Machine Learning 8 Assignment

Problem Statement In this assignment students have to find the frequency of words in a webpage. User can use urllib and BeautifulSoup to extract text from webpage.

In [1]:

```
from bs4 import BeautifulSoup
import urllib.request
import nltk
response = urllib.request.urlopen('http://php.net/')
html = response.read()
soup = BeautifulSoup(html,"html5lib")
```

In [2]:

```
sentences = soup.get_text(strip=True)
print (sentences)
```

```
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```

Tokenizing

In [3]:

```
words = [i for i in sentences.split()]
```

In [4]:

```
len(words)
```

Out[4]:

```
2981
```

Word Frequency Counting

In [5]:

```
wordfreq = nltk.FreqDist(words)
for key,val in wordfreq.items():

    print (str(key) + ':' + str(val))
```

```
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```

Frequency Distibution Plot

In [6]:

```
wordfreq.plot(30, cumulative=False)
```

```
<Figure size 640x480 with 1 Axes>
```

In [7]:

```
from nltk.corpus import stopwords
import string
words = [i for i in sentences.split() if (i not in stopwords.words('english')) & (i not in
```

In [8]:

```
len(words)
```

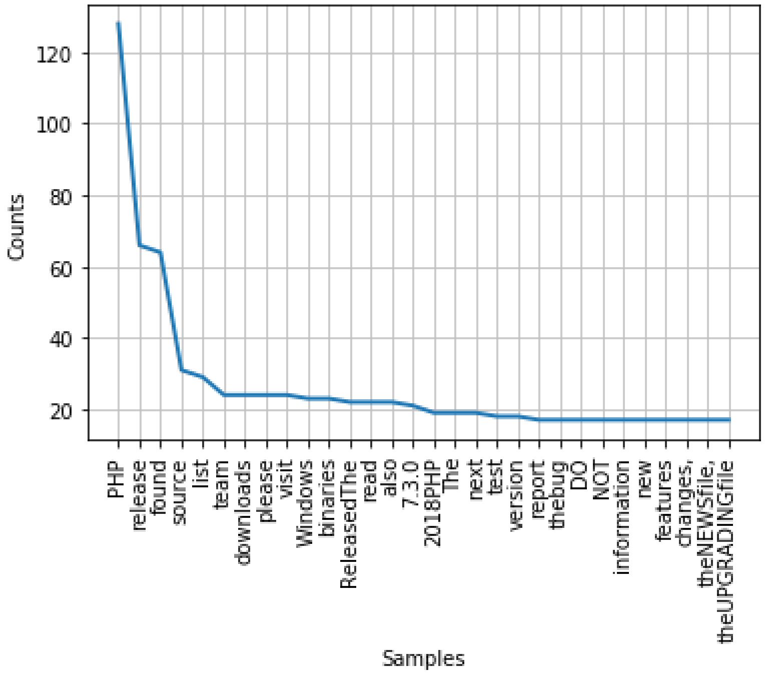
Out[8]:

```
2121
```

Frequency Distibution Plot for the most commonly ocuuring 30 words

In [9]:

```
wordfreq = nltk.FreqDist(words)
wordfreq.plot(30, cumulative=False)
```



Note

Stopwords has been removed using nltk.corpus.stopwords library.

Tokenizing using NLTK

In [10]:

```
sentences = nltk.sent_tokenize(sentences)
words = []
for i in range(len(sentences)):
    word = nltk.word_tokenize(sentences[i])
    for j in word:
        if j not in string.punctuation:#remove punctuations as a part of being considered a
            words.append(j)
```

In [11]:

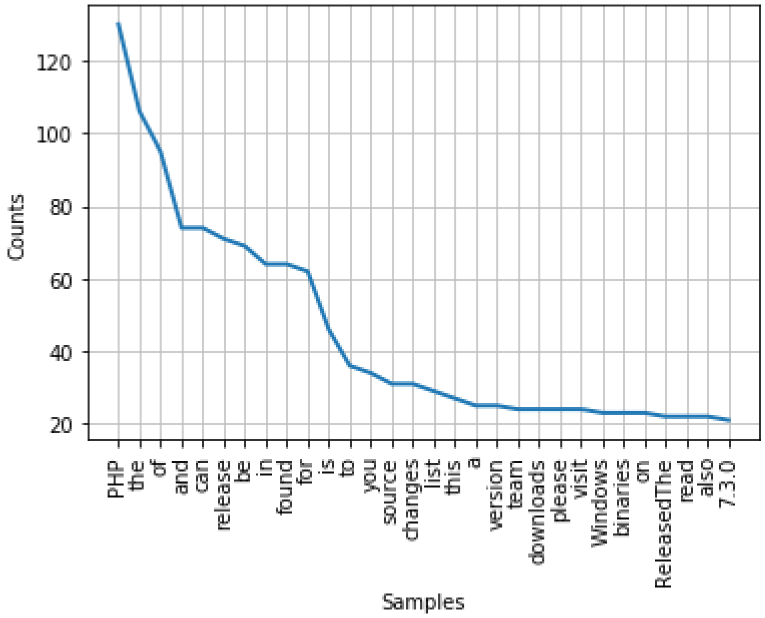
```
len(words)
```

Out[11]:

```
2987
```

In [12]:

```
freq = nltk.FreqDist(words)
freq.plot(30,cumulative=False)
```



Genearting tokens without stopwords

In [13]:

```
words_no_stopwords =[]
for i in range(len(sentences)):
    word = nltk.word_tokenize(sentences[i])

    for j in word:

        if (j not in stopwords.words('english'))  & (j not in string.punctuation):

            #print(j)
            words_no_stopwords.append(j)
```

In [14]:

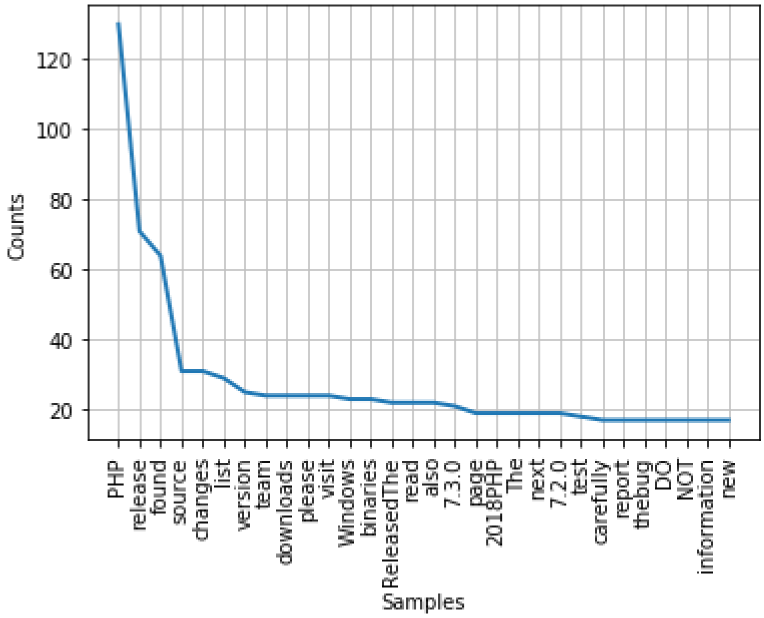
```
len(words_no_stopwords)
```

Out[14]:

```
2144
```

In [15]:

```
freq = nltk.FreqDist(words_no_stopwords)
freq.plot(30,cumulative=False)
```



In [ ]:

```
```