

1)Two changes:

1. I removed apostrophe using re.sub() method
for a short code, re.sub(r'\'', '', sentence)
2. I used lower method to make all capital letters to lowercase.
In the code, I just used lower() method

2)My Top terms:

According to the result from part2, some top term is not relevant to the story as well as seem like everyday word, such as "did", which occurred 270 times and should be removed by stopwords.

3) Graph: I just made a line graph with my data derived from partB

following is the code to draw the graph

```
strr = ""
strr_alphabet = ""
for i in range(len(lines[0])):
    if lines[0][i].isnumeric():
        print(lines[0][i], end="")
        strr += lines[0][i]
    if lines[0][i] >="a" and lines[0][i] <="z":
        strr_alphabet += lines[0][i]
    if lines[0][i] == "(":
        strr += "\n"
        strr_alphabet += "\n"
lst = strr.split('\n')
lst_alphabet = strr_alphabet.split('\n')
```

```
import matplotlib.pyplot as plt
import numpy as np
plt.figure(figsize=(15,15))
x = lst_alphabet
y = lst
plt.plot(x,y)
plt.show()
```

