CS 115 Lecture 15

Lists part 1

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    - To be safe you can use `in` first:
      ```
      pos = -1
      if thing in list:
          pos = list.index(thing)
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Traversing lists

You can traverse a list with a for loop:

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scores = [ 85, 72, 56, 98, 84, 72 ]
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Mutability and functions

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  - So assigning to the parameter doesn't change the argument.

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    x = x ** 2 # changes x, not num
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- However, they refer to the values of the arguments.
  - The parameter is another "finger" pointing at the same object.
  - And if that object is mutable, the function can mutate it:

```
def addseven(lst):
    lst.append(7) # mutates the list
def main():
    scores = [ 5, 9, 6 ]
    addseven(scores)
    print(scores) # [ 5, 9, 6, 7 ]
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  - Postconditions describe the return value and side effects.

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Mutation versus making new objects

- Notice that `append`, `extend`, and `insert` return nothing!
  - Most mutating functions in Python work this way.
  - (With a few exceptions we'll point out).

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