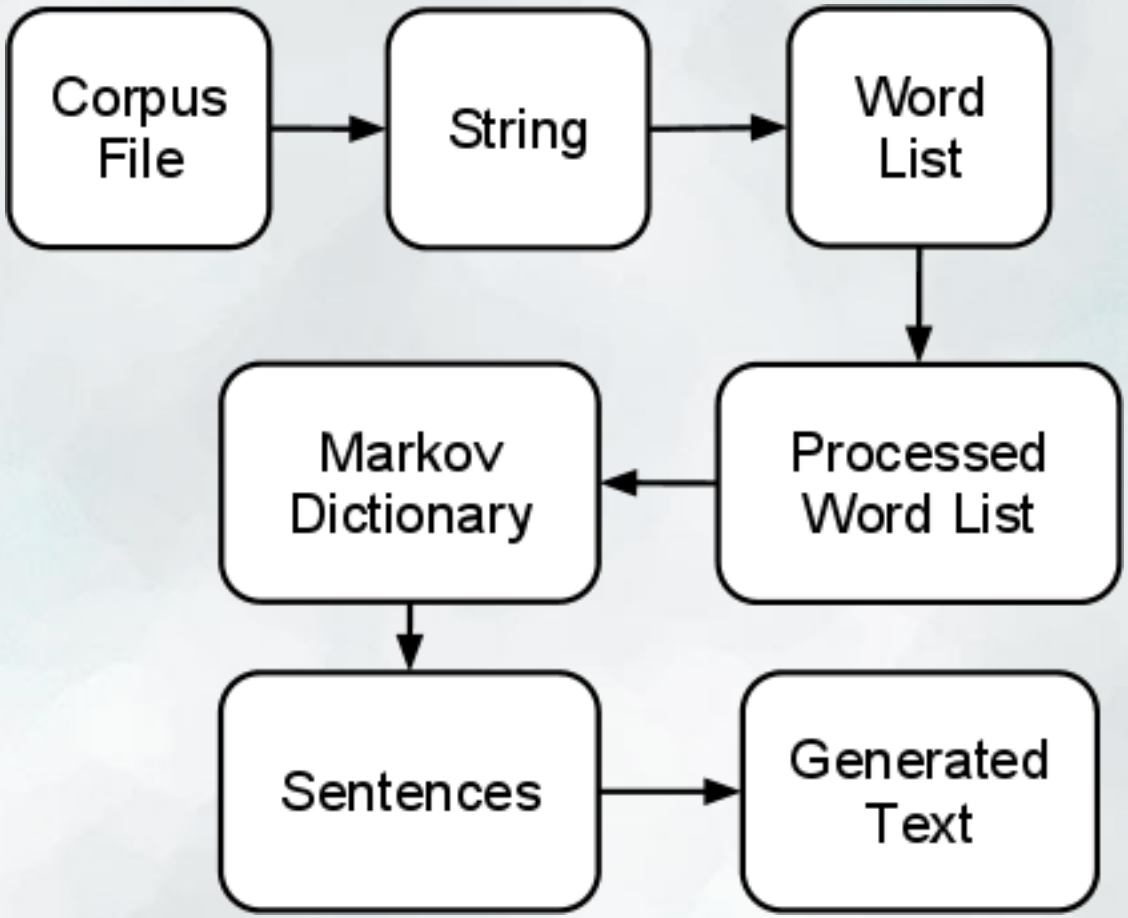
CIS 122

List Manipulations

Markov Text Generation



Lists Reviewed

- Lists are sequences of values
  - L = [1, 2, 3]
- These values can be of any type
  - L = [True, 2, 'C', (4.1, 5.2)]
- How many elements are in this list?
  - (If you're not sure, try the len function)

Lists Reviewed

- What can we do with lists?
  - Anything we can do with strings
- Index them
  - L[2]
- Add them
  - [1,2,3] + [4,5,6]
- Multiply them
  - [1,2,3] * 3

Lists Reviewed

- What can we do with lists?
  - Some things strings can't do
- Change them
  - L[2] = 100
  - Doesn't just reassign variable
  - Actually changes the list!
- Use list-specific methods
  - Like what?

Lists Reviewed

- Lists have a number of really useful methods
- Some return information
  - L.index('b') # Return index of first 'b' in list
  - L.count('b') # Return number of 'b' s in list
- Some just modify your list
  - L.append(x) # Add x to the end of L
  - L.sort() # Sort elements of L

List Quiz

What does myList look like after each line?

```
>>> myList = [ 10, 20, 30 ]

>>> myList.append(5)

>>> myList[ 0 ] = 15

>>> myList.sort()
```

List Quiz

What does this code do?

```
L = [ ]
for x in range(10):
    L.append(x)
print L
```

Markov Text Generation

- Let's write a function processText(text)
  - Takes string as input
  - Breaks string into list of words
  - Processes list of words to split out periods

- Where do we start?

Markov Text Generation

- Splitting a string is easy
  - Use the split method
- Processing the word list is harder
  - Need to iterate through, checking for periods
  - Build a new list as we go
- Give it a try