Lab. 7 I/O files (collaborative)

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1. Review the next resources

- https://towardsdatascience.com/complete-guide-on-file-handling-in-python-314cc8f0fdab
- https://www.w3schools.com/python/python_file_handling.asp
- https://www.geeksforgeeks.org/file-handling-python/

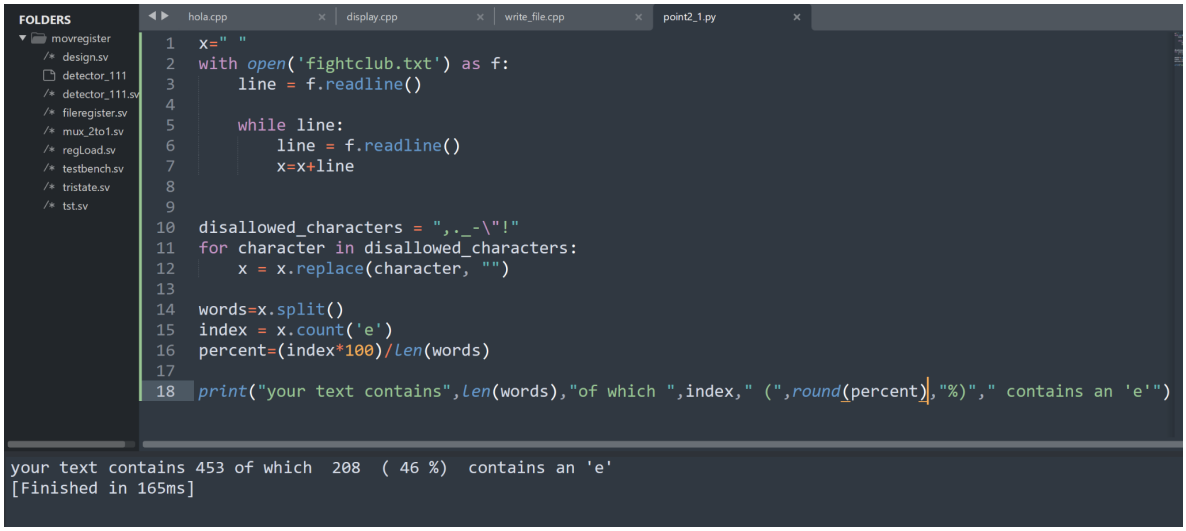
CSV Writing

- https://code.tutsplus.com/es/tutorials/how-to-read-and-write-csv-files-in-python--cms-29907
- https://docs.python.org/3/library/csv.html

2. Execute the next exercises

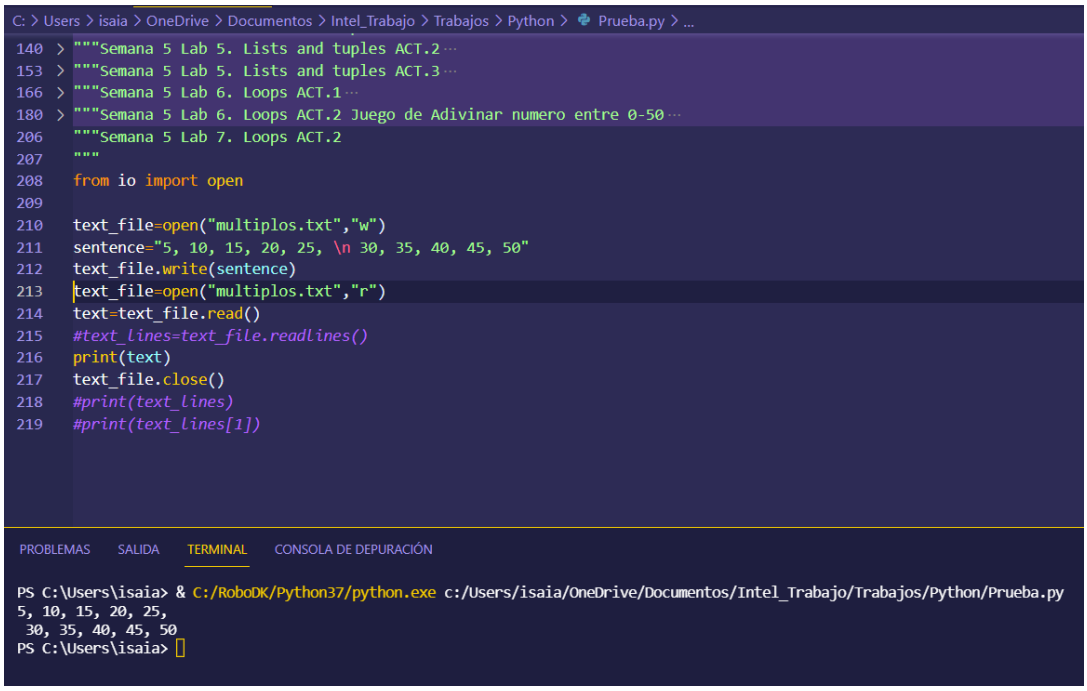
- Write a program that takes a text file as an argument containing some of your favorite text - perhaps a poem, a speech, instructions to bake a cake, some inspirational verses to a song, etc. Write a function which removes all punctuation from string, breaks the string into a list of words, and counts the number of words in your text that contain the letter ‘e’. Your program should print an analysis of the text like this:

Your text contains 243 words, of which 109 (44.8%) contain an 'e'. (Exercise extracted fromhttp://www.openbookproject.net/books/bpp4awd/exercises/ch06/ch06s02.html)



Create the following programs:

- A program called that generates a file called "multiplos.txt" with the first ten multiples of 5.



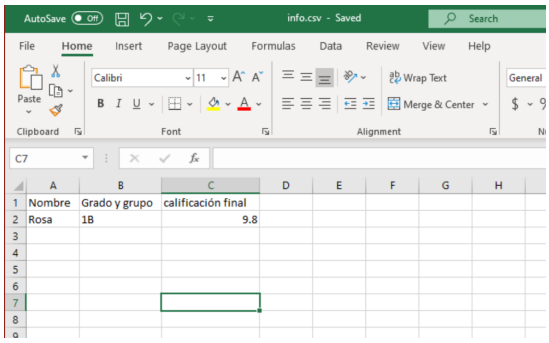
- A program that reads the contents of the file "multiplos.txt" and prints it on the screen.

- A program that adds to the file "multiplos.txt" the next ten multiples of 5. To do this the program must find out what was the last number written.

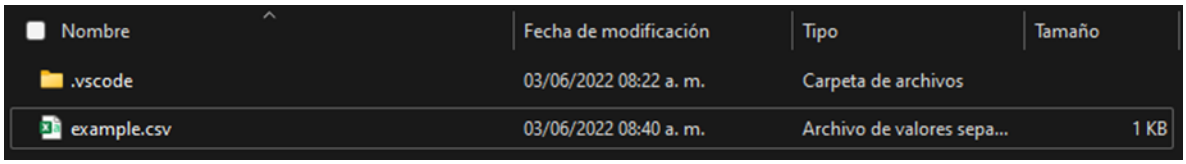
```
Clase 24 > Multiplo.py > ...
1   import os
2   multiplos=[]
3   file = open("multiplos.txt", "r")
4   multiplos=file.read().split(',')
5   file.close()
6   print("CONTENIDO DEL ARCHIVO: ")
7   print(multiplos)
8
9   ultimo=int(multiplos[-1])
10  file = open("multiplos.txt", "a")
11  for x in range(1,10):
12      ultimo+=5
13      file.write(','+str(ultimo))
14  file.close()
15  file = open("multiplos.txt", "r")
16  multiplos=file.read().split(',')
17  file.close()
18  print("CONTENIDO ACTUALIZADO: ")
19  print(multiplos)

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

thonFiles\lib\python\debugpy\launcher' '62167' '--' 'c:\Users\alber\OneDrive\Documentos\Verificacion Pre-silicio\VS

PS C:\Users\alber\OneDrive\Documentos\Verificacion Pre-silicio\VSC>  c:; cd 'c:\Users\alber\OneDrive\Documentos\Ver
SC'; & 'C:\Users\alber\AppData\Local\Programs\Python\Python310\python.exe' 'c:\Users\alber\.vscode\extensions\ms-py
thonFiles\lib\python\debugpy\launcher' '62180' '--' 'c:\Users\alber\OneDrive\Documentos\Verificacion Pre-silicio\VS

CONTENIDO DEL ARCHIVO:
['5', '10', '15', '20', '25', '30', '35', '40', '45', '50']
CONTENIDO ACTUALIZADO:
['5', '10', '15', '20', '25', '30', '35', '40', '45', '50', '55', '60', '65', '70', '75', '80', '85', '90', '95']
```

INDICATIONS

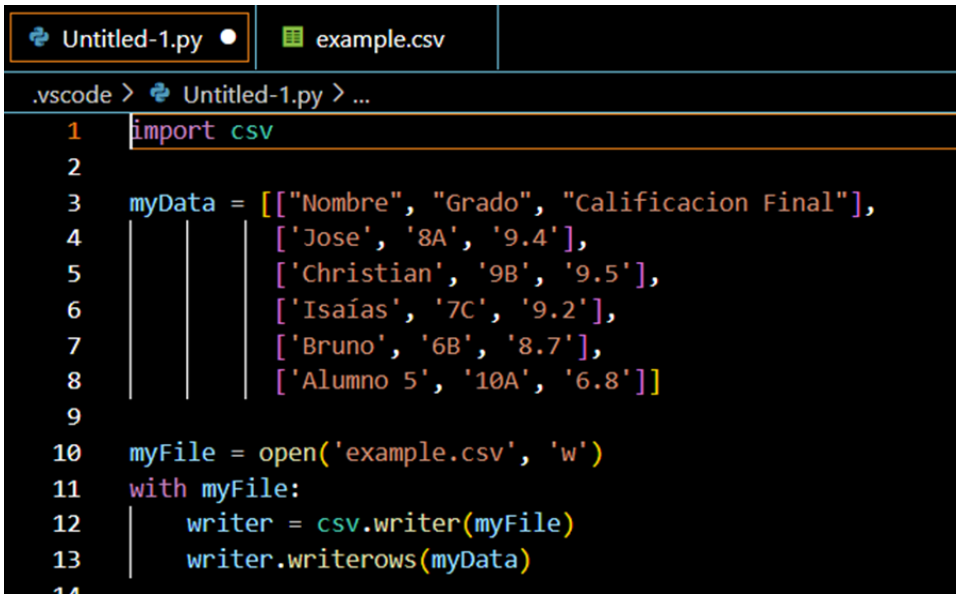
- It generates a list containing the following information for 5 persons:
- Name
- Grade and group
- Final grade
- Import the information to a CSV file where you organize the information by column:



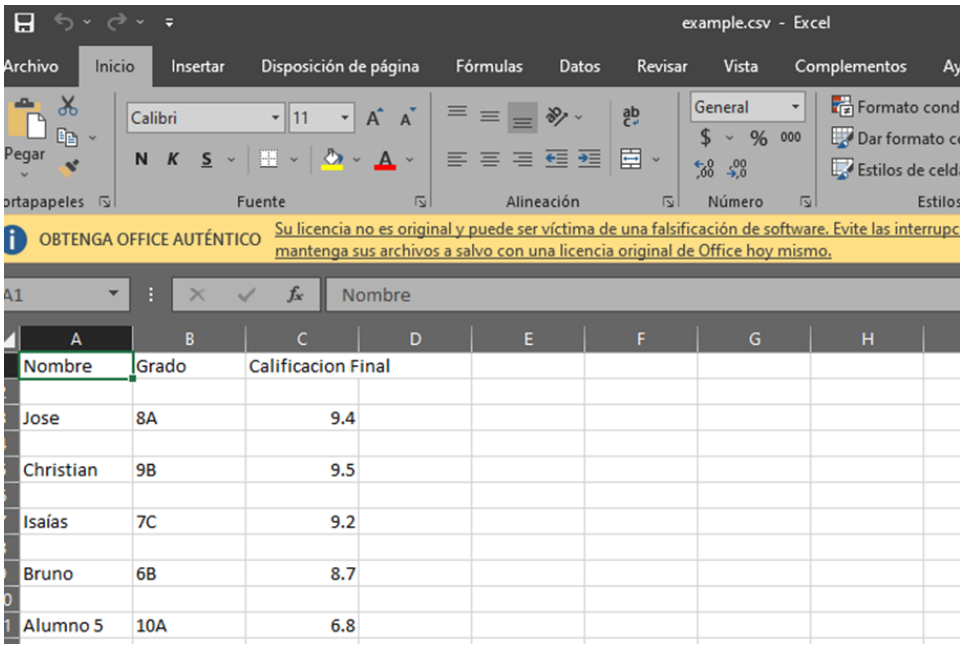
1. An empty csv file with name “example.csv” was created in order to import the data code into the file



2. Code with list generated, and then writing the values in “example.csv”:



3. Data from list is exported and organized in columns and rows



4. To validate in VisualCode, we added the followings lines of code:

```
10    myFile = open('example.csv', 'w')
11  with myFile:
12      writer = csv.writer(myFile)
13      writer.writerows(myData)
14
15    print("Writing complete")
16
17
18    results = []
19  with open('example.csv') as File:
20      reader = csv.DictReader(File)
21      for row in reader:
22          results.append(row)
23      print (results)
```

5. In the terminal console, the information from “example.csv” is imported and shown.

```
Writing complete
[{'Nombre': 'Jose', 'Grado': '8A', 'Calificacion Final': '9.4'}, {'Nombre': 'Christian', 'Grado': '9B', 'Calificacion Final': '9.5'}, {'Nombre': 'Is
aías', 'Grado': '7C', 'Calificacion Final': '9.2'}, {'Nombre': 'Bruno', 'Grado': '6B', 'Calificacion Final': '8.7'}, {'Nombre': 'Alumno 5', 'Grado':
 '10A', 'Calificacion Final': '6.8'}]
```