CS61A

# TREE RECURSION, PYTHON LISTS

## LOGISTICS AND REMINDERS

- Midterm regrade requests due **Today**
- Homework 3 due **Tomorrow**
- Cats project due **Friday 10/1**
  - Phase 1 is due **next Tuesday**

## AGENDA

- List example
- Problems

# LISTS

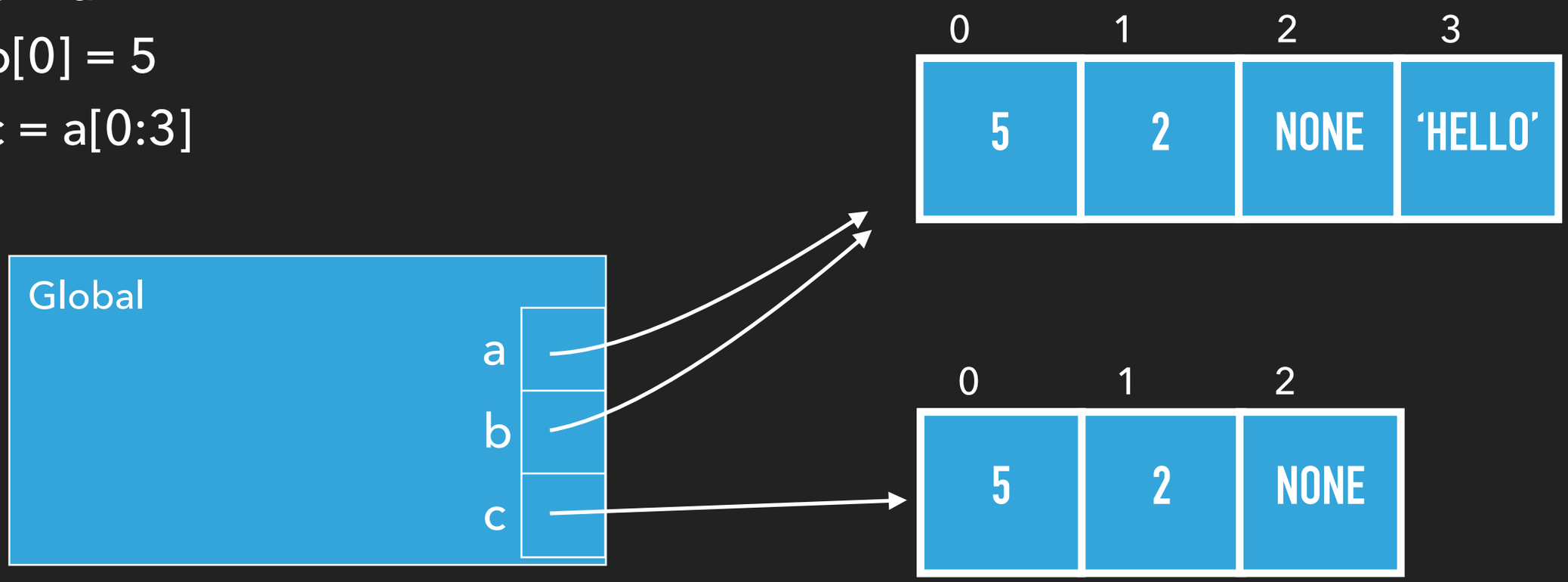
- a = [1,2, None, ‘hello’]
- a[0]

1

- a[3]

‘hello’

- b = a
- b[0] = 5
- c = a[0:3]



# SOME KINDS OF TREE RECURSIVE PROBLEMS

- **Building Problems**
  - **Ping-Pong, Fibonacci, Towers of Hanoi, Pascal's Triangle**
    - **Exploit Problem Structure**
- **Check Everything Problems**
  - **Count Partitions, Insect Combinatorics, Count Change, Spring 2018 M1 Q4B**
    - **See if you can turn the problem into a binary, ternary, or n-ary choice**
- **Searching Problems**
  - **Max-Product(Discussion Q)**
  - **How to look by asking questions?**
- **Invariance as a Problem Solving Tool**