Homework 2 CSC 116 Fall 2019 (Written Portion)

Due Wednesday, October 2, 11:45 pm

Problem 1)

Given the following program:

```
public class MysteryNumbers {
	public static void main(String[] args) {
		String one = “two”;
		String two = “three”;
		String three = “1”;
		int number = 20;


	}

	public static void sentence(String three, String one, int number) {
		System.out.println(one + “ times ” + three + “ = “ + (number * 2));
	}


}
```

Write out the outputs for each method call:

```
sentence(one, two, 3);
sentence(two, three, 14);
sentence(three, three, number + 1);
sentence(three, two, 1);
sentence("eight", three, number / 2);
```

```
three times two = 6
1 times three = 28
1 times 1 = 42
three times 1 = 2
1 times eight = 20
```

Problem 2)

```
Scanner console = new Scanner(System.in);
System.out.println("How much money do you have? ");
double money = console.nextDouble():
```

Given the following code fragment, describe what will happen when the user types each of the following values. If the code will read the value successfully, describe the value that will be stored in the variable money. If it will not, write 'Error' . (Make sure to write a value of the proper type, if applicable. For example, if your answer is a double and it is 12 for example, then write it out as it would actually be stored and printed such as 12.0 and if your answer is an integer and it is 12, write it out as 12)

34.50	34.50
6	6.0
$25.00	error
million	error
100*5	error
600x000	error
none	wait for input
645	645.0

Problem 3)

Given the following declarations,

```
int x = 4;
int y = -3;
int z = 4;
```

What are the results of the following expressions? (Use following page as scratch work or to record your answers)

x == 4 True

x == y false

x == z True

y == z False

x + y > 0 True

x - z != 0 False

y * y <= z False

y / y == 1 True

x * (y + 2) > y - (y + z) * 2 True

(238 % 10 + 3) % 7 4

2 + 19 % 5 - (11 * (5 / 2)) -16

177 % 100 % 10 / 2 3

4 + 1 + 9 + "." + (-3 + 10) + 11 / 3 14.73

"hello 34 " + 2 * 4 hello 34 8

1 + 1 + "8 - 2" + (8 - 2) + 1 + 1 2 8-2 8

89 % 10 / 4 * 2.0 / 5 + (1.5 + 1.0 / 2) * 2 4.8

Problem 4)

Write a program called ReverseOrder.java that passes in an input scanner in a separate method called processName.
processName will:
-prompt the user to enter his/her full name
-prints the name in reverse order
You may assume only a first and last name will be given and nothing else.

With this program, here is a sample output:

Please enter your full name: Andrew Shon
Your name in reverse order is Shon, Andrew

(Do not write this program in a separate file, but in the space provided below)

```
import java.util.Scanner;
public class reverseOrder{
    public static void processName(String input){
        int i = 0;
        String firstName;
        String lastName;
        while(input.charAt(i) != ' '){
            i++;
        }
        firstName = input.substring(0,i);
        lastName = input.substring(i, input.length());
        lastName = lastName.trim();
        System.out.println(lastName + " " + firstName);

    }

    public static void main(String[] args){
        Scanner in = new Scanner(System.in);
        String input;
        System.out.print("Enter your first and last name: ");
        input = in.nextLine();
        processName(input);

    }


}
```

Problem 5)

Consider the following method

```
Public static void ifElseMystery(int a, int b) {
        if (a * 2 < b) {
                a *= 3;
        }
        If (b < a) {
                b++;
        } else {
                a--;
        }
        System.out.println(a + " " + b);

}
```

For each call below, indicate what output is produced.

ifElseMystery(10, 2) 10 3

ifElseMystery(3, 8) 9 9

ifElseMystery(4, 4) 3 4

ifElseMystery(10, 30) 29 30