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| Instructor | ***Katherine Papademas*** | Due Date | **9/8/2016** |

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| Part | **1** | **2** | **3** | **4** | Total |
| *Maximum Points* | **25** points | **25** points | **25** points | **25** points | **100**G101010 pointsG |
| ***Your Score*** |  |  |  |  |  |

**Textbook Reading Assignment**

Thoroughly read Chapter(s) 2 in your **Java Programming** textbook.

**Part 1 Glossary Terms**

Define, in detail, each of these glossary terms from the realm of computer programming logic and design and computer topics, in general. If applicable, use examples to support your definitions. Consult your notes or course textbook(s) as references or the Internet by visiting Web sites such as:

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| **http://www.askjeeves.com** | **http://www.webopedia.com** | **http://www.wikipedia.org** |

**(a) Bitwise Operations**

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| Operators that work on bits and performs bit-by-bit operation. Can be applied to integer types, long, int, short, char, and byte |

**(b) Concatenation ( + ) Operator**

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| This operator acts as an arithmetic operator and adds two values unless it is being used with a string then it joins strings together. Ex: int x = 4 + 4; string name = “Hello “ + user + “!”; |

**(c) Escape Sequence**

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| These are used to insert something or create new lines in your statement without having to end it. /n is used to insert a new line in your text. |

**(d) Modulus**

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| This is an arithmetic operator that outputs the remainder of a division problem. Ex: int x = 10 % 3; x = 1 |

**(e) Primitive Types**

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| They are the most basic data types in java. They are boolean, byte, char, short, int, long, float, and double. They are the building blocks of data manipulation. |

**Part 2 Introductory Topics in Programming Logic and Design and Java**

For each of the following, enter T if the answer is True, otherwise enter F for False.

F **(1)** Variables of types float or double cannot hold integer values.

T **(2)** Class types are reference types.

T **(3)** Types of objects must be declared before they are used.

T **(4)** A GUI based program receives input via a text box.

F **(5)** When naming an object with an identifier, Java key words are permissible, the compiler knows can tell what you intend by the context.

Choose from (a), (b), (c), (d) or (e) to answer the following questions.

**(6)** When a method returns a value, what can be done with that value?

(d) All of these

**(7)** When a variable is declared it is always associated with a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

(c) type

**(8)** Which of the following are categories of Java types?

(c) Both of these

**(9)** Which of the following is a Boolean type literal?

(c) false

**(10)** Which of the following is NOT a legal Java identifiers?

(c) two2too

**Part 3 Programming Exercise(s)**

**(1)** Write Java assignment statements to perform the following tasks.

1. Assign the value of 5 to m .

int m = 5;

1. Increase ( by adding ) the value of n by 8 .

double sum = n + 8;

1. Assign four times the value of gross to h .

double h = math.pow(gross, 4);

1. Decrease ( by subtracting ) the value of x by 2 .

double sub = x – 2;

1. Assign z the product of 3 times the quotient of x divided by y .

double z = 3 \* (x/y);

1. Increase ( by multiplying ) net\_pay by 2 % .

double mult = net\_pay \* .02;

**Part 4 Programming Exercise(s)**

An application of Ohm’s Law is to compute the power *P* , measured in watts,of an electronic circuit which is defined as *P* = *I* 2 *R* where *I* is the current, measured in amperes and *R* is the resistance, measured in ohms.

Write a program that determines the power, in watts, that would be dissipated by a circuit having a current *I* = 0.020 amperes and a resistance of *R* = 5,000 ohms.

Attach a copy of your completed program.

/\* Erick Cabrera

\* September 8, 2016

\*/

import java.util.Scanner;

public class Power {

public static void main(String args[])

{

//declare a new Scanner class object

Scanner sc = new Scanner(System.in);

//prompt user for current

System.out.println("Please enter the current (I): ");

//declare local variable and read double

double current = sc.nextDouble();

//prompt user for resistance

System.out.println("Please enter the resistance (R): ");

//declare a local variable and read double

double resistance = sc.nextDouble();

//declare variable for power

double power;

//calculate power

power = Math.pow(current, 2) \* resistance;

//display power

System.out.print("Power dissipated: " + power + " watts");

sc.close();

}

}