Contents

[Function Scope 1](#_Toc89953822)

[Closure 1](#_Toc89953823)

[Function links 2](#_Toc89953824)

[Pass-by 2](#_Toc89953825)

# Function links

1. In the below code,
   1. what is on the memory stack at the print() line?
   2. What are B, C and A’s static and dynamic links?
   3. Lastly, how would B() access X, and which one, in a static scoped language?

Func A()

X = 0 //1

Func B()

print(x)

Func C()

B()

C()

X = 1 //2

A()

# Pass-by

1. Assume you have the following:

func f(x, y, z)  
 z = z + 1   
 y = x + 2

x = x + z

a = 0

b = [1,2]

f(a, b[a], a) //yes, the last argument is "a" NOT "b[...]"

What happens when the arguments are (assuming left to right assignment)...

**Passed by Name** What is a? \_\_\_\_\_\_ What is b[0]? \_\_\_\_\_\_\_    What is b[1]? **\_\_\_\_\_\_**

**Passed by Value/Result**     What is a? \_\_\_\_\_\_ What is b[0]? \_\_\_\_\_\_\_    What is b[1]? \_\_\_\_\_\_

**Passed by Value**    What is a? \_\_\_\_\_\_ What is b[0]? \_\_\_\_\_\_    What is b[1]? \_\_\_\_\_\_

**Passed by Reference** What is a? \_\_\_\_\_\_ What is b[0]? \_\_\_\_\_\_    What is b[1]? \_\_\_\_\_\_

1. Suppose you have the following function header in a language with named parameters. What is the call to makeDate(…) with the month set to December (12), and the year set to 2020, **without** specifying the day?

makeDate( day = 1, month = 1, year = 1900) //makes and returns a date