

14: string indexing, scope

Thursday, February 3, 2022 8:41 PM

Scope

Wednesday, April 27, 2022 1:07 PM

L-14-4

Scope

①
Parameters

```
def echo(num, words):  
    for i in range(num):  
        print(words)
```

echo(5, "LaLiLo") ← will this work?
print(num) ← will this work?
 ^

Num and words live behind the
def wall, and can't be used outside

②
Global

Words = "the tire has come"

```
def echo2(num):  
    for i in range(num):  
        print(words)
```

will work!

Variables outside of def's are global

L-14-5

In Python tutor
"render all objects on the heap"

③ Try to
Change
Global

words = "eleganza"

def change():

words = "realness"

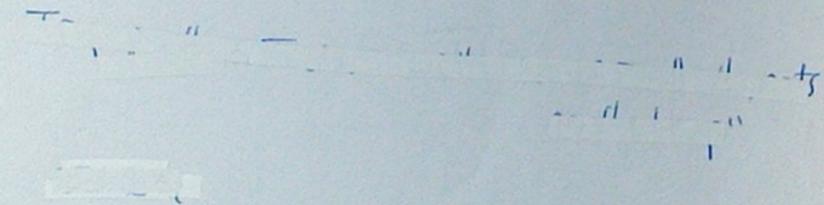
print(words)

words = "realness"

Change()

print(words)

If you ^{try to} change a global variable outside
in a def, it -- creates a new local copy
which dies when the function ends



Demo python tutor More on Scope
Monday

④

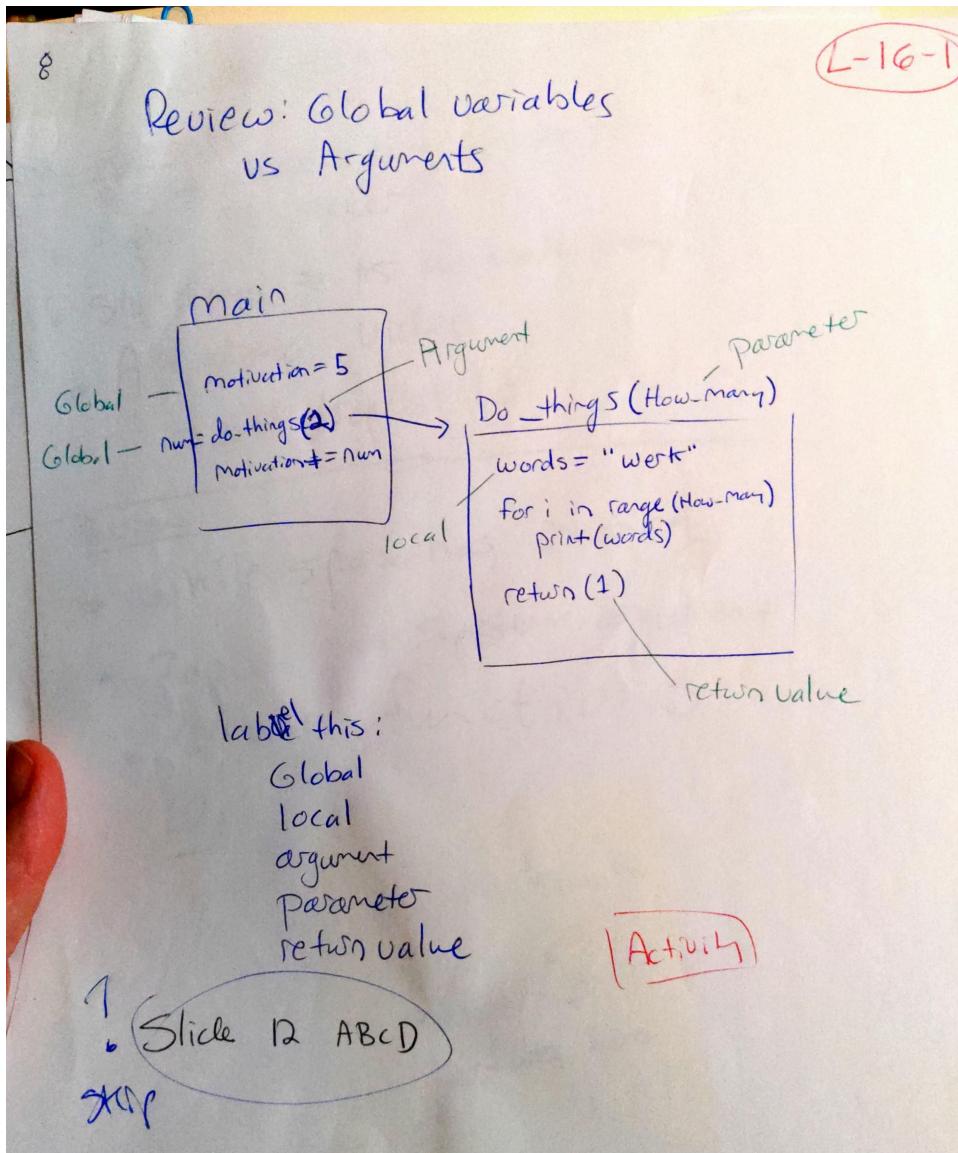
Actually
Change
Global

global words
words = "realness"

use global keyword to
actually -- change global
before use

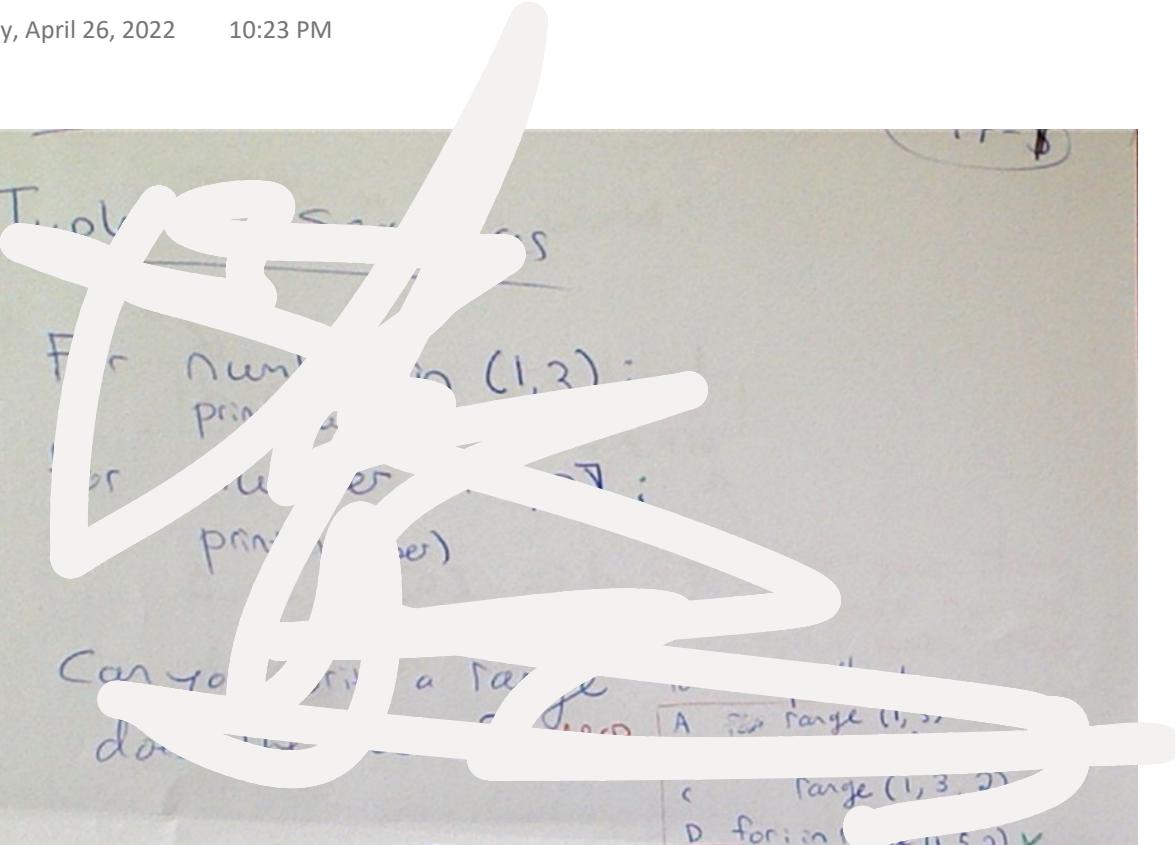
Global variables vs arguments

Tuesday, April 26, 2022 10:39 PM



Strings as sequences

Tuesday, April 26, 2022 10:23 PM



Two lines of handwritten text are visible above the X:

```
For num in range(1,3):
    print(str(i))
```

Below the X, there is more handwritten text:

Can you print a range of numbers? *(A for range(1,2))*

```
c range(1,3,2)
D for i in range(1,5,2) * cut
```

STRings

things we can do

```
A = "Hello"
type(A)
print(A)
```

```
A = A + "World"
len(A)
"nA" * 10 + "- Batman!"
```

At the bottom right, there is a small diagram of a rectangle divided into four quadrants labeled A, B, C, and D. To its right, the text "How? Strings are sequences" is written, with arrows pointing from the text to the diagram.

A-^{String} word = "hello world"

A-^{String}

hello world

0 1 2 3 4 5 6 7 8 9 10

A-^{String}. [0] => h

slice 12 [ABCD]

(?) not callable =>
it's not a function!

try in your Thonny
different numbers.
what works? what
doesn't?
what's the biggest?
smallest

d is len(A-^{String}) - 1

Strings can also be used as sequences!

for letter in a-String:

print(letter)

what if we:

a-String[1]

Next Page

Slice 3rd 15

String [start: end]
↑ start ↓ upto but no incl-adv

if omitted
defaults to 0

default to len

Alpha[:4]
Alpha[5:]

String indexing

Thursday, February 17, 2022 10:35 PM

Negative indexing

Motto =

M	a	k	e	W	a	v	e	s	
-10	-9	-8	-7	-6	-5	-4	-3	-2	-1
0	1	2	3	4	5	6	7	8	9

Print(motto[-1] + motto[8]*2)

what will this print? type in chat but
don't hit enter..... go!

how to print 'Seet ease' using
just the letters of the motto?

Breakout room 2 min

Print(motto[-1]+motto[8]*2+motto[2]+motto[4]+motto[3]+motto[2]+motto[-1]+motto[-2])

Work in pairs

Say you have a list of usernames
but each username has ##### in front/back
write a function that takes in a list of
such usernames and returns a cleared list

```
1 |
2 user_names = ["###jack###", "###jill###"]
3
4 ...
5 removes leading and trailing # from a list of
6 usernames
7 parameters: a list of usernames
8 returns: a list of usernames w/o #
9 ...
```

Imagine a secret code where you just
type random letters but after every
Z is a real letter

Q A Z H W S X Z I
H I ⇒ HI

Write a function that decodes a string