In [1]:
```
import spacy
```

In [2]:
```
nlp = spacy.load('en_core_web_sm')
```

In [3]:
```
# Create a doc object
doc = nlp(u'Tesla is looking to buy U.S. startup for $6 million')
```

In [4]:
```
for token in doc:
    print(token.text)
```

```
Tesla
is
looking
to
buy
U.S.
startup
for
$
6
million
```

In [5]:
```
for token in doc:
    print(token.text, token.pos)
```

```
Tesla 95
is 99
looking 99
to 93
buy 99
U.S. 95
startup 91
for 84
$ 98
6 92
million 92
```

In [6]:
```
# To find out the Part Of Speech (POS) use token.pos_
for token in doc:
    print(token.text, token.pos, token.pos_, token.dep_)
```

```
Tesla 95 PROPN nsubj
is 99 VERB aux
looking 99 VERB ROOT
to 93 PART aux
buy 99 VERB xcomp
U.S. 95 PROPN compound
startup 91 NOUN dobj
for 84 ADP prep
$ 98 SYM quantmod
6 92 NUM compound
million 92 NUM pobj
```

In [7]:
```
nlp.pipeline
```

Out[7]:
```
[('tagger', <spacy.pipeline.Tagger at 0x119b86b50>),
 ('parser', <spacy.pipeline.DependencyParser at 0x11bd87a70>),
 ('ner', <spacy.pipeline.EntityRecognizer at 0x11bd9e050>)]
```

In [8]:
```
nlp.pipe_names
```

Out[8]:
```
['tagger', 'parser', 'ner']
```

In [9]:
```
doc2 = nlp(u"Tesla isn't looking into startups anymore.")
```

In [10]:
```
for token in doc2:
    print(token.text, token.pos, token.pos_, token.dep_)
```

```
Tesla 95 PROPN nsubj
is 99 VERB aux
n't 85 ADV neg
looking 99 VERB ROOT
into 84 ADP prep
startups 91 NOUN pobj
anymore 85 ADV advmod
. 96 PUNCT punct
```

In [11]:
```
doc2 = nlp(u"Tesla isn't    looking into startups anymore.")
```

In [12]:
```
# Handling of white space is Spacy.
for token in doc2:
    print(token.text, token.pos, token.pos_, token.dep_)
```

```
Tesla 95 PROPN nsubj
is 99 VERB aux
n't 85 ADV neg
    102 SPACE
looking 99 VERB ROOT
into 84 ADP prep
startups 91 NOUN pobj
anymore 85 ADV advmod
. 96 PUNCT punct
```

In [13]:
```
# Use indexing to grab the tokens we want
doc2[0]
```

Out[13]:
```
Tesla
```

In [14]:
```
doc2[0].pos_
```

Out[14]:
```
'PROPN'
```

In [15]:
```
doc2 = nlp(u"Tesla isn't looking into startups anymore.")
```

In [16]:
```
print(doc2[0].text)
```

```
Tesla
```

In [19]:
```
print(doc2[0].lemma_)
```

```
tesla
```

In [18]:
```
print(doc2[0].pos_)
```

```
PROPN
```

In [20]:
```
print(doc2[0].tag_)
```

```
NNP
```

In [22]:
```
print(doc2[0].shape_)
```

```
Xxxxx
```

In [23]:
```
print(doc2[0].is_alpha)
```

```
True
```

In [24]:
```
print(doc2[0].is_stop)
```

```
False
```

In [25]:
```
# Span of a document

doc3 = nlp(u'Although commmonly attributed to John Lennon from his song
the phrase "Life is what happens to us while we are making other plans" 
cartoonist Allen Saunders and published in Reader\'s Digest in 1957, whe
```

In [26]:
```
life_quote = doc3[16:30]
```

In [27]:
```
print(life_quote)
```

```
"Life is what happens to us while we are making other plans"
```

In [28]:
```
#Sentences
doc4 = nlp(u'This is the first sentence. This is another sentence. This
```

In [29]:
```
for sentence in doc4.sents:
    print(sentence)
```

```
This is the first sentence.
This is another sentence.
This is the last sentence.
```

In [30]:
```
doc4[6].text
```

Out[30]:
```
'This'
```

In [31]:
```
doc4[6].is_sent_start
```

Out[31]:
```
True
```

In [32]:
```
doc4[7].text
```

Out[32]:
```
'is'
```

In [33]:
```
doc4[8].text
```

Out[33]:
```
'another'
```

In [34]:
```
doc4[8].is_sent_start
```

In [ ]:
```
# We see nothing. Last command returned None.
```