In [8]:

```
# Function to print the frequency  count of all words in a file

# test case
# data in line 1
# data in line 2
# data in line 3
# o/p
# data: 3
# in : 3
# line :3
# 1:1
# 2 : 1
# 3: 1



## Without using dictionaries:
def freqDistributionOfWords1(filePath):
    #Dictionary to be used
        #Keys -> unique words
        #Values --> Count of unique words
    #Two lists:
        # AllWords List -
        #UniqueWords List -

    # Set
    allwords = wordsFromFile(filePath)
    uniquewords = uniqueData(filePath)

    for word in uniquewords:
        count = allwords.count(word)
        print(word, ':', count)
    return

#Using dictionaries:
def freqDistributionOfWords2(filePath):
    allwords = wordsFromFile(filePath)
    wordFrequency = {}
    for word in allwords:
        if word not in wordFrequency.keys():
            wordFrequency[word] = 1
        else:
            wordFrequency[word] += 1

    return wordFrequency


freqDistributionOfWords2(filePath)
#freqDistributionOfWords1(filePath)
```

Out[8]:

```
{'new': 1,
 'data': 1,
 'Line': 7,
 '1': 4,
 'Lines': 3,
 '2': 3,
 'Lines3': 3,
```

```
'no': 3,
'4': 3,
'Updated': 1,
'Data': 1,
'Android': 1,
'': 1}
```

In [5]:
```
import re
def wordCountFile(filePath):
    pattern ='[\n]'
    filedata = readFile(filePath)
    count= len(re.split(pattern,filedata))
    return count



def wordsFromFile(filePath):
    pattern ='[\n .]'
    filedata = readFile(filePath)
    allWordsList = re.split(pattern,filedata)
    return allWordsList


wordCountFile(filePath)
wordsFromFile(filePath)

```

Out[5]:
```
['new',
 'data',
 'Line',
 '1',
 'Lines',
 '2',
 'Lines3',
 'Line',
 'no',
 '4',
 'Updated',
 'Data',
 'Android',
 '',
 'Line',
 '1',
 'Line',
 '1',
 'Line',
 '1',
 'Lines',
 '2',
 'Lines3',
 'Line',
 'no',
 '4',
 'Lines',
 '2',
 'Lines3',
 'Line',
 'no',
 '4']
```

In [3]:
```
def readFile(filePath):
    with open(filePath,'r') as f:
        filedata = f.read()
    return filedata

filePath='DataFiles/data.txt'
print(readFile(filePath))

```

```
new data
Line 1
Lines 2
Lines3
Line no 4
Updated Data
Android
Line 1
Line 1
Line 1
Lines 2
Lines3
Line no 4
Lines 2
Lines3
Line no 4
```

In [6]:
```
def uniqueData(filepath):
    # create an empty unique list
    filedata = readFile(filePath)
    allWords = wordsFromFile(filePath)
    unique = []

    #For every element in main file
    # check if it exists in the unique list.
#if it does not exist, add it to unique like
#esle if it already exists, move on to the

    for element in li:
        if element not in unique:
            unique.append(element)
    return unique
li = [1,2,3,3,2,1]
filePath='DataFiles/data.txt'
uniqueData(filePath)
```

Out[6]: [1, 2, 3]

In [1]:
```
#Contacts Application
    # Add, search, list,modify delete contacts
# Find and Replace Application
    # Count the total no of occurances of a word
    # If word is existing
    # Replace all occurances of a word with another word

#Marks analysis application
    # Generate marks file for n students
    #Input : Marks text file - each line in text line contains marks of one
   #Generates a report with the following information
        # Class Average
        #Percentage of students passed
        #Percentage of students failed
        # Percentage of students with distinction
        #Highest MArk Frequency
        #Lowest MArk Frequency

```

In [42]:
```
#Function to generate  marks data for n stuents from lb to ub:
from random import randint
def generateMarks(n,lb,ub):
    with open('DataFiles/marks.txt','w') as f:
        for i in range(0,n):
            r = randint(lb,ub)
            f.write(str(r) +'\n')
    return


generateMarks(10000,0,100)


```

In [ ]:
```

```