

# **COMP 248 - Winter 2016**

## **Tutorial 6**

## Question 1

What is the output of the following code:

```
a) int x = 0;
while (x != 8);
{
    System.out.print("Hello");
    x = x + 1;
}
```

```
b) while (x != 8);
    {
        System.out,print("Hello");
    }
```

```
c)   for (int i = 1;i < 9;i++)
      {
      if (i%2 == 0) System.out.println( i + 1);
      else if (i%3 == 0) continue;
      else if (i%5 == 0) break;
      else System.out.println( "Not multiple of 2, 3 or 5.");
      }
      System.out.println ("End");
```

## Question 2

Assume the following program:

```
public class Increment
{
    public static void main(String[] args)
    {
        int prevprev = 2;
        int prev = 2;
        int sum = 0;
        for (int i = 1; i < 4; i++)
        {
            sum = prevprev + prev;
            System.out.println(prevprev + " " + prev + " " + sum);
            prevprev = prev;
            prev = sum;
        }
    }
}
```

a) What is the output of this program?

b) If we replace the **for** (the line highlighted in red) with the following lines, will the output be the same? If the output will be different, what will it be?

- `for (int i = 1; ++i < 4; )`
- `for (int i = 1; i < 4; ++i)`

## Question 3

Write a program to display on the screen a multiplication table from 1 to n; where n is an integer entered by the user. The main diagonal of the table must be filled with the character '\*'. For example, if the user enters 7, your program should display:

Enter the value of n:7

1 2 3 4 5 6 7

-----

```
1| * 2 3 4 5 6 7
2| 2 * 6 8 10 12 14
3| 3 6 * 12 15 18 21
4| 4 8 12 * 20 24 28
5| 5 10 15 20 * 30 35
6| 6 12 18 24 30 * 42
7| 7 14 21 28 35 42 *
```

- Make sure that all integers are aligned properly (a field width of 4 will be sufficient)

## Question 4

Write a JAVA program to draw the following shapes:

a)

```
*  
**  
***  
****  
*****
```

b)

```
*****  
****  
***  
**  
*
```