18CSS101J

Programming For Problem Solving

C - PROGRAMMING MINI PROJECT

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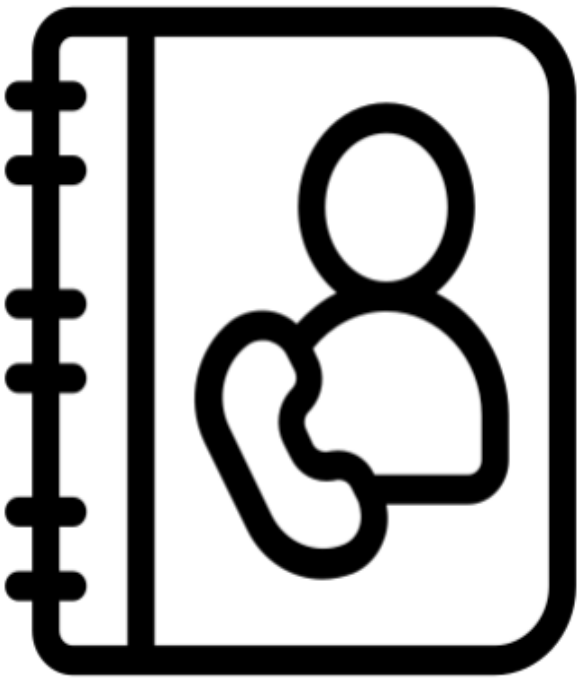
Topic

Phonebook Management System



BRIEF INTRO ON OUR PROJECT

This Phone book Project generates an external file to permanently store the user's data (Name, phone number and E-mail ID). The phone book is a very simple C project that will help you understand the core concepts of capacity, record keeping, and data structure. This program will show you how to add, list, edit or alter, look at, and delete data from a record. File handling and data structure concepts has been extensively used for almost all functions in this mini project.

About The Project

Phonebook is a very simple mini project in C that can help you understand the basic concepts of functions, file handling. 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, search 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, phone number, email are asked while adding a record into the Phonebook. These records can then be modified, listed, searched for and removed. I have used many functions in this mini project. These functions are easy to understand as their name only signifies their respective operations. • void add_item(); • void read_item(); • void modify_item(); • void delete_item(); • int option(); • void displayheading();

Source Code

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
void add_item();
void read_item();
void modify_item();
void delete_item();
int option();
void displayheading();
struct phonebook
{
 char name[30];
 long int pno;
 char address[30];
 };
void main()
{
 int c;
 char con='Y';
 while(con=='Y')
 {
```

```
 c=option();
 switch(c)
 {
 case 1:
 add_item();
 break;
 case 2:
 read_item();
 break;
 case 3:
 modify_item();
 break;
 case 4:
 delete_item();
 break;
 }
 printf("\nType 'Y' to continue with operations:");
 scanf("\n%c",&con);
 }
}
int option()
{
```

```
 int ch;
 printf("\nOptions available:");
 printf("\n1 to add contact in phonebook \n2to read a contact
from phonebook \n3 to modifycontacts \n4 to delete a contact
from thephonebook");
 printf("\nEnter choice: ");
 scanf("%d",&ch);
 return ch;
}
void add_item()
{
 struct phonebook item;
 FILE *ft;
 char x='Y';
 ft=fopen("phonebook","a+");
 do
 {
 char ch;
 printf("\nEnter Name: ");
 scanf("%s",item.name);
 printf("\nEnter Phone Number: ");
 scanf("%ld",&item.pno);
```

```
 printf("\nEnter Email address: ");
 scanf("%s",item.address);
 printf(ft,"%s %ld%s\n",item.name,item.pno,item.address);
 printf("Type 'Y' to repeat the operation\n");
 scanf("\n%c",&ch);
 x=ch;
 }while(x=='Y');
 fclose(ft);
}
void read_item()
{
 struct phonebook item;
 FILE *ft;
 ft=fopen("phonebook","r");
 while(feof(ft)==0)
 {
 fscanf(ft,"%s %ld%s\n",item.name,&item.pno,item.address);
 printf("\n%s %ld %s",item.name,&item.pno,item.address);
 }
 fclose(ft);
}
void modify_item()
```

```
{
 struct phonebook item;
 FILE *ft,*fp;
 ft=fopen("phonebook","r");
 fp=fopen("temp","w+");
 long int pno,npno;
 printf("\nEnter the phone number which is to be modified and
add the new phone number: \n");
 scanf("%ld %ld",&pno,&npno);
 while(!feof(ft))
 {
 fscanf(ft,"%s %ld %s\n",item.name,&item.pno,item.address);
 if(item.pno!=pno)
 fprintf(fp,"%s %ld %s\n",item.name,item.pno,item.address);
 else
 {
 item.pno=npno;
 fprintf(fp,"%s %ld %s\n",item.name,item.pno,item.address);
 }
 }
 fclose(ft);
 fclose(fp);
```

```
 remove("phonebook");
 rename("temp","phonebook");
}
void delete_item()
{
 struct phonebook item;
 FILE *ft,*fp;
 long int pno;
 ft=fopen("phonebook","r");
 fp=fopen("temp","w+");
 printf("\nEnter the phone number to be deleted: \n");
 scanf("%ld",&pno);
 while (!feof(ft))
 {
 fscanf(ft,"%s %ld %s\n",item.name,&item.pno,item.address);
 if(pno!=item.pno)
 fprintf(fp,"%s %ld %s\n",item.name,item.pno,item.address);
 }
 fclose(ft);
 fclose(fp);
 remove("phonebook");
 rename("temp","phonebook");}
```

OUTPUT

main.c

Run

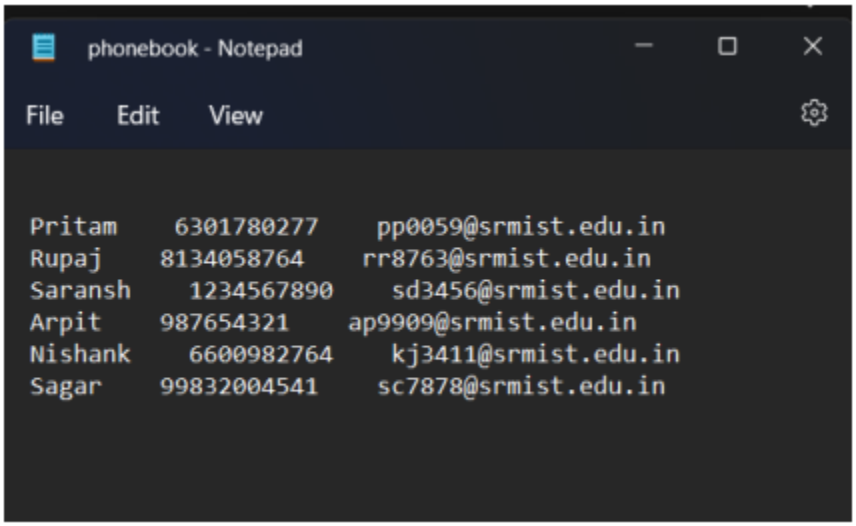
```c
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
void add_item();
void read_item();
void modify_item();
void delete_item();
int option();
void displayheading();
struct phonebook
{
 char name[30];
 long int pno;
 char address[30];
 };
void main()
{
 int c;
 char con='Y';
 while(con=='Y')
 {
 c=option();
 switch(c)
 {
 case 1:
 add_item();
 break;
 case 2:
 read_item();
 break;
 case 3:
 modify_item();
 break;
 case 4:
 delete_item();
```

```
/tmp/re7EP3yJs0.o
Options available:
1 to add contact in phonebook
2to read a contact from phonebook
3 to modifycontacts
4 to delete a contact from thephonebook
Enter choice:
```

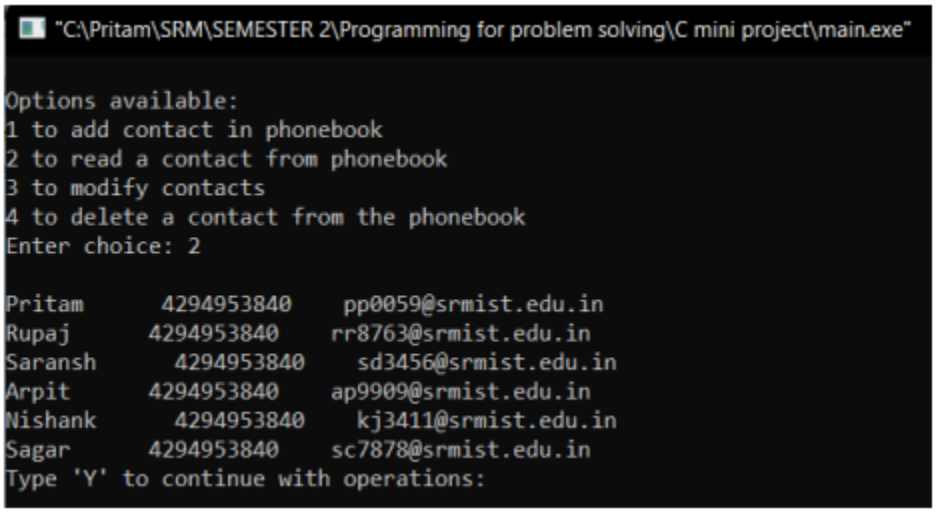
Adding a contact:

```
ayush/c

Options available:
1 to add contact in phonebook
2to read a contact from phonebook
3 to modifycontacts
4 to delete a contact from thephonebook
Enter choice: 1

Enter name: Ayush

Enter phonenumber:7008848457

Enter email address:ayush.patnaik07@gmail.com

Type 'Y' to repeat the operation

Type 'Y' to continue the operation
```

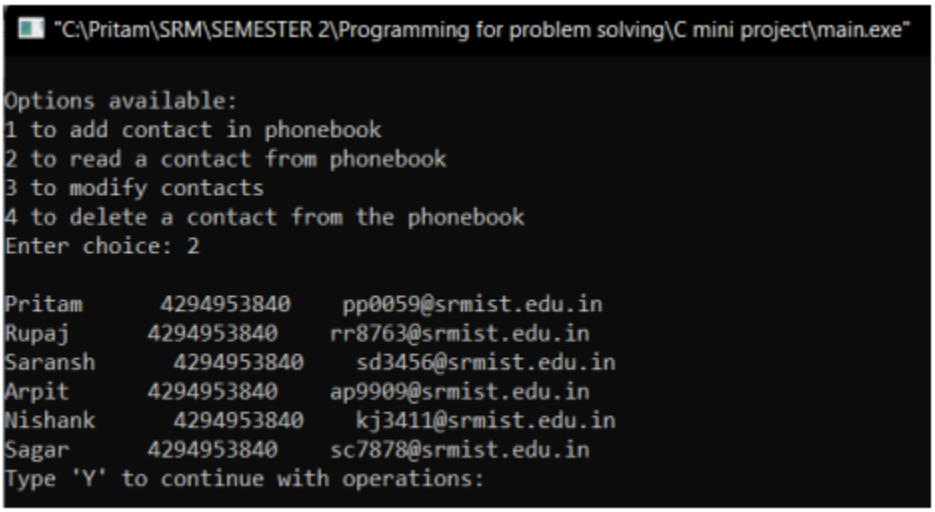
After adding several contacts, the phonebook looks like:

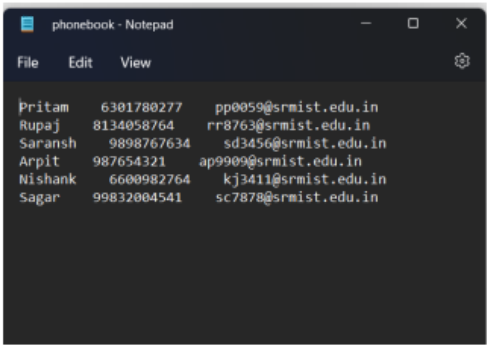


To read a contact:



To Modify a Contact:





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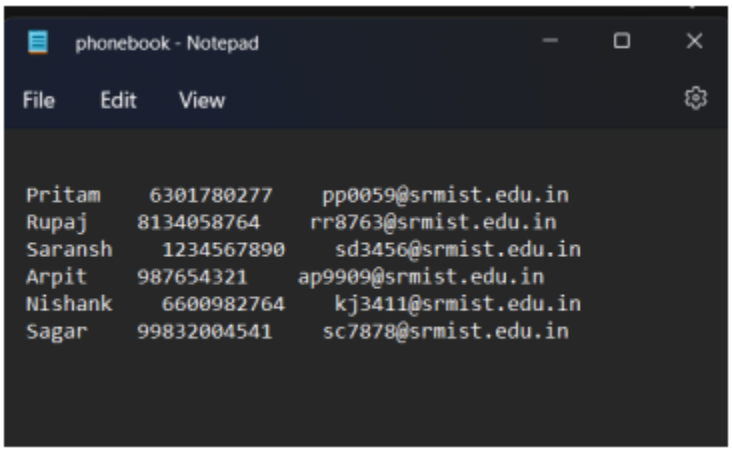
To delete a Contact: Before deletion:



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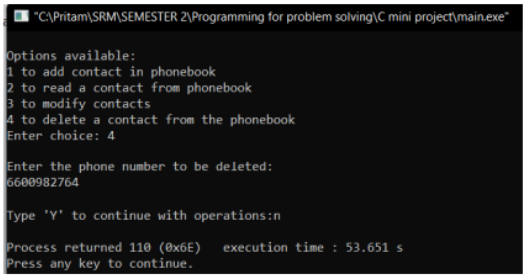

Conclusion:

Thus, using the concepts of C language, we have successfully executed the program for a Phonebook Management system. Various concepts such as structures, pointers, control statements, files, switch, and many other looping statements have been utilised. We can understand this project thoroughly from above screenshots, where every option has been explained.