Markov models (dictionary example)

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A **Markov model** is one where the future state of the system depends only on the current state (not on any previous states). They're widely used (I use them for analyzing movement of Florida panthers). They can be used for text analysis.

A Markov model of text would say that the next word in a piece of text (or letter, depending on what scale we're working at) depends only on the current word.

Constructing a Markov dictionary

Components:

- `file.read()`
- `str.replace()`
- `str.split()`
- `random.choice()`

Cleaning strings

Strings have a `tolower` method.

Easier to understand:

```
def clean_string(s,delete_chars):
    for i in delete_chars:
        s = s.replace(i,"")
    return(s)
x = "abcdeq@#$I"
import string
print(clean_string(x,string.punctuation))
```

```
## abcdeqI
```

More efficient:

```
import string
x = "abcdeq@#$I"
m = x.maketrans('','',string.punctuation)
print(x.translate(m))
```

```
## abcdeqI
```