6.00 Handout, Lecture 4
(Not intended to make sense outside of lecture)

```
ans = 0
itersLeft = x
while (itersLeft > 0):
    ans += x
    itersLeft -= 1
print ans
---------------

def square(x):
    """Return x**2"""
    ans = 0
    itersLeft = abs(x)
    while (itersLeft > 0):
        ans += x
        itersLeft -= 1
    return abs(ans)
---------------

def fib(x):
    """Return fibonacci of x, where x is a non-negative int"""
    if x == 0 or x == 1: return 1
    else: return fib(x-1) + fib(x-2)
---------------

def fib2(x, indent):
    """Return fibonacci of x, where x is a non-negative int"""
    print indent, 'Called fib2 with', x
    if x == 0 or x == 1:
        print indent, 'About to return 1'
        return 1
    else:
        ans = fib2(x-1, indent+'  ') + fib2(x-2, indent+'  ')
        print indent, 'About to return', ans
        return ans
```

```
>>> fib2(5,'')
 Called fib2 with 5
  Called fib2 with 4
   Called fib2 with 3
    Called fib2 with 2
     Called fib2 with 1
     About to return 1
     Called fib2 with 0
     About to return 1
    About to return 2
    Called fib2 with 1
    About to return 1
   About to return 3
   Called fib2 with 2
    Called fib2 with 1
    About to return 1
    Called fib2 with 0
    About to return 1
   About to return 2
  About to return 5
  Called fib2 with 3
   Called fib2 with 2
    Called fib2 with 1
    About to return 1
    Called fib2 with 0
    About to return 1
   About to return 2
   Called fib2 with 1
   About to return 1
  About to return 3
 About to return 8
8
```