ASU Computer Science and Engineering Department

CSE 110 - Lab 2

What this Lab Is About:

- This program is for practicing the use of primitive data types, expressions.– Chapter 2

Use the following Coding Guidelines:

- When declaring a variable, you usually want to initialize it.
- Remember you cannot initialize a number with a string.
- Remember variable names are case sensitive.
- Use tabs or spaces to indent code within blocks (code surrounded by braces). This includes classes, methods, and code associated with ifs, switches and loops. Be consistent with the number of spaces or tabs that you use to indent.
- Use white space to make your program more readable.
- Use comments after the ending brace of classes, methods, and blocks to identify to which block it belongs.

Assignments Documentation:

At the beginning of each programming assignment you must have a comment block with the following information:

```
/*-------------------------------------------------------------------------
// AUTHOR: your name
// FILENAME: Lab2.java
// SPECIFICATION: This program is for practicing the use of primitive data
// types, expressions.
// FOR: CSE 110- Lab #2
// TIME SPENT: how long it took you to complete the assignment
//-------------------------------------------------------------------------*/
```

Getting Started

Create a class called **Lab2**. Use the same setup for setting up your class and main method as you did for the previous assignments. Be sure to name your file **Lab2.java**.

Hints

- See the sample output below in the lab for an idea of what your program should output.

Part 1: Declaring Variables

Read the following code skeleton and add your own code according to the comments. Ask your TA or your classmates for help and/or clarification.
Note: When you see //--> that is where you need to add code.

```
// class name matches the file name
public class Lab2
{
	// we must have a main method to run the program
	public static void main(String[] args)
	{
		// declare some variables of different types:

		// an int called age
		// a double called num
		// a String called firstName
		// a String called lastName
//-->
```

Part 2: Assign Values to Variables

After part 1, write a segment of code which will **assign values to the variables** and **print out the following**:

```
		// now we assign values to these variables

	//-->	age = ???;
	//-->	firstName= ???;
	//-->	lastName= ???;
	//-->	num= ???;

		// print out "[firstName] is [age] years old" using the variables above
	//-->
		// print out the name in "last, first" format (lastName, firstName)
	//-->
		// print out "arbitrary number" [num]" where [num] is the double variable
	//-->
```

Part 3: Using Mathematical Operators

After part 2, write a segment of code which will calculate the sum of products **(sop)** and calculate the product of sums **(pos)**. Start by initializing the temporary variables.

```
        // let's look at mathematical operator precedence.
        // first we need to add the following temporary variables:
        int x1 = 3, x2 = 4;
        int y1 = 5, y2 = 6;

        // calculate the sum of products (add product of x's to product of y's)
        // assign the value to an integer variable sop, and then print it.
//-->

        // calculate product of sums (multiply sum of x's with sum of y's)
        // assign the value to an integer variable pos, and then print it.
//-->

    } // end main method
} // end class Lab 2
```

Please Note

- Please make sure to print something for every case.
- Labs are not graded by a program, so you do not need to spend a large amount of time making the output match perfectly with the sample below. Do, however, **make sure your output is reasonable**. The goal here is for you to demonstrate that you understand the underlying concepts.

Sample Output

Below is an example of what your output **should** look like when this lab is completed.

Sample Run:

```
John is 22 years old
Doe, John
An arbitrary number 78.8
Sum of Product : 42
Product of Sum: 77
```

Submission:

Submit your Lab2.java file to the Submission Server. Go to the Submission Server site,

https://courses.eas.asu.edu/cse110 login, then click on Lab Submissions in the left frame. Choose Lab2 from the dropdown box, click on the browse button and find where you saved your Lab2.java file (and not the Lab2.class file) on your computer. Upload the file to the site and then click on the Submit button.

Your file will be submitted and a screen will show up displaying if your program compiled and what your output is when run on some sample input.

You should then check to make sure that the actual file submitted properly and is readable to the grader. To do so click on Grades in the frame on the left of the page and then click on the 0 underneath Lab2. You will again see that your program compiled and the sample output, but you should scroll down to the bottom of the screen and make sure your file is readable as well.

Important Note: You may resubmit as many times as you like until the deadline, but we will only mark your last submission.