

COP 3503 Spring 2022 Section 2 Recitation Program #1

CD

For each recitation program, in order to get full credit, you must submit your solution to open.kattis.com and get your solution accepted on all test cases. In addition, some of the assignments will have some separate requirements to fulfill based on your code. When submitting your work to Webcourses, please carefully read the corresponding directions document before submitting all of your files.

NOTE: Over the course of the semester, you must submit THREE out of the five recitation programs. It is expected that while you are in recitation, you start working on each of them. But, afterwards, you can choose which three to finish up.

What This Program Is Testing

This problem requires reading in two lists of size upto 10^6 . The run time would be too long if there was a double for loop structure of two nested loops, with each iterating 10^6 time. Rather, what is being tested is the use of the Java API to speed up the solution to the problem. There are several ways to use the Java classes covered in lecture to solve the problem and there's even a way to solve the problem fast enough that doesn't use any of these classes. However, since the purpose of the assignment is to practice using the portion of the Java API shown in lecture, part of the grade will be given for using at least one of the following classes: HashSet, HashMap, TreeSet, or TreeMap.

Important Note

Java's Scanner class is very slow when processing many lines of input. In order to get this problem accepted on Kattis, you have to read in input using the BufferedReader, StringTokenizer and Integer classes. Here are the methods in each class you'll need to use:

BufferedReader: readLine()

StringTokenizer: nextToken()

Integer: Integer.parseInt(String s)

What to Submit

Please submit the following:

- 1) Your source file, cd.java.
- 2) A screenshot of your solution's accepted status on Kattis. **(This screen shot needs to include BOTH your username and the checkmarks for all of the test cases.)**