CIS 122

That's the Key
The Big Picture

- Corpus File
- String
- Word List

- Markov Dictionary
- Processed Word List

- Sentences
- Generated Text
Dictionary Review

- A dictionary is a set of key-value pairs
  - \( \text{myDict} = \{ \text{key1 : value1, key2 : value2, key3 : value3, \ldots } \} \)

- We look up values in a dictionary by their keys
  - \( \text{myDict[ key1 ] \rightarrow value1} \)

- Dictionaries are mutable
  - We can reassign values after the fact
  - \( \text{myDict[ key1 ] = 12} \)
scores = {}  

scores['red'] = 3  

scores['blue'] = scores['red'] + 1  

scores['red'] += 1  

(scores['blue'] + scores['red'])  

scores['yellow'] = scores['blue'] + scores['red']  

print scores['red']  
print scores['blue']  
print scores['yellow']
Have I Seen this Key Before?

- We can only look up keys already in our dictionary

```python
>>> coinValue = { 'penny' : 1, 'nickel' : 5, 'dime' : 10 }
>>> coinValue['quarter']
<ERROR>
```

- How do we tell if a key is present?
  - Use the `in` keyword

```python
>>> 'penny' in coinValue
True

>>> 'quarter' in coinValue
False
```
Have I Seen this Key Before?

- The `in` keyword works on any kind of sequence

5 in [1, 2, 3, 4, 5]
True

6 in [1,2,3,4,5]
False

'a' in 'lighthouse'
False

'light' in 'lighthouse'
True
Markov Time

- Let's use a Python dictionary to represent a Markov Dictionary
- What would our keys be?
- What would our values be?
Let's write a function `makeMarkovDict(wordList)`
- Takes a processed word list as input
- Return a Markov Dictionary
  - Keys are words in list
  - Values are lists of words following that key

Where do we start?