CLASS: CSE7345  
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QUEST: Part B. Timing Comparison

CODE:

**import** timeit  
**import** matplotlib.pyplot **as** plt  
**import** collections  
  
*#words.txt contains 100,000 words*f=open(**'words.txt'**,**'r'**)  
totalWords=(f.readline())  
splitWord = totalWords.split()  
print(**"Length of words"**,len(splitWord))  
  
timeList=[]  
  
**def** wordsInStringToDictWordCount(s):  
 dict = {}  
 *# Split the string in list* splittedList = s.split()  
 *# for loop to iterate each element* **for** i **in** splittedList:  
 **if** (i **not in** dict):  
 dict[i] = 1  
 **else**:  
 dict[i] = dict[i] + 1  
 print (dict)  
  
**def** wordsInStringToDictWordCount(splitWord):  
 sum=0  
 **for** i **in** range(splitWord):  
 sum = sum + 1  
 **return** sum  
mynumber = 10  
mytime = timeit.timeit(**'wordsInStringToDictWordCount(100000)'**, **'from \_\_main\_\_ import wordsInStringToDictWordCount'**, number=10)  
computeTimewithoutCounter =(mytime / 10)  
timeList.append(computeTimewithoutCounter)  
print (**"Compute Time without using Counter:"**,computeTimewithoutCounter)  
  
**def** wordsInStringToCounter(splitWord):  
 counter = collections.Counter(splitWord)  
 counterDict={}  
 **for** word **in** counter:  
 counterDict[word]=counter[word]  
 print (counterDict)  
  
**def** wordsInStringToCounter(splitWord):  
 sum=0  
 **for** i **in** range(splitWord):  
 sum = sum + 1  
 **return** sum  
mynumber = 10  
mytime = timeit.timeit(**'wordsInStringToCounter(100000)'**, **'from \_\_main\_\_ import wordsInStringToCounter'**, number=10)  
computeTimeCounter=(mytime / 10)  
timeList.append(computeTimeCounter)  
print (**"Compute Time using Counter:"**,computeTimeCounter)  
  
*#Ready to plot*plt.ylabel(**'Time'**)  
plt.xlabel(**'Function Name'**)  
plt.title(**'Comparison Graph\n'**)  
plt.bar([**'wordsInStringToDictWordCount'**,**'wordsInStringToCounter'**],timeList,color=**"green"**)  
plt.show()

OUTPUT:



