

# CSEP

## Computer Science and Elements of Programming

### Self-Assessment Test

Given: 9<sup>th</sup> December 2008

**Solution provided: 23<sup>rd</sup> January 2009**

<http://www.dcs.bbk.ac.uk/~dimarzo/courses/csep/SelfAssessmentTest.pdf>

### Instructions

- Answer the 20 questions below.
- Each correct answer provides 5 marks.
- In January, check with the solution provided.
- Add up all marks.

### Questions

1. In a single Java instruction, declare a variable called `i` of type `double` and assign to it value 5.
2. Is the Java type `String` a primitive type?
3. Write the instruction for printing on the standard output (terminal window) the following message: `Hello World`.
4. Consider the following instruction:

```
long n = 91;
```

What is the name of the variable?

What is the type of the variable?

What is the value stored in the variable (if any)?

5. What will the following instructions cause to be printed on the screen:

```
String a = "2";  
int b = 3;  
System.out.println("The total value is " + a + b);
```

6. What is the value stored in `j`:

```
int j = 32 - 5 * 3 % 2;
```

7. Is this a valid assignment:

```
int i == 3;
```

8. What is the value stored in compare:

```
String name1 = "Mark";  
String name2 = "Kevin";  
boolean compare = name1 == name2;
```

9. What is the value stored in compare:

```
int val1 = 10;  
int val2 = 5;  
boolean compare = val1 < val2;
```

10. What is the value stored in compare:

```
boolean compare = '1' == 1;
```

11. What will the following instructions cause to be printed on the screen:

```
int temperature = 22;  
if ( temperature > 20 )  
    System.out.print("Switch off ");  
else  
    System.out.print("Switch on ");  
System.out.println("the heating");
```

12. Consider the following method:

```
public static void checkCandidate (int years, boolean bsc){  
    ...  
}
```

Complete this method so that it prints on the standard output whether the candidate is hired to a job. A candidate is hired if s/he has 3 years or more of work experience or s/he has a BSc degree

13. Consider the following method:

```
public static void printInOrder(int a, int b){  
    ...  
}
```

Complete this method so that it prints on the standard output the smallest one of the two numbers first, then the other.

14. What will the following instructions cause to be printed on the screen:

```
for (int i = 1; i < 10; i++) {  
    System.out.println( 2 * i );  
}
```

15. What will the following instructions cause to be printed on the screen:

```
int j = 3;  
while (j < 10) {  
    System.out.println(j);  
    j = j-1;  
}
```

16. Convert the following while into a for.

```
int j = 20;  
while (j > 5) {  
    System.out.println(j);  
    j = j-2;  
}
```

17. Write a for that prints the numbers 5 4 3 2 1 in that order.

18. Consider the following method:

```
public static void calculator(int i, int j){  
    System.out.println(i + "+" + j + "=" + (i+j));  
}
```

Write the instruction for invoking method `calculator()` with values 7 and 12.

19. Consider method `calculator()` defined in 11.

What will be printed on the standard output when `calculator` is invoked with values 5 and 9?

20. Consider the following instruction:

```
printValue(9.5);
```

This instruction causes the following output:

```
The value is 9.5
```

to be printed on the screen.

Write the necessary instructions to declare method `printValue()`.