

```
In [14]: import pandas as pd
import nltk
nltk.download('punkt')
```

```
[nltk_data] Downloading package punkt to
[nltk_data] C:\Users\saisagar\AppData\Roaming\nltk_data...
[nltk_data] Unzipping tokenizers\punkt.zip.
```

Out[14]: True

```
In [15]: # STOPWORDS
nltk.download("stopwords")
```

```
[nltk_data] Downloading package stopwords to
[nltk_data] C:\Users\saisagar\AppData\Roaming\nltk_data...
[nltk_data] Package stopwords is already up-to-date!
```

Out[15]: True

```
In [16]: from nltk.corpus import stopwords
```

```
In [17]: stop_words = stopwords.words("english")
```

In [18]: stop\_words

```
'it',  
"it's",  
'its',  
'itself',  
'they',  
'them',  
'their',  
'theirs',  
'themselves',  
'what',  
'which',  
'who',  
'whom',  
'this',  
'that',  
"that'll",  
'these',  
'those',  
'am',  
'is'
```

In [19]: `from nltk.stem import PorterStemmer`  
`from nltk.tokenize import word_tokenize`

In [20]: `stemmer = PorterStemmer()`  
`str1= "There are so many players in ground"`  
`str2= nltk.word_tokenize(str1)`  
`str1`

Out[20]: 'There are so many players in ground'

In [21]: `## LAMITIZATION`  
`nltk.download("wordnet")`

```
[nltk_data] Downloading package wordnet to  
[nltk_data] C:\Users\saisagar\AppData\Roaming\nltk_data...
```

Out[21]: True

```
In [22]: from nltk.stem import WordNetLemmatizer  
  
         from nltk.tokenize import word_tokenize
```

```
In [23]: lemmatizer = WordNetLemmatizer()
```

```
In [24]: str1 = "Playing cricket and Singing songs and in that corner there are so many mice."
```

```
In [25]: str1 = nltk.word_tokenize(str1)  
  
str1
```

```
Out[25]: ['Playing',  
          'cricket',  
          'and',  
          'Singing',  
          'songs',  
          'and',  
          'in',  
          'that',  
          'corner',  
          'there',  
          'are',  
          'so',  
          'many',  
          'mice',  
          '.']
```

```
In [26]: for word in str1:  
         print(lemmatizer.lemmatize(word))
```

```
Playing  
cricket  
and  
Singing  
song  
and  
in  
that  
corner  
there  
are  
so  
many  
mouse  
.
```

```
In [ ]:
```