44-542 Object Oriented Programming

Exam 1 Part 2 Version B KEY (60 pts total)

1. Write the syntax for compilation and execution commands of Java using command line prompt. Use the below example. (5 points)
   * File name: “Verifier.java”
   * Class name: “Verifier”

Compilation: javac Verifier.java

Execution: java Verifier

1. Write the prototype and signature of the below method in the given blanks. (5points)

private double getperimeter(double lenghthIn, double breadthIn){

//code…

return false;

}

Prototype: **private double getperimeter(double lenghthIn, double breadthIn)**

Signature **getperimeter(double, double)**

1. Assume one space is in between the words given in myString and write the output for the following Java statements. (5 points)

String myString = "Vijayawada is the new Capital";

System.out.println(myString.substring(2,6));

  System.out.println(myString.charAt(14));

System.out.println(myString.indexOf("Capital"));

    System.out.println(myString.indexOf("C"));

System.out.println(myString.indexOf("x"));

OUTPUT for 3

jaya

t

22

22

-1

1. Write one line statement to return the square root value of number 16 by calling a method defined in the Math class. You need to declare a variable, named squareRootValue, to store the value returned after calling the method. Be sure to do this in one line of Java code. (5 points)

double squareRootValue = Math.sqrt(16);

1. Declare and create an array of type String with 101 values. Use cities as the array name. (5 points)

Declare: String [] cities;

Create: cities = new String[101];

1. Write the output for the following Java statements. (5 points)

int a = 7;

int b = 8;

int c = 14;

System.out.println(a/b == 0);

System.out.println(a\*b\*c-1 == 783);

System.out.println(a%b%c <= 6);

System.out.println(a-a\*b+c-4 >= 27);

System.out.println(a-b>4 && (c%b)<=1 || c-a>=7 && c!=13);

OUTPUT for 6

true

true

false

false

true

1. myArray and yourArray are two arrays of type String. Using System class, copy eight elements from myArray starting from subscript ‘2’ to yourArray beginning at the subscript of ‘2’. (5 points)

System.arrayCopy(myArray, 2, yourArray, 2, 8);

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1. Write a single Java statement to declare and initialize a two-dimensional array of int values. The array should be named myNumbers. It should have 7 rows and 3 columns. (3 points)

int [] [] myNumbers = new int [7] [3];

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1. Write only the output in the given space. If you want to trace you can use a separate sheet. It will be not be graded. (10 points)

OUTPUT for 10

inner: 4

inner: 4

inner: 4

outer: 3

11 11 1

//initialize variables

int i = 9;

int j = 0;

int k = 5;

int outerLoopCount = 0;

int innerLoopCount = 0;

while (i>=(j+k)){

outerLoopCount++;

j += 1;

while(j<=8){

innerLoopCount++;

k -= 1;

j += 2;

if(j+k == i){

i +=2;

}//end if

}//end inner while loop

System.out.println(“inner:”+innerLoopCount);

}//end outer while loop

System.out.println(“outer: ”+outerLoopCount);

System.out.println(i+" "+j+" "+k);

1. Trace x, y, and z values in the below Java code. Write those values in the given space. (7 points)

int x = 6; int y = 19; int z = 0;

|  |  |  |
| --- | --- | --- |
| Trace for 10: | | |
| x | y | z |
| 6 | 19 | 0 |
| 8 | 18 | -2 |
| 10 | 17 | -4 |
| 12 | 16 | -1 |
| 14 | 15 | 2 |
| 16 | 14 | 5 |
| Final Output:  16 14 5 | | |

while(x < y) {

x += 2;

y -= 1;

if(x + y > 27) {

z += 3;

} else {

z -= 2;

}

}

System.out.println(x + " " + y + " " + z);

1. Write the output for the below Java source code in the given space. (5 points)

for(int p=0; p<1; p++){

OUTPUT for 11

Howdy

Howdy

Howdy

Howdy

Howdy

Welcome to exam2!

for(int q=0; q<5; q++){

System.out.println("Howdy");

}//End for:p

System.out.print("Welcome to ");

}//End for:q

System.out.println("exam2!");