SOURCE CODE

#include <stdio.h>

#include <string.h>

#include <conio.h>

#include <stdlib.h>

#include <windows.h>

char password\_given[10]="123",password\_entered[10];

char ch; //use for password field

#define LINEE printf("\t\t--------------------------------------------------------------------\n");

#define LINE printf("\t\t========================================\n");

#define DELAY for(i=0;i<32767;i++) for(j=0;j<32767/2;j++); //Delay function implementation using for loop

unsigned int i,j; //i and j are used in delay function

void write();void mobile\_write(int val);

void read();void mobile\_read(int val);void all\_read();

void erase();

void search();void mobile\_search(int val);

void modify();void mobile\_modify();

int password();

void filter();

void rom();void ram();void display();void battery();void price();

struct mob

{

char model\_nm[100];

float prize;

float display\_size; //size in inch

int ram;

int rom;

float rear\_cam;

float front\_cam;

int battery;

};

struct mob mobile\_str; //variables str=structure

int main()

{

ClearConsoleToColors(17,15);

int option,result;

do

{

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

printf("\n\t\tENTER CHOICE\n");

printf("\t\t[0] EXIT\n");

printf("\t\t[1] WRITE TO THE Advisory\n");

printf("\t\t[2] READ THE Advisory\n");

printf("\t\t[3] ERASE THE Advisory\n");

printf("\t\t[4] SEARCH THE Advisory\n");

printf("\t\t[5] MODIFY THE Advisory\n");

printf("\t\t[6] FILTER BY Advisory\n");

LINE

printf("\t\t");

scanf("%d",&option);

system("cls");

switch(option){

case 0:

printf("\n\tTHANK YOU");

break;

case 1:

system("cls");

result=password();

if(result)

{

printf("\n\tAUTHENTIFICATION SUCCESSFUL");

DELAY

system("cls");

write();

}

else

{

printf("\n\tINVALID PASSWORD"); Beep(1000,1000);

//Beep(1000,1000);

DELAY

system("cls");

}

break;

case 2:

system("cls");

result=password();

if(result)

{

printf("\n\tAUTHENTIFICATION SUCCESSFUL");

DELAY

system("cls");

read();

}

else

{

printf("\n\tINVALID PASSWORD"); Beep(1000,1000);

DELAY

system("cls");

}

break;

case 3:

system("cls");

result=password();

if(result)

{

printf("\n\tAUTHENTIFICATION SUCCESSFUL");

DELAY

system("cls");

erase();

}

else

{

printf("\n\tINVALID PASSWORD"); Beep(1000,1000);

DELAY

system("cls");

}

break;

case 4:

system("cls");

result=password();

if(result)

{

printf("\n\tAUTHENTIFICATION SUCCESSFUL");

DELAY

system("cls");

search();

}

else

{

printf("\n\tINVALID PASSWORD"); Beep(1000,1000);

DELAY

system("cls");

}

break;

case 5:

system("cls");

result=password();

if(result)

{

printf("\n\tAUTHENTIFICATION SUCCESSFUL");

DELAY

system("cls");

modify();

}

else

{

printf("\n\tINVALID PASSWORD"); Beep(1000,1000);

DELAY

system("cls");

}

break;

case 6:

system("cls");

result=password();

if(result)

{

printf("\n\tAUTHENTIFICATION SUCCESSFUL");

DELAY

system("cls");

filter();

}

else

{

printf("\n\tINVALID PASSWORD"); Beep(1000,1000);

DELAY

system("cls");

}

break;

default:

printf("\n\tInvalid option\n");

DELAY

system("cls");

}

}while(option);

return 0;

}

void write()

{

int option;

do{

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

printf("\n\t\tENTER THE MODELS COMPANY\n");

printf("\n\t\t[0] EXIT THE PROGRAM\n");

printf("\t\t[1] EXIT\n");

printf("\t\t[2] SAMSUNG\n");

printf("\t\t[3] VIVO\n");

printf("\t\t[4] OPPO\n");

printf("\t\t[5] NOKIA\n");

LINE

scanf("%d",&option);

system("cls");

switch(option)

{

case 0:

system("cls");

printf("\n\tTHANK YOU");

exit(0);

case 1:

system("cls");

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

DELAY

system("cls");

break;

case 2:

mobile\_write(1);

system("cls");

break;

case 3:

mobile\_write(2);

system("cls");

break;

case 4:

mobile\_write(3);

system("cls");

break;

case 5:

mobile\_write(4);

system("cls");

break;

default:

printf("\n\tInvalid option");

DELAY

system("cls");

}

}while(option!=1);

}

void mobile\_write(int val)

{

fflush(stdin);

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

printf("\n\t\tEnter model name\n\t\t");

gets(mobile\_str.model\_nm); //gets not working // solved by using fflush(stdin) as suggested by mam

printf("\t\tEnter price\n\t\t");

scanf("%f",&mobile\_str.prize);

printf("\t\tEnter display size\n\t\t");

scanf("%f",&mobile\_str.display\_size);

printf("\t\tEnter ram\n\t\t");

scanf("%d",&mobile\_str.ram);

printf("\t\tEnter rom\n\t\t");

scanf("%d",&mobile\_str.rom);

printf("\t\tRear camera (in megapixel)\n\t\t");

scanf("%f",&mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel)\n\t\t");

scanf("%f",&mobile\_str.front\_cam);

printf("\t\tBattery (MHz)\n\t\t");

scanf("%d",&mobile\_str.battery);

LINE

// Storing the above data inside a file

FILE \*ptr;

if(val==1)

ptr=fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\samsung.txt","ab+");

else if(val==2)

ptr=fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\vivo.txt","ab+");

else if(val==3)

ptr=fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\oppo.txt","ab+");

else if(val==4)

ptr=fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\nokia.txt","ab+");

if(ptr==NULL)

{

printf("\n\t\tERROR,TERMINATE THE PROCESS...");

exit(0);

}

else

{

fwrite(&mobile\_str,sizeof(mobile\_str),1,ptr);

}

fclose(ptr);

printf("\n\t\tDATA ENTERED SUCCESSFULLY");

DELAY

}

void erase()

{

int option;

char ch;

do{

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

printf("\n\t\tENTER THE MODELS COMPANY\n");

printf("\n\t\t[0] EXIT\n");

printf("\t\t[1] SAMSUNG\n");

printf("\t\t[2] VIVO\n");

printf("\t\t[3] OPPO\n");

printf("\t\t[4] NOKIA\n");

printf("\t\t[5] ENTIRE DATABASE\n");

LINE

fflush(stdin);

scanf("%d",&option);

system("cls");

switch(option)

{

case 0:

system("cls");

printf("\n\tEXITING");

DELAY

system("cls");

break;

case 1:

system("cls");

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

printf("\n\t\tARE YOU SURE YOU WANT TO DELETE ALL DATA(Y/N):\n\t\t");

fflush(stdin);

scanf("%c",&ch);

if(ch=='Y'||ch=='y')

{

remove("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\samsung.txt");

printf("\t\tSamsung database deleted succesfully");

DELAY

system("cls");

}

else if(ch=='N'||ch=='n')

{

printf("\t\tProcess cancelled");

DELAY

system("cls");

}

else

{

printf("\t\tInvalid option");

DELAY

system("cls");

}

break;

case 2:

system("cls");

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

printf("\n\t\tARE YOU SURE YOU WANT TO DELETE ALL DATA(Y/N):\n\t\t");

fflush(stdin);

scanf("%c",&ch);

if(ch=='Y'||ch=='y')

{

remove("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\vivo.txt");

printf("\t\tVivo database deleted succesfully");

DELAY

system("cls");

}

else if(ch=='N'||ch=='n')

{

printf("\t\tProcess cancelled");

DELAY

system("cls");

}

else

{

printf("\t\tInvalid option");

DELAY

system("cls");

}

break;

case 3:

system("cls");

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

printf("\n\t\tARE YOU SURE YOU WANT TO DELETE ALL DATA(Y/N):\n\t\t");

fflush(stdin);

scanf("%c",&ch);

if(ch=='Y'||ch=='y')

{

remove("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\oppo.txt");

printf("\t\tOppo database deleted succesfully");

DELAY

system("cls");

}

else if(ch=='N'||ch=='n')

{

printf("\t\tProcess cancelled");

DELAY

system("cls");

}

else

{

printf("\t\tInvalid option");

DELAY

system("cls");

}

break;

case 4:

system("cls");

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

printf("\n\t\tARE YOU SURE YOU WANT TO DELETE ALL DATA(Y/N):\n\t\t");

fflush(stdin);

scanf("%c",&ch);

if(ch=='Y'||ch=='y')

{

remove("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\nokia.txt");

printf("\t\tNokia database deleted succesfully");

DELAY

system("cls");

}

else if(ch=='N'||ch=='n')

{

printf("\t\tProcess cancelled");

DELAY

system("cls");

}

else

{

printf("\t\tInvalid option");

DELAY

system("cls");

}

break;

case 5:

system("cls");

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

printf("\n\t\tARE YOU SURE YOU WANT TO DELETE ALL DATA(Y/N):\n\t\t");

fflush(stdin);

scanf("%c",&ch);

if(ch=='Y'||ch=='y')

{

remove("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\samsung.txt");

remove("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\vivo.txt");

remove("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\oppo.txt");

remove("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\nokia.txt");

printf("\t\tEntire database deleted succesfully");

DELAY

system("cls");

}

else if(ch=='N'||ch=='n')

{

printf("\t\tProcess cancelled");

DELAY

system("cls");

}

else

{

printf("\t\tInvalid option");

DELAY

system("cls");

}

break;

}

}while(option);

}

int password()

{

printf("\n\tEnter the password provided by the service operator\n\t");

fflush(stdin);

for(i=0; ;) //need a proper terminating condition //maybe something to do with dynamically memory //solved using ch=='\r' condition

{

ch=getch();

if(ch=='\r') //when enter is pressed \r is stored instead of \n //if getche was used, we could echo the password

break;

if(ch=='\b')

{

if(i>0)

{

printf("\b");

printf(" ");

printf("\b");

i--;

}

continue;

}

//printf("aa");

password\_entered[i] = ch;

ch = '\*' ;

printf("%c",ch);

i++;

}

password\_entered[i] = '\0';

if(strcmp(password\_given,password\_entered) == 0)

{

return 1;

}

else

{

return 0;

}

}

void read()

{

int option;

do{

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

printf("\n\t\tENTER THE MODELS COMPANY\n");

printf("\n\t\t[0] EXIT THE PROGRAM\n");

printf("\t\t[1] EXIT\n");

printf("\t\t[2] SAMSUNG\n");

printf("\t\t[3] VIVO\n");

printf("\t\t[4] OPPO\n");

printf("\t\t[5] NOKIA\n");

printf("\t\t[6] ALL\n");

LINE

fflush(stdin);

scanf("%d",&option);

system("cls");

switch(option)

{

case 0:

system("cls");

printf("\n\tTHANK YOU");

exit(0);

case 1:

system("cls");

printf("\n\tEXITING Screen Read");

DELAY

system("cls");

break;

case 2:

mobile\_read(1);

system("cls");

break;

case 3:

mobile\_read(2);

system("cls");

break;

case 4:

mobile\_read(3);

system("cls");

break;

case 5:

mobile\_read(4);

system("cls");

break;

case 6:

all\_read();

system("cls");

break;

default:

system("cls");

printf("\n\tInvalid option");

DELAY

system("cls");

}

}while(option!=1);

}

void mobile\_read(int val)

{

system("cls");

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

FILE \*fptr;

//char ch;

if(val==1)

{fptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\samsung.txt", "r");

printf("\n\t\t>>>>SAMSUNG\n");

LINE

}

else if(val==2)

{fptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\vivo.txt", "r");

printf("\n\t\t>>>>VIVO\n");

LINE

}

else if(val==3)

{fptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\oppo.txt", "r");

printf("\n\t\t>>>>OPPO\n");

LINE

}

else if(val==4)

{fptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\nokia.txt", "r");

printf("\n\t\t>>>>NOKIA\n");

LINE

}

if (fptr == NULL)

{

printf("\n\t\tCannot open file \n");

DELAY

}

while(fread(&mobile\_str,sizeof(mobile\_str),1,fptr) == 1){

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%f\n",mobile\_str.prize);

printf("\t\tDisplay size:%f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

LINEE

}

printf("\n");

LINE

fclose(fptr);

getch();

}

void all\_read()

{

mobile\_read(1);

mobile\_read(2);

mobile\_read(3);

mobile\_read(4);

}

void search()

{

int option;

do{

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

printf("\n\t\tENTER THE MODELS COMPANY\n");

printf("\n\t\t[0] EXIT THE PROGRAM\n");

printf("\t\t[1] EXIT\n");

printf("\t\t[2] SAMSUNG\n");

printf("\t\t[3] VIVO\n");

printf("\t\t[4] OPPO\n");

printf("\t\t[5] NOKIA\n");

LINE

scanf("%d",&option);

system("cls");

switch(option)

{

case 0:

system("cls");

printf("\n\tTHANK YOU");

exit(0);

case 1:

system("cls");

printf("\n\tEXITING ");

DELAY

system("cls");

break;

case 2:

mobile\_search(1);

system("cls");

break;

case 3:

mobile\_search(2);

system("cls");

break;

case 4:

mobile\_search(3);

system("cls");

break;

case 5:

mobile\_search(4);

system("cls");

break;

default:

printf("\n\tInvalid option");

DELAY

system("cls");

}

}while(option!=1);

}

void mobile\_search(int val){

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

char model\_name[100];

int isFound = 0;

printf("\n\t\tENTER THE MODEL NAME TO BE SEARCHED: ");

fflush(stdin);

gets(model\_name);

FILE \*ptr;

if(val==1)

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\samsung.txt","rb");

else if(val==2)

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\vivo.txt","rb");

else if(val==3)

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\oppo.txt","rb");

else if(val==4)

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\nokia.txt","rb");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(strcmp(model\_name,mobile\_str.model\_nm) == 0){

isFound = 1;

break;

}

}

if(isFound == 1){

printf("\t\tThe record is Found\n");

printf("\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%f\n",mobile\_str.prize);

printf("\t\tDisplay size:%f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}else{

printf("\n\t\t Sorry, No record found in the database");

}

fclose(ptr);

getch();

}

void modify()

{

int option;

do{

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

printf("\n\t\tENTER THE MODELS COMPANY\n");

printf("\n\t\t[0] EXIT THE PROGRAM\n");

printf("\t\t[1] EXIT\n");

printf("\t\t[2] SAMSUNG\n");

printf("\t\t[3] VIVO\n");

printf("\t\t[4] OPPO\n");

printf("\t\t[5] NOKIA\n");

LINE

scanf("%d",&option);

system("cls");

switch(option)

{

case 0:

system("cls");

printf("\n\tTHANK YOU");

exit(0);

case 1:

system("cls");

printf("\n\tEXITING ");

DELAY

system("cls");

break;

case 2:

mobile\_modify(1);

system("cls");

break;

case 3:

mobile\_modify(2);

system("cls");

break;

case 4:

mobile\_modify(3);

system("cls");

break;

case 5:

mobile\_modify(4);

system("cls");

break;

default:

printf("\n\tInvalid option");

DELAY

system("cls");

}

}while(option!=1);

}

void mobile\_modify(int val){

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

char model\_name[100];

int isFound = 0;

printf("\n\t\tENTER THE MODEL NAME TO BE MODIFIED: ");

fflush(stdin);

gets(model\_name);

FILE \*ptr;

if(val==1)

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\samsung.txt","rb+");

else if(val==2)

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\vivo.txt","rb+");

else if(val==3)

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\oppo.txt","rb+");

else if(val==4)

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\nokia.txt","rb+");

while(fread(&mobile\_str, sizeof(mobile\_str),1,ptr) == 1){

if(strcmp(model\_name, mobile\_str.model\_nm) == 0){

fflush(stdin);

printf("\t\tEnter model name\n\t\t");

gets(mobile\_str.model\_nm); //gets not working // solved by using fflush(stdin) as suggested by mam

printf("\t\tEnter price\n\t\t");

scanf("%f",&mobile\_str.prize);

printf("\t\tEnter display size\n\t\t");

scanf("%f",&mobile\_str.display\_size);

printf("\t\tEnter ram\n\t\t");

scanf("%d",&mobile\_str.ram);

printf("\t\tEnter rom\n\t\t");

scanf("%d",&mobile\_str.rom);

printf("\t\tRear camera (in megapixel)\n\t\t");

scanf("%f",&mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel)\n\t\t");

scanf("%f",&mobile\_str.front\_cam);

printf("\t\tBattery (MHz)\n\t\t");

scanf("%d",&mobile\_str.battery);

fseek(ptr,-sizeof(mobile\_str), SEEK\_CUR);

fwrite(&mobile\_str,sizeof(mobile\_str), 1, ptr);

isFound = 1;

break;

}

}

if(!isFound){

printf("\t\tNo Record Found");

}

fclose(ptr);

DELAY

}

void filter()

{

int option;

do{

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

printf("\n\t\tENTER THE OPTION\n");

printf("\t\t[0] EXIT THE PROGRAM\n");

printf("\t\t[1] EXIT\n");

printf("\t\t[2] SORT BY PRICE\n");

printf("\t\t[3] SORT BY BATTERY IN (MH)\n");

printf("\t\t[4] SORT BY DISPLAY SIZE (IN INCHES)\n");

printf("\t\t[5] SORT BY RAM\n");

printf("\t\t[6] SORT BY ROM\n");

LINE

scanf("%d",&option);

system("cls");

switch(option)

{

case 0:

system("cls");

printf("\n\tTHANK YOU");

exit(0);

case 1:

system("cls");

printf("\n\tEXITING");

DELAY

system("cls");

break;

case 2:

price();

system("cls");

break;

case 3:

battery();

system("cls");

break;

case 4:

display();

system("cls");

break;

case 5:

ram();

system("cls");

break;

case 6:

rom();

system("cls");

break;

default:

printf("\n\tInvalid option");

DELAY

system("cls");

}

}while(option!=1);

}

void price(){

fflush(stdin);

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

float budget,budget1;

int count=0;

printf("\n\t\t ENTER THE PRICE RANGE : \n\t\t");

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

scanf("%f",&budget);

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

scanf("%f",&budget1);

LINE

printf("\n\t\t>>>>SAMSUNG\n");

LINE

FILE \*ptr;

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\samsung.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(budget<=mobile\_str.prize && budget1>=mobile\_str.prize ){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%.2f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%.2f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

fclose(ptr);

LINE

printf("\n\t\t>>>>VIVO\n");

LINE

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\vivo.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(budget<=mobile\_str.prize && budget1>=mobile\_str.prize ){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%.2f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%.2f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

fclose(ptr);

LINE

printf("\n\t\t>>>>OPPO\n");

LINE

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\oppo.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(budget<=mobile\_str.prize && budget1>=mobile\_str.prize ){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%.2f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%.2f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

fclose(ptr);

LINE

printf("\n\t\t>>>>NOKIA\n");

LINE

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\nokia.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(budget<=mobile\_str.prize && budget1>=mobile\_str.prize ){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%.2f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%.2f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

LINE

printf("\n\t\t There are total %d Mobiles That are in YOUR budget %.2f.......",count,budget);

DELAY

fclose(ptr);

getch();

}

void display(){

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

char chh;

float siz;

int count=0;

printf("\n\t\tENTER DISPLAY SIZE : \n\t\t");

fflush(stdin);

scanf("%f",&siz);

LINE

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

LINE

FILE \*ptr;

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\samsung.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(siz>=mobile\_str.display\_size){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%.2f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%.2f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

fclose(ptr);

LINE

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

LINE

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\vivo.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(siz>=mobile\_str.display\_size){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%.2f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%.2f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

fclose(ptr);

LINE

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

LINE

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\oppo.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(siz>=mobile\_str.display\_size){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%.2f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%.2f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

fclose(ptr);

LINE

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

LINE

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\nokia.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(siz>=mobile\_str.display\_size){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%.2f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%.2f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

LINE

printf("\n\t\t There are total %d Mobiles having display size less than equal to %d .......",count,siz);

DELAY

fclose(ptr);

getch();

}

void battery(){

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

char chh;

int battery;

int count=0;

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

fflush(stdin);

scanf("%d",&battery);

LINE

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

LINE

FILE \*ptr;

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\samsung.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(battery<=mobile\_str.battery){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%.2f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%.2f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

fclose(ptr);

LINE

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

LINE

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\vivo.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(battery<=mobile\_str.battery){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%.2f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

fclose(ptr);

LINE

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

LINE

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\oppo.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(battery<=mobile\_str.battery){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%.2f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%.2f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

fclose(ptr);

LINE

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

LINE

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\nokia.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(battery<=mobile\_str.battery){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%.2f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%.2f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

LINE

printf("\n\t\t There are total %d Mobiles Having Battery storage less than equal to %d .......",count,battery);

DELAY

fclose(ptr);

getch();

}

void ram(){

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

char chh;

int ram;

int count=0;

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

fflush(stdin);

scanf("%d",&ram);

LINE

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

LINE

FILE \*ptr;

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\samsung.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(ram>=mobile\_str.ram){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%.2f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%.2f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

fclose(ptr);

LINE

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

LINE

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\vivo.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(ram>=mobile\_str.ram){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%.2f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%.2f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

fclose(ptr);

LINE

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

LINE

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\oppo.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(ram>=mobile\_str.ram){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%.2f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%.2f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

fclose(ptr);

LINE

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

LINE

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\nokia.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(ram>=mobile\_str.ram){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%.2f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%.2f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

LINE

printf("\n\t\t There are total %d Mobiles Having RAM storage less than equal to %d .......",count,ram);

DELAY

fclose(ptr);

getch();

}

void rom(){

printf("\n\n\t\t>>>>>>> SMARTPHONE ADVISORY <<<<<<<\n");

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

LINE

char chh;

int rom;

int count=0;

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

fflush(stdin);

scanf("%d",&rom);

LINE

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

LINE

FILE \*ptr;

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\samsung.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(rom>=mobile\_str.rom){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%.2f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%.2f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

fclose(ptr);

LINE

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

LINE

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\vivo.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(rom>=mobile\_str.rom){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%.2f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%.2f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

fclose(ptr);

LINE

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

LINE

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\oppo.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(rom>=mobile\_str.rom){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%.2f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%.2f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

fclose(ptr);

LINE

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

LINE

ptr = fopen("C:\\Users\\Nayan Bhatia\\Desktop\\file\_operation\\nokia.txt","rb+");

while(fread(&mobile\_str,sizeof(mobile\_str),1,ptr) == 1){

if(rom>=mobile\_str.rom){

count++;

printf("\n\t\tModel name:%s\n",mobile\_str.model\_nm);

printf("\t\tPrice:%.2f\n",mobile\_str.prize);

printf("\t\tDisplay size:%.2f\n",mobile\_str.display\_size);

printf("\t\tRam:%d\n",mobile\_str.ram);

printf("\t\tRom:%d\n",mobile\_str.rom);

printf("\t\tRear camera (in megapixel):%.2f\n",mobile\_str.rear\_cam);

printf("\t\tFront camera (in megapixel):%f\n",mobile\_str.front\_cam);

printf("\t\tBattery (MHz):%d\n",mobile\_str.battery);

}

}

LINE

printf("\n\t\t There are total %d Mobiles Having ROM storage less than equal to %d .......",count,rom);

DELAY

fclose(ptr);

getch();

}

void ClearConsoleToColors(int ForgC, int BackC)

{

WORD wColor = ((BackC & 0x0F) << 4) + (ForgC & 0x0F);

///Get the handle to the current output buffer...

HANDLE hStdOut = GetStdHandle(STD\_OUTPUT\_HANDLE);

///This is used to reset the carat/cursor to the top left.

COORD coord = {0, 0};

///A return value... indicating how many chars were written

/// not used but we need to capture this since it will be

/// written anyway (passing NULL causes an access violation).

DWORD count;

///This is a structure containing all of the console info

/// it is used here to find the size of the console.

CONSOLE\_SCREEN\_BUFFER\_INFO csbi;

///Here we will set the current color

SetConsoleTextAttribute(hStdOut, wColor);

if(GetConsoleScreenBufferInfo(hStdOut, &csbi))

{

///This fills the buffer with a given character (in this case 32=space).

FillConsoleOutputCharacter(hStdOut, (TCHAR) 32, csbi.dwSize.X \* csbi.dwSize.Y, coord, &count);

FillConsoleOutputAttribute(hStdOut, csbi.wAttributes, csbi.dwSize.X \* csbi.dwSize.Y, coord, &count );

///This will set our cursor position for the next print statement.

SetConsoleCursorPosition(hStdOut, coord);

}

return;

}

void SetColorAndBackground(int ForgC, int BackC)

{

WORD wColor = ((BackC & 0x0F) << 4) + (ForgC & 0x0F);;

SetConsoleTextAttribute(GetStdHandle(STD\_OUTPUT\_HANDLE), wColor);

return;

}

COORD coord = {0,0}; ///set the cordinate to 0, 0 (top-left corner of window);

void gotoxy(int x, int y){

coord.X = x; coord.Y = y; /// X and Y coordinates

SetConsoleCursorPosition(GetStdHandle(STD\_OUTPUT\_HANDLE), coord);

}

OUTPUT