import java.util.\*;

class stack

{

int size;

int arr[];

int top;

stack (int s)

{

size = s;

arr = new int[s];

top = -1;

}

boolean isfull ()

{

return top == size - 1;

}

boolean isempty ()

{

return top == -1;

}

void push (int d)

{

if (isfull ())

{

System.out.println ("Stack is overflow");

}

else

{

top++;

arr[top] = d;

}

return;

}

int pop ()

{

if (isempty ())

{

System.out.println ("Stack is underflow");

return -10;

}

else

{

int d = arr[top];

top--;

return d;

}

}

void peek ()

{

if (isempty ())

{

System.out.println ("Stack is underflow");

}

else

{

System.out.println ("Peek value " + arr[top]);

}

}

void display ()

{

if (isempty ())

{

System.out.println ("Stack is underflow");

}

else

{

for (int i = top; i >= 0; i--)

System.out.print (arr[i] + " ");

System.out.println ("\n");

}

return;

}

}

public class Main

{

public static void main (String args[])

{

System.out.print ("Enter the size of the stack: ");

Scanner s = new Scanner (System.in);

int n = s.nextInt ();

int c;

stack s1 = new stack (n);

do

{

System.out.println ("1.PUSH");

System.out.println ("2.POP");

System.out.println ("3.PEEK");

System.out.println ("4.DISPLAY");

System.out.println ("5.EXIT");

System.out.println ("\n CHOOSE THE OPTION: ");

c = s.nextInt();

switch (c)

{

case 1:

System.out.print ("Enter the value to insert: ");

int v = s.nextInt ();

s1.push (v);

break;

case 2:System.out.println ("Deleted the value from the stack " +

s1.pop ());

break;

case 3:s1.peek ();

break;

case 4:s1.display ();

case 5:

break;

default:System.out.println ("Enter valid option");

}

}

while (c != 5);

}

}