ASSIGNMENT 6b

1. Identify the following kinds of expression statements:

*aValue = 8933.234;assignment statments*

*aValue++;increament statements*

*System.out.println("Hello World!");method innovation statement*

*Bicycle myBike = new Bicycle();object creation statements*

2 Consider the following code snippet.

*if (aNumber >= 0)*

*if (aNumber == 0)*

*System.out.println("first string");*

*else System.out.println("second string");*

*System.out.println("third string");*

A. What output do you think the code will produce if aNumber is 3?

B. Write a test program containing the previous code snippet; make aNumber 3. What is the output of the program? Is it what you predicted? Explain why the output is what it is; in other words, what is the control flow for the code snippet?

C. Using only spaces and line breaks, reformat the code snippet to make the control flow easier to understand.

D. Use braces, { and }, to further clarify the code.

3. Consider the following code snippet.

*int i = 10;*

*int n = i++%5;*

1. What are the values of i and n after the code is executed?

Ans I is 11 and n is 0

1. What are the final values of i and n if instead of using the postfix increment operator (i++), you use the prefix version (++i))?

Ans I is 11 and n is 1

4. Change the following program to use compound assignments:

*class ArithmeticDemo {*

*public static void main (String[] args){*

*int result = 1 + 2; // result is now 3*

*System.out.println(result);*

*result = result - 1; // result is now 2*

*System.out.println(result);*

*result = result \* 2; // result is now 4*

*System.out.println(result);*

*result = result / 2; // result is now 2*

*System.out.println(result);*

*result = result + 8; // result is now 10*

*result = result % 7; // result is now 3*

*System.out.println(result);*

*}*

*}*

*public class ArithmeticDemo{*

*public static void main(String[] args){*

*int result =3;*

*System.out.println(result);*

*result -= 1; // result is now 2*

*System.out.println(result);*

*result \*=2; //result is now 4*

*System.out.println(result);*

*result /= 2; //result is now 2*

*System.out.println(result);*

*result +=8; // result is now 10*

*result %=7; // result is now 3*

*System.out.println(result);*

*}*

*}*

5. In the following program, explain why the value "6" is printed twice in a row:

*class PrePostDemo {*

*public static void main(String[] args){*

*int i = 3;*

*i++;*

*System.out.println(i); // "4"*

*++i;*

*System.out.println(i); // "5"*

*System.out.println(++i); // "6"*

*System.out.println(i++); // "6"*

*System.out.println(i); // "7"*

*}*

*}*

The code Sytem.out.println(++i); evaluates to 6, because the prefix version of ++ evaluates to the incremented value.

System.out.println(i++); evaluates to the current value 6 then increments by one.So “7” doesn’t get printed until the next line.

6. Consider the following class:

*public class IdentifyMyParts {*

*public static int x = 7;*

*public int y = 3;*

*}*

1. What are the class variables?

x are the variables

1. What are the instance variables?

Y is the instance variable

C. What is the output from the following code:

*IdentifyMyParts a = new IdentifyMyParts();*

*IdentifyMyParts b = new IdentifyMyParts();*

*a.y = 5;*

*b.y = 6;*

*a.x = 1;*

*b.x = 2;*

*System.out.println("a.y = " + a.y);*

*System.out.println("b.y = " + b.y);*

*System.out.println("a.x = " + a.x);*

*System.out.println("b.x = " + b.x);*

*System.out.println("IdentifyMyParts.x = " + IdentifyMyParts.x);*

*The output is*

*a.y =5*

*b.y =6*

*a.x = 2*

*b.x =2*

*IdentifyMyParts.x = 2*

7. What is wrong with the following while statement?

while ( z >= 0 )

sum += z;

ans; there is no semicolon after the condition

8. Identify and correct the errors in each of the following sets of code:

a) *while ( c <= 5 ){*

*product \*= c;*

*++c;*

A ns while(C<=5){

Product = c;

++c;

}

b) *if ( gender == 1 )*

*System.out.println( "Woman" );*

*else;*

*System.out.println( "Man" );*

*Ans if (gender==1){*

*System.out.println(“Woman”);*

*else;*

*System.out.println(“Man”);*

*}*

9. Write a Java statement to accomplish each of the following tasks:

a) Declare variables sum and x to be of type int.

b) Assign 1 to variable x.

c) Assign 0 to variable sum.

d) Add variable x to variable sum, and assign the result to variable sum.

e) Print "The sum is: ", followed by the value of variable sum.

1. Combine the statements that you wrote in Exercise 9 into a Java application that calculates and prints the sum of the integers from 1 to 10. Use a while statement t o loop through the calculation and increment statements. The loop should terminate when the value of x becomes 11.
2. Determine the value of the variables in the statement product \*= x++; after the calculation is performed. Assume that all variables are type int and initially have the value 5.

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