

PYTHON

Κάνω πράξεις

<https://docs.python.org/3/tutorial/introduction.html>

διαφορά string & list

<https://www.cs.swarthmore.edu/~knerr/teaching/f17/topics/strlist.html>

A **string** is a **sequence** of characters between single or double quotes.

A **list** is a **sequence** of items, where each item could be anything (an integer, a float, a string, etc).

Both strings and lists have lengths: a string's length is the number of characters in the string; a list's **length** is the number of items in the list.

```
>>> S = "hello"
>>> L = ["a", "b", "zebra"]
>>> len(S)
5
>>> len(L)
3
```

Strings can be concatenated (glued together) with the + operator, and repeated with *

Assignment to slices is also possible, and this can even change the size of the list or clear it entirely:

```
>>>
letters = ['a', 'b', 'c', 'd', 'e', 'f', 'g']
letters
['a', 'b', 'c', 'd', 'e', 'f', 'g']
# replace some values
letters[2:5] = ['C', 'D', 'E']
letters
['a', 'b', 'C', 'D', 'E', 'f', 'g']
```

Τι αναγνωρίζει η python

ακολουθεί σχόλιο

string λίστα γραμμάτων π.χ. 'word'

scalar π.χ a=4

tuple : συλλογή πραγμάτων π.χ (1,3,4)

list : [1,23,4]

array: (από τη βιβλιοθήκη numpy) [1,23,4] ίδια μορφή αλλά παραπάνω ιδιότητες

dictionaries : δομή δομών π.χ πολλές λίστες ή array μπορεί ναναι ανάμικτα {'a': [1,24], 'b': ['mean', 'stdev'] }

How to open a file:

```
pivakas= open('apotelesmata')  
pivakas.readline()  
data = pivakas.readlines()  
pivakas.close()
```

To read as array removing white spaces → χρησιμοποιώντας την panda library

```
import pandas as pd  
data= pd.read_csv('apotelesmata',delim_whitespace=True,header=0, index_col='Time')  
To plot with legend and Ylabel  
data['Temp'].plot(legend = True, ylabel='Temperature in C')
```

Προσοχή οι δείκτες στη fortran αρχίζουν από το 1 ενώ στη python από το 0

if in fortran → while in python

```
# Fibonacci series:  
# the sum of two elements defines the next  
a, b = 0, 1  
while a < 10:  
    print(a)  
    a, b = b, a+b  
  
print('title', a, b)  
end the printed text/number with a symbol ','  
a, b = 0, 1  
while a < 1000:  
    print(a, end=',')  
    a, b = b, a+b
```

do in fortran → for in python

```
for c in df.columns[:-1]:  
    df.plot(x=c,y='ypsos',ax=ax,logx=True,label=c,xlim=(1e-2,1e6))
```

File tranfer from andromeda to iapetus

rsync -auvzh filename [user@iapetus.chemistry.uoc.gr:~/](mailto:user@iapetus.chemistry.uoc.gr).

Θα ζητήσει το password σας στον iapetus