```
1  ---------------------------------Stack.java-------------------------------
2  package com.ameya.mystack;
3
4  public class Stack {
5      private int data[];
6      private int top;
7      private final int SIZE=5;
8
9      public Stack() {
10         data=new int[SIZE];
11         for(int i=0;i<data.length;i++) {
12             data[i]=-1;
13         }
14         top=-1;
15         System.out.println("++++ Stack Initialized For Size "+SIZE+"
           Elements");
16         printStack();
17     }
18     public boolean isFull() {
19         if(top==SIZE-1) {
20             return true;
21         }
22         return false;
23     }
24     public boolean isEmpty() {
25         if(top==-1) {
26             return true;
27         }
28         return false;
29     }
30     public void push(int element) {
31         top+=1;
32         data[top]=element;
33     }
34     public int pop() {
35         int element=data[top];
36         data[top]=-1;
37         top-=1;
38         return element;
39     }
```

```
40      public int peek() {
41          return data[top];
42      }
43      public void printStack() {
44          for(int i : data) {
45              System.out.print(i+" ");
46          }
47          System.out.println("       TOP -> "+top);
48      }
49  }
50  ---------------------------------TestStack.java-------------
    -----------
51  package com.ameya.test;
52
53  import com.ameya.mystack.Stack;
54
55  public class TestStack {
56
57      public static void main(String[] args) {
58          Stack stck=new Stack();
59          int element=10;
60          while(!stck.isFull()) {
61              stck.push(element);
62              stck.printStack();
63              element+=10;
64          }
65          System.out.println("++++ Stack Full ++++");
66          while(!stck.isEmpty()) {
67              element=stck.pop();
68              stck.printStack();
69          }
70          System.out.println("++++ Stack Empty ++++");
71      }
72
73  }
74
```