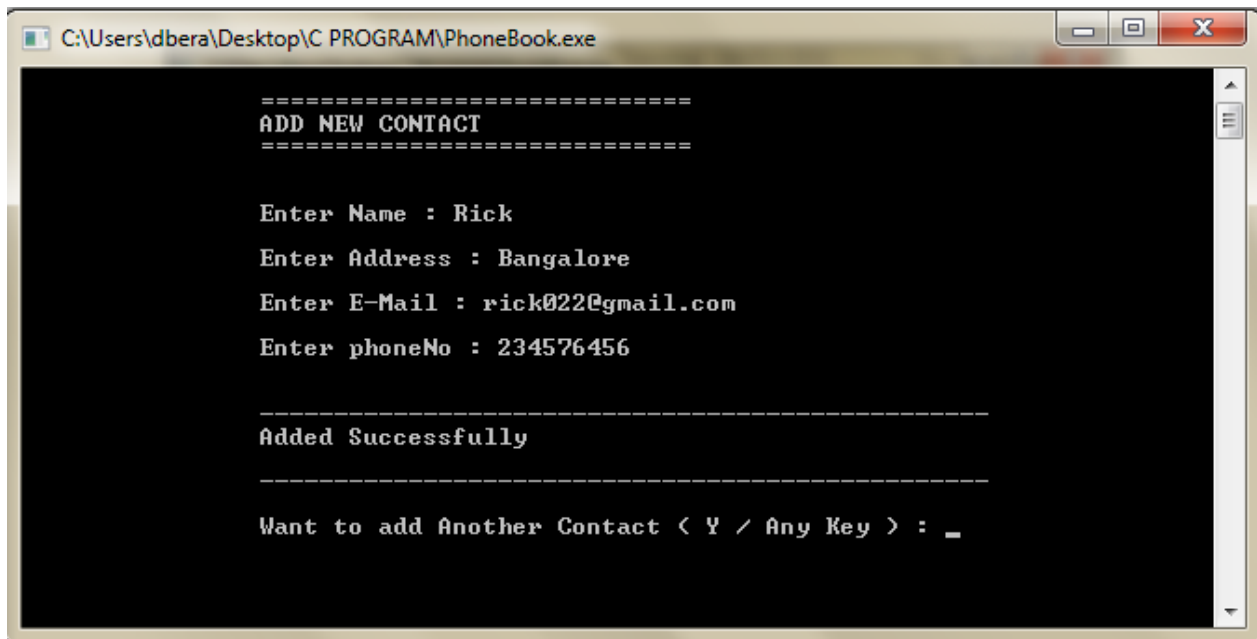
Name : Ram
Address : Kolkata
E-Mail : ram01@gmail.com
Phone No : 99989899

Name : Angshuman
Address : Delhi
E-Mail : angushman@gmail.com
Phone No : 567853563

Name : Uictor
Address : Mumbai
E-Mail : victor001@gmail.com
Phone No : 34543564

Press Any Key For Main Menu ... _
```

Add New Contact



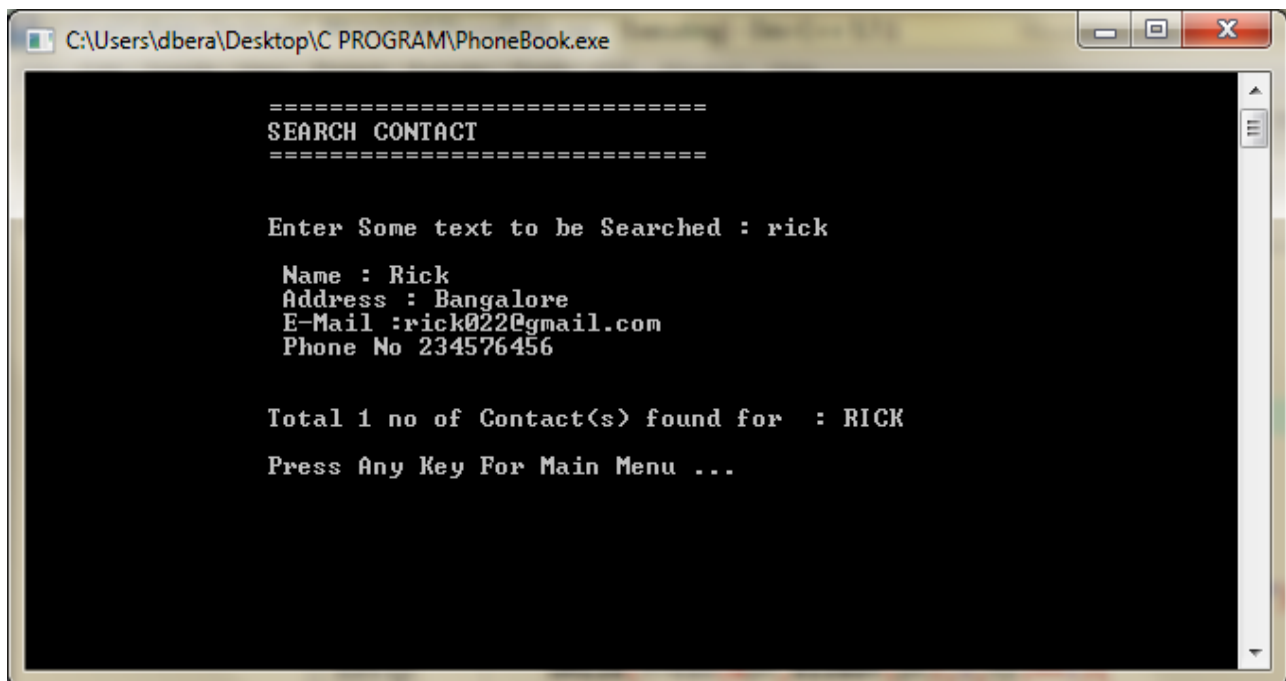
```
=====  
ADD NEW CONTACT  
=====
```

Enter Name : Rick
Enter Address : Bangalore
Enter E-Mail : rick022@gmail.com
Enter phoneNo : 234576456

Added Successfully

Want to add Another Contact < Y / Any Key > : _

Search Contact



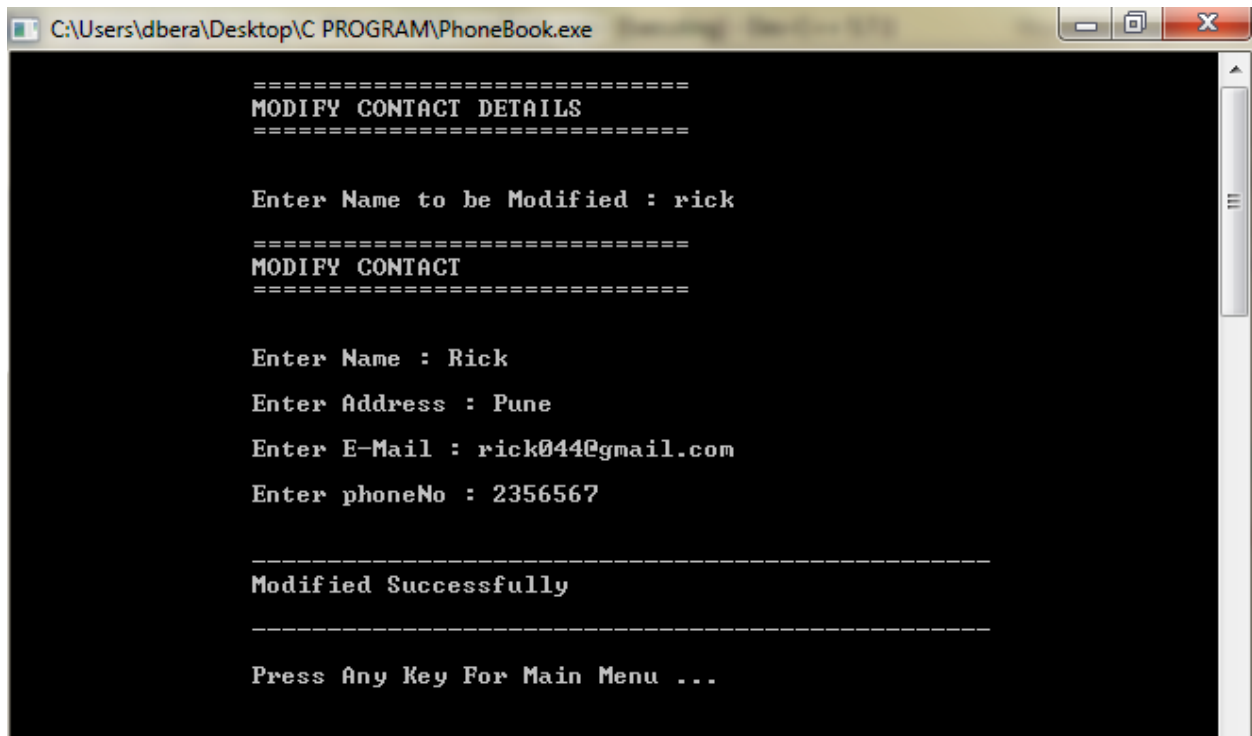
```
=====  
SEARCH CONTACT  
=====
```

Enter Some text to be Searched : rick

Name : Rick
Address : Bangalore
E-Mail : rick022@gmail.com
Phone No 234576456

Total 1 no of Contact(s) found for : RICK
Press Any Key For Main Menu ...

Update Contact Detail



```
=====  
MODIFY CONTACT DETAILS  
=====
```

Enter Name to be Modified : rick

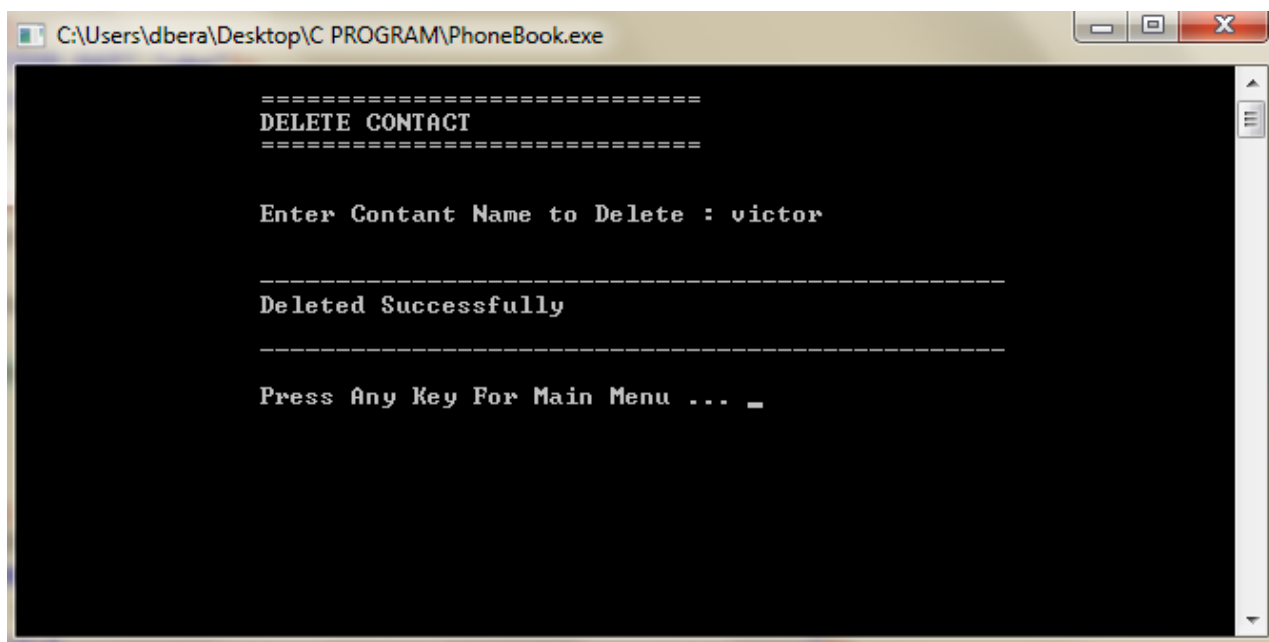
```
=====  
MODIFY CONTACT  
=====
```

Enter Name : Rick
Enter Address : Pune
Enter E-Mail : rick044@gmail.com
Enter phoneNo : 2356567

Modified Successfully

Press Any Key For Main Menu ...

Delete Contact Detail



```
=====  
DELETE CONTACT  
=====
```

Enter Contant Name to Delete : victor

Deleted Successfully

Press Any Key For Main Menu ... _