**Lab 1**

**Preliminaries**

The name of your Eclipse project should be abc123-lab1, where you replace abc123 with your abc123 id. The name of the file that contains your main method should be Lab1.java (yes, capital L). To submit the project, export the project and upload the zip file to Blackboard.

**Task**

The task is to read the tokens from a file and print out three values: the number of tokens that are numbers (doubles), the number of tokens that are not numbers, and the sum of the numbers.

For example, if this is the contents of the file being processed:

1 2 3 one two three

z 1.1 zz 2.2 zzz 3.3 zzzz

Your program should print out:

6 7 12.6

and nothing else.

Assume that the name of the file is data.txt. In Eclipse, the file needs to be in the top directory of the project. To open a file, use a sequence of code like:

Scanner in;

try {

in = new Scanner(new File("data.txt"));

} catch (Exception FileNotFoundException) {

System.err.println("failed to open data.txt");

System.exit(1);

}

You will need import statements at the top of your .java file in order to use the Scanner and File classes. After you are done processing the file, close it.

in.close();

Reading all the tokens in a file can be done via a loop:

while (in.hasNext()) {

String token = in.next();

}

One way of converting a String to a double is:

if (new Scanner(token).hasNextDouble()) {

System.out.println("It's a double!");

double d = Double.parseDouble(token);

} else {

System.out.println("It's not a double!");

}

An alternative is:

try {

double d = Double.parseDouble(token);

System.out.println("It's a double!");

} catch (NumberFormatException e) {

System.out.println("It's not a double!");

}

**Comments**

Create javadoc comments for your Java class and your main method (and any other methods).

**Rubric**

* An incorrect submission will possibly get zero points.
* (90 pts.) The Eclipse project is submitted correctly, and the output of the program is correct (no extraneous output).
* (10 pts.) There are javadoc comments: at least one for the class and another for the main method.

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