COMP 248 - Winter 2016

Tutorial 11

Question 1

A) Predict the output of the following program..

```
public class Q1_a {
    public static void main(String[] args) {
        int  i;
        int a[] = {5, 2, 3, 1, 1, 0, 2, 1, 0, 1};
        for (i = 0; (i < 10); i++)
        {
            if (a[i] == 0)
                break;
            if (i % 2 == 1)
               continue;
            System.out.print(a[i]);
        }
    }
}
```

Question 1

B) Predict the output of the following program..

```
public class Q1_b {
    public static void main(String[] args)
    {
        int[] data = {1, 3, 5, 8, 11, 15};
        int sum = 0;
        for(int i=1; i<data.length; ++i){
            sum = sum + data[i] - data[i-1];
            System.out.println("sum  = " + sum);
        }
    }
}
```

Question 1

C) Predict the output of the following program..

```
public class Q1_c {
    public static int sumIf(int[] a, boolean[] b) {
        int sum = 0;

        for (int i = 0; i < a.length; ++i)
            if(b[i])
                sum = sum + a[i];
        return sum;
    }

    public static void main(String[] args)
    {
        int[] data = {1, 2, 3, 4, 5, 6, 7};
        boolean[] filter = {true, false, true, true, false, true, true};
        System.out.println("data:" + sumIf(data, filter));
        for(int i = 0; i < filter.length; ++i)
            filter[i] = !filter[i];
        System.out.println("data:" + sumIf(data, filter));
    }
}
```

Question 2

Write a method called initializeArray that has one parameter which is an array of int values. When it is called it will set all the elements of the array to zero.

Question 3

Write a method called ***row_sum*** that has two parameters called ***row*** and ***n:***

- ***row*** is an array of floating-point numbers;
- ***n*** is an integer which will be greater than or equal to ***0***.

The method will return the sum of the first ***n*** elements of the array row.

Question 4

Write a main method to display a histogram for the marks of students in a class of 20 students. The marks will be stored in an array called ***marks*** and each element of this array will be an integer between 0 and 9. The histogram will consist of a series of stars for each possible value of a mark. The number of stars for each mark depends on how many students received this mark.

For example, if the array ***marks*** contains :

0	5	5	7	8	7	8	9	9	6	8	6	9	7	7	9	4	7	8	8

Your program must display the following histogram:

0 : *
1 :
2 :
3 :
4 : *
5 : **
6 : **
7 : *****
8 : *****
9 : ****