Assignment-2

Objective: Execution of python programs

Date of submission: 17 Jan 2023

Submitted by Group: Shravan , Ashutosh and Vidya

Guided by: Prof. Sonika Thakral ma'am

Part A

```
1  def max(a,b,c):
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4      Precondition: a, b, c are numbers"""
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11 d = max(1,2,3)
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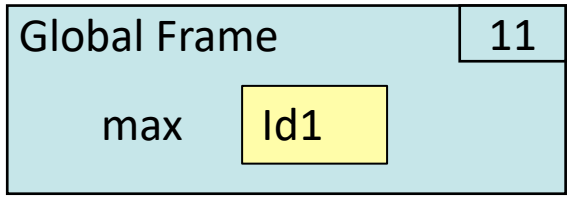

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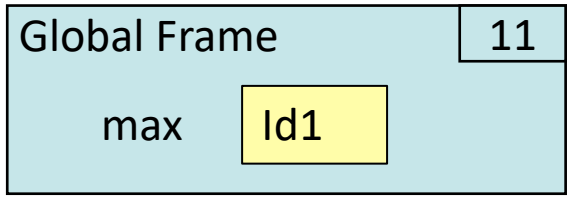

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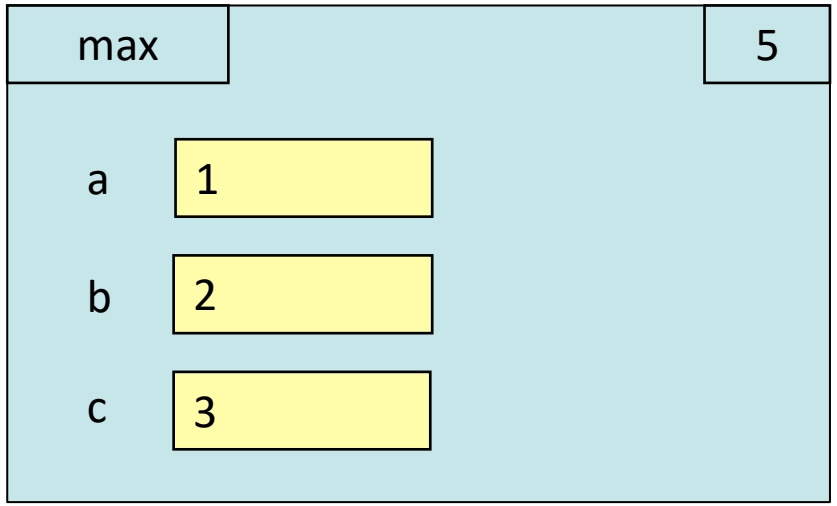

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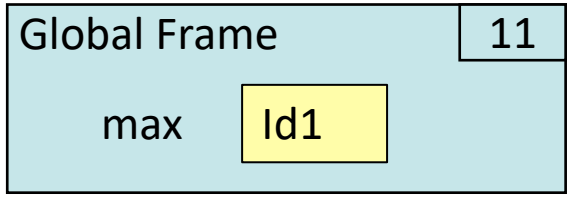

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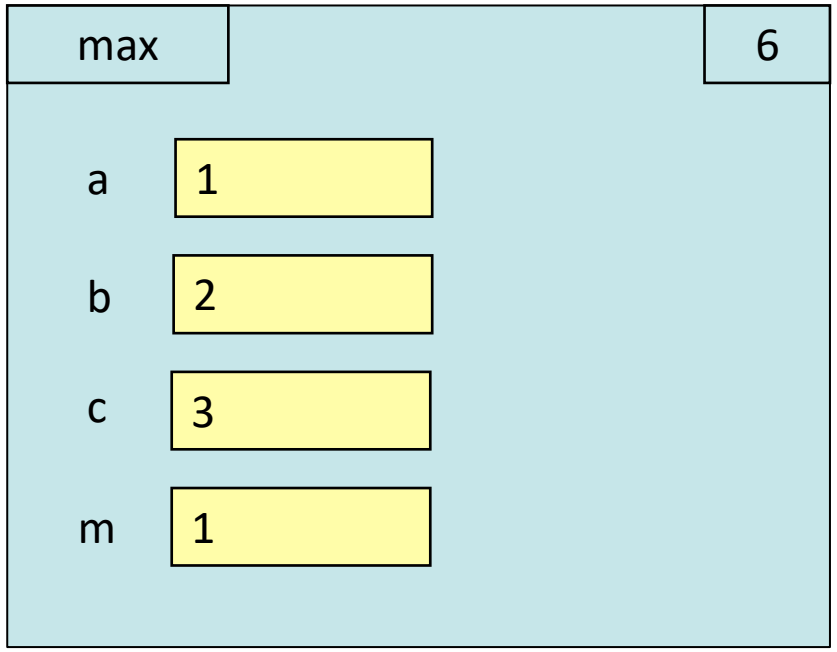

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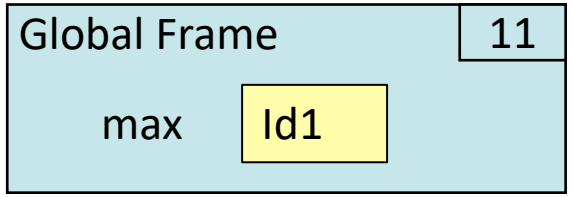

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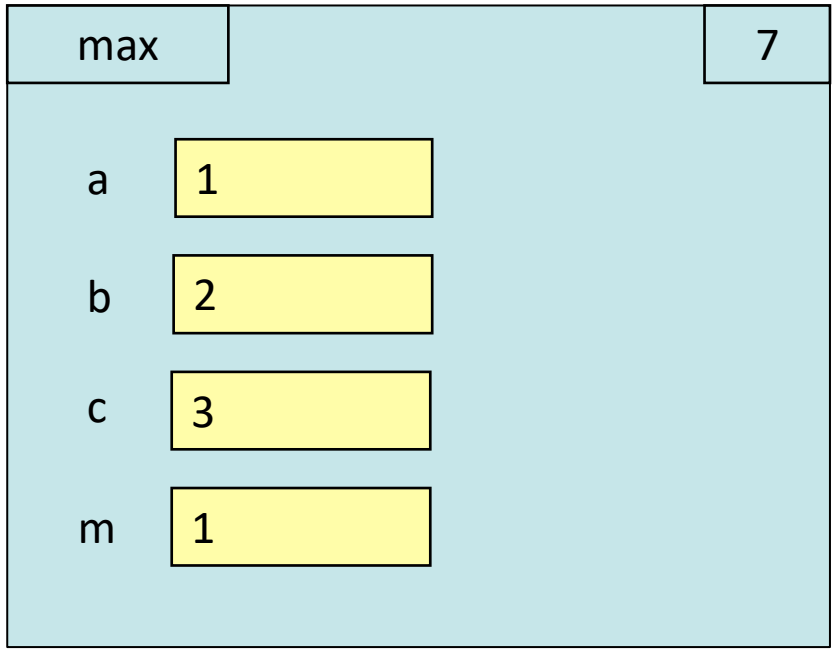

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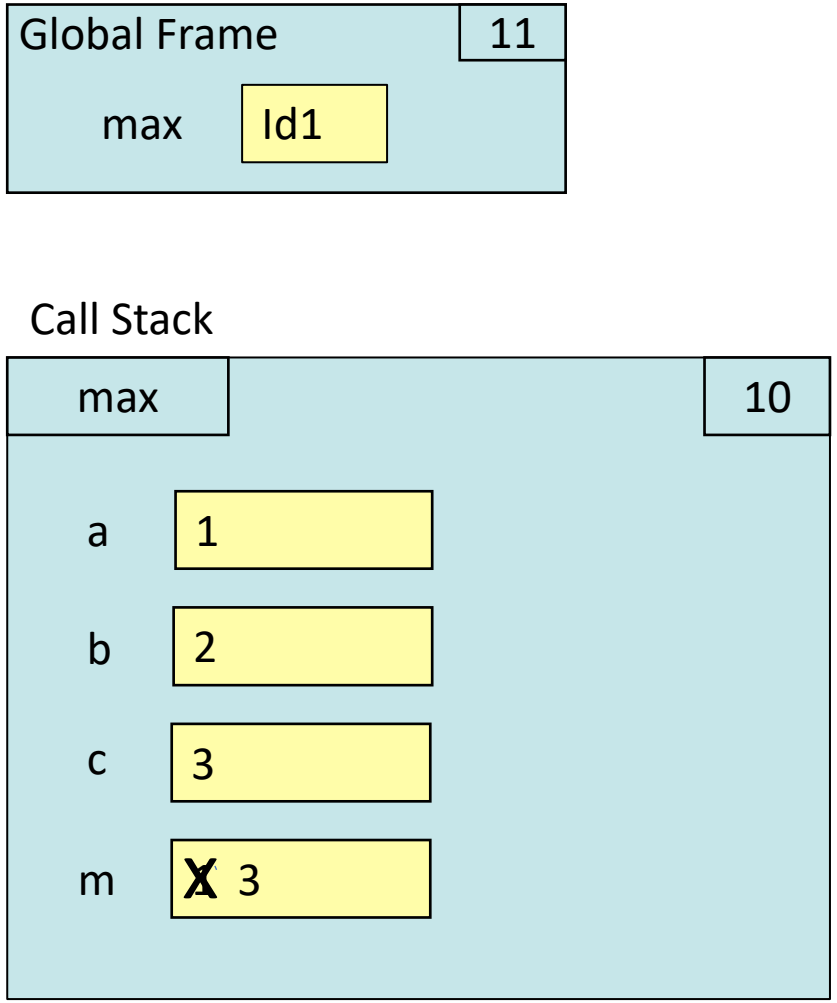

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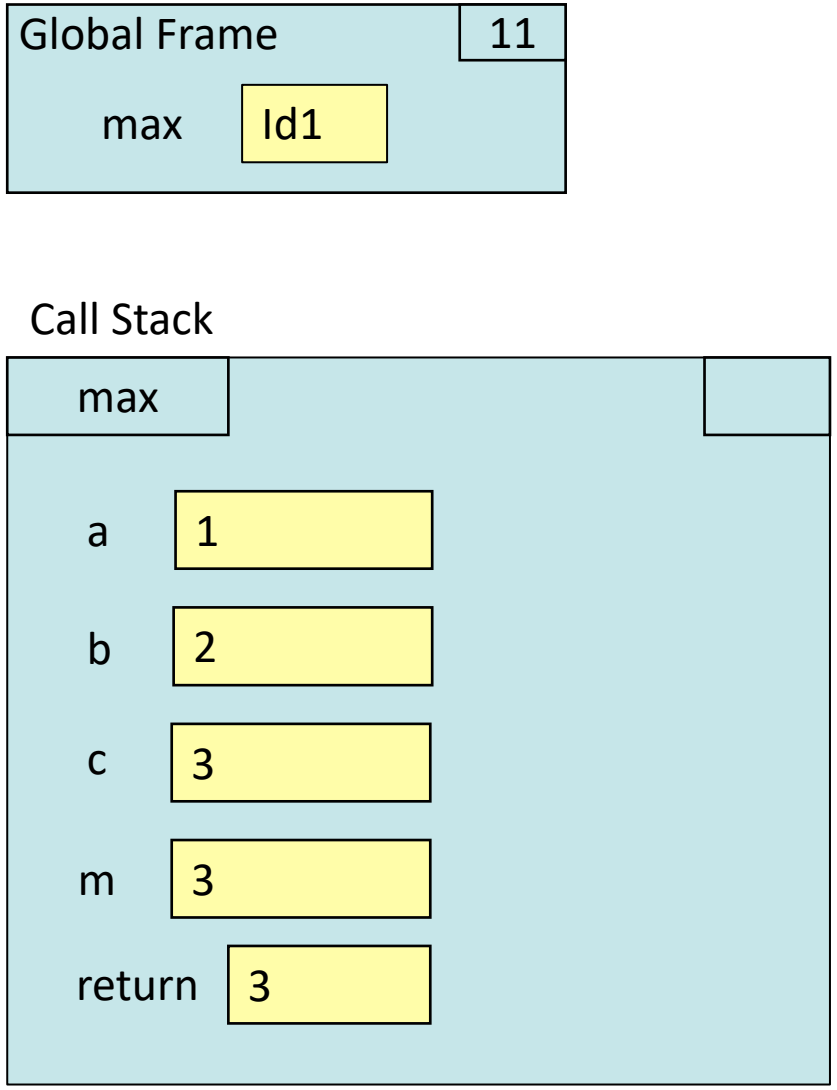

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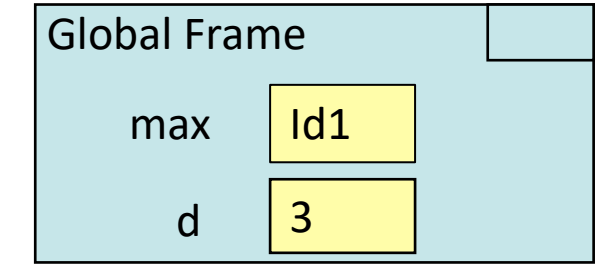

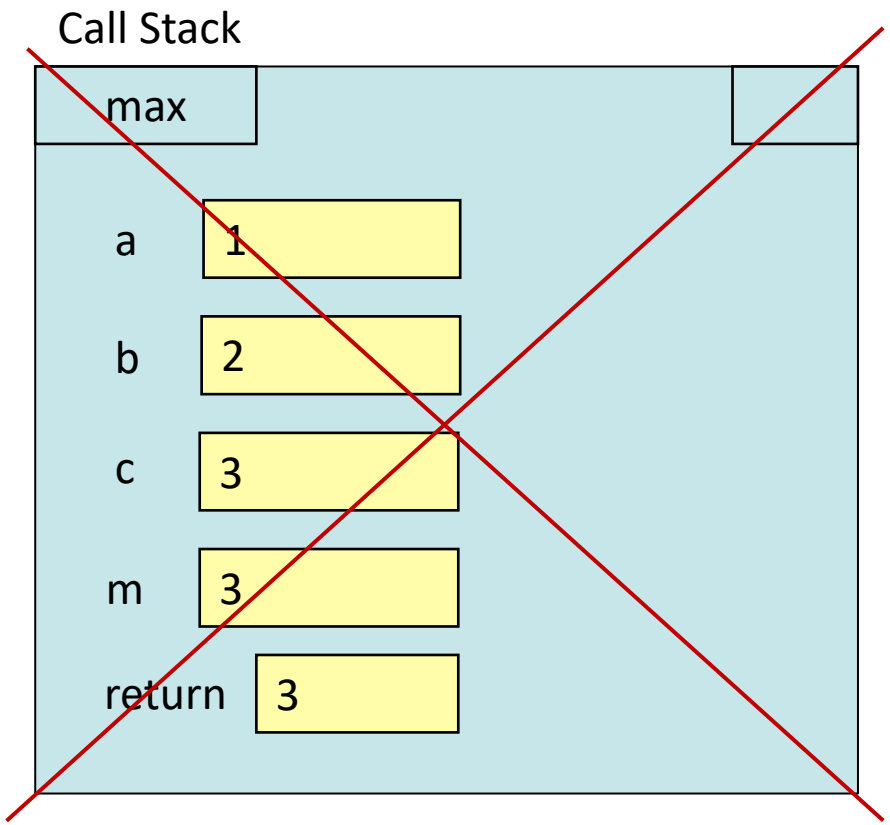

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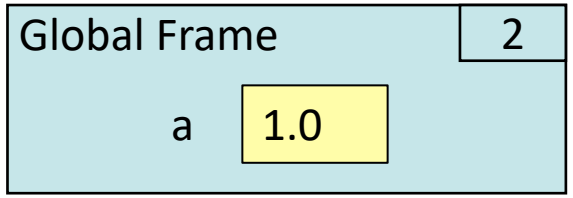

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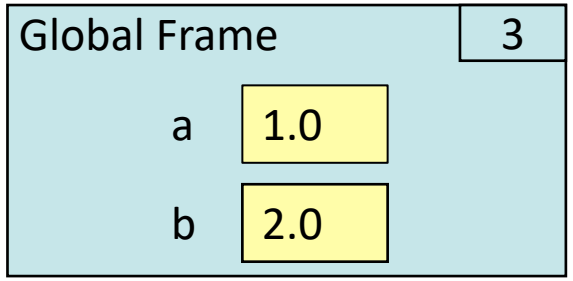

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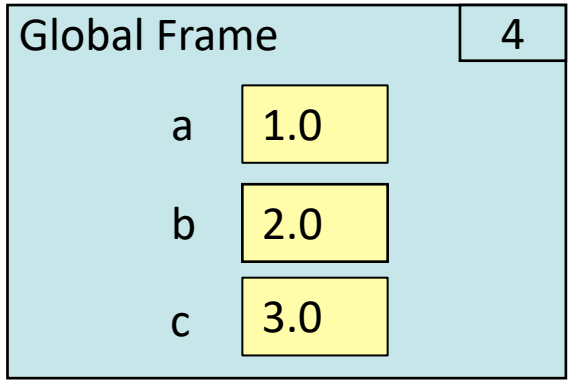

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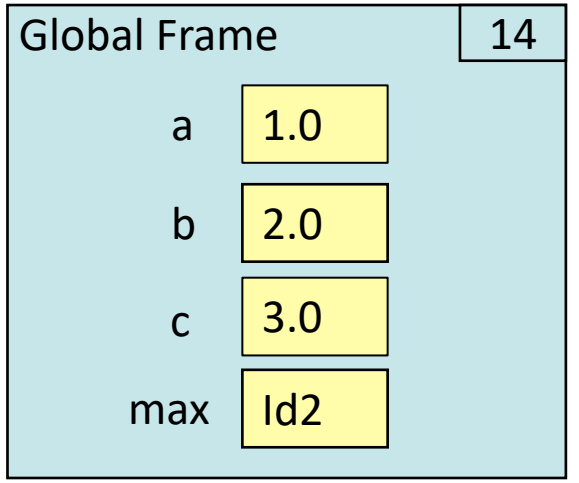

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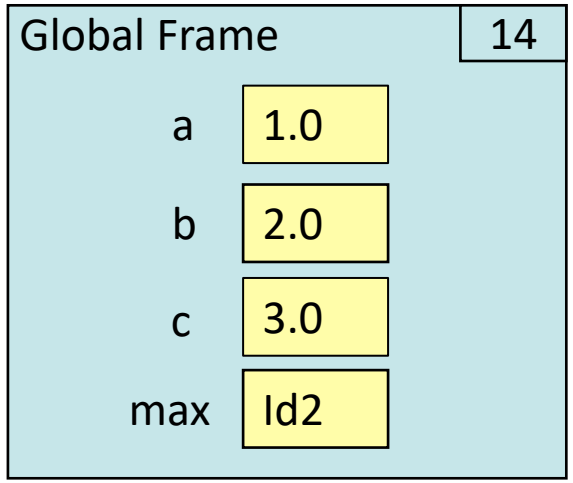

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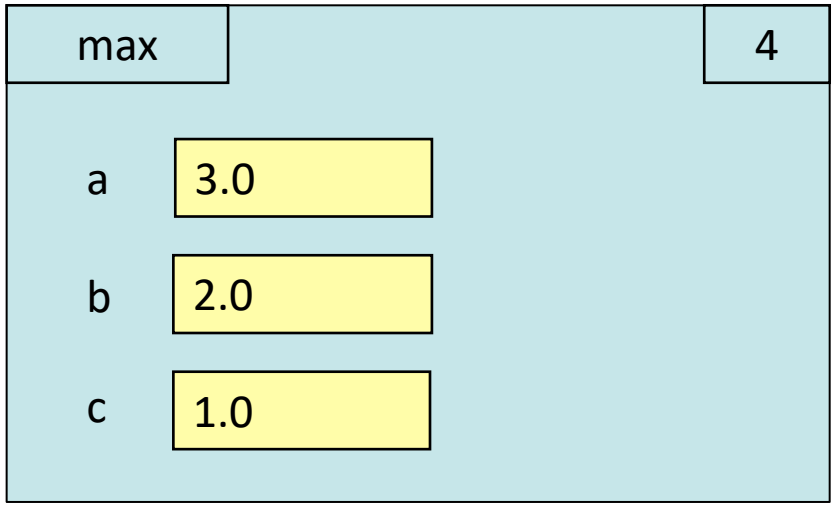

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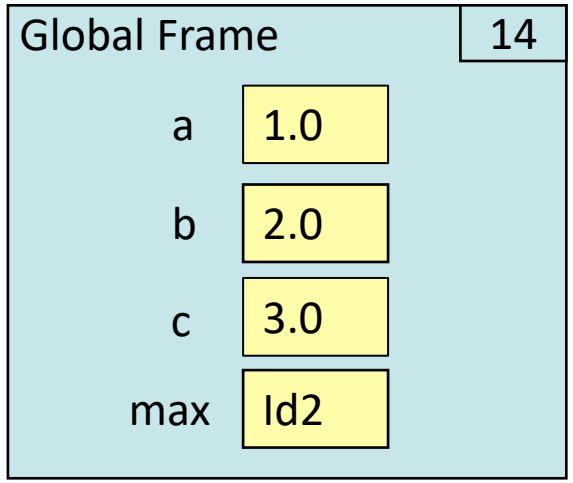

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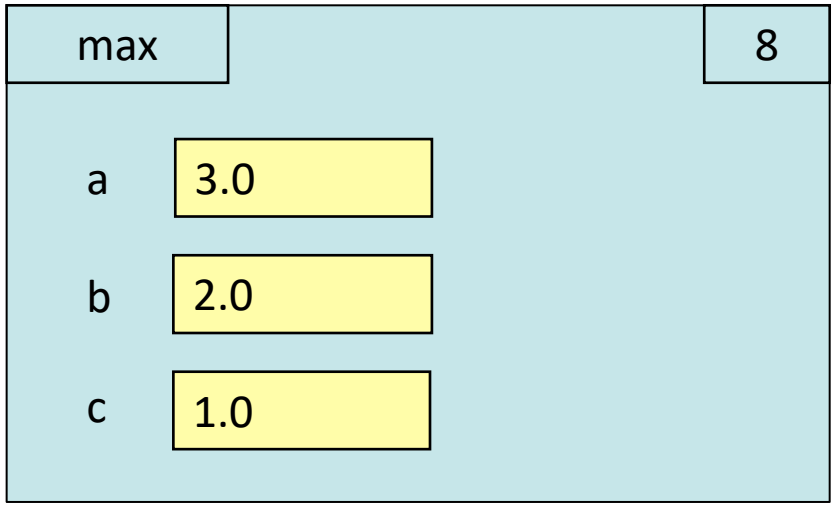

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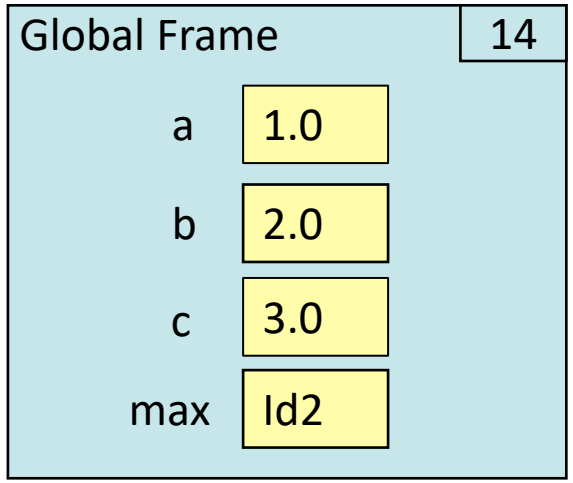

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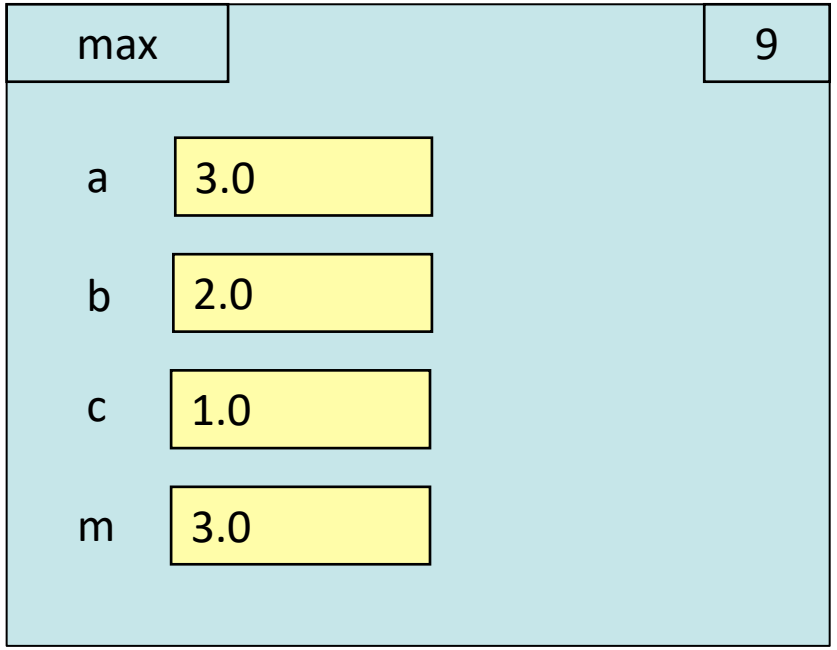

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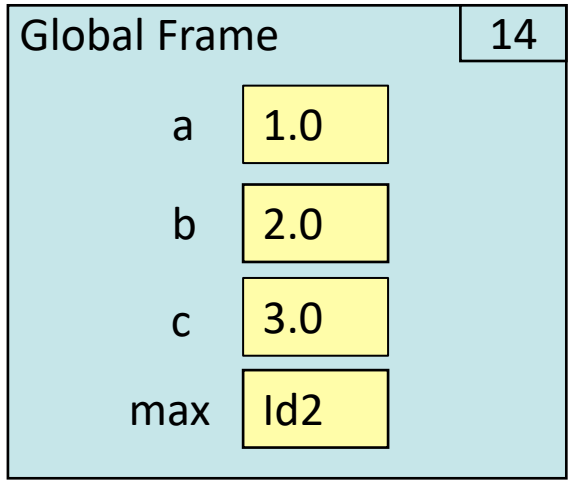

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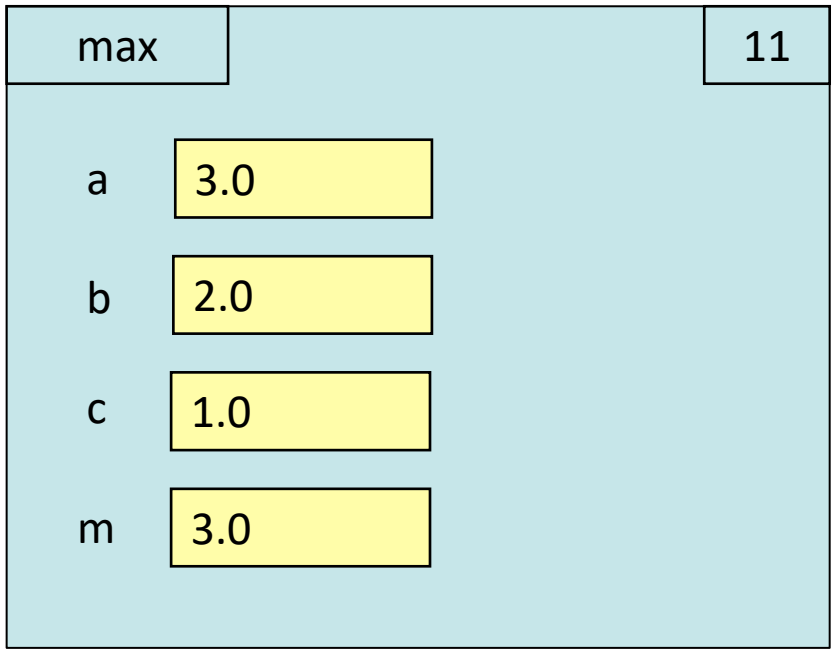

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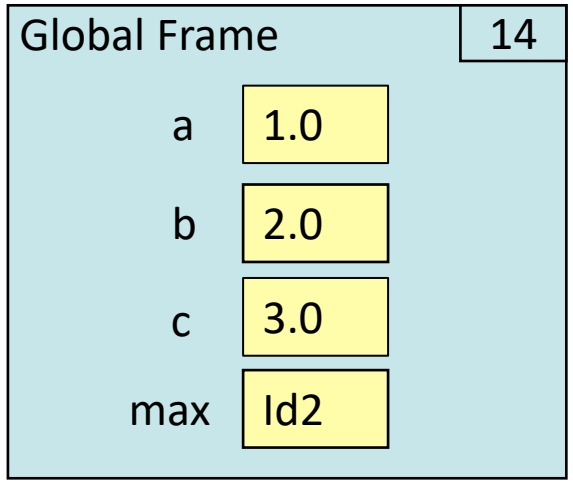

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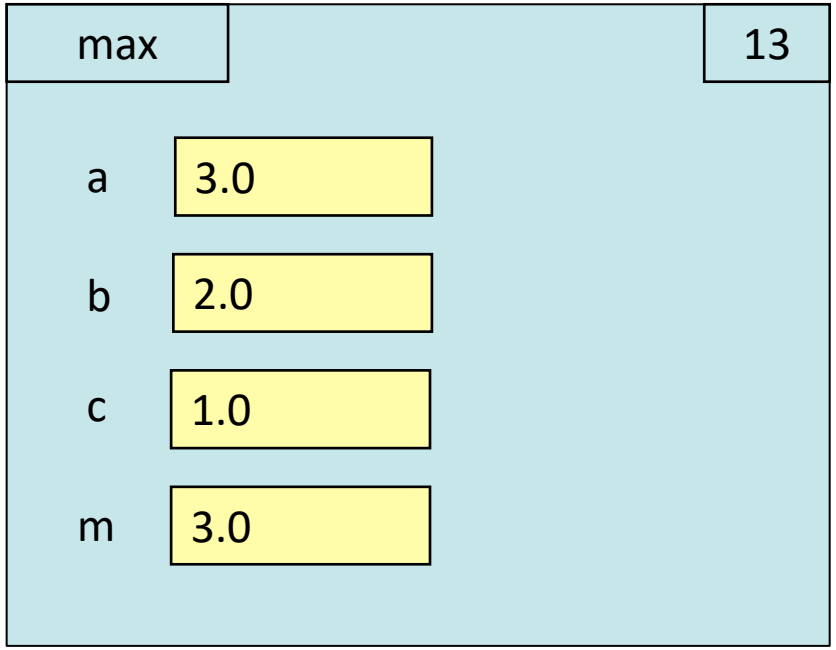

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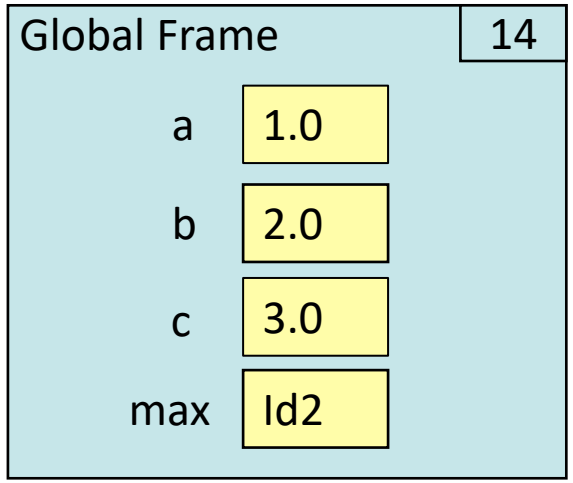

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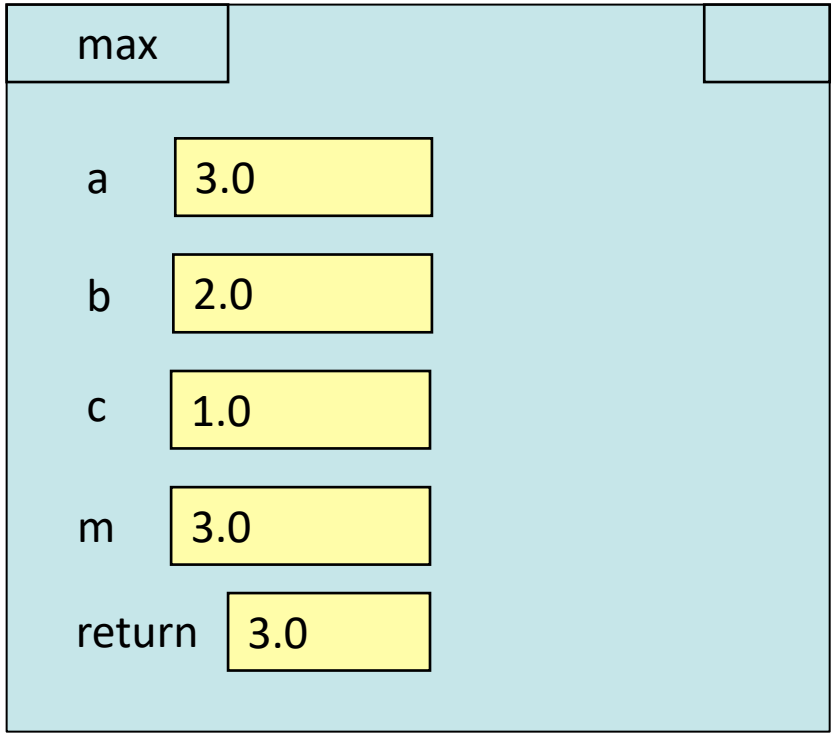

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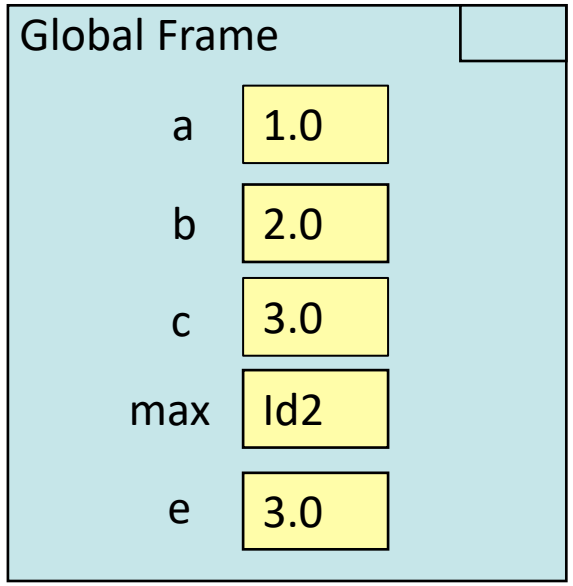

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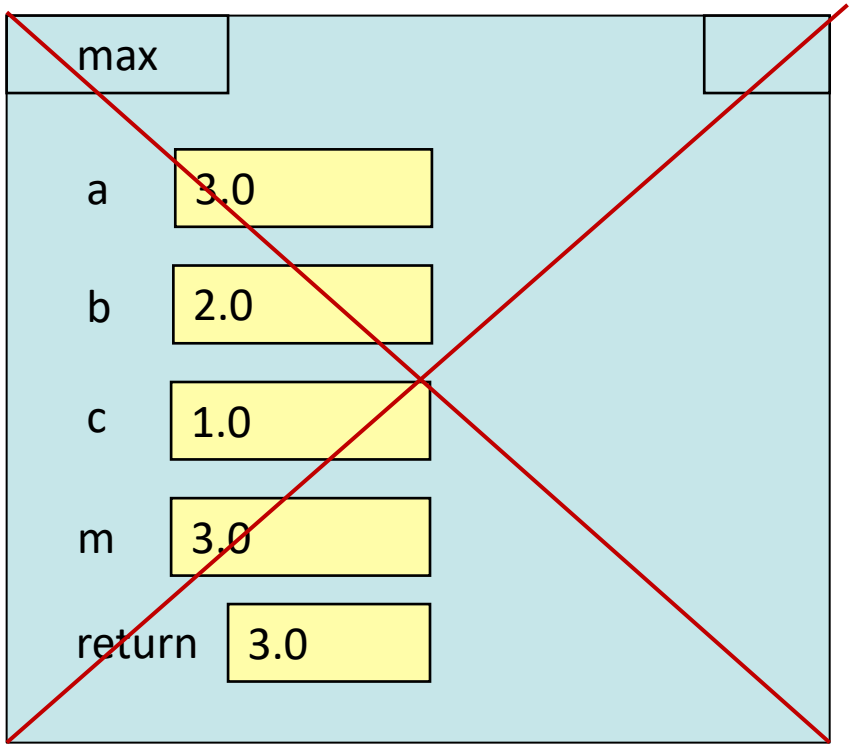

Part C

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2  v = Vector2(3.0,4.0)
3  def perp(v):
4      """Modifies v to be perpendicular to the original
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6      Precondition: v is a Vector2 object"""
7      tmp = v.y
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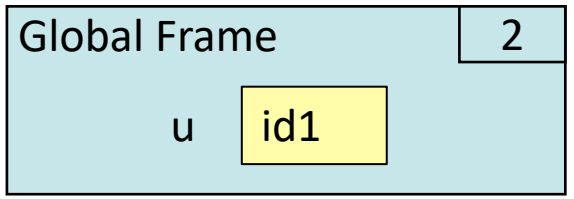

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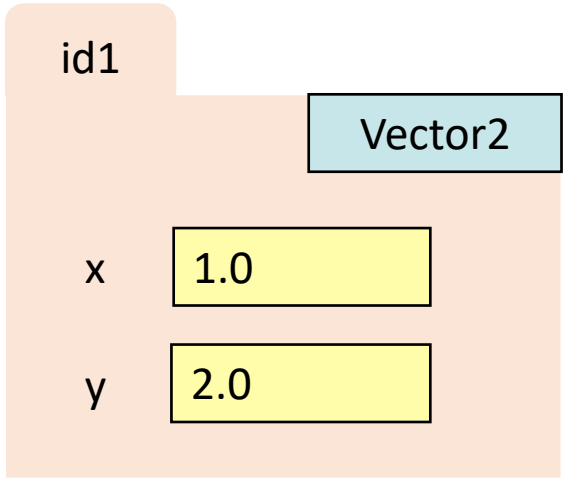

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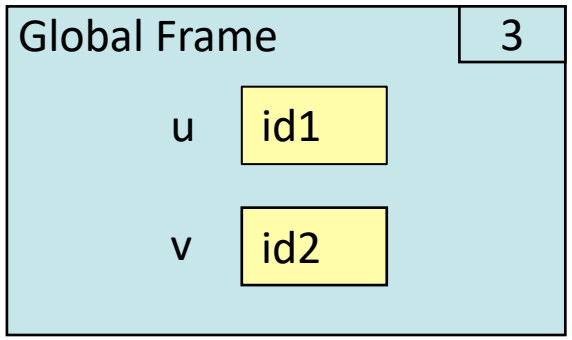

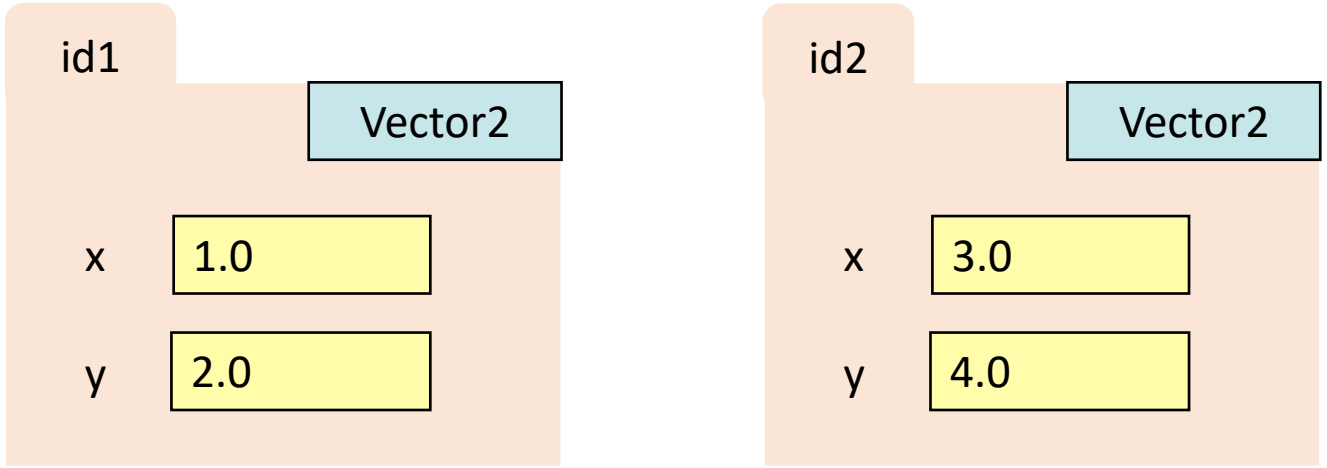

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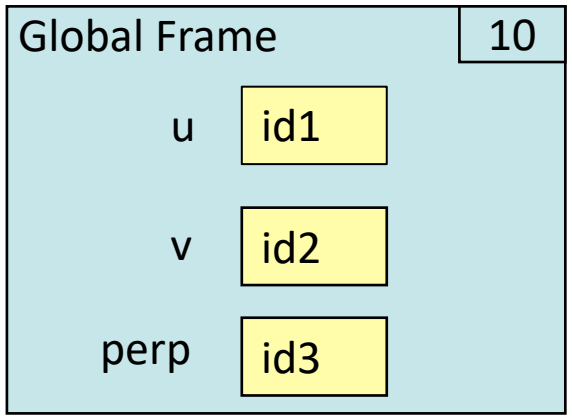

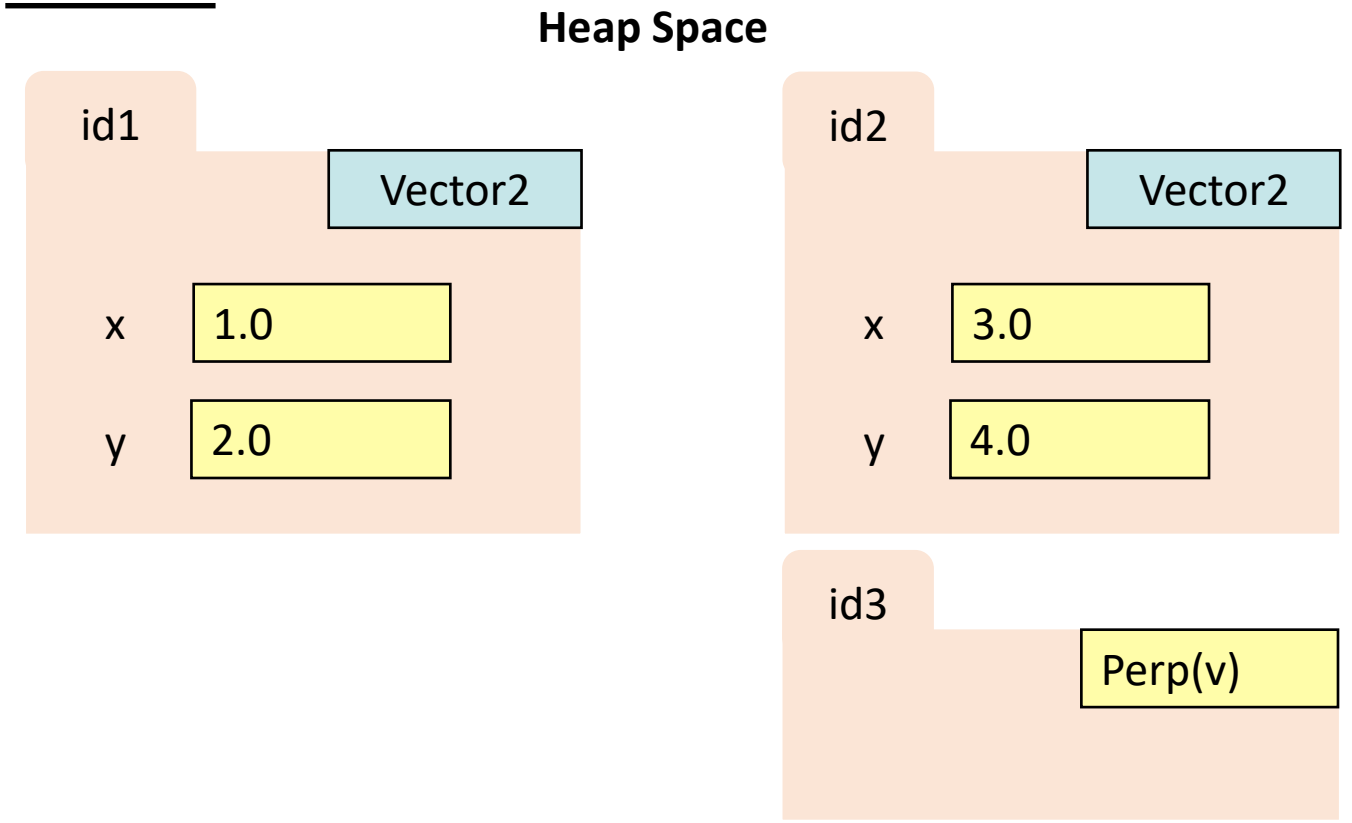

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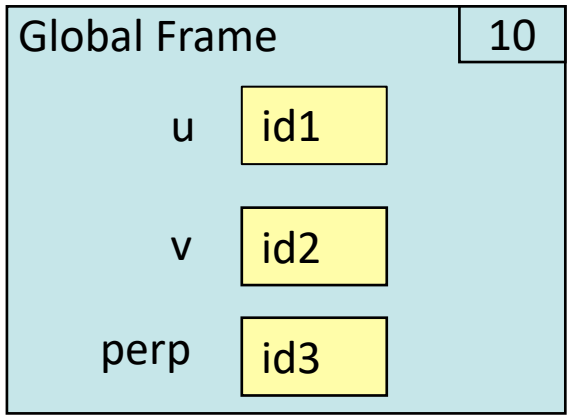

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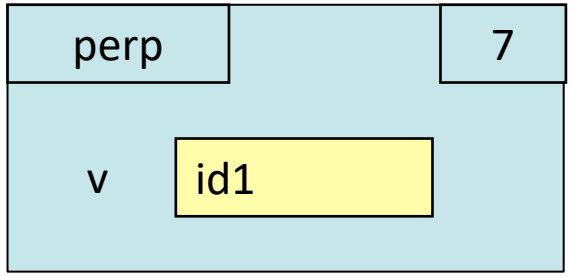

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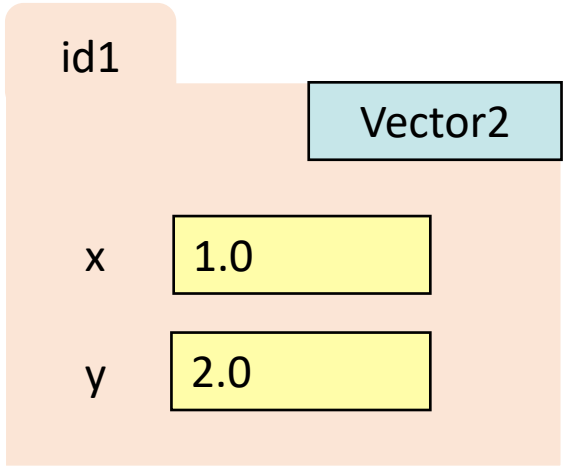

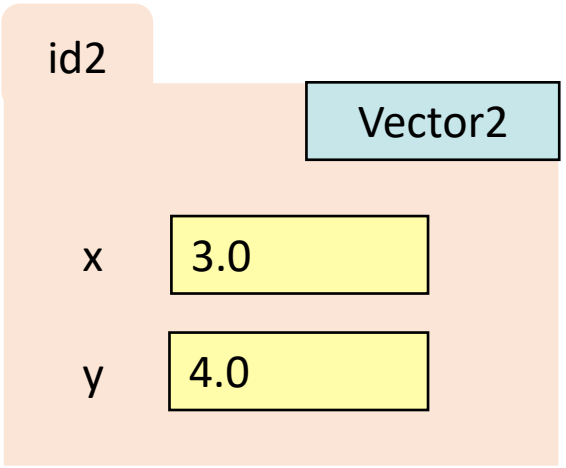

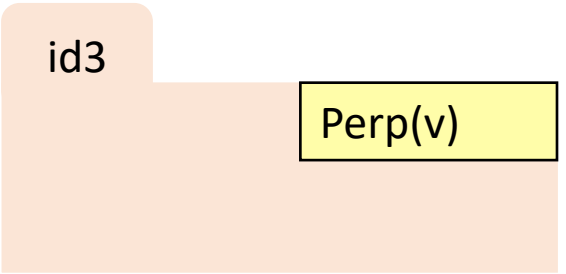

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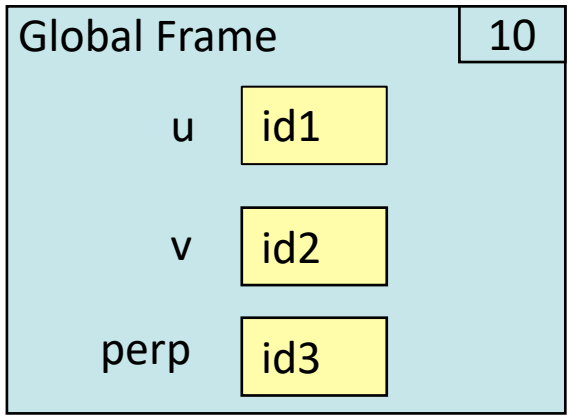
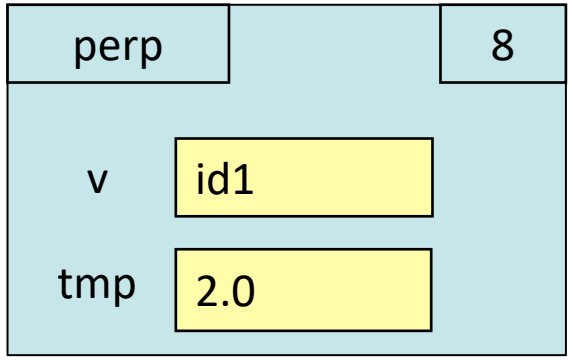
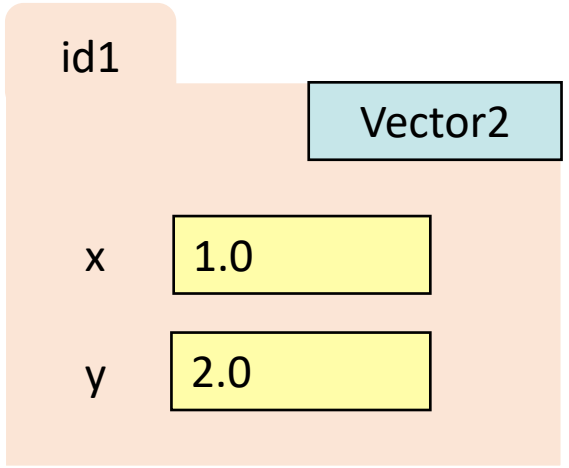
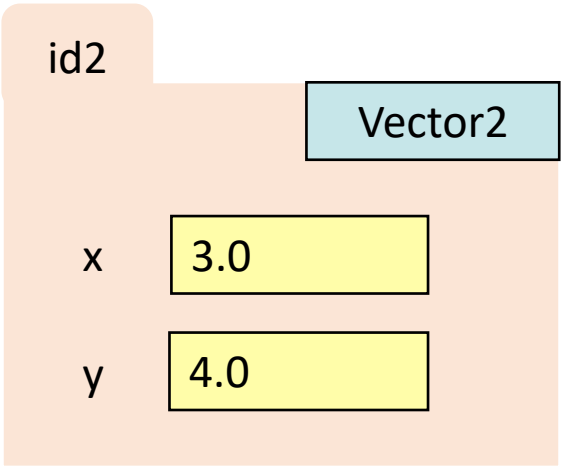


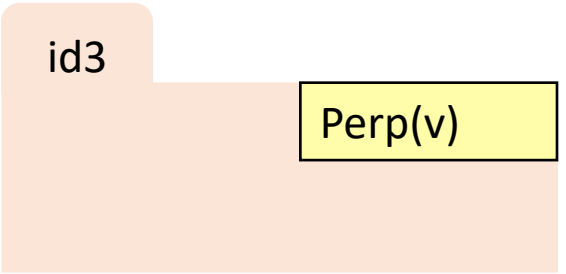
Call Stack



Heap Space







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```

Heap Space

id1

Vector2

x 1.0

y ~~2.0~~ 1.0

id2

Vector2

x 3.0

y 4.0

id3

Perp(v)

Global Frame 10

u id1

v id2

perp id3

Call Stack

perp 9

v id1

tmp 2.0

Part C

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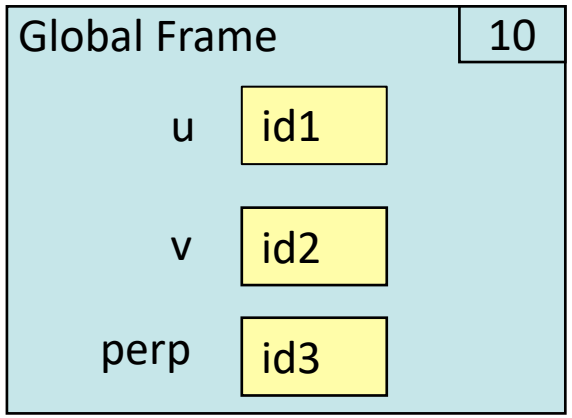

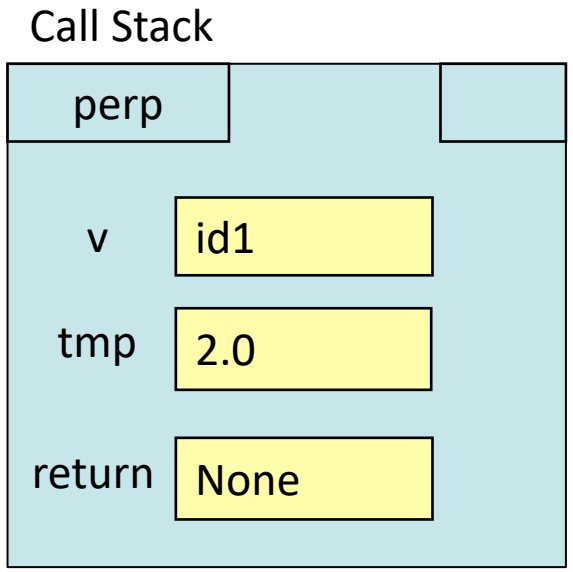

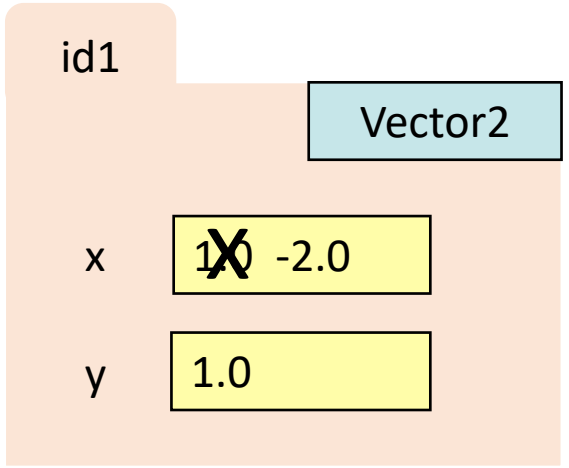

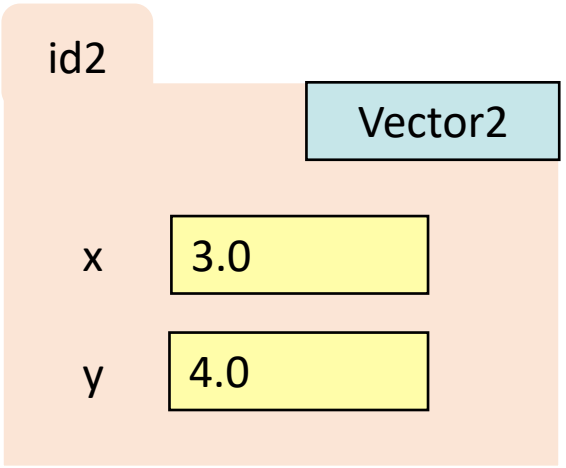

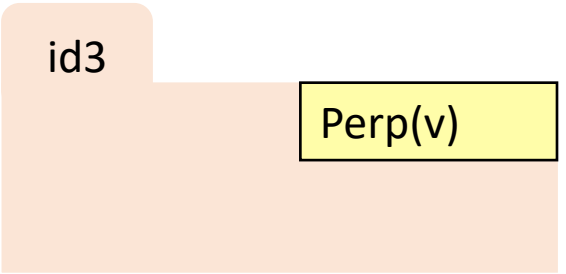

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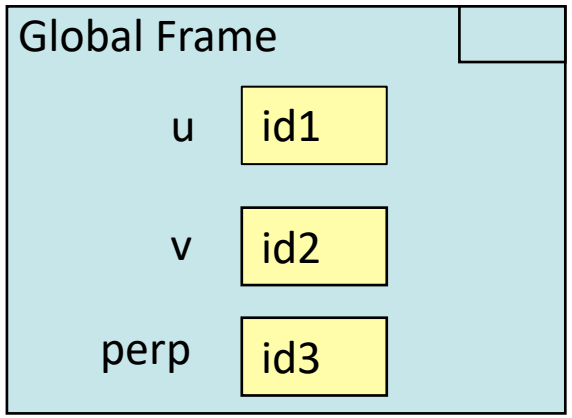

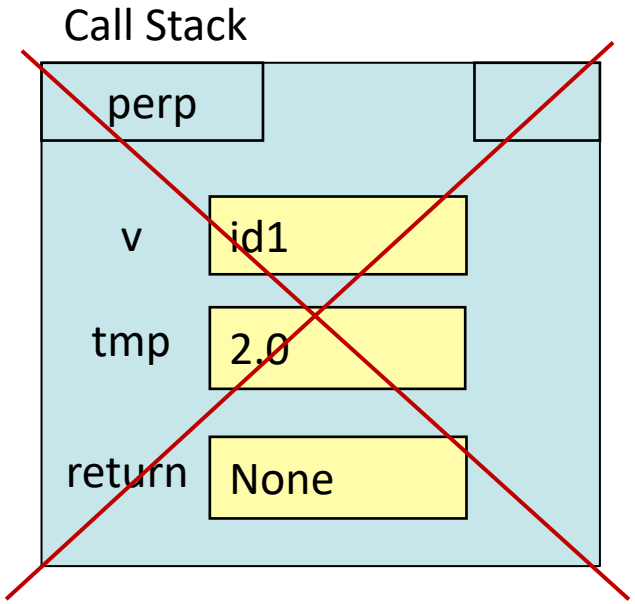

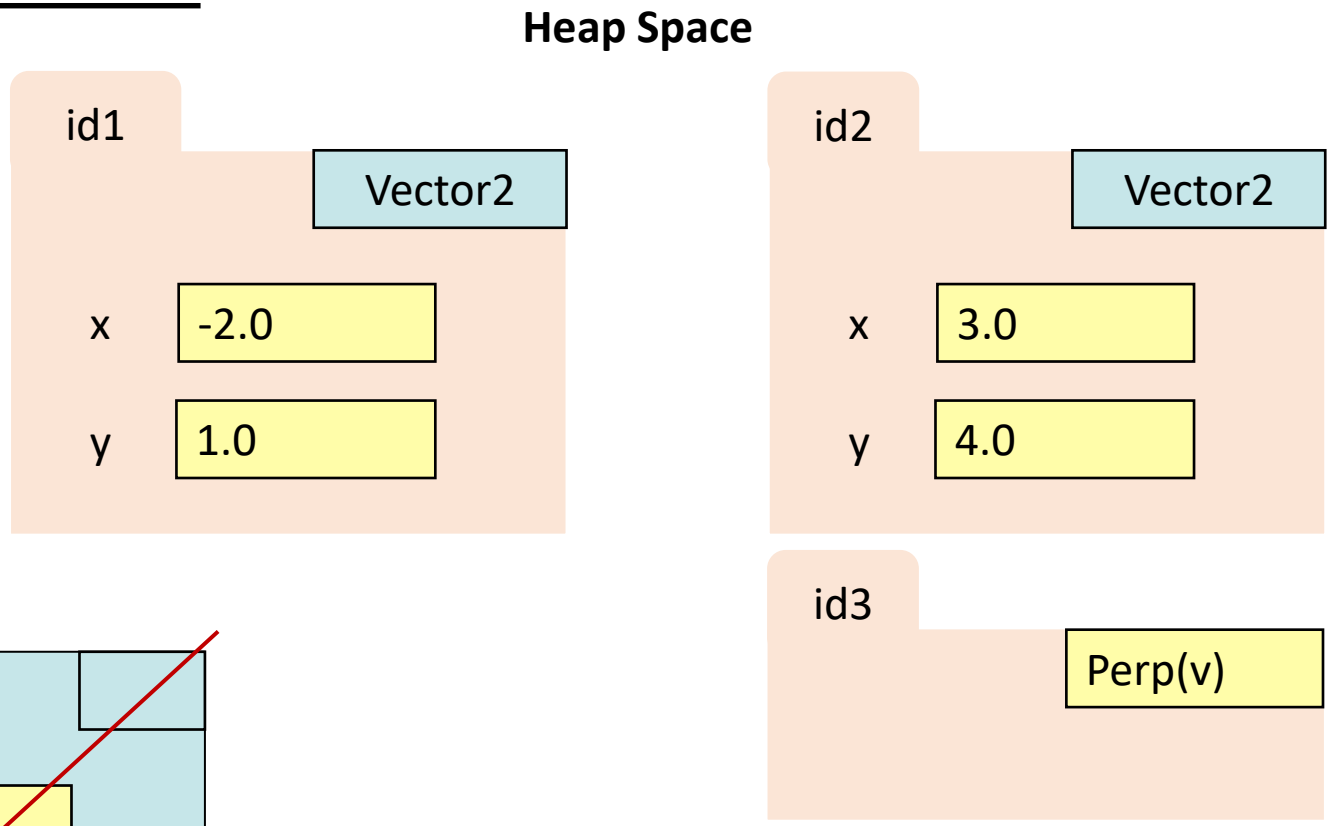

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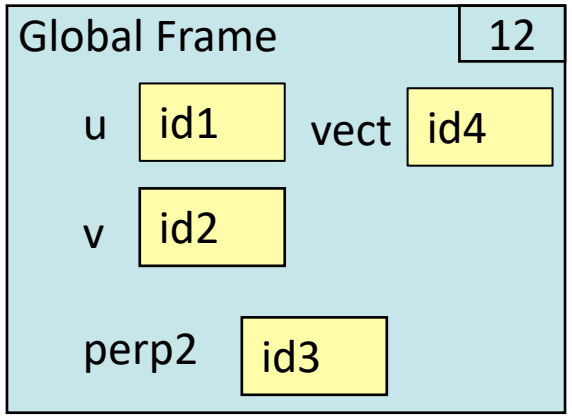
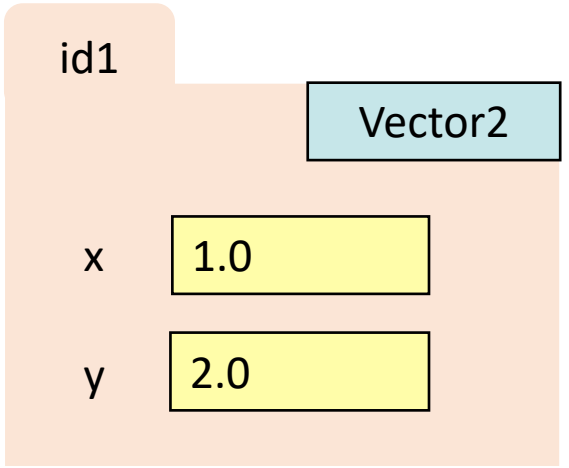
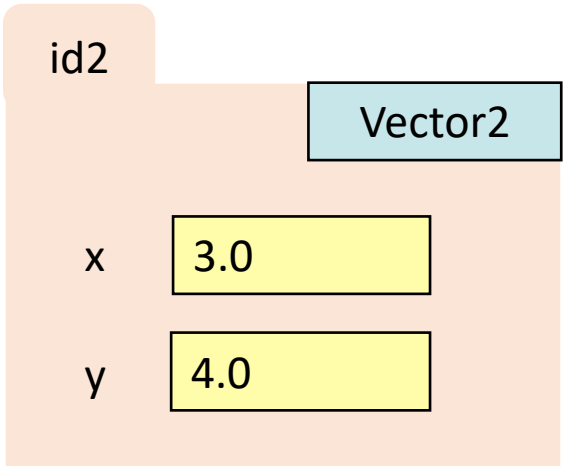
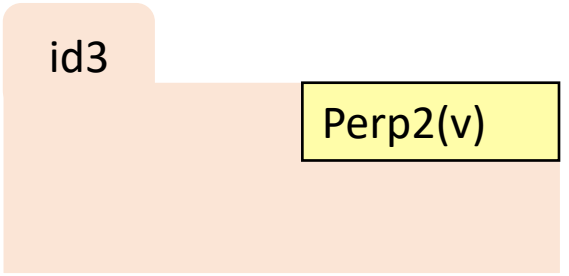
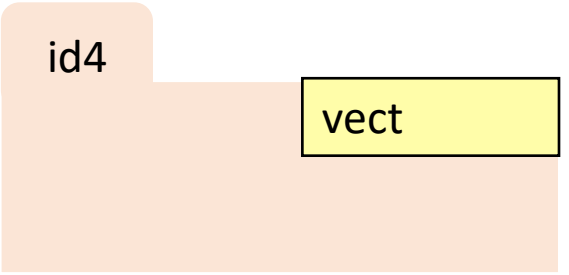


Heap Space









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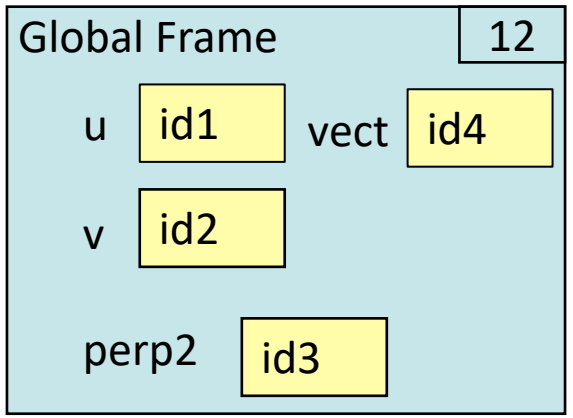
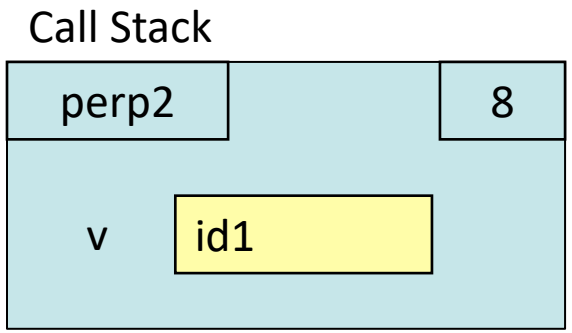
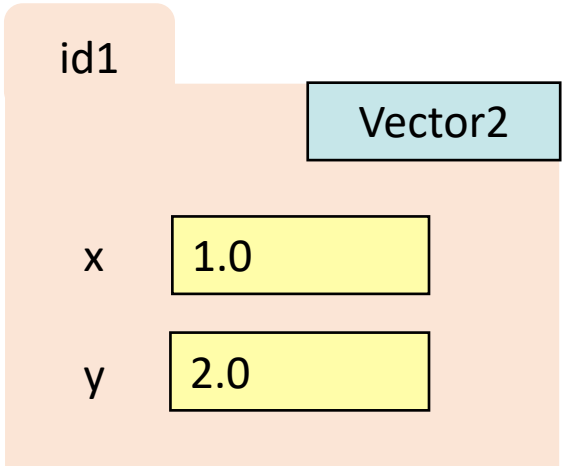
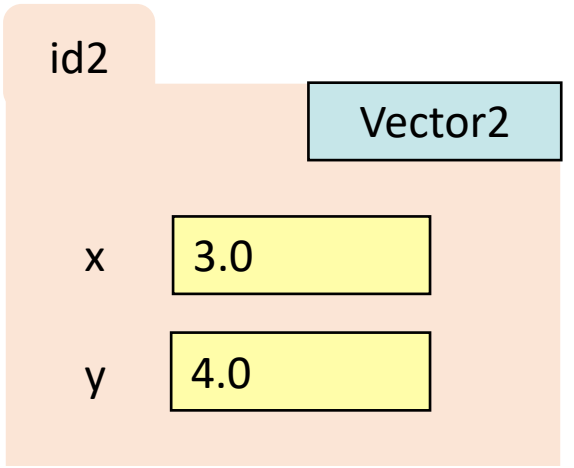
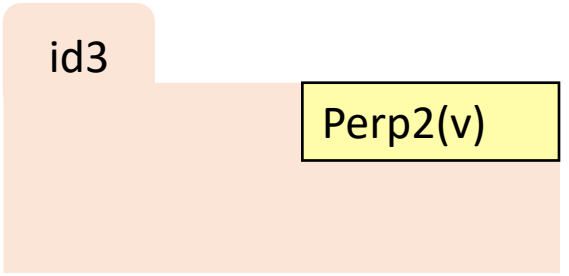


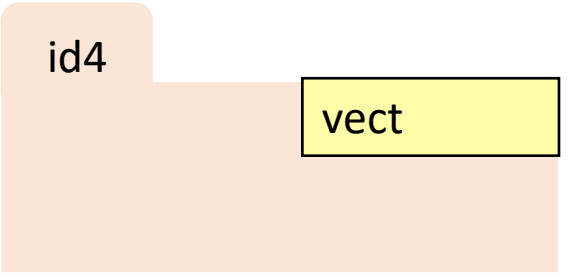


Heap Space









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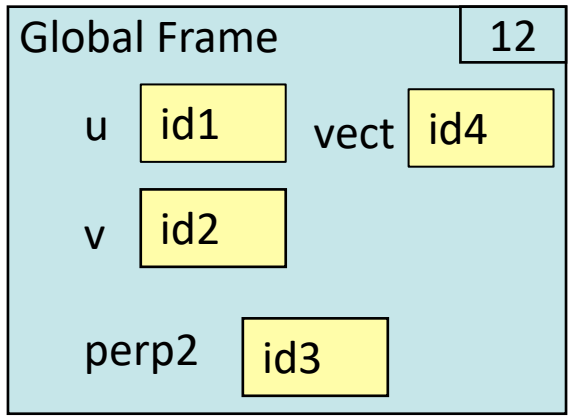

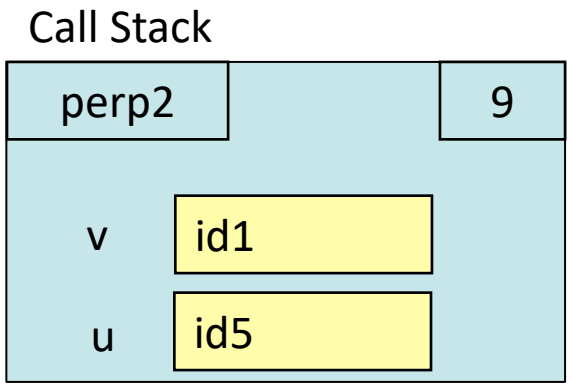

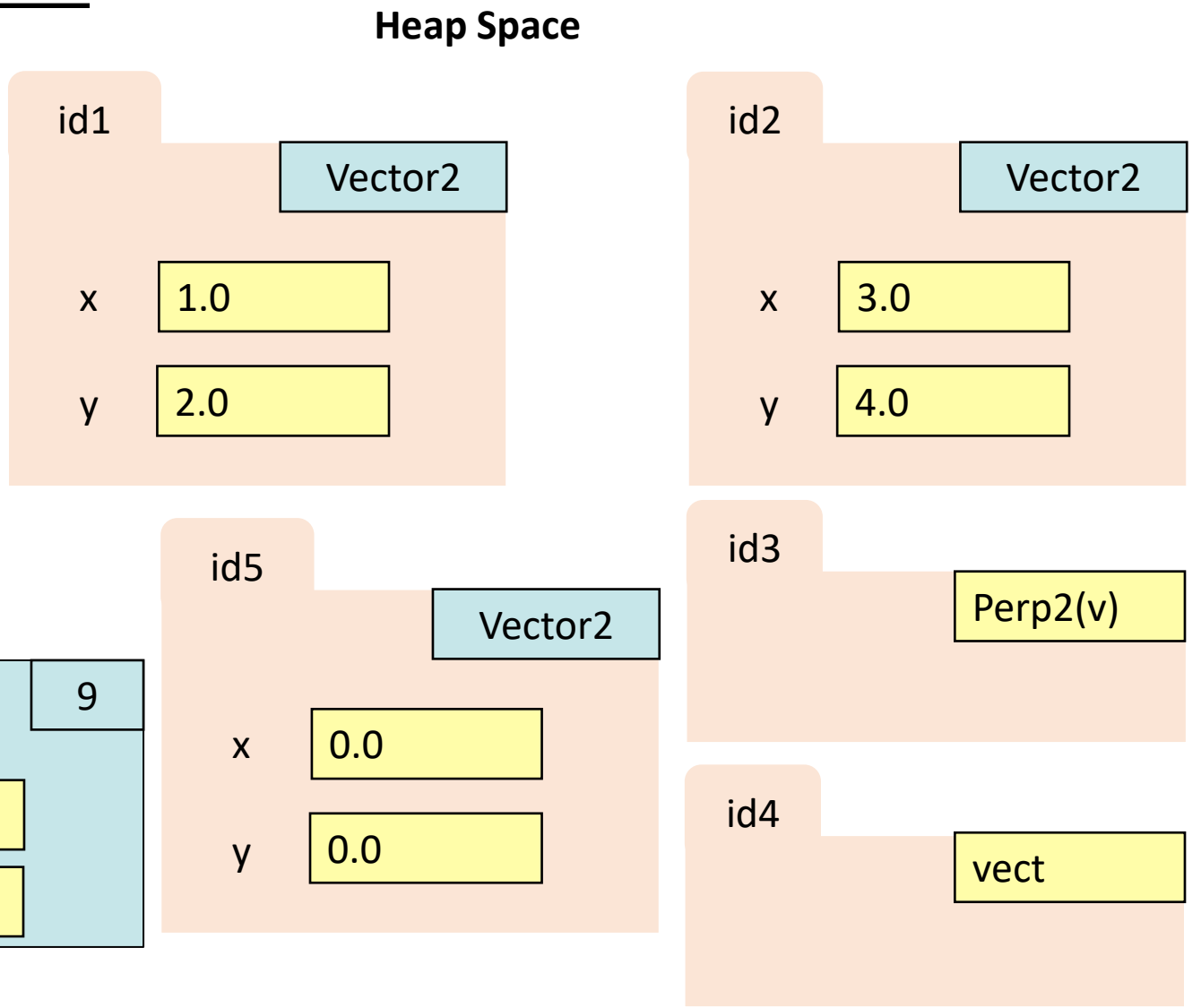

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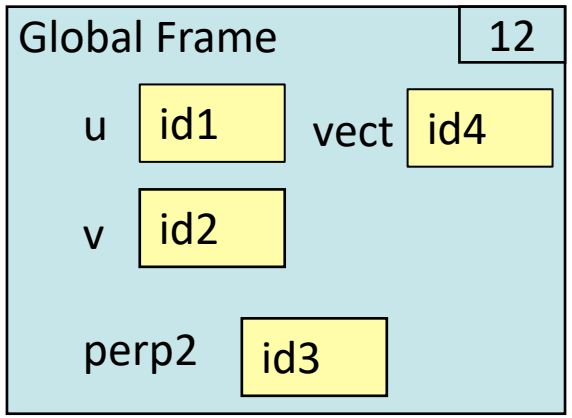

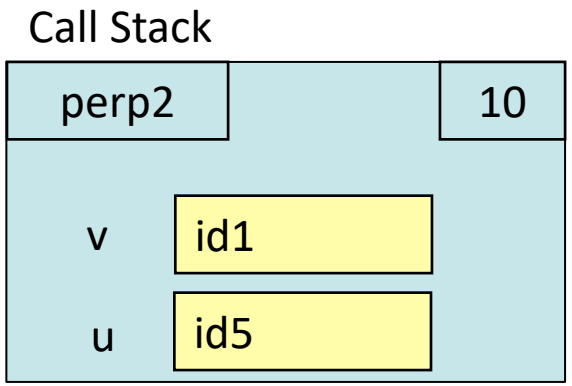

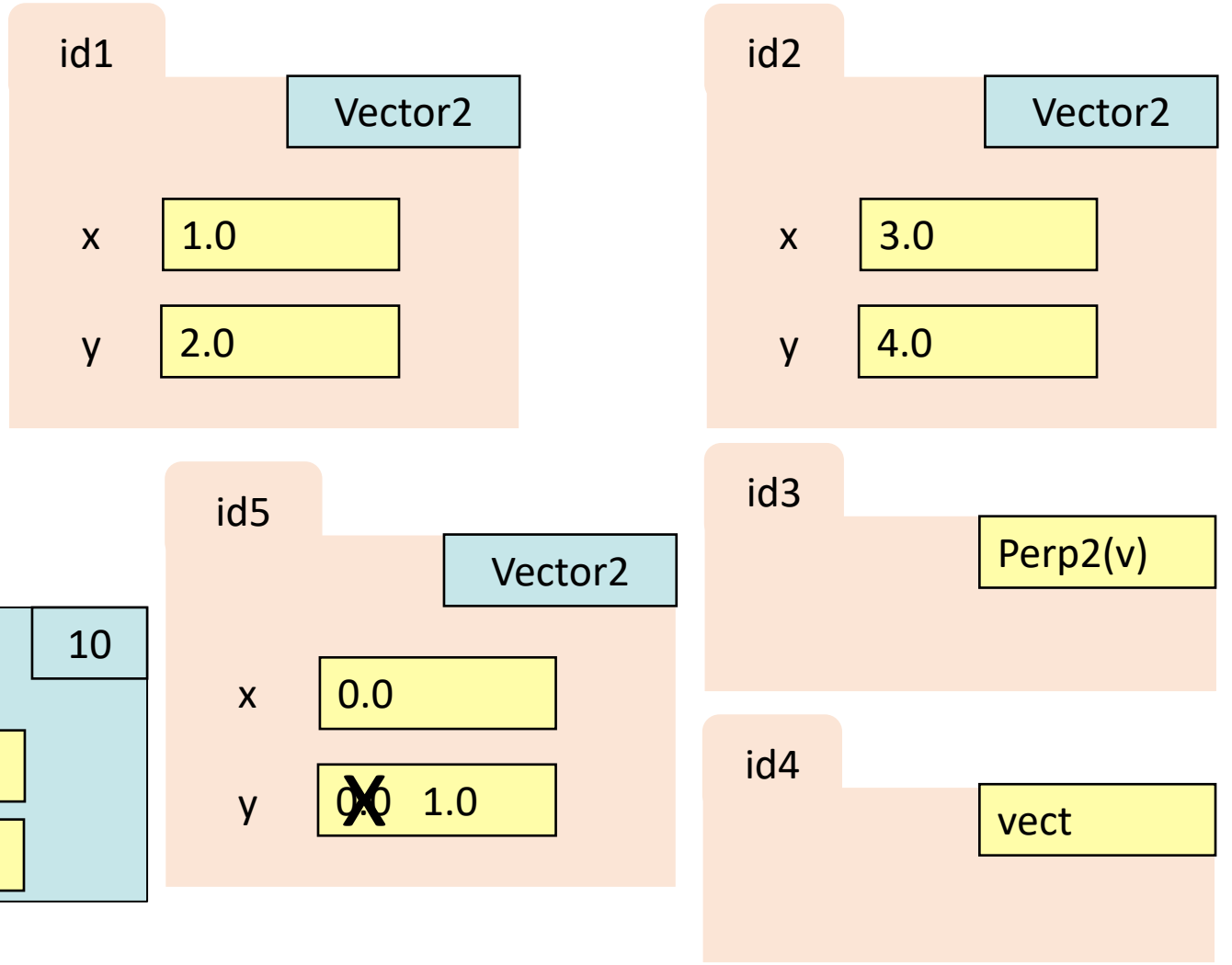

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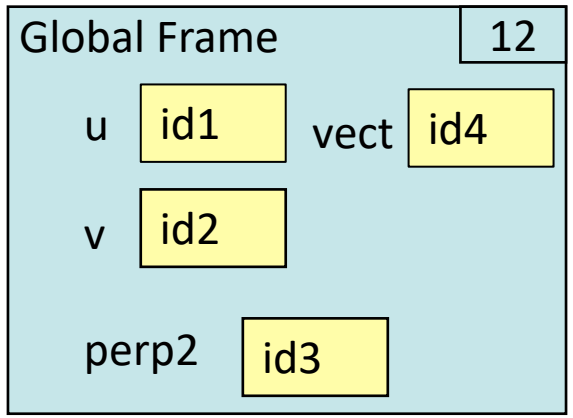

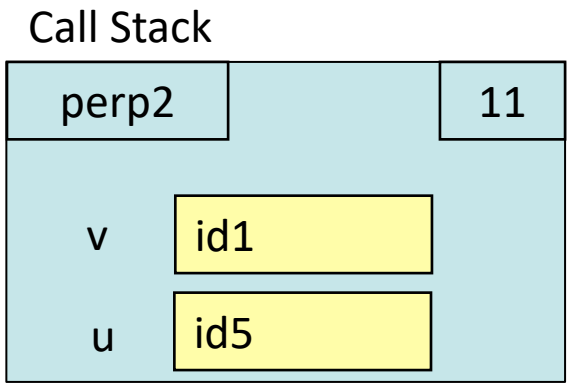

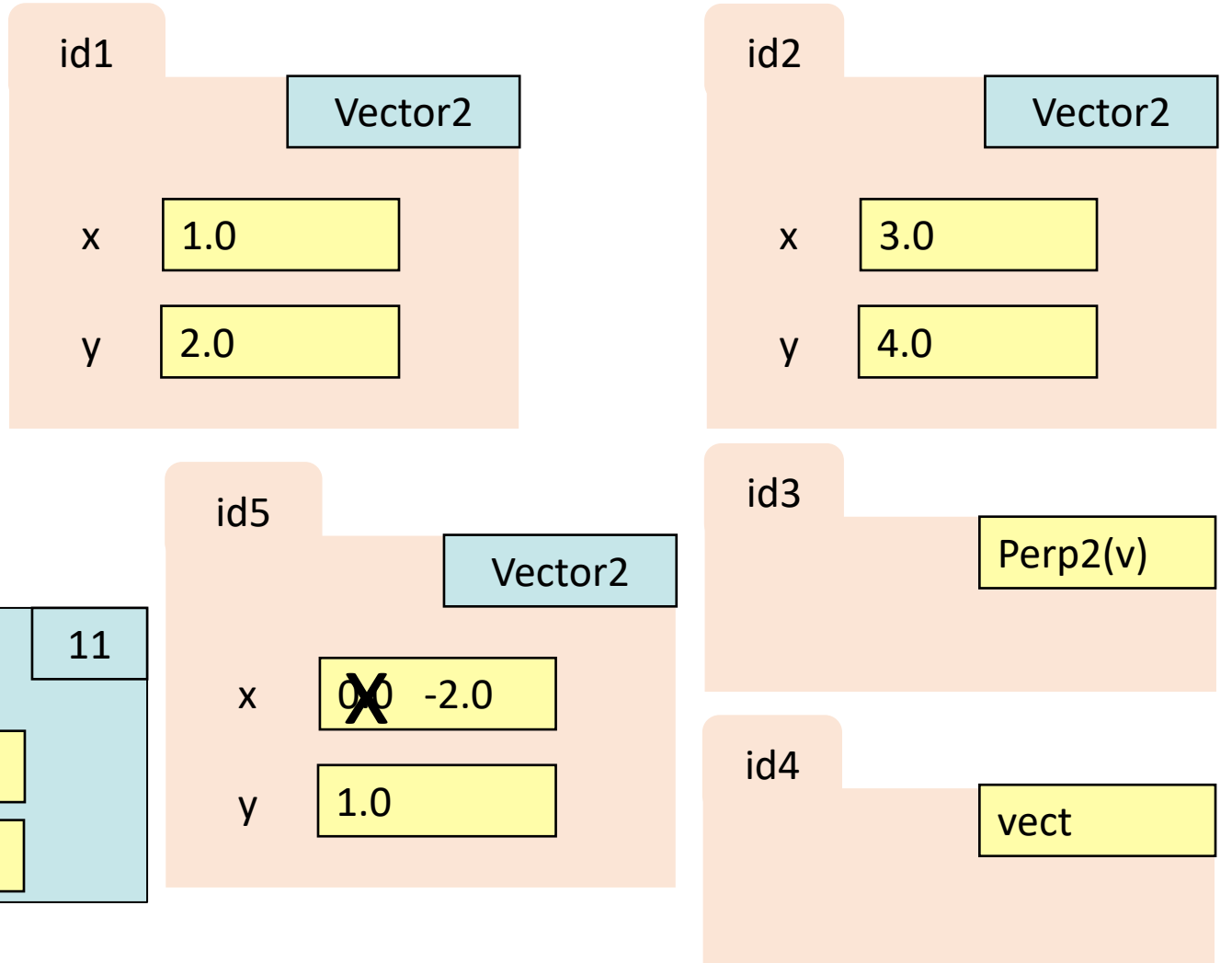

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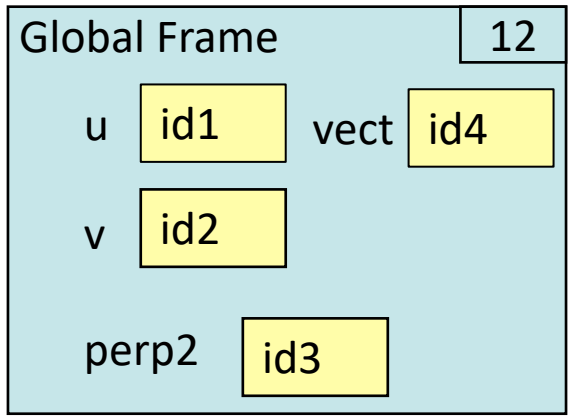

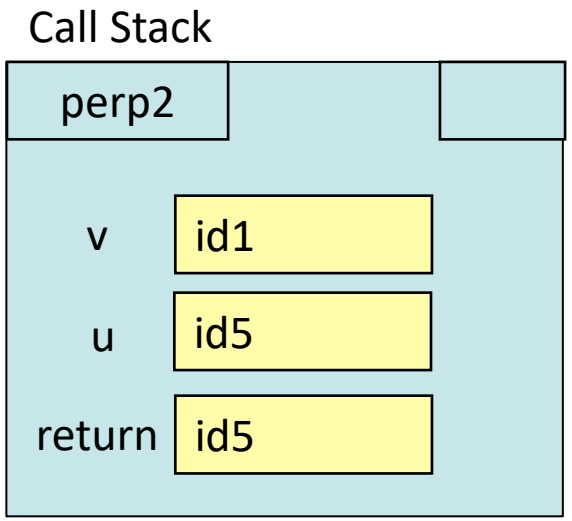

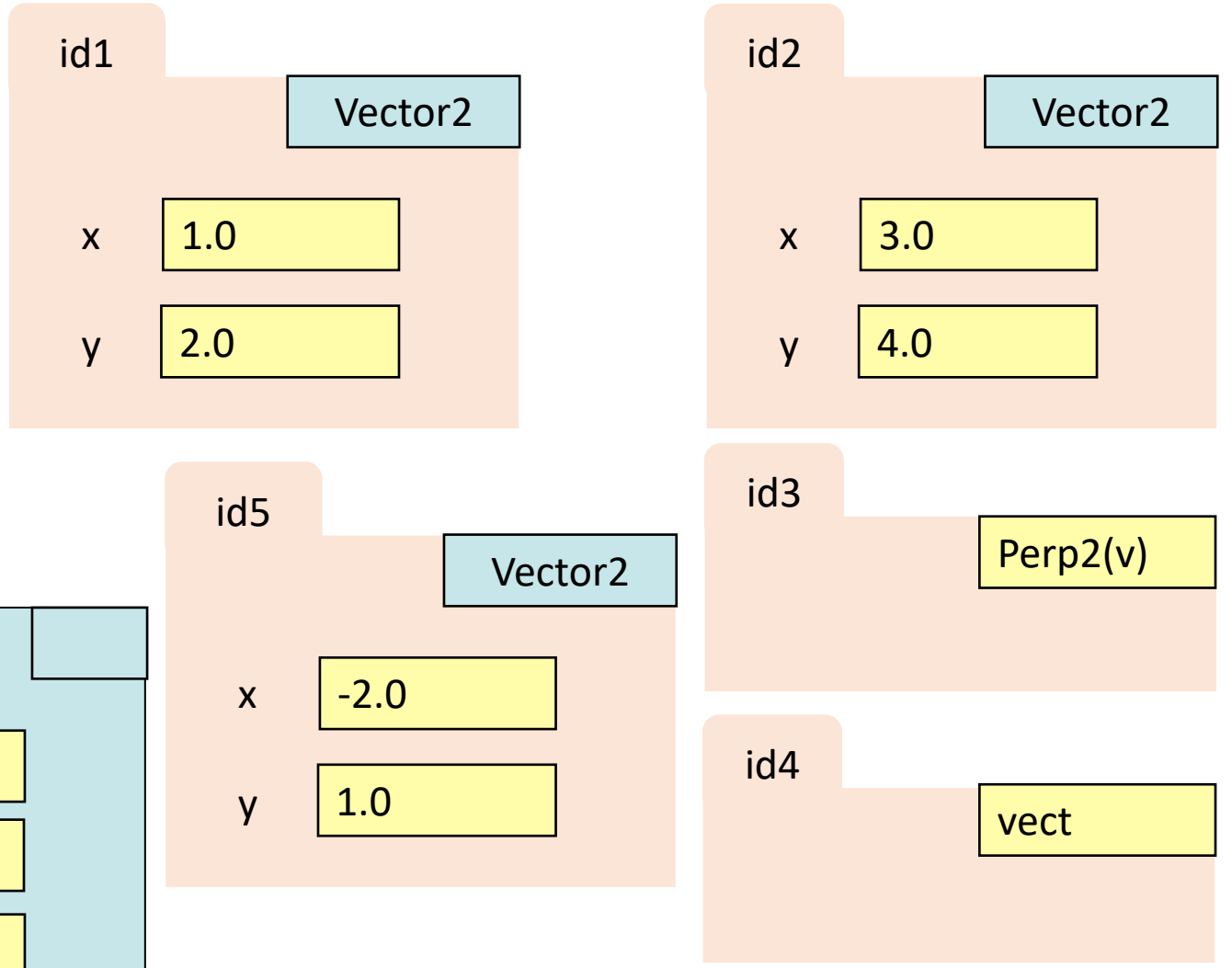

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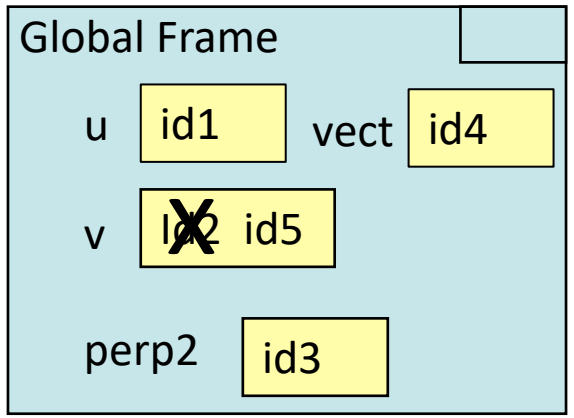

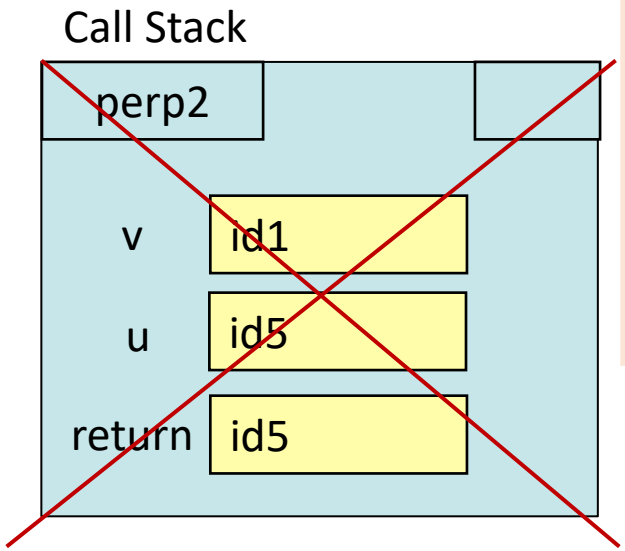

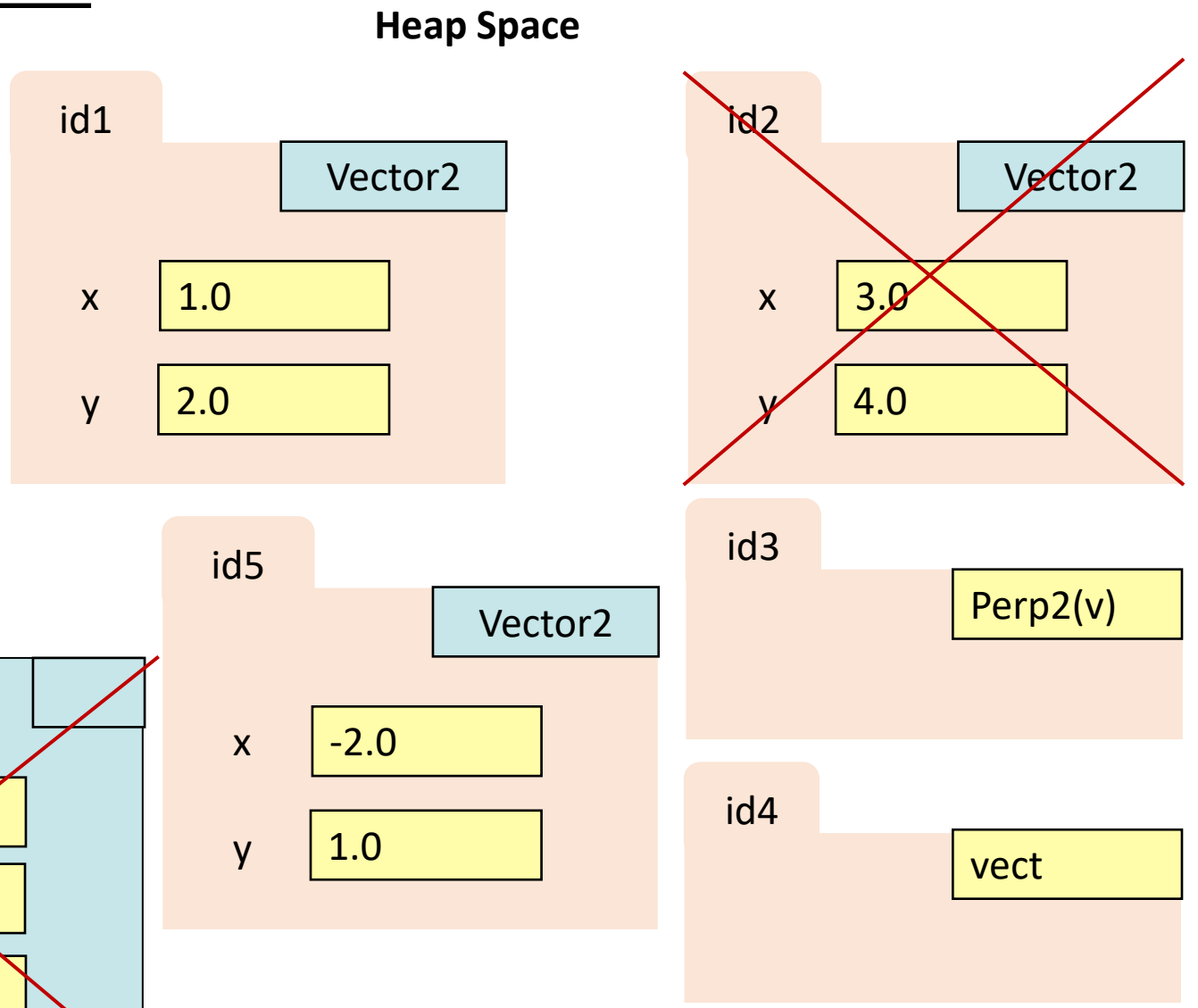

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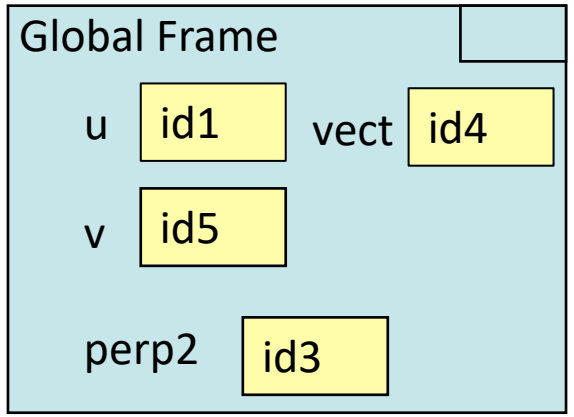

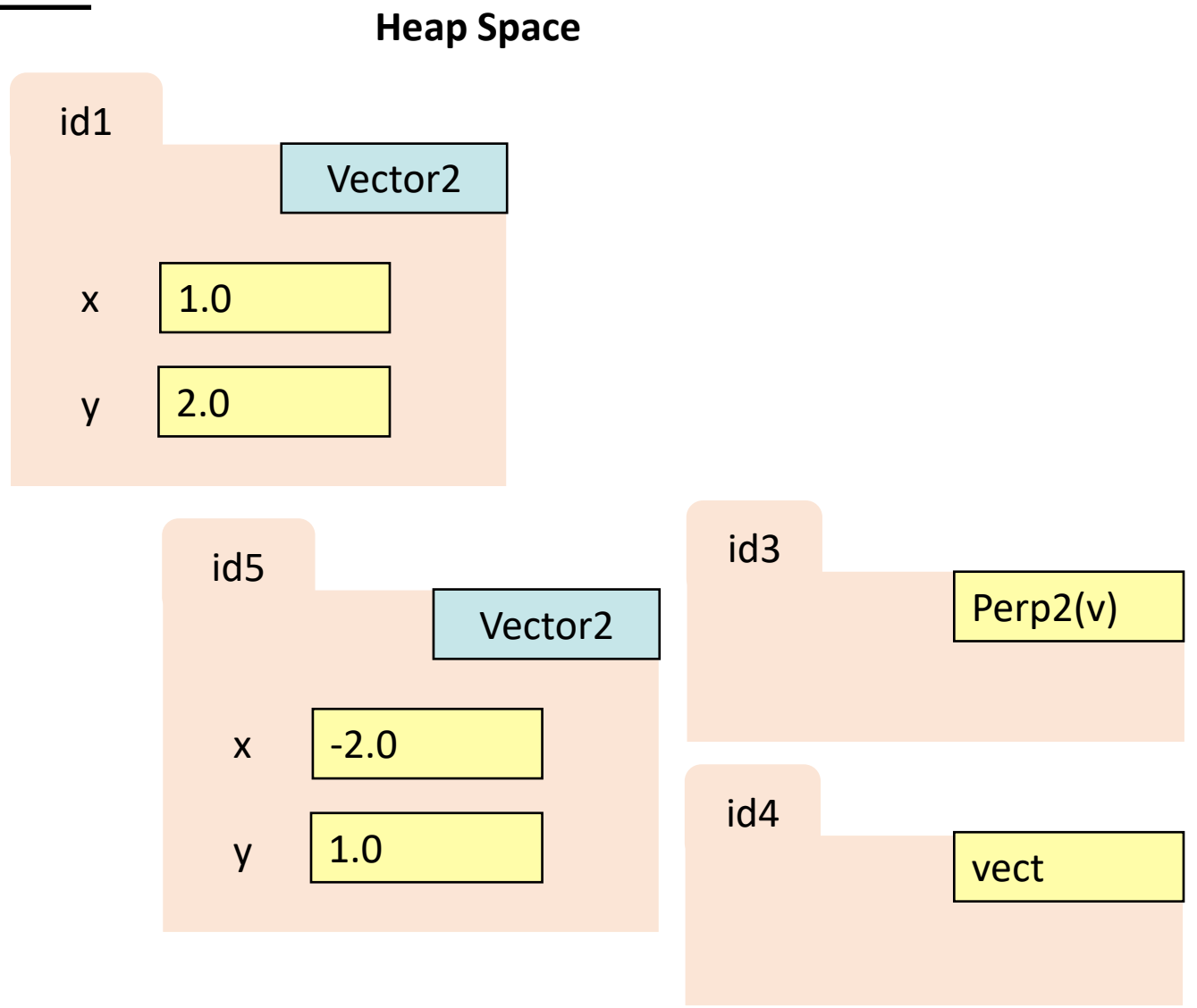

Part E

```
def dist(x,y):
    """Returns: The number line distance between x and y

    Example: dist(2,5) returns 3
    Example: dist(5,2) returns 3

    Parameter x: the starting point
    Precondition: x is a number

    Parameter y: the ending point
    Precondition: y is a number"""
    a = x-y
    if a < 0:
        b = -a
    else:
        b = a
    return b
dist(3,5)
dist(7,2)
```

Thank You