Lab 2  Name:_________________________  Checked:______

Objectives:
- Learn about variables and keyboard input to Java programs.
- Experiment with simple arithmetic including integer division
- Practice expressing algorithms in simple, unambiguous pseudocode
- Learn about conditionals and repetition

A. Implement a Java application Lab2A.java that outputs a personalized message of the following form:

Hello, my name is Daphne and I am 18 years old. I’m enjoying my time at Villanova, though I miss my pet Luca very much!

- Your program should obtain the name, age and pet’s name as input from the keyboard. A complete rung might look like this:

<table>
<thead>
<tr>
<th>Please enter name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anne Boleyn</td>
</tr>
<tr>
<td>Please enter pet name:</td>
</tr>
<tr>
<td>Purkoy</td>
</tr>
<tr>
<td>Please enter age:</td>
</tr>
<tr>
<td>32</td>
</tr>
</tbody>
</table>

Hello, my name is Anne Boleyn and I am 32 years old. I'm enjoying my time at Villanova, though I miss my pet Purkoy very much!

Need more ideas for pet names? [http://www.medievalists.net/2013/06/23/medieval-pet-names/](http://www.medievalists.net/2013/06/23/medieval-pet-names/)

Check your work with a classmate – test each other’s programs to ensure they work well.

Classmate signature: ____________________________

B. Create a Java application Lab2B.java that inputs values representing a time duration in hours, minutes, and seconds and then prints the equivalent total number of seconds. (e.g.: 1 hour, 28 minutes, and 42 seconds is equivalent to 5322 seconds.)

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C. Create a Java application Lab2C.java that reverses the above process. That is, input a value representing a number of seconds, then print the equivalent amount of time as a combination of hours, minutes, and seconds. (For example, 9999 seconds is equivalent to 2 hours, 46 minutes, and 39 seconds.)

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D. Write three different algorithms for determining the largest (maximum) of three numbers, a, b, c. The largest of the three values should be assigned to the variable max.

Algorithm 1

Algorithm 2

Algorithm 3
Now, modify one of the above algorithms to find the maximum of 4 values (a, b, c, d) and, based on that algorithm, create a Java application `Lab2D.java` that inputs four values and outputs the largest of the four.

*Updated Algorithm*

*Classmate signature: ________________________________*
E. We will next create a Java application `Lab2E.java` that inputs any number of values and outputs the largest of the lot.

Finding the maximum of some values. How many will there be? 7
Please enter 7 numbers, separated by spaces:
42 21 9 58 14 55 30
The largest value entered is 58

*Hint:* After inputting how many values there will be, you need to use repetition to input each of the numbers, keeping count of how many have been seen and the maximum so far.

*Algorithm*

*Classmate signature:* ________________________________

When finished, have the instructor or TA check your work and initial your worksheet.