#4 Nonlocals & Mutation

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*Traveling on vacation is often considered a "nonlocal" experience.*
Feedback

Thanks!

- Majority of people think current pace is ok
- A few think it's too fast/too slow
- Note on participation
Would you rather be a sky diver afraid of heights or a scuba diver afraid of water?

28 responses

- 50%: Acrophobic sky diver
- 39.3%: Aquaphobic scuba diver
- 10.7%: Oh my gosh how neat I just realized that those both have diver in the name
1 def g(x):
2     def f():
3         x = 10
4         x = x + 2
5         f()
6     print(x)
7 g(20)
1 def g(x):
2     def f():
3         x = x - 8
4         f()
5     print(x)
6 g(20)
Nonlocal

Old rule: you cannot modify variables outside your frame
New rule: you can modify, but must specify with nonlocal
```python
def g(x):
    def f():
        nonlocal x
        x = x - 8
        f()
    print(x)
g(20)
```
List Mutation

- Recall that slicing a list makes a copy
- Can also modify a list "in place"
List Mutation

Common operations

lst.append(x)  # Add x to the end of lst

lst += [x]  # Does the same thing

lst = lst + [x]  # NOT the same! Creates a copy of lst

lst[0] = x  # Assigns to index 0
Dictionaries Demo