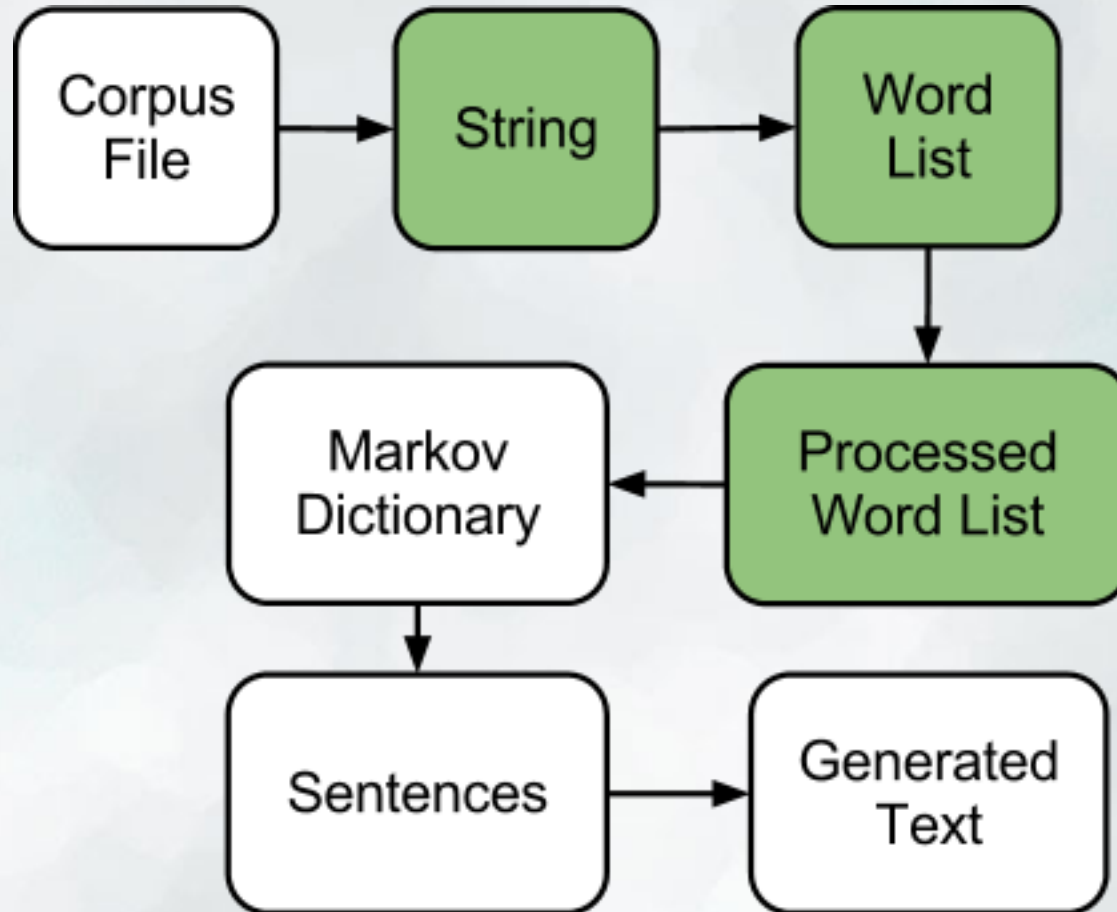


CIS 122

Files, Files, Files

Markov Text Generation



What is a file?

- At the lowest level, a file is just a bunch of 1's and 0's
 - Bits
- Different programs do different things with this data
 - Notepad interprets data as characters
 - Adobe Reader interprets data as a pdf
- So what differentiates a text file from a pdf?
 - Extensions
 - .txt
 - .pdf
- Tell computer which program should interpret this file

Python Files

- So how does Python interact with files?
 - With file objects

```
f = open("myFile.txt", "r")
```

filename

open for reading



- What can we do with files?
 - `f.read()` # If file is open for writing
 - `f.write(text)` # If file is open for writing
 - `f.close()` # Close file when you're done with it

Python Files

```
def copyFile(inFilename, outFilename):
```

```
    infile = open(inFilename, 'r')
```

```
    text = infile.read()
```

```
    infile.close()
```

```
    outfile = open(outFilename, 'w')
```

```
    outfile.write(text)
```

```
    outfile.close()
```

Python Files

- Python file objects point to a position in a file
 - `f = file("myFile.txt", "r")`
 - `f` points to the beginning of the file
- As it reads through the file, its position changes
 - `f.read()`
 - Now `f` points to the end of the file
- What happens if you call `f.read()` a second time?

Python Files

- We can also read through files bits at a time
 - `f.readLine()` # Read just one line
 - `f.seek(charNum)` # Move to a specific position in file
- Or we can iterate through them!
 - File objects are sequences of lines

```
f = open("myFile.txt")  
for line in f:  
    print line
```