#include<iostream>

using namespace std;

struct node

{

int info;

node \*left,\*right;

};

class j\_prob

{

node \*head,\*current,\*temp;

public:

j\_prob()

{

head,current,temp=0;;

}

void createlist()

{

int i=1,size;

cout<<"Enter the number of the persons : ";

cin>>size;

if (size>0)

size=size;

else

size=10;

head=new node;

head->left=head;

head->right=head;

head->info=1;

current=head;

while(i!=size)

{

temp=new node;

temp->right=head;

temp->left=current;

current->right=temp;

temp->info=i+1;

current=current->right;

i++;

}

head->left=temp;

}

void joseph()

{

int start;

current=head;

if(head==NULL)

return;

cout<<"Enter the start point of selecting : ";

cin>>start;

if(head->info==start)

{

while(current->right!=current)

{

current=current->right->right->right;

temp=current->right;

current->right->left=current->left;

current->left->right=current->right;

if(current==head)

head=current->right;

delete current;

print();

current=temp;

}

}

else

{

current=current->right;

while(current!=head)

{

if(current->info==start)

break;

else

current=current->right;

}

}

while(current->right !=current)

{

current=current->right->right->right;

temp=current->right;

current->right->left=current->left;

current->left->right=current->right;

if(current==head)

head=current->right;

delete current;

print();

current=temp;

}

cout<<" THe winner is : "<<current->info<<endl;

}

void print()

{

current=head;

if(head==NULL)

return;

cout<<current->info<<" ";

current=current->right;

while(current!=head)

{

cout<<current->info<<" ";

current=current->right;

}

cout<<endl;

}

};

void main()

{

cout<<"\t|==========================================|"<<endl;

cout<<"\t|| ||"<<endl;

cout<<"\t|| JOSEPH PROBLEM ||"<<endl;

cout<<"\t|| ||"<<endl;

cout<<"\t|==========================================|"<<endl;

j\_prob obj;

obj.createlist();

obj.joseph();

system("pause");

}

