**Home Assignment – 4  
Due Date: 10/10 (Monday), 11.59 pm**

This assignment is based on topics covered in Chapter 5.

1. **End of Chapter – 5 exercises**

***5.14.1 Multiple Choice Exercises***#1, (7 points)  
#2, (8 points)  
#4, #9 (1 point each = 2points)

***5.14.2 Reading and Understanding Code***# 12, #16, #19 (3 points each = 9 points)

**5.14.5 Debugging area – Using messages from the java compiler and Java JVM.**

#39, #40 (2 points each = 4 points)

1. **Answer the following questions**
   1. Write a Boolean expression that evaluates to true if a number stored in variable num is between 1 and 100. (5 points)
   2. Suppose **x is 1**. What is **x** after the evaluation of the following expression?

(x > 1) && (x++ > 1) (5 points)

* 1. What is **y** after the following switch statement is executed?

x = 3; y = 3;

switch( x + 3 )  
{

case 6:

y = 1;  
 default:

y += 1;

}

(5 points)

* 1. Use the **switch** statement to rewrite the following if statement

if ( a == 1)  
 x += 5;

else if ( a == 2)

x += 10;

else if ( a == 3)

x += 16;

else

x += 34;

(10 points)

* 1. Show and explain the output of the following code (3 x 5 = 15 points):
     1. int i = 0;

System.out.println(--i + i + i++);

System.out.println( i + ++i);

* + 1. int i = 0;

i = i + (i – 1);  
System.out.println(i);

* + 1. int i = 0;

i = (i = 1) + i;

System.out.println(i);

* 1. Assume that **int a = 1** and **double d = 1.0**, and that each expression is independent. What are the results of the following expressions?
     1. a = (a = 3) + a;
     2. a = a + (a – 3);
     3. a += a + (a = 3);
     4. a = 5 + 5 \* 2 % a--;
     5. a = 4 + 1 + 4 \* 5 % (++a + 1);
     6. d += 1.5 \* 3 + (++d);
     7. d -= 1.5 \* 3 + d++;

(7 x 3 = 21 points)

* 1. Use the **DeMorgan’s Law** to show the equivalent expressions.

(X >= 0) && (x < 100) (9 points)

**To turn in your assignment**

* Open a Microsoft Word document name using the same file naming convention below
  + Home04-LnameFM
    - Home04 = assignment prefix
    - Lname = your last name
    - F = your first initial
    - M = your second initial
* **Type your name at the top of the document.**
* Type in the answers to the questions in the assignment. Make sure to convert font type to Courier New.
* **On Blackboard submit both your Word document.**