Project One

Goal: Write a program that you can use to calculate your possible grade average. The user enters grades and the program calculates various averages.

You should read through the entire project before you begin coding. See rubric for grading.

1. Comments
2. On the first few lines provide comments that provide:

Class Name: (name of the Java program)

Author’s Name: (your name)

Purpose: (program purpose).

1. Place your pseudo-code next.
2. Provide comments throughout the code that states the purpose of sections of code.
3. Variables, input
4. Prompt the user to input a value for the possible Assignments average. This number does not have to be a whole number. Store into an appropriately named and declared variable.
5. Prompt the user to input grades for Test 1, Test 2, and the Final Exam. Store the values input by the user into separate integer variables.
6. Random number

Generate and store in a separate variable a random integer to represent the potential average for the entire class. Limit the random value to [70, 95].

1. Verify values
2. Output the four user input values (identify what is being printed) on a single line separated by a space. Use at least two print statements.
3. Output the random value representing the potential average for the entire class using a different statement.
4. Calculations, output, casting

Calculate the possible grade average based on our syllabus: Assignments – 50%; Test 1- 10%; Test 2 – 15%; Cumulative Final Exam – 25%.

Calculate and print the grade average (without using a separate variable) on two lines using a single print statement. The first line should identify what is being printed. The second should print the calculated average as an integer. (hint:cast)

1. Testing and Submission
   1. Test the program with the following values:

(These values will not show in your code. They will be the values of variables. Make sure your answers are as expected.)

1. All input values = 70
2. Assignments = 89.5 Test 1 = 60, Test 2 = 70, Final = 80
3. Assignments = -50, All tests = 90
   1. Submit the project by email:
      1. the \_\_.java file
      2. a screenshot/snippet of the results of running the program with the requested test values. Crop the window(s) to remove irreverent info/space
      3. Remember to use a proper subject

**Useful information and hints:** The filename and class name must match.

-Remember the import statements for the scanner and the random number generator.

-A character preceded by a backslash (\) is an *escape sequence* and has special meaning to the compiler. In a print statement, \n will insert a newline in the text at the point \n appears.

-You should not have to change your code between test runs of your program.

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| 16 | 1. Comments |
|  | 1. On the first few lines provide comments that provide: Class Name, Student name, purpose |
|  | 1. Pseudo-code |
|  | 1. Comments throughout that state the purpose of code sections |
|  |  |
| 16 | 1. Variables, input |
|  | 1. All variables declared with correct types. 2. User prompted to input values. |
|  | 1. User values stored in variables |
|  |  |
| 16 | 1. Random number |
|  | 1. Variable declared to store random integer. 2. Random number limited to [70, 95]. |
|  |  |
| 16 | 1. Verify values |
|  | 1. Four user input values printed and identified on same line using 2+ statements |
|  | 1. Random value for entire class average printed using a different statement. |
|  |  |
| 16 | 1. Calculations, output, casting |
|  | Grade average based on our syllabus:  Assignments – 50%; Test 1- 10%; Test 2 – 15%; Cumulative Final Exam – 25%. |
|  | Grade average calculated and printed in same statement using /n  First line identifies what is being printed. Second prints the grade average as an integer. (hint:cast) |
|  |  |
|  | 1. Testing and Submission |
| 16 | * 1. Correct test input and calculated values |
|  | 1. All input values = 70 |
|  | 1. Assign = 89.5 Test1 = 60, Test2 = 70, Final = 80 |
|  | 1. Assignments = -50, All tests = 90 |
| 4 | * 1. Email: |
|  | * + 1. \_\_.java file |
|  | * + 1. Cropped screenshot/snippet of the results of running the program with the requested test values. |
|  | * + 1. Proper email subject |