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BATCH: B2

Q1: **A package that implements Stack operations PUSH and POP.**

A package2 Handle user-defined exceptions stack overflow and underflow.
A driver function to implement the scenario
Package pack1

Stack class

```
package pack1;

import pack2.Overflow;
import pack2.Underflow;

public class Stack{
   int top=-1;
   int stackL=4;
   int [] stack= new int[stackL];
   int r;
   public void pop(int num) throws Underflow{
       try{
        if(top==-1){
            throw new Underflow("The stack is underflowing");
        }
        else{
        r=stack[top];
        top--;
        System.out.println(r);
        }
       }
       catch(Underflow e){
           System.out.println(e.getMessage());
       }
   }
   public void push(int num) throws Overflow{
    try{
        if(top==stackL-1){
            throw new Overflow("The stack is overflowing");
           }
           else{
```

```
            top++;
            stack[top]=num;
            }
    }
    catch(Overflow e){
        System.out.println(e.getMessage());
    }

   }
}
```

Package pack2

Overflow class

```
package pack2;
public class Overflow extends Exception {
    public Overflow(String s){
        super(s);
    }
}
```

Underflow class

```
package pack2;

public class Underflow extends Exception{
    public Underflow(String s){
        super(s);
    }
}
```

Output

```
The stack is overflowing
6
7
8
9
The stack is underflowing
PS C:\Users\aspur\OneDrive\Desktop\JavaPrograms2>
```