CS 1050, Mr. Kramer Programming Assignment #7 # of points: 60

Purpose Process grades and names from an input file; produce a report in an output file based on the range of grades.

Due Date Per the Course at a Glance. Cannot be resubmitted.

Submissions In this order: printed copy of the source code with line numbers, the input file, and the output file.

Java Topics Java I/O, while loops, if-else-if, methods, summing/averaging data.

The programming standards and guidelines as discussed in class.

Use of leftPad and padString in the Toolkit class.

References Textbook – use the index for relevant topics.

Your code from Assignment 4 for I/O

Toolkit.java

Specification

Write a Java program that reads from one file and writes to a second file. The files are named according to the naming convention we have been following using your name, section number and assignment number. The program processes input lines until the end of file. Read and process the input file in one pass through of the file, as should be done in all programs unless specified otherwise. All output should be to one file. Each line in the input file contains an integer followed by a name as shown below. Use a String to store the name. Do NOT use an array. Do NOT use global (non-local) variables except for the Toolkit. The main method should contain all the variables. Do NOT use a separate class except for the Toolkit.

Create a printed report that consists of a table with appropriate headings. The columns of the report contain the name, value, and then a message in that order. The message is “OUTSTANDING” if the value is 90 or more; “Satisfactory” if the value is between 70 and 89 inclusive; “FAILING” otherwise. Use "if/else/if" or a table-driven approach. Use methods to line up the columns of the report. Use the padString method to output the name (a string) to a specified width, and a leftPad method for the value. Use Toolkit for the leftPad and padString methods.

After all the data lines have been processed, print with messages the number of data lines processed, the number and real average of the values between 70 and 89 inclusive and the average of all grades. The average is formatted to one decimal place.

Follow the documentation guidelines. Methods must be used at least for the heading of the table and for the summary of the table.

Data to use in this order:

------------------------------------

70 Light Karen L

99 Fagan Bert Todd

60 Antrim Forrest N

73 Camden Warren

80 Mulicka Al B

99 Lee Phoebe

75 Bright Harry

92 Garris Ted

83 Benson Martyne

71 Lloyd Jeanine D

43 Leslie Bennie A

40 Brandt Leslie

100 Schulman David

51 Worthington Dan

60 Hall Gus W

60 Prigeon Dale R

96 Fitzgibbons Rusty

Instead of typing in the above data lines, you can copy them from this assignment file to a text file using Notepad (PC) or textEdit (Mac). Do not put the table heading in the input file. Using the variable “inputFile” below to represent the input file, you can input each pair of data values as follows:

while (inputFile.hasNext()) {

grade = inputFile.nextInt(); // On the first row, reads 70 into variable ‘grade’

name = inputFile.nextLine();// Reads “ Light Karen L ” into variable ‘name’

name = name.trim(); // Trims leading and trailing spaces, leaving

// “Light Karen L” in the variable ‘name’

// Process the information

}

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Sample Report Layout

Name Grade Message

-------------------------- --------- -----------------------

Light Karen L 70 Satisfactory

Fagan Bert Todd 99 OUTSTANDING

etc.