#include<iostream>

using namespace std;

class node

{

public:

int prn;

string name;

node \*link;

};

class linkedlist

{

public:

node \*start;

linkedlist()

{

start=NULL;

}

void insert\_President()

{

node \*n;

n=new node;

cout<<"\nEnter President PRN to be inserted\n";

cin>>n->prn;

cout<<"\nEnter President Name to be inserted\n";

cin>>n->name;

n->link=NULL;

if(start==NULL)

{

start=n;

}

else

{node \*tmp;

tmp=start;

while(tmp->link!=NULL)

{

tmp=tmp->link;

}

tmp->link=n;

}

display();

}

void insert\_Secretary()

{

node \*n;

n=new node;

cout<<"\nEnter Secretary PRN to be inserted\n";

cin>>n->prn;

cout<<"\nEnter Secretary Name to be inserted\n";

cin>>n->name;

n->link=NULL;

if(start==NULL)

{

start=n;

}

else

{

node \*tmp;

tmp=start;

while(tmp->link!=NULL)

{

tmp=tmp->link;

}

tmp->link=n;

}

display();

}

void insert\_Member()

{

node \*n;

n=new node;

cout<<"\nEnter Member PRN to be inserted\n";

cin>>n->prn;

cout<<"\nEnter Member Name to be inserted\n";

cin>>n->name;

n->link=NULL;

if(start==NULL)

{

start=n;

}

else

{

node \*tmp;

tmp=start;

while(tmp->link!=NULL)

{

tmp=tmp->link;

}

tmp->link=n;

}

display();

}

void del\_President()

{

if(start==NULL)

{

cout<<"\nLinked List is Empty !!\n";

return;

}

else

{

node \*tmp;

tmp=start;

start=start->link;

delete tmp;

}

display();

}

void del\_Secretary()

{

if(start==NULL)

{

cout<<"\nLinked List is Empty !!\n";

return;

}

else

{

node \*tmp;

tmp=start;

while(tmp->link->link!=NULL)

{

tmp=tmp->link;

}

node \*p;

p=tmp->link;

tmp->link=p->link;

delete p;

}

display();

}

void del\_Member()

{

if(start==NULL)

{

cout<<"\nLinked List is Empty !!\n";

return;

}

else

{

node \*tmp;

tmp=start;

while(tmp->link->link->link!=NULL)

{

tmp=tmp->link;

}

node \*p;

p=tmp->link;

tmp->link=p->link;

delete p;

}

display();

}

void display()

{

node \*tmp;

tmp=start;

if(start==NULL)

{

cout<<"\nLinked List is Empty !!\n";

return;

}

else

{

cout<<"\nElements of the Linked List are as follows: \n";

while(tmp!=NULL)

{

cout<<tmp->prn<<"\t"<<tmp->name<<"\n";

tmp=tmp->link;

}

}

}

};

int main()

{

linkedlist list;

int ch;

do

{

cout<<"\n\nChoose an option: \n1. Insert President\n2. Insert Secretary\n3. Insert Member\n4. DeletePresident\n5. Delete Secretary\n6. Delete Member\n7. Display Linked List\n8. Exit\n";

cin>>ch;

switch(ch)

{

case 1:

list.insert\_President();

break;

case 2:

list.insert\_Secretary();

break;

case 3:

list.insert\_Member();

break;

case 4:

list.del\_President();

break;

case 5:

list.del\_Secretary();

break;

case 6:

list.del\_Member();

break;

case 7:

list.display();

break;

case 8:

break;

default:

cout<<"\n\nInvalid Input! Please Enter Again...\n";

}

}while(ch!=8);

return 0;

}