

Important Note

In [2]: s = "Hello, my name is Diane"

Out[2]: ['Hello,', 'my', 'name', 'is', 'Diane']

planete = "Earth" diameter = 12742

In [3]: planete = "Earth"

'hello'

diametre = 12742

In [1]:

Out[1]:

In [4]:

In [6]:

Out[6]:

In [7]:

Out[7]:

In [9]: # hint :

3,

'me', 'if', 'you',

'hello'

In [11]: def domainGet(email):

complete

'domain_name.com'

In [13]: def domainGetList(email): # complete

In [15]: # version 1 (llong version)

complete

In [18]: # version 2 (short version)

complete

def findWord_2(in_words):

In [23]: def countWord(in_words, find="wolf"):

In [24]: countWord('Is there a wolf in the sheepfold?')

complete

For instance:

should return:

Hint: a word is a list

letter

For instance:

should return:

['sentence', 'soldier']

Fibonacci sequence

complete

[0, 1, 1, 2, 3, 5, 8]

complete

Two real roots:

 $x_1=rac{-b+\sqrt{delta}}{2*a}$

 $x_2=rac{-b-\sqrt{delta}}{2*a}$

 $x_1=x_2=rac{-b}{2*a}$

Hint:

In [36]: import numpy as np

• A double root:

No real solution

import numpy as np

def resol_equa_degre2 (a, b, c):

np.sqrt(delta)

complete

In [49]: def resol_equa_degre2_bis (): # complete

In [37]: resol_equa_degre2(1,5,6)

Two real roots

x1 = -3.0x2 = -2.0

Enter a : 1 Enter b: 1 Enter c: 3

Enter a: 1 Enter b : 2 Enter c: 1

A double root x1 = x2 = -1.0

Enter a : 1 Enter b: 5 Enter c: 6

x1 = -3.0x2 = -2.0

_____ Two real roots

_____ No real solution

In [50]:

In [51]:

In [52]:

In []:

Congratulations!

In [34]: def fib_list(n):

Out[35]: [0, 1, 1, 2, 3, 5, 8]

In [35]: fib list(8)

['sentence','soldier']

In [27]: seq = ['sentence', 'wolf', 'soldier', 'dog', 'cat']

False

True

False

False

Out[24]: 1

Out[26]:

In [30]:

In [31]:

In [32]: def fib(n):

0

5

In [33]: fib(8)

def findWord(in_words):

['user_name', 'domain_name.com']

In [16]: findWord('Is there a wolff in the sheepfold?')

In [17]: findWord('Is there a wolf in the sheepfold?')

In [19]: findWord_2('Is there a wolff in the sheepfold?')

In [20]: findWord_2('Is there a wolff in the sheepfold?')

Do not take into account the case (e.g. capitalization) of the searched word

seq = ['sentence','wolf','soldier','dog','cat']

seq = ['sentence', 'wolf', 'soldier', 'dog', 'cat']

Write a function that returns the elements of a Fibonacci list up to a given threshold

Write a version of the previous function that returns the result as a list

Depending on the value of delta (discriminant) the program should display :

Write a function that takes as input the values a, b, c of a second degree equation and returns the solution found

['Sentence','Wolf','Soldier','Dog','Cat']

['Sentence', 'Wolf', 'Soldier', 'Dog', 'Cat']

Fibonacci sequence up to 8 is: 0, 1, 1, 2, 3, 5, 8

Solving a second degree equation

 $ax^2 + bx + c = 0$, $delta = b^2 - 4 * a * c$

• Import the numpy library with the instruction

ullet To calculate the square root of delta use the statement

Modify the previous function to allow the user to enter the parameters of the equation himself.

In [26]: countWord('Is there a wolf in the sheepfold that looks like the wolf of the Alpes?')

{'hideout1': ['Find',

{'hideout2': [1, 2, 3, 'hello']}]}]

user_name@domain_name.com

Out[9]: [1,

In [10]:

Out[10]:

In [12]:

Out[12]:

In [14]:

Out[14]:

In []: #

2401

What does 7 to the power of 4?

Split the following strinng into a list

s = "Hello, my name is Diane"

• Answer the following questions or achieve the mentioned tasks.

The diameter of the Earth is 12742.00 kilometres

Given the following nested list, use indexing to find the word "hello"

The diameter of the Earth is 12742.00 kilometres

Find the length of the list previously created

Given the following nested dictionary, find the word "hello"

try -> d['key'] -> then the position of the item which cintains 'hello'

What is the main difference between a list and a tuple?

In [8]: d = {'key':[1,2,3,{'hideout1':['Find','me','if', 'you', 'can', {'hideout2':[1,2,3,'hello']}]}]}

d = {'key':[1,2,3,{'hideout1':['Find','me','if', 'you', 'can', {'hideout2':[1,2,3,'hello']}]}]

Write a function that retrieves the domain name of an email address of the following form:

For instance, applying "user_name@domain_name.com" to the concerned function, it should return: domain_name.com

Define a function that returns a list composed of "user_name" and "domain_name"

Write a function that searches for the presence of the word "wolf" in a sequence of words

This function displays 'True' if the word searched for is in the sequence (the search must check the presence of the word written in lower case)

Write a function that counts the number of occurrences of the word "wolf" in a sequence of words

Use "lambda" expression and "filter()" function to filter the words in a list and retrieve those that start with the letter "s"

Use "lambda" expression and "map()" function to transform the first letter of each word in a list of words in a capital

In [5]: lst = [1,2,[3,4],[5,[100,200,['hello']],23,11],1,7]

• Do not delete or erase existing cells, create your own to keep track of the expected results.

Given the variables below, use string formatting to display the following sentence

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