Post-Lab Exercise 02 (Optional)

**Revision 1 DHaley 15 Sep 2023**

Task 1: Calculate the Average Grade

Write a program using Java to calculate and print your current grades average. The program should ask for five values; the scores of two lab assignments, the scores of two homework assignments, and an exam score (you will have to make up some of these scores). Each of these will need to be stored using a separate variable.

For this exercise, the total maximum mark for the labs is 20; for the homework it is 20 and for the exam it is 50.

Additionally, assume that labs are 30% of your final mark, homework assignments are 35%, and exams are 35% of your final mark. Use these percentages to calculate out what your current course average would be.

Example:

The number of points contributed by the labs is:

**(labScore1 + labScore2) / TotalLabPoints\*0.30\*100**

If you have 8 out of 10 and 9 out of 10 on the two labs you would have (8+9)/(10+10)\*0.3\*100 = 25.5 points contributed by your labs.

Make use of constants in your solution – e.g. MAX\_LAB\_POINTS = 20

Remember to include programmer comments and ensure that your solution closely matches the one provided below, noting that the output final average should use 2 decimal places.

Test the program with a few different marks. Make sure the division is not truncating your answer – use the debugger as necessary to correct any calculations that end up as 0.00.

Can you get more than 100? Or less than zero? Why or why not?

Sample of program **Grader.java**’s output, where the highlighted values are the user’s input. Place your own name in the last output line.

Enter the mark for the first lab (maximum 10 marks): 4

Enter the mark for the second lab (maximum 10 marks): 5

Enter the mark for the first homework (maximum 10 marks): 4

Enter the mark for the second homework (maximum 10 marks): 5

Enter the mark for the exam (maximum 50 marks): 45

The final average is 60.75

Program by David Haley