

PHONE BOOK MANAGER

ASSIGNMENT - III

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NAME OF THE LABORATORY: Programming For Problem Solving

Introduction :

The project is to develop a program known as 'PHONE BOOK MANAGER' which allows the user to create a contact and a group which can also be deleted.

Description :

Pre - defined function: standard library functions are also known as built-in functions. These functions are already defined in the header files, eg.: stdio.h, stdlib.h, etc., i.e., files with an extension '.h' , such functions can be used any where in the function by calling them.

Pre - defined functions used are :

- Printf()
- Scanf()
- System()
- Strcmp()
- Strcpy()

User - defined function: these are the functions which are defined by the user according to the user's need. A function is a block of code that performs a specific task.

User - defined functions used are :

- Void menu()
- Void readgroup()
- Void read()
- Void deletecont()
- Void sortbyg()
- Void display()
- Void readgroupnew()
- Void readgroup()

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Code :

```
/*
    Program to show the usage of phone book manager
    Written by: Choppala Nikithanjali and Cheedella Samiksha
    Date      : 2/4/21
*/

#include <stdio.h>

#include <stdlib.h>

#include<string.h>

int n,gn; //global declaration

struct contact
{
    char name[20];
    char gender[10];
    char gmail[30];
    char lastname[20];
    int phone;
    char group[20];
}s[100];

struct group
{
    char gname[10];
}g[20];

void menu(); //function declaration
void readgroup(); //function declaration
void read(); //function declaration
void readnew(); //function declaration
void deletecont(); //function declaration
void sortbyg(); //function declaration
```

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```
void display(); //function declaration
```

```
void readgroupnew(); //function declaration
```

```
void readgroup() //function definition
```

{

```
system("clear");
```

[illegible][illegible][illegible]

```
printf("\n\n\n\n\n\nENTER THE NUMBER OF GROUPS : ");
```

```
scanf("%d",&gn);
```

```
int i;
```

```
for(i=0; i<gn; i++) //condition check
```

{

```
printf("ENTER THE GROUP %d NAME : ",(i+1));
```

```
scanf("%s",g[i].gname);
```

}

}

```
void read() //function definition
```

{

```
int i, j, flag=0; //initializing flag value to zero
```

```
printf("\nENTER THE NUMBER OF CONTACTS : ");
```

```
scanf("%d",&n);
```

```
for(i=0; i<n; i++) //condition check
```

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```
{  
  
printf("ENTER CONTACT %d *****\n",(i+1));  
  
printf("Enter first name : ");  
  
scanf("%s",s[i].name);  
  
printf("Enter last name : ");  
  
scanf("%s",s[i].lastname);  
  
printf("Enter gender : ");  
  
scanf("%s",s[i].gender);  
  
printf("Enter gmail id : ");  
  
scanf("%s",s[i].gmail);  
  
printf("Enter phone no : ");  
  
scanf("%d",&s[i].phone);  
  
printf("\nEnter the group of contact : ");  
  
scanf("%s",s[i].group);  
  
while(flag==0) //condition check  
{  
    for(j=0; j<gn; j++) //condition check  
    {  
        if(strcmp(s[i].group,g[j].gname)==0) //condition check  
        {  
            flag=1;  
            break;  
        }  
        else  
        {  
            flag=0;  
        }  
    }  
}
```

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```
if(flag==0) //condition check
{
    printf("\nGROUP DOES NOT EXISTS ENTER AGAIN : ");
    scanf("%s",s[i].group);
}
}
}
```



```
void readnew() //function definition
{
    system("clear");

    printf("\n\n\n\t::::::::::::::::::::::::::::::::::::\n");
    printf("\t                WELCOME TO READ CONTACT                \n");
    printf("\t::::::::::::::::::::::::::::::::::::\n");

    int flag=0,i,j; //initializing flag to 0

    printf("\n\n\n\t\tENTER CONTACT %d -----\\n",(n));
    printf("\n\t\t\tEnter first name : ");
    scanf("%s",s[n].name);
    printf("\t\t\tEnter last name : ");
    scanf("%s",s[n].lastname);
    printf("\t\t\tEnter gender : ");
    scanf("%s",s[n].gender);
    printf("\t\t\tEnter gmail id : ");
    scanf("%s",s[n].gmail);
    printf("\t\t\tEnter the phone no : ");
    scanf("%d",&s[n].phone);
    printf("\t\t\tEnter the group of contact : ");
```

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```
scanf("%s",s[n].group);

printf("\n");

while(flag==0) //condition check
{

    for(j=0; j<gn; j++) //condition check
    {
        if(strcmp(s[n].group,g[j].gname)==0) //condition check
        {
            flag=1;

            break;
        }
        else
        {
            flag=0;
        }
    }
    if(flag==0) //condition check
    {
        printf("GROUP DOES NOT EXISTS ENTER AGAIN:");

        scanf("%s",s[n].group);
    }
}

n++; //incrementing n value
}
```

void deletecont() //function definition

```
{
```

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```
int key, pos=-1; //initializing pos value to -1

int i, j, k;

system("clear");

printf("\n\n\n\t:.....\n");

printf("\t                WELCOME TO DELETE CONTACT                \n");

printf("\t:.....\n");

printf("\n\n\n\n\t\tEnter the phone number of the contact to be deleted : ");

scanf("%d",&key);

for(i=0; i<n; i++) //condition check
{
    if(s[i].phone==key) //condition check
    {
        pos=i; //copying i value in pos
    }
}

if(pos==-1) //condition check
{
    printf("\n\nNO CONTACT FOUND TO HAVE THE NUMBER-PLEASE CHECK THE NO AGAIN\n");

    return;
}

else
{

    for(i=pos; i<n; i++) //condition check
    {
        strcpy(s[i].name,s[i+1].name);

        strcpy(s[i].gender,s[i+1].gender);

        strcpy(s[i].gmail,s[i+1].gmail);
```


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```
strcpy(s[i].lastname,s[i+1].lastname);

s[i].phone=s[i+1].phone;

strcpy(s[i].group,s[i+1].group);

n--; //decrementing n value

printf("\n\nCONTACT DELETED SUCCESSFULLY\n\n");

}

}

}

void sortbyg() //function definition
{
    int i, j, k;
    system("clear");
    for(i=0; i<gn; i++) //condition check
    {
        printf("GROUP : %s -----\n",g[i].gname);
        for(j=0; j<n; j++) //condition check
        {
            if(strcmp(g[i].gname,s[j].group)==0) //condition check
            {
                printf("\n\nNAME : %s\nGENDER : %s\nGMAIL : %s\nLASTNAME : %s\nPHONE : %d\nGROUP : %s\n\n",s[j].name,s[j].gender,s[j].gmail,s[j].lastname,s[j].phone,s[j].group);
            }
        }
    }
}

void display() //function definition
{
```

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```
int j;

system("clear");

printf("\n\n\n\n\nDISPLAYING CONTACTS ----- \n");

for(j=0; j<n; j++) //condition check

{

    printf("\n\nFIRST NAME : %s\nGENDER : %s\nGMAIL : %s\nLASTNAME : %s\nPHONE : %d\nGROUP : %s\n\n\n\n",s[j].name,s[j].gender,s[j].gmail,s[j].lastname,s[j].phone,s[j].group);

}

}


void readgroupnew() //function definition

{

    system("clear");

    printf("\n\n\n\nt:::::::::::::::::::::::::::::::::::::::::::::::::: \n");

    printf("\t                                WELCOME TO READ GROUP                                \n");

    printf("\t:::::::::::::::::::::::::::::::::::::::::::::::::: \n");

    printf("\n\n\n\t\tENTER THE GROUP %d NAME : ",(gn+1));

    scanf("%s",g[gn].gname);

    gn++; //incrementing value

    printf("\n\n\n\n");

}


void menu() //function definition

{

    int c;

    system("clear");

    printf("\n\n\n    MENU \n\n");

    printf("    1. TO ENTER NEW CONTACT \n");
```

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```
        default:printf("\t\tInvalid choice\n\t\tRE-ENTER : \n");
    }

    printf("  1. TO ENTER NEW CONTACT \n");
    printf("  2. TO DELETE  \n");
    printf("  3. TO SORT BY GROUP \n");
    printf("  4. TO DISPLAY \n");
    printf("  5. TO ENTER NEW GROUP \n");
    printf("  0. TO EXIT \n");

    printf("\n\n      Enter your choice : ");

    scanf("%d",&c);
}
}

int main()
{
    readgroup(); //function call
    read(); //function call
    menu(); //function call
    return 0;
}
```

Compilation :

```
$gcc Project.c -o Project.o
```

```
$ ./Project.o
```

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Test Cases :

(Output :)

```
it20037@vasavi:~/A3/Pjt

=====
WELCOME TO PHONE BOOK MANAGER
=====

ENTER THE NUMBER OF GROUPS : 1
ENTER THE GROUP 1 NAME : friends

ENTER THE NUMBER OF CONTACTS : 1
ENTER CONTACT 1 *****
Enter first name : nikitanjali
Enter last name : choppala
Enter gender : female
Enter gmail id : nilitanjali@gmail.com
Enter phone no : 0987654321

Enter the group of contact : friends
```

```
it20037@vasavi:~/A3/Pjt

MENU

1. TO ENTER NEW CONTACT
2. TO DELETE
3. TO SORT BY GROUP
4. TO DISPLAY
5. TO ENTER NEW GROUP
0. TO EXIT

Enter your choice : 4
```

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```
it20037@vasavi:~/A3/Pjt

DISPLAYING CONTACTS -----

FIRST NAME : nikitajali
GENDER : female
GMAIL : nilitanjali@gmail.com
LASTNAME : choppala
PHONE : 987654321
GROUP : friends

1. TO ENTER NEW CONTACT
2. TO DELETE
3. TO SORT BY GROUP
4. TO DISPLAY
5. TO ENTER NEW GROUP
0. TO EXIT

Enter your choice : 5
```

```
it20037@vasavi:~/A3/Pjt

::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
WELCOME TO READ GROUP
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::

ENTER THE GROUP 2 NAME : vce

1. TO ENTER NEW CONTACT
2. TO DELETE
3. TO SORT BY GROUP
4. TO DISPLAY
5. TO ENTER NEW GROUP
0. TO EXIT

Enter your choice : 1
```

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```
it20037@vasavi:~/A3/Pjt

.....
WELCOME TO READ CONTACT
.....

ENTER CONTACT 1 -----

Enter first name : samiksha
Enter last name : cheedella
Enter gender : female
Enter gmail id : samiksha@gmail.com
Enter the phone no : 1234567890
Enter the group of contact : vce

1. TO ENTER NEW CONTACT
2. TO DELETE
3. TO SORT BY GROUP
4. TO DISPLAY
5. TO ENTER NEW GROUP
0. TO EXIT

Enter your choice : 4
```

```
it20037@vasavi:~/A3/Pjt

DISPLAYING CONTACTS -----

FIRST NAME : nikitanjali
GENDER : female
GMAIL : nilitanjali@gmail.com
LASTNAME : choppala
PHONE : 987654321
GROUP : friends

FIRST NAME : samiksha
GENDER : female
GMAIL : samiksha@gmail.com
LASTNAME : cheedella
PHONE : 1234567890
GROUP : vce

1. TO ENTER NEW CONTACT
2. TO DELETE
3. TO SORT BY GROUP
4. TO DISPLAY
5. TO ENTER NEW GROUP
0. TO EXIT

Enter your choice : 3
```

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```
it20037@vasavi:~/A3/Pjt
GROUP : friends -----

NAME : nikitanjali
GENDER : female
GMAIL : nikitanjali@mail.com
LASTNAME : choppala
PHONE : 987654321
GROUP : friends

GROUP : vce -----

NAME : samiksha
GENDER : female
GMAIL : samiksha@gmail.com
LASTNAME : cheedella
PHONE : 1234567890
GROUP : vce

1. TO ENTER NEW CONTACT
2. TO DELETE
3. TO SORT BY GROUP
4. TO DISPLAY
5. TO ENTER NEW GROUP
0. TO EXIT

Enter your choice : 1
```

```
it20037@vasavi:~/A3/Pjt

::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
WELCOME TO READ CONTACT
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::

ENTER CONTACT 2 -----

Enter first name : natasha
Enter last name : cheparla
Enter gender : female
Enter gmail id : natasha@gmail.com
Enter the phone no : 1029384756
Enter the group of contact : friends

1. TO ENTER NEW CONTACT
2. TO DELETE
3. TO SORT BY GROUP
4. TO DISPLAY
5. TO ENTER NEW GROUP
0. TO EXIT

Enter your choice : 2
```


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```
it20037@vasavi:~/A3/Pjt

.....
WELCOME TO DELETE CONTACT
.....

Enter the phone number of the contact to be deleted : 1029384756

CONTACT DELETED SUCCESSFULLY

1. TO ENTER NEW CONTACT
2. TO DELETE
3. TO SORT BY GROUP
4. TO DISPLAY
5. TO ENTER NEW GROUP
0. TO EXIT

Enter your choice : 0

*****
THANK YOU FOR USING PHONE BOOK MANAGER
*****

[it20037@vasavi Pjt]$
```

Conclusion :

The C program 'PHONE BOOK MANAGER' was completed successfully without any errors.

Future Scope :

The code can be improved by the use of advance options such as graphics and the use of other functions to get better output.

THANK YOU !!!!