

CS1101X

Week 7

Trace the programs below and write the outputs.

1.

```
public class TraceCode1 {

    public static void main(String[] args) {
        int a = 123, b = 345;

        someMethod(b, a);
        System.out.println("In main(): a = " + a);
        System.out.println("In main(): b = " + b);
    }

    public static int someMethod(int a, int b) {
        a += 100;
        b--;

        System.out.println("In someMethod(): a = " + a);
        System.out.println("In someMethod(): b = " + b);

        return a + b;
    }
}
```

2. Replace the statement `someMethod(b, a);` with the following statement:

```
a = someMethod(b, a);
```

What is the output?

3. Can this swap () method ever work? Why or why not?

```
public static void main(String[] args) {
    int a = 123, b = 345;
    swap(a, b);
    System.out.println("In main(): a = " + a);
    System.out.println("In main(): b = " + b);
}

public static void swap(int a, int b) {
    int temp = a;
    a = b;
    b = temp;
}
```

- 4.

```
public class TraceCode2 {

    public static void main(String[] args) {
        int[] list = {1,2,3,4,5};
        someMethod(list);
        printArray(list);
    }

    public static void someMethod(int[] arr) {
        for (int i=0; i<arr.length; i++)
            arr[i] += 10;
    }

    public static void printArray(int[] arr) {
        for (int i=0; i<arr.length; i++)
            System.out.print(arr[i] + " ");

        System.out.println();
    }
}
```