

5COSC019W - Solutions to Tutorial 1 Exercises

1 Java/Netbeans Reminder

```
public class Hello_OOP {  
    public static void main(String[] args) {  
        System.out.println("Welcome to Online Learning!\n\nPlease virus go away!");  
    }  
}
```

2 Java/Netbeans Reminder - Syntax of the main method

A public class should have the same name as the name of the file without the java extension. Case sensitivity.

`args` is an array of strings passed to the command line. It can have an arbitrary (variable) number of command line arguments passed to it.

There is nothing special about the name `args` it could be `x` or whatever.

```
public class CommandLineArgumentsExample {  
    public static void main(String[] foo) {  
        for (String e: foo)  
            System.out.println(e);  
    }  
}
```

Running this in the command line:

```
java CommandLineArgumentsExample one two three
```

produces:

```
one  
two  
three
```

You can do the same thing in Netbeans by setting the run arguments in the menu: Goto project by right clicking (two-finger click on Mac, right click on Linux, Windows) on the project name. Then select **Properties->Run** and type your arguments in the **Arguments** textbox. Run your program to see the output!

3 Java Reminder - For Loops and ifs

```
class EvenNumbersExample {
    public static void main(String[] hohoho) { // no args here?
        for (int i=1; i <= 100; i++) {
            if (i % 2 == 0)
                System.out.println(i + " is even");
        }
    }
}
```

4 Java Reminder - While Loops and ifs

```
class EvenNumbersExample {
    public static void main(String[] hohoho) { // no args here?
        int i = 1;
        while (i <= 100) {
            if (i % 2 == 0)
                System.out.println(i + " is even");
            ++i;
        }
    }
}
```

5 Java References

The output is: abcabc456.

You can draw a diagram with the memory mappings to help figure out what is happening step by step in each assignment.

6 A Lottery Program

```
import java.util.*;

class Lotto {
    static int[] storage = new int[6];

    public static void main(String[] args) { // args is back keep the good name in
        Random random_generator = new Random();
        int count = 0;

        while (count < 6) {
            int randomNumber = 1 + random_generator.nextInt(49);
        }
    }
}
```

```
        if (!isItAlreadyThere(randomNumber)) {
            storage[count] = randomNumber;
            ++count;
        }
        //System.out.println(randomNumber);
    }

    for (int x: storage)
        System.out.println(x);
}

static boolean isItAlreadyThere(int x) {
    for (int e: storage) {
        if (e == x)
            return true;
    }

    return false;
}
}
```