

CSCI 3155 LAB 1 Writeup

Jason Lubrano & Brad Smith

January 26, 2018

Github repo:

<https://github.com/jasonlubrano/CSCI3155-JasonLubrano.git>

Questions about the Scala programming language

Problem 1. The use of π in line 4 is bound by the declaration in line 3. The use of π in line 7 is bound by the declaration in line 1. This is because of scope.

Problem 2. The use of x in line 3 is bound by line 2. The use of x in line 6 is bound by line 5. The use of x in line 10 is bound by line 5. The use of x in line 13 is bound by line 1

Problem 3. The body of g is well-typed because we could come up with a valid return type. $((Int, Int), Int)$ will be the return type in all cases.

```
(a, b) = (1, (x, 3)) because:
  a: Int
  b: (Int, Int)
(x == 0) (b, 1)
  x: Int
  b: (Int, Int) //more specifically
  b: (x, 3)
(b, a + 2)
  b: (Int, Int) //more specifically
  b: (x, 3)
  x: Int
  a: Int //more specifically
  a: 1 //from line 2
  a + 2: Int //because
    1 + 2 = 3: Int
```