

# Assignment #5 by Luke O'Brien

Tuesday, February 25, 2020 3:35 PM

CS 1450:002

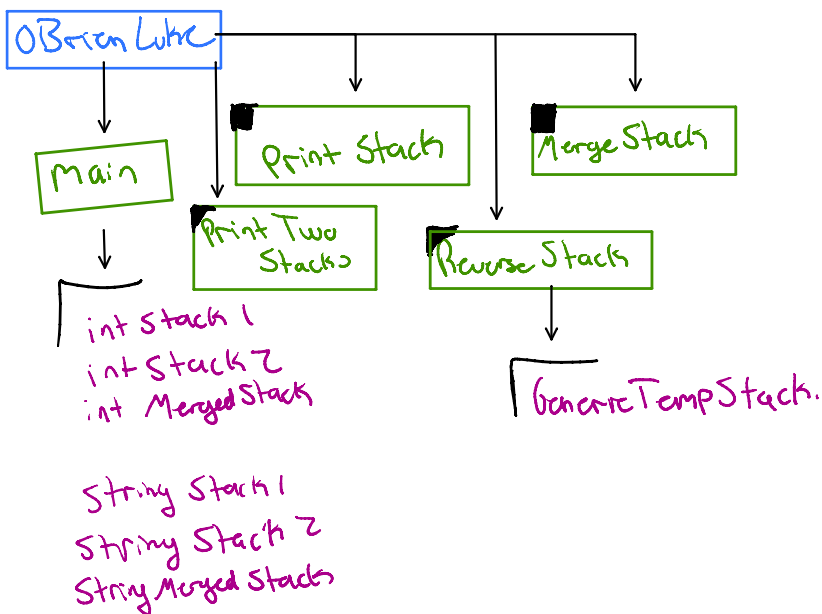
## Problem:

We are given two sets of two stacks. Each set needs to merge the two stacks into one final merged stack. but this stack has to be from smallest to largest.

## What I Don't Know:

- Don't remember from top of head how to use Iterator because I'm pretty sure it's an *Interface*
- Pre Sorting Stacks while merging them.

## Class method Interface Abstract Generic



## Main

```
Public static void main(String[] args) throws IOException
{
    Scanner intFileOne ("numbers1.txt");
    Scanner intFileTwo ("numbers2.txt");
    Scanner strFileOne ("mountains1.txt");
    Scanner strFileTwo ("mountains2.txt");

    Stack<Integer> intStackOne = all number from intFileOne;
    Stack<Integer> intStackTwo = all numbers from intFileTwo;
    Stack<String> strStackOne = all Strings from strFileOne;
    Stack<String> strStackTwo = all Strings from strFileTwo;

    Stack<Integer> intStackFin;
    Stack<Integer> strStackFin;

    printStack(intStackOne);

    mergeStack(intStackOne, intStackTwo, intStackFin);
    reverseStack(intStackFin);
    printStack(intStackFin);

    printStack(intStackTwo);

    mergeStack(strStackOne, strStackTwo, strStackFin);
    reverseStack(strStackFin);
    printStack(strStackFin);

    printTwoStacks(intStackFin, strStackFin);
}
```

## What I have learned:

- grew very familiar with use of generics in methods & even classes.
- got closer to figuring out how to sort objects by value without predetermined sort function.
- Better Understand how the Java Data Structures are built. (given we kinda made our own)