CS 150: Intro to OOP, Spring 2009
Homework 2 Solutions

1. Adapted from Exercise 4.8 in the text:

Write a program that prompts the user for a string, for example ‘slice’, and then prints
the following pattern for the entered word:

s
sl
sli
slic
slice

Solution: The following for loops is one way to accomplish this.

```python
word = raw_input('Enter a word: ') for i in range(len(word)): print word[0:(i+1)]
```

2. Adapted from Exercise 4.9 in the book:

Write a program that prompts the user for an integer n, and then prints an n-level staircase
make of stars, such as the example for n = 4 shown here:

*  
**  
***  
****

Solution: Here is one solution.

```python
height = raw_input('Enter the height of the staircase: ') numLevels = int(height) for i in range(numLevels): stars = '*'*(i + 1) print stars.rjust(numLevels)
```

You could also form the string without using rjust, by adding together the correct number
of spaces and stars.

3. Exercise 4.24, parts a through g

(a) 1 adieu  
(b) 4 aloha  
(c) 1 bonjour
4. Exercise 4.26

Solution: We may assume that items has already been created. The following code goes through every item in the list and prints it if it appears more than twice in the list and it is the leftmost occurrence of the item.

```python
for number in range(len(items)):
    currentItem = items[number]
    if (items.count(currentItem) > 1) and (number == items.index(currentItem)):
        print currentItem
```

Note that any correct code to do this will be accepted.

5. Exercise 5.9

Solution: The key here was to use a while loop to keep going until a repeat word was entered. One possible solution:

```python
print 'Start entering words:'
wordlist = []
word = raw_input()
while not (word in wordlist):
    wordlist.append(word)
    word = raw_input()
print 'You already entered', word + '.
print 'You entered', len(wordlist), 'distinct words.'
```

6. Extra Credit: Exercise 4.15