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Assignment 6 – Fall 2020

Due Date: *by Tuesday November 30, 2020 11:59PM*
How to submit: *upload solution file to Blackboard*

This assignment focuses on Java's Lambdas and Streams discussed in Chapter 17 and generic classes discussed in Chapter 20. You will need to implement the four methods declared in the provided Java file.

For this assignment, you must use Java's streams with intermediate and terminal operations (e.g. $filter, map, limit, sum$ …). You are not allowed to use any looping structures (i.e. For, While, and Do-While). For file input, you must use the $java.nio$ package and not the $java.io$ package. However, you may use any of the exception classes from $java.io$ since there aren't any in $java.io$!

Consult each method's Javadoc for a description of that method's task.

Note:

- ✓ ***This is an individual assignment; please do your own work, sharing and/or copying code and/or solution ideas with/from others will result in a grade of 0 and disciplinary actions for all involved parties. If you run into problems and have done your best to solve them, please contact me before/after class or by e-mail.***
- ✓ ***A 20% grade deduction for every day the assignment is late.***

Figures:

Figure 1: Sum illustration between 10 and 20 (must account for 0-based indexes)

1. *Testing toQueue using an empty stack. Values*:

2. *Testing toQueue using stackChar. Values*: *ABCDEFGHIJKLMNOPQRSTUVWXYZ*

3. *Testing reverseStack using stackChar. Values*: *ZYXWVUTSRQPONMLKJIHGFEDCBA*

4. *Testing sumBetween using stackInt. Sum between* 2 *and* 0: -1

5. *Testing sumBetween using stackInt. Sum between* 10 *and* 20: 704

5. *Testing sumBetween using stackInt. Sum between* 1000 *and* 2000: -1

6. *Testing readNumericFromFile.* 1*st* 10 *Numeric characters found*: 7, 4, 6, 9, 6, 8, 6, 1, 3, 2

Figure 2: Test script output