Announcements

HW due Saturday by midnight
Practice (also solution in book)

P 2.17, p83: Write a script that prompts the user to enter their name in the form: "firstName lastName"
Then output their name in the form: "lastName firstName"

P 2.31: Write a program that asks the user to enter 2 integers, separated by a space, and outputs the sum

Ex: Enter 2 integers: 5 16
Their sum is 21.
For loops - Ch 4.1

Sometimes we need to repeat things a set # of times, or for each item in a sequence.

This is called iterating over a set.

For loops:

for variable in sequence:
    code to execute

(Add list or tuple)
For loops

Example:

```python
guests = ['Kim', 'Lizzie', 'Eric']

print('Guest List')
for person in guests:
    print(person)
```

Schematic:
Another example:

transactions = [20, 50, -10, 100]
balance = 0

for entry in transactions:
    balance = balance + entry

print 'Your balance is', balance

Output
Your balance is 160
Ex:
```python
groceries = ['milk', 'eggs', 'cheese']
count = 1
for item in groceries:
    print str(count) + ' ' + item
    count = count + 1
```
Index-Based Loops

If you just need to repeat a set # of times, use range:

Ex:

```python
for value in range(10):
    animal.move(10)  # value isn't really important
    sleep(.5)
```

```python
animal.move((10,0))  # range(10) = [0, 1, 2, 3, ..., 9]
sleep(.5)
```
Example:

for count in range ((0, 0, -1)):
    print count
print 'Blastoff!'
Nested Loops

```python
for chapter in ('1', '2'):
    print('Chapter ' + chapter)
    for section in ('a', 'b', 'c'):
        print('    Section ' + section + chapter + section)
print('Appendix')
```

Output:

Chapter 1
Section 1a
Section 1b
Section 1c

Chapter 2
Section 2a
Practice 4.2

Given a string, create a new string that has 2 consecutive copies of each letter from the original string.

Ex: 'argh' results in 'aarrggghh'

For each letter in original