```
"""# -*- coding: utf-8 -*-
Created on Sat Dec  3 07:30:14 2022
@author: 17574, b.hogan@snhu.edu
it.304 wk14 Project Part II
"""
#                               =====
#                           =====   =====
#                       =====           =====
#                   =====                   =====
#                   >_7 Pillars of Python Project
#                   =====                   =====
#                       =====           =====
#                           =====   =====
#                               =====

# 1) Perform with ANYONE !
# 2) Copy answers from CONSOLE, put under question, and comment out
#       use a pound sign # for a single line (pound sign is the proper name)
#       Comment multiple lines like
""" <== START
    your answers here
""" #end
# 3) Email me you current project work however it is ! Please do so now.
# 4) Prep and check the image of what the data should like in the directory

# 5) PLEASE read the instructions.
#                                   May the grok be with you ~brian

#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
#=============================================================================
#=> Part 0.0 - FILL IN THE BLANKS
#=>                                 LOSE 20 points if not 100% correct !
#=============================================================================
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

"""
     obj_Name   | charcter code     |   explicit code
      --------- | --------------    | -----------------------------
  i) mytuple =  | ( , )             |=> mytuple = tuple(myobject)
 ii) mylist =   | [  ]              |=> mylist  = list(myobject)
iii) mydict =   | { key: value }    |=> mydict  = dict(myobject)
 iv) myset  =   | set(myobject)     |=> myset   = set((myobject)
  v) dataframe =| pd.DataFrame()    |=> df      = pd.DataFrame(myobject)
 vi) mystring = | " "               |=> mystring= str(myobject)
     integer  = |                   |=> <casting> int(<value>)
"""
#----------------------------------------------------------------------------
#=> Part 0.1 - Download files
#---------------------------

# a) CREATE a folder in your data folder called Shakespear_txt_name
# b) unpack the zipped github shakespeare corpus text files into this folder.
#    https://github.com/bbe2/IT.304.Fall.2022/blob/Shakespeare-Corpus/shakespeare_txt_fullname.zip
# c) use your SECOND monitor and verify with this image
# d) if you dont have a second monitor please let me know so I can get you one
# https://github.com/bbe2/IT.304.Fall.2022/blob/main/xwk_14_Project_Text_File_Validation_Step_0.pdf
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
#=============================================================================
#=> Part 1: IMPORT DATA (done for you)
#=============================================================================
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

# INSTRUCTIONS
# a) change path to match your directory.
# b) it should ONLY involved deleting "_it304" in the path below
# c) Please text me if not done in 5 min
                        #.7-5-7.four.Se~@Ven.7.8!~>2>?4=1

import pandas as pd                               #dataframe library
#df = pd.read_excel("."),df.to_dict(),pd.DataFrame.from_dict(mydict)
import numpy as np                                #num library
import matplotlib.pyplot as plt                   #visualization library
import os                                         #op system, #msft.os=\\
import sys                                        # sys.exit()

# inform the operating system what drive and location working on
os.chdir('C:\\Users\\17574\\Desktop\\data_it304\\shakespeare_txt_name')
# create a path so you can use in code to go find files in a directory
path = 'C:\\Users\\17574\\Desktop\\data_it304\\shakespeare_txt_name'

mylist_filenames = os.listdir(path)
help(os.listdir)
                    #=> help(os.listdir)
                    #=> Help on built-in function listdir in module nt:
                    #=> Return a list containing names of the files in directory
print(mylist_filenames)
print(type(mylist_filenames))   #class list
print(len(mylist_filenames))           #37

"""ANSWER
<class 'list'>
37
"""
#---------------------------------------------------------------------------
#=> Part 1 cont: INSTRUCTIONS
#=> double check your import for mylist_filenames equals answer 4 lines down
#=> EXTRA POINTS if double check programmatically, hint: myA == myB
#----------------------
"""ANSWER
    ['A Midsummer Nights Dream.txt', 'Alls Well That Ends Well.txt',
     'Antony and Cleopatra.txt', 'As You Like It.txt', 'Comedy of Errors.txt',
     'Cymbeline.txt', 'Hamlet.txt', 'Henry IV part 1.txt', 'Henry IV part 2.txt',
     'Henry V.txt', 'Henry VI part 1.txt', 'Henry VI part 2.txt',
     'Henry VI part 3.txt', 'Henry VIII.txt', 'King Lear.txt',
     'Loves Labours Lost.txt', 'Macbeth.txt', 'Measure for Measure.txt',
     'Much Ado About Nothing.txt', 'Othello the Moore of Venice.txt',
     'Pericles.txt', 'Richard II.txt', 'Richard III.txt', 'Romeo and Juliet.txt',
     'The Life and Death of Julius Caesar.txt',
     'The Life and Death of King John.txt', 'The Merchant of Venice.txt',
     'The Merry Wives of Windsor.txt', 'The Taming of the Shrew.txt',
     'The Tempest.txt', 'The Tragedy of Coriolanus.txt', 'Timon of Athens.txt',
     'Titus Andronicus.txt', 'Troilus and Cressida.txt', 'Twelfth Night.txt',
     'Two Gentlemen of Verona .txt', 'Winters Tale.txt']
"""
    # <class 'list'>
    # Out[3]: 37
```

```
#--------------------------------------------------------------------------
#=> Part 1 cont: INSTRUCTIONS
#=> the following seperates file name from its extension
#=> PLEASE double check correct. ifnot.text.ME.7-5-7.four.Se~@Ven.7.8!~>2>?4=1
#----------------------
mylist_playnames= []
for file in os.listdir(path):
    #print(path+ "\\" + file)
    #next = path + "\\" + file
    filename = file.split(".")  #=> get names and file paths in any directory
    justname = filename[0]      #=> returns list and title in index 0
    print(justname)
    mylist_playnames.append(justname)
print(len(mylist_playnames))

"""ANSWER
        A Midsummer Nights Dream
        Alls Well That Ends Well
        Antony and Cleopatra
        As You Like It
        Comedy of Errors
        Cymbeline
        Hamlet
        Henry IV part 1
        Henry IV part 2
        Henry V
        Henry VI part 1
        Henry VI part 2
        Henry VI part 3
        Henry VIII
        King Lear
        Loves Labours Lost
        Macbeth
        Measure for Measure
        Much Ado About Nothing
        Othello the Moore of Venice
        Pericles
        Richard II
        Richard III
        Romeo and Juliet
        The Life and Death of Julius Caesar
        The Life and Death of King John
        The Merchant of Venice
        The Merry Wives of Windsor
        The Taming of the Shrew
        The Tempest
        The Tragedy of Coriolanus
        Timon of Athens
        Titus Andronicus
        Troilus and Cressida
        Twelfth Night
        Two Gentlemen of Verona
        Winters Tale
        37
"""
print(filename)         #['Winters Tale', 'txt']
print(justname)         # Winters Tale
print(type(filename))   #<class 'list'>
print(path+ "\\" + file)
    #C:\Users\17574\Desktop\data_it304\shakespeare_txt_name\Winters Tale.txt
#=> INSTRUCTIONS: copy and paste here your path
#=> urANSWER
#   #C:\Users\17574\Desktop\data_it304\shakespeare_txt_name\Winters Tale.txt
#--------------------------------------------------------------------------

#=> Part 1 cont: INSTRUCTIONS
#=> View the variable explorer. Do you have more than 2 names in it?
#=> List ALL the files you have here
#=> urANSWER
#
#----------------------

#perform housekeeping
del file; del filename; del justname
print(type(mylist_playnames))       # <class 'list'>
print(type(mylist_playnames[0]))    # <class 'str'>

"""ANSWER
<class 'list'>
<class 'str'>
"""

#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
#=============================================================================
#=> Part 2: LEARN to count words and characters
#=> BUILD your skills looping and counting words and characters
#=============================================================================
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

#=> BEHAVIORS:  if data packed as a string you can count characters
#=>             if data packed as a list you are counting words
#=>             cast data from lists to strings or strings to lists
#=>             depending on what and how you want to count
#=>             you may need to use iterators to do this!
#=====================================


#----------------------------------------------------------------------
#=> Part 2 cont: COUNTing LISTS vs WORDS vs CHARACTERS
#-----------------------------------------------

#=> a space or carriage return between one word and another is a "character"
print(len("ab"))      # 2
print(len("a bc"))    # 4
print(len("a b c"))   # 5
#-------------------------------------

print(type(mylist_playnames[0]))            # <class 'str'>

print(mylist_playnames[0])                  # A Midsummer Nights Dream
print(mylist_playnames[1])                  # Alls Well That Ends Well
print(mylist_playnames[2])                  # Antony and Cleopatra
print(mylist_playnames[3])                  # As You Like It
print(len(mylist_playnames[0].split()))     # 4, count at word level
print(len(mylist_playnames[1].split()))     # 5, count at word level
print(len(mylist_playnames[2].split()))     # 3, count at word level
print(len(mylist_playnames[3].split()))     # 4, count at word level
```

```
"""ANSWER
A Midsummer Nights Dream
Alls Well That Ends Well
Antony and Cleopatra
As You Like It
4
5
3
4
"""

#-----------------------COUNT AT ITEM LEVEL
count_1 = 0
for i in mylist_playnames:  # count at item level, not word or character
    count_1 +=1
print(count_1)              #37 titles in the list

"""ANSWER
37
"""

#-----------------------COUNT AT CHARACTER LEVEL
count_2 = 0
for i in mylist_playnames[0]:
    count_2 +=1
print(count_2)              # 24 characters in  "A Midsummer Nights Dream"

print(len(mylist_playnames[0]))         # the length of item 0 is 24
print(len(mylist_playnames[0].split())) # BUT the length of split words is 4

"""ANSWER
24
24
4
"""
#------------------YOUR AN ANALYST SO count everything by words or characters
#=> this counts the total words for each script title and appends to a new list

mylist_words_title = []
for i in mylist_playnames:
    mylist_words_title.append(len(i.split()))
print(mylist_words_title)
"""
  [4, 5, 3, 4, 3, 1, 1, 4, 4, 2, 4, 4, 4, 2, 2, 3, 1, 3, 4, 5, 1, 2, 2,
   3, 7, 7, 4, 5, 5, 2, 4, 3, 2, 3, 2, 4, 2]
"""
print(min(mylist_words_title),max(mylist_words_title),
      sum(mylist_words_title))

"""ANSWER
min,    max,    total
1,      7,      121
"""
```

```
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
#=============================================================================
#=> Part 3: BUILD A SCRIPT MEGASARUS (done for you)
#=============================================================================
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

mylist_script_megasaurus= []
for file in os.listdir(path):       # 'r' parameter to read vs 'w' to write
    with open(file,'r') as data:    # object.readlines is a method
        mylist_script_megasaurus.append(data.readlines())

#help(data.readlines)                       # use help to learn unknown methods
#print(mylist_script_megasaurus)            # HUGE !
print(len(mylist_script_megasaurus))        # 37 scripts in one list!
print(type(mylist_script_megasaurus))       # <class 'list'> titles in a list

"""ANSWER
37
<class 'list'>
"""

#~~~~~~~~~~~~~~ CRTICAL PACK AND UNPACK POINT
# ------the data is packed as a list, not a string
# ------everything you did up top is with a string
# .......AH Sooooooooooooo

print(type(mylist_script_megasaurus[0]))    # <class 'list'>
print(len(mylist_script_megasaurus[0]))     # 1, only 1 script in item 1

"""ANSWER
<class 'list'>
1
"""

#=> INSTRUCTION
# Add ONE function to this statement to count the script as a string
# You can use any combination of iterators, etc to do counting
# I WANT TO SEE ALL COMBINATIONS RIGHT OR WRONG
# Please type every combination right here spending 30-60 minutes max
# Answers -
#           words   |   characters
#           16,026  |   81,505
#____________________________________________________________________________
# HINT --> function_A(function_B(object).method<functionB>())

len(mylist_script_megasaurus[0])
#=> could also try
for i in mylist_script_megasaurus[0]:
    True #true for compiling only would delete if you use

print(len(str(mylist_script_megasaurus[0])))           #81505
print(len(str(mylist_script_megasaurus[0]).split()))   #16026

"""ANSWER for Part 3

81505
16026

"""
```

```
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
#=============================================================================
#=> Part 4: REPEAT FOR THE WHOLE CORPUS (all the scripts)
#=> Again, I WANT TO SEE ALL COMBINATIONS RIGHT OR WRONG
#=============================================================================
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

mylist_words= []
mylist_characters= []
for i in mylist_script_megasaurus:
    for word in i:
        mylist_words.append(len(str(word).split()))
        mylist_characters.append(len(str(word)))
print(mylist_words)

"""ANSWER
    # [ 16026, 22527, 71154, 42565, 14495, 26653, 29479, 23874, 25726, 25513,
    #   20507, 24399, 23279, 23148, 25238, 21051, 16385, 21228, 20749, 25750,
    #   17422, 21740, 28285, 23743, 19052, 20349, 20899, 21041, 20374, 16003,
    #   26455, 17366, 19782, 25222, 19395, 16857, 24471]

"""

print(mylist_characters)

"""ANSWER
    # [ 81501, 113219, 364289, 211738, 72787, 136054, 149870, 120676, 131720,
    #   132051, 108775, 126099, 120398, 118465, 129344, 107350, 84811, 107557,
    #   102728, 129652, 88879, 112713, 145669, 119313, 96398, 104880, 104502,
    #   105018, 101852, 81695, 135205, 89819, 101909, 129526, 95784, 84526,
    #   124131]
"""

print(min(mylist_words),max(mylist_words),sum(mylist_words))
print(min(mylist_characters),max(mylist_characters),sum(mylist_characters))

"""ANSWER
               Min      Max     Total
# Words         14,495  71,154  878,202
# Characters    72,787  364,289 4,470,903
"""
```

```
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
#=============================================================================
#=> Part 5: Explain to me everything going on below
#=============================================================================
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
#     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~    ~ ~ ~ ~ ~ ~ ~ ~ ~ ~     ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

#______________________________________________________________________
mylist_id = []
mylist_id = list(range(37))
print(type(mylist_id))
print(mylist_id)

"""ANSWER
<class 'list'>
[ 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19,
  20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36]
"""

comedy = ['A Midsummer Nights Dream', 'Alls Well That Ends Well',
'As You Like It',
 'Comedy of Errors', 'Cymbeline', 'Hamlet',
'Loves Labours Lost',
 'Measure for Measure', 'Much Ado About Nothing',
 'Pericles',
 'The Merchant of Venice', 'The Merry Wives of Windsor',
 'The Taming of the Shrew', 'The Tempest',
 'Twelfth Night', 'Two Gentlemen of Verona ', 'Winters Tale']
history = [ 'Henry IV part 1', 'Henry IV part 2',
 'Henry V', 'Henry VI part 1', 'Henry VI part 2', 'Henry VI part 3',
 'Henry VIII',  'Richard II',
 'Richard III',  'The Life and Death of King John']
tragedy = ['Antony and Cleopatra', 'The Tragedy of Coriolanus', 'Macbeth',
 'Timon of Athens', 'Titus Andronicus', 'Troilus and Cressida',
  'Othello the Moore of Venice','Romeo and Juliet',
 'The Life and Death of Julius Caesar','King Lear',]

print(len(comedy), len(history),len(tragedy))

"""ANSWER
17 10 10

"""

mylist_play_type = []
for i in mylist_playnames:
    if i in comedy: mylist_play_type.append("comedy")
    if i in history: mylist_play_type.append("history")
    if i in tragedy: mylist_play_type.append("tragedy")
print(mylist_play_type)
print(len(mylist_play_type))

"""ANSWER
['comedy', 'comedy', 'tragedy', 'comedy', 'comedy', 'comedy', 'comedy',
 'history', 'history', 'history', 'history', 'history', 'history',
 'history', 'tragedy', 'comedy', 'tragedy', 'comedy', 'comedy',
 'tragedy', 'comedy', 'history', 'history', 'tragedy', 'tragedy',
 'history', 'comedy', 'comedy', 'comedy', 'comedy', 'tragedy', 'tragedy',
 'tragedy', 'tragedy', 'comedy', 'comedy', 'comedy']
37
```

```
"""

#------------------------------------------------------------------
# 1f) create a dictionary that matchs weeks 5-8 input spreadsheet
  #          => title, script, type, id, words_script, words_title
#-------------------------------------
mydict = {}
mydict = {'title':mylist_playnames, 'script':mylist_script_megasaurus,
          'type':mylist_play_type, 'id':mylist_id,
          'words_script':mylist_words, 'words_title':mylist_words_title}

#------------------------------------------------------------------
#=> 1g) send dict to df, export to spreadsheet, email to me
#------------------
df1 = pd.DataFrame.from_dict(mydict)
df1.info()
df1

""" ANSWER    Out[29]:
                                  title  ... words_title
0              A Midsummer Nights Dream  ...           4
1              Alls Well That Ends Well  ...           5
2                  Antony and Cleopatra  ...           3
3                        As You Like It  ...           4
4                      Comedy of Errors  ...           3
5                             Cymbeline  ...           1
6                                Hamlet  ...           1
7                       Henry IV part 1  ...           4
8                       Henry IV part 2  ...           4
9                               Henry V  ...           2
10                      Henry VI part 1  ...           4
11                      Henry VI part 2  ...           4
12                      Henry VI part 3  ...           4
13                           Henry VIII  ...           2
14                            King Lear  ...           2
15                   Loves Labours Lost  ...           3
16                              Macbeth  ...           1
17                  Measure for Measure  ...           3
18               Much Ado About Nothing  ...           4
19          Othello the Moore of Venice  ...           5
20                             Pericles  ...           1
21                           Richard II  ...           2
22                          Richard III  ...           2
23                     Romeo and Juliet  ...           3
24  The Life and Death of Julius Caesar  ...           7
25      The Life and Death of King John  ...           7
26               The Merchant of Venice  ...           4
27           The Merry Wives of Windsor  ...           5
28              The Taming of the Shrew  ...           5
29                          The Tempest  ...           2
30            The Tragedy of Coriolanus  ...           4
31                      Timon of Athens  ...           3
32                     Titus Andronicus  ...           2
33                 Troilus and Cressida  ...           3
34                        Twelfth Night  ...           2
35             Two Gentlemen of Verona   ...           4
36                         Winters Tale  ...           2
[37 rows x 6 columns]
"""

#---------------------------------------------------------------------------
#=> OUPTUT REPORT 1 - SUMMARY OF TITLE AND SCRIPT WORDS
#=> send result to a spreadsheet or a text file
#------------------------------------------------------

#make sure you put in a different directory
os.chdir('C:\\Users\\17574\\Desktop\\data_it304')
mywriter = pd.ExcelWriter('my_wk14_Project_OUTPUT_Report_1_Summary.xlsx')
df1.to_excel(mywriter)
mywriter.save()

#==========================================================================
#=> Part 5 continue   - create summary report by play type
#==========================================================================

  #       Total all script words and title words by 3 play types
  #       send to df to spreadsheet and email to me
  #     Answer:
          # comedy  + history   + tragedy
          # 371235  + 236820    + 270147    = 878202
          # 53      + 35        + 33        = 121

comedy_script_words = 0 ; history_script_words = 0; tragedy_script_words = 0
comedy_title_words = 0; history_title_words = 0; tragedy_title_words = 0

i=0
while i <=36:
    if mylist_playnames[i] in comedy:
        comedy_script_words = comedy_script_words + mylist_words[i]
        comedy_title_words = comedy_title_words + mylist_words_title[i]
    if mylist_playnames[i] in history:
        history_script_words = history_script_words + mylist_words[i]
        history_title_words = history_title_words + mylist_words_title[i]
    if mylist_playnames[i] in tragedy:
        tragedy_script_words = tragedy_script_words + mylist_words[i]
        tragedy_title_words = tragedy_title_words + mylist_words_title[i]
    i = i+1

mydict2 = {"comedy_script_words":comedy_script_words,
           "history_script_words":history_script_words,
           "tragedy_script_words":tragedy_script_words,
           "comedy_title_words":comedy_title_words,
           "history_title_words":history_title_words,
           "tragedy_title_words":tragedy_title_words}

#---------------------------------------------------------------------------
#=> OUPTUT REPORT 2 - SUMMARY OF TITLE AND SCRIPT WORDS
#=> view as a dictionary object
#-----------------------------------------------------

mydict2

"""ANSWER
Out[35]:
{'comedy_script_words': 371235,
 'history_script_words': 236820,
 'tragedy_script_words': 270147,
 'comedy_title_words': 53,
 'history_title_words': 35,
 'tragedy_title_words': 33}
"""
```

```
#---------------------------------------------------------------------------
#=> OUPTUT REPORT 2 - SUMMARY OF TITLE AND SCRIPT WORDS
#=> view as a dataframe
#-----------------------
df2 = pd.DataFrame.from_dict(mydict2, orient='index')
print(df2.info())

""" ANSWER
<class 'pandas.core.frame.DataFrame'>
Index: 6 entries, comedy_script_words to tragedy_title_words
Data columns (total 1 columns):
 #   Column  Non-Null Count  Dtype
---  ------  --------------  -----
 0   0       6 non-null      int64
dtypes: int64(1)
memory usage: 96.0+ bytes
None
"""

df2
""" ANSWER
                           0
comedy_script_words   371235
history_script_words  236820
tragedy_script_words  270147
comedy_title_words        53
history_title_words       35
tragedy_title_words       33
"""
#---------------------------------------------------------------------------
#=> OUPTUT REPORT 2 - Send as a spreadsheet or a dataframe
#-----------------------

mywriter = pd.ExcelWriter('my_wk14_Project_OUTPUT_Report_2_Summary.xlsx')
df2.to_excel(mywriter)
mywriter.save()

#---------------------------------------------------------------------------
#=> OUPTUT REPORT 3 - Transpose the axis
#-----------------------

df3 = df2.swapaxes("index","columns")
print(df3)
""" ANSWER
      comedy_script_words    history_script_words     tragedy_script_words
0     371235                   236820                 270147
...
comedy_title_words         history_title_wordstragedy_title_words
0     53                             35                     33

"""
mywriter = pd.ExcelWriter('my_wk14_Project_OUTPUT_Report_3_AxisSwap.xlsx')
df3.to_excel(mywriter)
mywriter.save()

#---------------------------------------------------------------------------
#=> Future Team class work
#---------------------------------------------------------------------------
#           Create an object with one or two functions.
#           Ask user what play they want to read.
#           Figure out a minimum of 1 other useful piece of information
#           to display or include in user report.
#           Have function export data
#           you can simply email me the file!
```