BRACUniversity

Department of Computer Science and Engineering

# Spring 2014

**CSE111 (Programming Language-II)**

Trace the output of the following Java Codes. Then run them in Dr. Java to see if the results match.

**Task 1**

//Run the methodA() and methodB() on an Instance of Test few times and explain the answer.

public class Test{

int sum;

public int y;

public void methodA(){

int x=0, y =0;

y = y + 7;

x = y + 11;

sum = x + y;

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

}

public void methodB(){

int x = 0;

y = y + 11;

x = x + 33 + y;

sum = sum + x + y;

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

}

}

**Task 2**

public class Q3

{

public static void main(String args[])

{

String test = "";

inti = 5, j = 0, k = 15;

while (i< 10){

k-=1;

j = k;

while (j > 10 ){

if (j % 2 == 0){

test = "<--";

test = test + i + 2 + "-->" + (j / 2);

}

else

{

test = "-->";

test = "-->" + (i / 2) + test + j;

}

System.out.println(test);

--j;

}

i++;

}

}

**Task 3**

//Run the methodA() on an Instance of Test3 five times and explain the answer.

public class Test3{

public int sum;

public int y;

public void methodA(){

int x=2, y =3;

int [] msg = new int[1];

msg[0] = 3;

y = this.y + msg[0];

methodB(msg, msg[0]);

x = this.y + msg[0];

sum = x + y + msg[0];

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

}

private void methodB(int [] mg2, int mg1){

int x = 0;

y = this.y + mg2[0];

x = x + 33 + mg1;

sum = sum + x + y;

mg2[0] = y + mg1;

mg1 = mg1 + x + 2;

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

}

}

**Task 4**

//Run the methodA() on an Instance of Test4 five times and explain the answer.

public class Test4{

public int sum;

public int y;

public void methodA(){

int x=0, y =0;

int [] msg = new int[1];

msg[0] = 5;

y = y + methodB(msg[0]);

x = y + methodB(msg, msg[0]);

sum = x + y + msg[0];

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

}

Private int methodB(int mg2[] , int mg1){

int x = 0;

y = y + mg2[0];

x = x + 33 + mg1;

sum = sum + x + y;

mg2[0] = y + mg1;

mg1 = mg1 + x + 2;

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

return sum;

}

private int methodB(int mg1){

int x = 0;

int y = 0;

y = y + mg1;

x = x + 33 + mg1;

sum = sum + x + y;

this.y = mg1 + x + 2;

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

return y;

}

}

**Task 5**

//What is the output if you execute the methodA( ) on an instance of the Test04 Class?

public class Test4{

public int sum;

public int y;

public void methodA(){

int x=0;

int z = 0;

while (z < 5){

y = y + sum;

x = y + 1;

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

sum = sum + methodB(x, y);

z++;

}

}

public int methodB(int m, int n){

int x = 0;

int sum = 0;

y = y + m;

x = n - 4;

sum = sum + y;

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

return sum;

}

}

**Task 6**

/\*

What is the output for the following code sequence?

FinalT3A fT3A = new FinalT3A();

fT3A.methodA();

fT3A.methodB(6,8);

\*/

public class FinalT3A{

public int sum;

public int y;

public void methodA(){

int x=0, y =0, j = 0;

while (j < 2){

y = y + j;

x = j + methodB(y , j);

sum = x + y;

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

j++;

}

}

public int methodB(int p, int k){

int x = 0;

y = y + k + 1;

x = x + 3 - p;

sum = sum + x + y;

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

return sum;

}

}

**Task 7**

class PuzzleTester{

public static void main(String[]args)

{

Puzzle p = new Puzzle();

p.methodA();

p.methodA();

p=new Puzzle();

p.methodA();

p.methodB(7);

}

}

class Puzzle{

static int x;

void methodA(){

int z;

x=5; //at home, comment/delete this line and try again

z=x+methodB(x);

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

z=methodB(z+2)+x;

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

methodB(x,z);

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

}

int methodB(int y){

x=y+x;

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

return x+3;

}

void methodB(int z, int x){

z=z+1;

x=x+1;

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

}

}

**Task 7.1**

class PuzzleTester{

public static void main(String[]args)

{

Puzzle p = new Puzzle();

p.methodA();

p.methodB(7);

}

}

class Puzzle{

static int x;

void methodA(){

int z;

x=5; //at home, comment/delete this line and try again

z=x+methodB(x);

Maze m1 = new Maze();

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

m1.methodA();

z=methodB(z+2)+x;

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

methodB(x,z);

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

}

int methodB(int y){

x=y+x;

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

return x+3;

}

void methodB(int z, int x){

z=z+1;

x=x+1;

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

}

}

class Maze{

static int x;

void methodA(){

int m;

x=5;

m=x+methodB(x);

System.out.println(x+" "+m);

m=methodB(m-3)+x;

System.out.println(x+" "+(m));

methodB(x,m);

System.out.println(x+" "+m+x);

}

int methodB(int y){

x=y\*y;

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

return x+3;

}

void methodB(int z, int x){

z=z-2;

x=x\*1;

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

}

}