import java.util.EmptyStackException;

public class Stack {

private ListNode top;

private int length;

private class ListNode {

private int data; // Can be a generic type

private ListNode next; // Reference to next ListNode in list

public ListNode(int data) {

this.data = data;

this.next = null;

}

}

public Stack() {

top = null;

length = 0;

}

public int length() {

return length;

}

public boolean isEmpty() {

return length == 0;

}

public void push(int data) {

ListNode temp = new ListNode(data);

temp.next = top;

top = temp;

length++;

}

public int pop() {

if(isEmpty()) {

throw new EmptyStackException();

}

int result = top.data;

top = top.next;

length--;

return result;

}

public int peek() {

if(isEmpty()) {

throw new EmptyStackException();

}

return top.data;

}

public static void main(String[] args) {

Stack stack = new Stack();

stack.push(10);

stack.push(15);

stack.push(20);

System.out.println(stack.peek());

stack.pop();

System.out.println(stack.peek());

stack.pop();

System.out.println(stack.peek());

}

}