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1 Project 2: Text Analysis

```
[1]: # import packages
import numpy as np
import pandas as pd
from nltk.sentiment.vader import SentimentIntensityAnalyzer
import requests
import re
from urllib.parse import urlparse
import urllib.robotparser
from bs4 import BeautifulSoup

# This code checks the robots.txt file
def canFetch(url):

    parsed_uri = urlparse(url)
    domain = '{uri.scheme}://{uri.netloc}/'.format(uri=parsed_uri)

    rp = urllib.robotparser.RobotFileParser()
    rp.set_url(domain + "/robots.txt")
    try:
        rp.read()
        canFetchBool = rp.can_fetch("*", url)
    except:
        canFetchBool = None

    return canFetchBool
```

2 Pride and Prejudice analysis:

Find out main characters through counting occurrence of words.

```
[ ]: #Read the text file, and remove some unuseful words to make the counting
    ↪process more efficient.

f=[x.strip('\n').strip(',') for x in open('pride and prejudice.txt',
    ↪encoding='utf8').readlines()]
```

```

str=''
for i in f:
    if i!=' ':
        str=str+i
str=str.replace('Chapter','').replace('and','').replace('the','').
→replace('to','').replace('was','').\
    replace('that','').replace('not','').replace('with','').replace('but','').
→replace('you','').replace(',','').\
    replace('.', '').replace(';', '').replace('!', '')
str

```

[3]: *#function for counting occurrence of words*

```

def count(str, word):
    lst=str.split(" ")
    length=len(lst)
    count = 0
    for i in range(0, length):
        if (word == lst[i]):
            count = count + 1
    return count

```

[4]: *#Put the output of the function above into a dictionary and sort it*

```

dict={}
for word in str.split(' '):
    if word not in dict:
        dict[word]=count(str, word)
dict_sorted=sorted(dict.items(), key=lambda x: x[1], reverse = True)
dict_sorted

```

```

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('observation', 13),
('fact', 13),
('respectable', 13),
...]
```

[13]:

```

#Even though some words are deleted, still there are a lot of uninteresting
↪words. This cell extracts some names.
names=['Elizabeth', 'Darcy', 'Bennet', 'Jane', 'Bingley', 'Wickham', 'Collins',
↪'Lydia', 'Carine', 'Longbourn', 'Gardiner']

result=[]
for i in dict_sorted:
    if i[0] in names:
        result.append(i)
result

```

```

[13]: [('Elizabeth', 584),
      ('Darcy', 346),
      ('Bennet', 276),
      ('Jane', 254),
      ('Bingley', 240),
      ('Wickham', 155),
      ('Collins', 149),
      ('Lydia', 121),
      ('Carine', 108),
      ('Longbourn', 85),
      ('Gardiner', 80)]

```

According to the result above, Elizabeth is the name that appears the most (238 times more than the second most frequent name), and thus Elizabeth is highly likely to be the main character of the book. Darcy, the second most frequent name, is the next most important character. The names listed above are mostly main characters in the book, with some exception of names of places, such as Longbourn.

```
[ ]:
```