#include<iostream.h>

#include<conio.h>

#include<fstream.h>

#include<string.h>

#include<stdio.h>

#include<process.h>

class CONTACTS

{

public:

char numb1[11], numb2[11];

char name[25];

char contype;

void getdata();

void putdata();

}obj;

void CONTACTS :: getdata()

{

cout<<"\n\tEnter Contact Type [normal-N or favourite-F] : ";

cin>>contype;

if ((contype=='F')||(contype=='N'))

{

cout<<"\tEnter Contact Name(no spaces in between):"<<endl;

cout<<"\t\t";

cin>>name;

cout<<"\tEnter Contact Number(maximum 10 digits):"<<endl;

cout<<"\t\t";

cin>>numb1;

cout<<"\t";

char ch;

cout<<"Do you want to enter an alternate number ? (YES-Y OR NO-N) :"<<endl;

cout<<"\t\t";

cin>>ch;

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

{

cout<<"\tEnter The Second Number(maximum 10 digits):"<<endl;

cout<<"\t\t";

cin>>numb2;

}

else

{

numb2[0]='N';

numb2[1]='I';

numb2[2]='L';

numb2[3]=' ';

numb2[4]=' ';

numb2[5]=' ';

numb2[6]=' ';

numb2[7]=' ';

numb2[8]=' ';

numb2[9]=' ';

}

}

else

{

cout<<"\t\t\t INVALID CONTACT TYPE!"<<endl;

}

}

void CONTACTS::putdata()

{

cout<<"\n\n\t\t\t Name : "<<name<<"\n\t\t\t Contact type: "<<contype<<"\n\t\t\t Number1 : "<<numb1<<"\n\t\t\t Number2 : "<<numb2;

}

void main()

{

clrscr();

cout<<"\n\n\t\t\t CONTACT DATABASE PROJECT DONE BY:\n\n\t Achyuth Anand---Magesh Rengarajan---L.N Narein---Shri Hari V.";

cout<<"\n\n\t\t\t SCHOOL: Sri Vageesha Vidhyashram";

char key;

cout<<"\n\n\t\t\t Press Any Key To Continue\n\n\t\t\t\t\t";

cin>>key;

clrscr();

char start='Y';

cout<<"\n\t\t\t Welcome To The Contact Database\n\t\t\t -------------------------------\n";

while(start=='Y'||start=='y')

{

cout<<"\t\t\t\tEnter your choice\n";

cout<<"\n\t 1-INSERT 2-DISPLAY 3-SEARCH 4-MODIFY 5-DELETE"<<endl;

int X;

cout<<"\n\t\t\t\t ";

cin>>X;

switch(X)

{

case 1:

clrscr();

cout<<"\n\t\t\t\t INSERTION\n\t\t\t\t ---------\n";

ofstream fout;

fout.open("CONTACTS.txt",ios::binary|ios::app);

char a='Y';

while(a=='Y'||a=='y')

{

obj.getdata();

fout.write((char\*)&obj, sizeof(obj));

cout<<" \n\n\t DO YOU WANT TO ENTER MORE RECORDS ? (YES-Y OR NO-N) "<<endl;

cout<<"\n\t\t\t\t ";

cin>>a;

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

{

clrscr();

}

}

fout.close();

break;

case 2:

clrscr();

ifstream fin;

cout<<"\n\t\t\t\t DISPLAY\n\t\t\t\t -------\n";

fin.open("CONTACTS.txt",ios::binary);

while(fin.read((char\*)&obj,sizeof(obj)))

{

obj.putdata();

}

fin.close();

break;

case 3:

int y=0;

clrscr();

ifstream fsearch;

fsearch.open("CONTACTS.txt",ios::binary);

cout<<"\n\t\t\t\t SEARCHING\n\t\t\t\t ---------\n";

cout<<"\t\t\t SEARCH ON THE BASIS OF:\n";

cout<<"\n\t\t A-NAME B-CONTACT TYPE C-BOTH NAME AND TYPE"<<endl;

cout<<"\n\t\t\t\t ";

char q;

cin>>q;

cout<<"\n";

switch(q)

{

case 'A':

cout<<"\tENTER [FULL] NAME YOU WANT TO SEARCH FOR :"<<endl;

char n[25];

cout<<"\t";

cin>>n;

while(fsearch.read((char\*)&obj, sizeof(obj)))

{

if(strcmp(obj.name,n)==0)

{

obj.putdata();

y++;

}

}

fsearch.close();

break;

case 'B':

cout<<"\tENTER CONTACT TYPE YOU WANT TO SEARCH FOR :"<<endl;

char t;

cout<<"\t";

cin>>t;

while( fsearch.read((char\*)&obj, sizeof(obj)))

{

if(obj.contype==t)

{

obj.putdata();

y++;

}

}

fsearch.close();

break;

case 'C':

cout<<"\tENTER TYPE :";

char b;

cin>>b;

cout<<"\n\tENTER NAME :";

char c[25];

cin>>c;

while(fsearch.read((char\*)&obj, sizeof(obj)))

{

if(obj.contype==b)

{

if(strcmp(obj.name,c)==0)

{

obj.putdata();

y++;

}

}

}

fsearch.close();

break;

default:

cout<<"\t\t\t\t INVALID CHOICE"<<endl;

y++;

}

if(y==0)

{

cout<<"\t\t\t\tCONTACT NOT FOUND!";

}

break;

case 4:

clrscr();

fstream fmd;

fmd.open("CONTACTS.txt",ios::in|ios::out|ios::binary);

cout<<"\n\t\t\t\t MODIFYING\n\t\t\t\t ---------\n\n";

cout<<"\n\t\t\t MODIFY ON THE BASIS OF:\n";

cout<<"\t\t\t A-NAME B-BOTH NAME AND TYPE \n";

cout<<"\t (B-for records with same name but different contact type)\n "<<endl;

char w;

cout<<"\t\t\t\t\t";

cin>>w;

switch(w)

{

case 'A':

int w=0;

clrscr();

cout<<"\n\t ENTER THE [FULL] NAME OF THE RECORD YOU WANT TO MODIFY:\n"<<endl;

char j[25];

cout<<"\t\t\t\t\t";

cin>>j;

cout<<endl;

while(fmd.read((char\*)&obj, sizeof(obj)))

{

long pos = fmd.tellg();

if(strcmp(obj.name,j)==0)

{

fmd.seekg(pos - sizeof(obj));

obj.getdata();

fmd.write((char\*)&obj, sizeof(obj));

w++;

}

}

clrscr();

if(w==0)

{

cout<<"\t\t\t\tCONTACT NOT FOUND!";

}

ifstream fmd1;

cout<<"\n\t\t\t THE LIST IS NOW:"<<endl;

fmd1.open("CONTACTS.txt",ios::binary);

while(fmd1.read((char\*)&obj,sizeof(obj)))

{

obj.putdata();

}

fmd1.close();

fmd.close();

break;

case 'B':

int abc=0;

clrscr();

cout<<"\n\n\t\t\t\tENTER TYPE AND THEN NAME\n\n ";

char g[25];

char f;

cout<<"\tENTER TYPE :";

cin>>f;

cout<<"\n\tENTER NAME :";

cin>>g;

while(fmd.read((char\*)&obj, sizeof(obj)))

{

long pos = fmd.tellg();

if(obj.contype==f)

{

if(strcmp(obj.name,g)==0)

{

fmd.seekg(pos - sizeof(obj));

obj.getdata();

fmd.write((char\*)&obj, sizeof(obj));

abc++;

}

}

}

clrscr();

if(abc==0)

{

cout<<"\t\t\t\tCONTACT NOT FOUND!";

}

ifstream fmd2;

cout<<"\n\t\t\t THE LIST IS NOW:"<<endl;

fmd2.open("CONTACTS.txt",ios::binary);

while(fmd2.read((char\*)&obj,sizeof(obj)))

{

obj.putdata();

}

fmd2.close();

fmd.close();

break;

default :

cout<<"\t\t\t\t INVALID CHOICE"<<endl;

}

break;

case 5:

clrscr();

ifstream finn;

ofstream foutt;

finn.open("CONTACTS.txt",ios::binary);

foutt.open("TMP.txt",ios::binary|ios::app);

cout<<"\n\t\t\t\t DELETION\n\t\t\t\t --------\n\n";

cout<<"\t\t\t DELETE ON THE BASIS OF:\n\n";

cout<<"\t\t\t A-NAME B-BOTH NAME AND TYPE \n\n\t\t\t\tC-DESTROY DATABSE\n";

cout<<"\n\t (B-for records with same name but different contact type)\n "<<endl;

char p;

cout<<"\t\t\t\t\t";

cin>>p;

switch(p)

{

case 'A':

int o=0;

cout<<"\n\n\t\t\tENTER [FULL] NAME YOU WANT TO DELETE :\n";

char h[25];

cout<<"\t\t\t\t ";

cin>>h;

while(finn.read((char\*)&obj, sizeof(obj)))

{

if(strcmp(obj.name,h)!=0)

{

foutt.write((char\*)&obj, sizeof(obj));

}

else

{

o++;

}

}

finn.close();

foutt.close();

remove("CONTACTS.txt");

rename("TMP.txt","CONTACTS.txt");

clrscr();

if(o!=0)

cout<<"\t\t\t The record is deleted"<<endl;

else

cout<<"\t\t\t Entered record does not exist !"<<endl;

cout<<"\t\t\t THE LIST IS NOW:"<<endl;

ifstream fin1;

fin1.open("CONTACTS.txt",ios::binary);

while(fin1.read((char\*)&obj,sizeof(obj)))

{

obj.putdata();

}

fin1.close();

break;

case 'B':

int g=0;

clrscr();

cout<<"\n\n\t\t\t\tENTER TYPE AND THEN NAME\n\n ";

char l;

char d[25];

cout<<"\tENTER TYPE :";

cin>>l;

cout<<"\n\tENTER NAME :";

cin>>d;

while(finn.read((char\*)&obj, sizeof(obj)))

{

if(strcmp(obj.name,d)!=0)

{

foutt.write((char\*)&obj, sizeof(obj));

}

else

{

if(obj.contype==l)

{

g++;

}

else

{

foutt.write((char\*)&obj, sizeof(obj));

}

}

}

finn.close();

foutt.close();

remove("CONTACTS.txt");

rename("TMP.txt","CONTACTS.txt");

clrscr();

if(g!=0)

cout<<"\t\t\t The record is deleted"<<endl;

else

cout<<"\t\t\t Entered record does not exist !"<<endl;

cout<<"\t\t\t THE LIST IS NOW:"<<endl;

ifstream fin2;

fin2.open("CONTACTS.txt",ios::binary);

while(fin2.read((char\*)&obj,sizeof(obj)))

{

obj.putdata();

}

fin2.close();

break;

case 'C':

clrscr();

char confirm;

cout<<"\n\n\t Are you really sure you want to destry the database ? (Y/N)\n\t\t\t\t ";

cin>>confirm;

if(confirm=='Y')

{

remove("CONTACTS.txt");

cout<<"\n\t\t\t THE EMPTY LIST:"<<endl;

ifstream fin3;

fin3.open("CONTACTS.txt",ios::binary);

while(fin3.read((char\*)&obj,sizeof(obj)))

{

obj.putdata();

}

fin3.close();

}

else

{

cout<<"\n\t\t\t OK....QUERY REJECTED";

}

break;

default:

cout<<"\t\t\t\t INVALID CHOICE"<<endl;

}

break;

default:

cout<<"\t\t\t\t INVALID CHOICE"<<endl;

}

cout<<"\n\n\t DO YOU WANT TO PERFORM FURTHER OPERATIONS ON THE LIST ? (Y or N)\n";

cout<<"\n\t\t\t\t ";

cin>>start;

cout<<"\n";

clrscr();

}

cout<<"\n\n\t\t\t !!THANK YOU AND GOODBYE!!";

getch();

}