CSE 121 – Lesson 7
Miya Natsuhara
Autumn 2023

Music: [121 23au Lecture Tunes 🐐]

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<th>TAs:</th>
<th>Trey</th>
<th>Christina</th>
<th>Sahej</th>
<th>Vinay</th>
<th>Kriti</th>
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Announcements, Reminders

• Programming Assignment 1 is out, due Tues April 25
  • Start early!
  • [Math Problems case study video walkthrough](#) posted

• Resubmission Cycle 1 released yesterday, due Thurs April 27

• Quiz 0
  • Plan is to release grades tonight!
  • First opportunity for Quiz 0 Retakes will be Tuesday, April 25
    (Retake details and form released tonight)
(PCM) Parameters

A value passed to a method by its caller

```java
public static void myMethod(int num) {
    System.out.println(num + " is the best!");
    ...
}
```

Calling a method with a parameter...

```java
myMethod(42);
```
(Review) Scope

• The part of a program where a variable exists.
  • From its declaration to the end of the {   } braces
  • Ex: a variable declared in a for loop only exists in that loop
  • Ex: a variable declared in a method exists only in that method

```java
public static void example() {
    System.out.println("hello");
    int x = 3;
    for (int i = 1; i <= 10; i++) {
        System.out.println(x);
    }
}
```

i's scope

x's scope
What will be the last line of output after this code has executed?

```java
public static void main(String[] args) {
    int count = 5;
    line(count);
    System.out.println("count is: " + count);
}

public static void line(int count) {
    for (int i = 1; i <= count; i++) {
        System.out.print("*");
    }
    count++;
    System.out.println();
}
```

A. count is: 5
B. count is: 6
C. count is: 1
D. I'm lost
public class Scope {

    public static void main(String[] args) {
        int val = 1;
        mOne(val); // Prints "One: 1"
        val = -1;
        mTwo(val); // Prints "Two: -2"
        mThree(val); // Prints "One: -1"
                        // "Three: 2"
    }

    // Method mOne()
    public static void mOne(int val) {
        System.out.println("One: "+ val);
    }

    // Method mTwo()
    public static void mTwo(int val) {
        val = val * 2;
        System.out.println("Two: "+ val);
    }

    // Method mThree()
    public static void mThree(int val) {
        mOne(val);
        val = val + 3;
        System.out.println("Three: "+ val);
    }
}

What is the output of this program?

```java
public class ParameterMystery {
    public static void main(String[] args) {
        int x = 9;
        int y = 2;
        int z = 5;

        mystery(z, y, x);
        mystery(y, x, z);
    }

    public static void mystery(int x, int z, int y) {
        System.out.println(z + " and " + (y - x));
    }
}
```

A. 2 and 4
    9 and 3

B. 5 and -7
    5 and -7

C. 9 and -3
    5 and -7

D. I'm lost