Data Encapsulation

In this solution, you will need 3 classes. Place all classes in the StackTest1.java file. This means that StackData and StackOps are not public classes.

1. StackData:
    a. public data for a stack
    b. you can use any data structure you wish, but not the Java stack class. You must write your own implementation.
2. StackOps:
    a. containing operations for the stack object. Note: all methods for this class are static and there are no class variables.
    b. Operations to include are
        i.   Push
        ii. Pop
        iii. Peek
        iv. Count
        v.   toString
    c. Include exceptions for overflow and underflow
3. StackTest1
    a. Test the different operations of the stack class

Information Hiding

In this solution, you will need 2 classes. Place both classes in the StackTest2.java file. This means that Stack is a private class.

1. Stack :
    a. Including private data
    b. Included public methods for
        i.   Push
        ii. Pop
        iii. Peek
        iv. Count
        v.   toString
    c. Include exceptions for overflow and underflow
    d. You can use any data structure you wish, but not the Java stack class. You must write your own implementation.
2. StackTest2
    a. Test the different operations of the stack class

Be sure to follow all course coding and documentation standards.