import java.util.\*;

public class Main

{

// node

private class Node

{

int data;

Node next;

}

//linked list content

private Node head;

private Node tail;

private int size=0;

//adding nodes

public void addnode(int d)

{

Node node = new Node();

node.data=d;

node.next=null;

//for empty list

if(this.size==0)

{

this.head=node;

this.tail=node;

this.size++;

}

else

{

this.tail.next=node;

this.tail=node;

this.size++;

}

}

//display the list

public void displaylist()

{

if(this.size!=0)

{

Node node=this.head;

while(node!=null)

{

System.out.println(node.data);

node=node.next;

}

}

else

{

System.out.println("empty list");

}

}

public void addbeg(int d)

{

Node node=new Node();

node.data=d;

if(this.size!=0)

{

node.next=this.head;

this.head=node;

this.size++;

}

else

{

node.next=null;

this.head=this.tail=node;

this.size++;

}

}

public void getnode(int index)

{

if(this.size==0 || this.size<=index)

{

System.out.println("do not exist");

}

else

{

Node node=this.head;

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

{

node=node.next;

}

System.out.println(node.data);

}

}

public void addatanyindex(int d,int index)

{

if(index==0)

{

addbeg(d);

}

else if(index==size)

{

addnode(d);

}

else if(index>size)

{

System.out.println("invalid index");

}

else

{

Node nice=new Node();

nice.data=d;

Node node=this.head;

for(int i=0;i<index-1;i++)

{

node=node.next;

}

nice.next=node.next;

node.next=nice;

this.size++;

}

}

public void removebeg()

{

if(this.size==0)

System.out.println("empty list");

else if(this.size==1)

{

this.tail=this.head=null;

this.size=0;

}

else

{

this.head=this.head.next;

this.size--;

}

}

public void removeend()

{

if(this.size==0)

System.out.println("empty list,, removall not possible");

else if(this.size==1)

{

this.head=this.tail=null;

this.size--;

}

else

{

Node node=this.head;

while(node.next!=tail)

{

node=node.next;

}

node.next=null;

tail=node;

this.size--;

}

}

public void removeany(int index)

{

if(this.size==0 || this.size==index)

System.out.println("please enter valid option");

else if(index==0)

removebeg();

else if(index==size-1)

removeend();

else

{

Node node=this.head;

for(int i=0;i<index-1;i++)

{

node=node.next;

}

node.next=node.next.next;

this.size--;

}

}

public void displayrev()

{

Node node=new Node();

for(int i=size-1;i>=0;i--)

{

this.getnode(i);

//System.out.println(node.data);

}

}

public void dorevptrrec(Main list2,Node zero,Node one, Node two)

{

if(two==null)

{

one.next=zero;

list2.head=one;

return;

}

one.next=zero;

zero=two.next;

dorevptrrec(list2,one,two,zero);

}

public void revlistpointerrec(Main list1)

{

Node z=list1.head;

Node o=z.next;

Node t=o.next;

z.next=null;

list1.tail=z;

dorevptrrec(list1,z,o,t);

}

public static void main(String args[])

{

Main list=new Main();

list.addbeg(0);

list.addnode(10);

list.addnode(20);

list.addnode(30);

list.addbeg(0);

list.addnode(40);

list.addnode(50);

list.addatanyindex(90,3);

//list.removebeg();

//list.removeany(4);

//list.displaylist();

//System.out.println(list.size);

//list.getnode(6);

list.revlistpointerrec(list);

//list.displayrev();

list.displaylist();

}

}

import java.util.\*;

public class Main

{

static int count=0;

public static void main (String[] args)

{

int a[]={5,10,15,20,25,30};

int b[]={0,0,0,0,0,0,0};

ArrayList<Integer> list=new ArrayList<Integer>();

fc(a,b,50,list,0,0);

System.out.println(count);

}

public static void fc(int x[],int y[],int t,ArrayList<Integer> l1,int s,int si)

{

if(s==t)

{

count++;

System.out.println(l1);

return;

}

for(int i=si;i<x.length;i++)

{

if(y[i]==0)

{

y[i]=1;

l1.add(x[i]);

if(s+x[i]<=t)

fc(x,y,t,l1,s+x[i],i);

l1.remove(Integer.valueOf(x[i]));

y[i]=0;

}

}

}