#include<iostream>

#include<string.h>

using namespace std;

struct Detail

{

long int Number;

char Name[10];

Detail \*Next;

};

struct Schar

{

char Chars;

Detail \*Next;

}S[26];

class Telephone

{

int alphai,i;

public:

Detail \*Dnode,\*Temp,\*D1node,\*Temp1;

Telephone()

{

alphai=65;

Dnode=NULL;

for(i=0;i<26;i++)

{

S[i].Chars=alphai;

S[i].Next=NULL;

alphai++;

}

}

void Create()

{

char ch2;

do

{

Dnode=new Detail;

cout<<"\nENTER NAME(\*INITIAL MUST BE CAPS\*)::";

cin>>Dnode->Name;

cout<<"\nENTER NUMBER::";

cin>>Dnode->Number;

Insert(Dnode);

cout<<"\nDO YOU WANT TO INSERT MORE::";

cin>>ch2;

}while(ch2=='y'||ch2=='Y');

}

void Insert(Detail \*Node)

{

int Count=0,Index=0;

for(int i=0;i<26;i++)

{

if(S[i].Chars!=Node->Name[0])

Count++;

else

break;

}

Index=Count%26;

if(S[Index].Next==NULL)

S[Index].Next=Node;

else

Node->Next=S[Index].Next;

S[Index].Next=Node;

}

void Display()

{

for(int i=0;i<26;i++)

{

Temp=S[i].Next;

while(Temp!=NULL)

{

cout<<"\nNAME:: "<<Temp->Name<<"\tNUMBER:: "<<Temp->Number;

Temp=Temp->Next;

}

}

}

int Search(char Name[])

{

int Count=0,Index=0;

for(int i=0;i<26;i++)

{

if(S[i].Chars!=Name[0])

Count++;

else

break;

}

Index=Count%26;

Temp=S[Index].Next;

while(Temp!=NULL)

{

if(strcmp(Temp->Name,Name)==0)

{

cout<<"\nNAME:: "<<Temp->Name<<"\tNUMBER:: "<<Temp->Number;

return 1;

}

Temp=Temp->Next;

}

cout<<"::CONTACT NOT PRESENT::";

}

int Delete(char Name[])

{

int Count=0,Index=0;

for(int i=0;i<26;i++)

{

if(S[i].Chars!=Name[0])

Count++;

else

break;

}

Index=Count%26;

Temp=S[Index].Next;

if(strcmp(Temp->Name,Name)==0)

{

Temp1=Temp;

S[Index].Next=Temp->Next;

delete Temp1;

cout<<"@\*OPERATION SUCCESSFUL\*@";

return 1;

}

while(Temp!=NULL)

{

if(strcmp(Temp->Next->Name,Name)==0)

{

Temp1=Temp->Next;

Temp->Next=Temp->Next->Next;

delete Temp1;

cout<<"@\*OPERATION SUCCESSFULL";

return 1;

}

Temp=Temp->Next;

}

cout<<"::CONTACT NOT PRESENT::";

}

};

int main()

{

Telephone T1;

int ch,flag=0;

char ch1,Name[20];

do

{

cout<<"::\*\*\*\*\*TELEPHONE DIRECTORY\*\*\*\*\*::\n\n\t1.CREATE DIRECTORY\n\t2.INSERT NUMBER\n\t3.SEARCH NUMBER\n\t4.DISPLAY CONTACT\n\t5.DELETE CONTACT\n\tENTER YOUR CHOICE::";

cin>>ch;

switch(ch)

{

case 1:if(flag==0)

T1.Create();

else

cout<<"Cannot create";

break;

case 2:

T1.D1node=new Detail;

cout<<"\nENTER NAME(\*INITIAL MUST BE CAPS\*)::";

cin>>T1.D1node->Name;

cout<<"\nENTER NUMBER::";

cin>>T1.D1node->Number;

T1.Insert(T1.D1node);

break;

case 3:

cout<<"\nENTER THE NAME OF USER::";

cin>>Name;

T1.Search(Name);

break;

case 4:

T1.Display();

break;

case 5:

cout<<"\nENTER THE NAME USER TO DELETE::";

cin>>Name;

T1.Delete(Name);

break;

case 6:

break;

default:

cout<<"\n::WRONG CHOICE ENTERED::";

break;

}

cout<<"\nDO YOU WANT TO CONTINUE MORE OPERATIONS(y/n)::";

cin>>ch1;

}while(ch1=='y'||ch1=='Y');

return 0;

}

/\* OUTPUT

\*/

cclab00@spllab:~$ g++ tele.cpp

cclab00@spllab:~$ ./a.out

::\*\*\*\*\*TELEPHONE DIRECTORY\*\*\*\*\*::

1.CREATE DIRECTORY

2.INSERT NUMBER

3.SEARCH NUMBER

4.DISPLAY CONTACT

5.DELETE CONTACT

ENTER YOUR CHOICE::1

ENTER NAME(\*INITIAL MUST BE CAPS\*)::Sunita

ENTER NUMBER::912007080

DO YOU WANT TO INSERT MORE::y

ENTER NAME(\*INITIAL MUST BE CAPS\*)::Amit

ENTER NUMBER::9800368102

DO YOU WANT TO INSERT MORE::y

ENTER NAME(\*INITIAL MUST BE CAPS\*)::ABC

ENTER NUMBER::7038110264

DO YOU WANT TO INSERT MORE::y

ENTER NAME(\*INITIAL MUST BE CAPS\*)::PQR

ENTER NUMBER::8080502361

DO YOU WANT TO INSERT MORE::n

DO YOU WANT TO CONTINUE MORE OPERATIONS(y/n)::y

::\*\*\*\*\*TELEPHONE DIRECTORY\*\*\*\*\*::

1.CREATE DIRECTORY

2.INSERT NUMBER

3.SEARCH NUMBER

4.DISPLAY CONTACT

5.DELETE CONTACT

ENTER YOUR CHOICE::4

NAME:: ABC NUMBER:: 7038110264

NAME:: Amit NUMBER:: 9800368102

NAME:: PQR NUMBER:: 8080502361

NAME:: Sunita NUMBER:: 912007080

DO YOU WANT TO CONTINUE MORE OPERATIONS(y/n)::y

::\*\*\*\*\*TELEPHONE DIRECTORY\*\*\*\*\*::

1.CREATE DIRECTORY

2.INSERT NUMBER

3.SEARCH NUMBER

4.DISPLAY CONTACT

5.DELETE CONTACT

ENTER YOUR CHOICE::2

ENTER NAME(\*INITIAL MUST BE CAPS\*)::XYZ

ENTER NUMBER::8890012365

DO YOU WANT TO CONTINUE MORE OPERATIONS(y/n)::y

::\*\*\*\*\*TELEPHONE DIRECTORY\*\*\*\*\*::

1.CREATE DIRECTORY

2.INSERT NUMBER

3.SEARCH NUMBER

4.DISPLAY CONTACT

5.DELETE CONTACT

ENTER YOUR CHOICE::3

ENTER THE NAME OF USER::Amit

NAME:: Amit NUMBER:: 9800368102

DO YOU WANT TO CONTINUE MORE OPERATIONS(y/n)::y

::\*\*\*\*\*TELEPHONE DIRECTORY\*\*\*\*\*::

1.CREATE DIRECTORY

2.INSERT NUMBER

3.SEARCH NUMBER

4.DISPLAY CONTACT

5.DELETE CONTACT

ENTER YOUR CHOICE::5

ENTER THE NAME USER TO DELETE::XYZ

@\*OPERATION SUCCESSFUL\*@

DO YOU WANT TO CONTINUE MORE OPERATIONS(y/n)::y

::\*\*\*\*\*TELEPHONE DIRECTORY\*\*\*\*\*::

1.CREATE DIRECTORY

2.INSERT NUMBER

3.SEARCH NUMBER

4.DISPLAY CONTACT

5.DELETE CONTACT

ENTER YOUR CHOICE::4

NAME:: ABC NUMBER:: 7038110264

NAME:: Amit NUMBER:: 9800368102

NAME:: PQR NUMBER:: 8080502361

NAME:: Sunita NUMBER:: 912007080

DO YOU WANT TO CONTINUE MORE OPERATIONS(y/n)::n

cclab00@spllab:~$

\*/