import java.io.\*;

import java.util.\*;

class Link

{

Node head;

class Node

{

int data;

Node next;

public Node(int d)

{

data=d;

next=null;

}

}

public void push(int newdata)

{

Node newnode = new Node(newdata);

newnode.next=head;

head=newnode;

}

public void inafter(Node prev, int ndata)

{

if(prev==null)

{

System.out.println("The previous node cannot be null");

}

else

{

Node nnode = new Node(ndata);

nnode.next = prev.next;

prev.next=nnode;

}

}

public void print()

{

Node tnode=head;

while(tnode!=null)

{

System.out.print(tnode.data+"->");

tnode=tnode.next;

}

}

}

class Main

{

public static void main(String[] args)throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

int n = Integer.parseInt(br.readLine());

Link obj= new Link();

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

{

System.out.print("Enter the"+" "+i+" "+"value: ");

int newdata = Integer.parseInt(br.readLine());

obj.push(newdata);

}

System.out.println("=======================================================");

System.out.println("The values after insertion are: ");

obj.print();

System.out.println();

System.out.println("========================================================");

System.out.print("Enter the previous node value: ");

int ndata = Integer.parseInt(br.readLine());

obj.inafter(obj.head.next.next,ndata);

System.out.println("=======================================================");

System.out.println("The values after insertion are: ");

obj.print();

}

}