

Assignment 1 – BCS 345 Java Programming

Due: 9/15/2021 @ 10:50am

Submission Guidelines

Create a winzip file containing the WHOLE project directory and submit on Blackboard.

IMPORTANT – Make sure you ***properly comment*** AND ***properly indent*** your program. The commenting and indenting documents are on Blackboard. ***If you fail to properly comment or properly indent points will be deducted.***

VERY IMPORTANT – IF THE PROGRAM DOES NOT COMPILE THERE WILL BE MAJOR POINTS TAKEN OFF. THIS MEANS IT WILL BE A FAILING GRADE.

Overview

Write a program that reads data from an input file and writes a report to an output file.

The input data will be student grade data. The output will be a report of the student's grades. See below for both the input file format and the report format.

Git Version Control

The project directory you submit must be under Git version control. You should periodically execute commits to save your progress. You must execute at least three commits for this assignment during development. The commits should be

spaced out evenly. Do not wait until the end of your development to do all the commits.

Deliverables

One winzip file containing the WHOLE project directory.

Packages

There should be one package in the project.

<u>Package</u>	<u>Description</u>
com.<your last name>.standalonereport	There should be one package named com.<your last name>.standalonereport. For example, com.arthurhoskey.standalonereport. Create the package in the Source Packages folder.

Detailed Specifications

1. Create an input file for your program. See below for the input file format and sample data.
2. Report column specifications. Define the columns in the printf statements that generate the report such that they are wide enough to hold data at least as large as the data that appears in the sample input file below. Use left or right justification in columns as necessary. All data in each column should be properly lined up (see example report below).
3. Ask the user to enter the name of both the input and output files. Whatever names they enter at the command line during execution should be used for input and output.

For example, if the user types in the string “grades.txt” for the input filename then the input data should be read from that file. The same goes for the output file. If the user enters the string “Report.txt” for the output file then the report should be written to that file.

DO NOT HARD CODE THE FILENAMES INTO THE PROGRAM OR YOU WILL LOSE POINTS!!!

4. **Comment** your code according to the guidelines set forth in the commenting document on Blackboard. Part of doing this requires actually generating Javadoc comments. It is not enough to just add the Javadoc comments to the Java source code. You need to actually generate the HTML documents that the Javadoc utility creates.

MAKE SURE YOU DO THIS CORRECTLY OR YOU WILL LOSE POINTS!!!

5. **Indent** your code according to the guidelines set forth in the indenting document on Blackboard.

MAKE SURE YOU DO THIS CORRECTLY OR YOU WILL LOSE POINTS!!!

Notes and Hints

- Each time through the loop you should process one record from the file. This means read it in, do any necessary calculations, and write it out.
- The program should always work for a properly formatted input file no matter how many records are in the input file.
- I may test your program with an input file that contains a different number of records than the file you used as input to your program (for example 50 instead of 4). If the program does not work on my input file then it will be marked as incorrect.
- Use one instance of the Scanner class to read in the names of the input and output files.
- Use another instance of the Scanner class to read the data from the input file.
- Use the PrintStream class to write the report to the output file.

Input File Format

```
FirstName
LastName
Major
SubmissionCount
Month
Day
Year
SubmissionName
SubmissionGrade
...
Month
```

Day
Year
SubmissionName
SubmissionGrade

Sample Input File (grades.txt)

```
Inaya
Ali
Computer Systems
4
9
1
2021
Lab 1
70
9
8
2021
Quiz 1
85
9
15
2021
Homework 1
90
9
27
2021
Exam 1
80
```

Sample File Output (Report.txt)

Student Grades

First: Inaya
Last : Ali
Major: Computer Systems

Month	Day	Year	Assignment	Numeric Grade	Letter
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9	1	2021	Lab 1	70.00	C-
9	8	2021	Quiz 1	85.00	B
9	15	2021	Homework 1	90.00	A-
9	27	2021	Exam 1	80.00	B-

Numeric Average: 81.25
Overall Letter : B-