



COMP 248 - Winter 2016

Tutorial 12

Question 1 (1)

What is the output of the following code?

```
public class Array {
    Array() {
        char[] a = { 'a', 'b', 'c', 'd', 'e' };
        change(a);
        System.out.println(new String(a));
    }
    private void change(char[] a) {
        for (int i=0; i<a.length/2; i++) {
            char c = a[i];
            a[i] = a[a.length - i - 1];
            a[a.length - i - 1] = c;
        }
    }
    public static void main(String[] args) {
        new Array();
    }
}
```

Question 1 (2)

What is the output of the following code?

```
class Array {  
    Array() {  
        char[] chs = { 'a', 'b', 'c', 'd', 'e', 'f'};  
        String s = new String(chs, 1, 3);  
        System.out.println(s);  
    }  
    public static void main(String[] args) {  
        new Array();  
    }  
}
```

Question 1 (3)

What is the output of the following code?

```
class Array {
    Array() {
        int[] ary = { 3, 1, 4, 5, 9 };
        bump(ary);
        dump(ary);
    }
    void bump(int[] ary) {
        for (int n=0; n<ary.length; n++)
            ary[n] = 3 * ary[n];
    }
    void dump(int[] ary) {
        for (int n=0; n<ary.length; n++)
            System.out.print(ary[n]+" ");
        System.out.println();
    }
    public static void main(String[] args) {
        new Array();
    }
}
```

Question 2

Write a Java program which initializes two 2D matrices and then adds them. Your program should have the following output.

Number of Rows= 2

Number of Columns= 3

Matrix 1 :

4 5 6

6 8 9

Matrix 2 :

5 4 6

5 6 7

Addition of both matrices :

9 9 12

11 14 16

Question 3

Write a Java program which sorts an array of 5 integers

Question 4 (1)

Consider the following Java program:

```
class Array{
    Array() {
        String[] ary = new String[6];
        load(ary);
        dump(ary);
    }
    void load(String[] ary) {
        for (int n=1; n<ary.length; n+=2) {
            ary[n-1] = " Pos: " + n;
            ary[n] = " Neg: " + (-n-1);
        }
    }
    void dump(String[] ary) {
        for (int n=0; n<ary.length; n++)
            System.out.println(ary[n]);
        System.out.println();
    }
    public static void main(String[] args) {
        new Array();
    }
}
```

Question 4 (2)

Which of the following statements is true after the execution of the given program?

- A. Line 4 of the output displays: Neg: -4
- B. Line 3 of the output displays: Neg: -3
- C. Line 4 of the output displays: Pos: 4
- D. All of the above