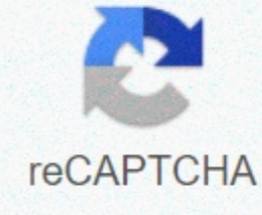I'm not robot

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PythonServer Side ProgrammingProgramming A list is a data type for collecting in Python. The items in a list can be changed, and there is no specific order associated with the items. In this article, we will see how to find the length of a list in Python. Which means we need to get the number of items present in the list regardless of whether they are duplicated or not. ExamplesIn the example below, we take a list of name days. We first find the length of the list using the len() function. And then we add a few more items and check the length again using the append() function. Finally, we remove some items using the remove() function and check the length again. Please note that even if the items are duplicated remove() function will remove only the items at the end of listdays = [Mon,Tue,Wed]print(len(days)) # Add some list items days.append(Sun) days.append(Man) print(Now the list: , days) print (Length after adding more items: ,len(days)) # Remove some items days.remove(Man) print(Now the list is: ,days) print(Length after removing items: ,len(days))OutputRunning the above code gives us the following result −3 Now is the list: ['Man', 'Tue', 'Wed', 'Sun', 'Man'] Length after adding more items:

5 Now the list is: ['Tir', 'Wed', 'Sun', 'Man'] Length after removing items: 4 Published on 07-Aug-2019 12:16:48 In Python, list is a collection of data type that is ordered and changeable. A list can also have a duplicate record. Here, the task finds the number of entries in a list. See the examples below. Examples: Input : a = [1, 2, 3, 1, 2, 3] Output: 6 Count the number of entries in the list a. Input : a = [] Output: 0 The idea is to use len() in Python a = [] a.append (Hi) a.append (Geeks) a.append (For) a.append (Geeks) print (Length of the list is : , len(a)) Output: The length of the list is: 4 Example 2: n = len([10, 20, 30]) print(Length of list is: , n) Output: The length of the list is: 3 How does len() work? len() works in O(1) time as the list is an object and has a member to save its size. Below is the description of len() from Python documents. Return the length (number of items) of an object. The argument can be a sequence (such as a string, byte, tip, list, or range) or a collection (such as a dictionary, set, or frozen set). How to check if a list is empty in Python Attention geek! Strengthen your foundation with python programming foundation course and learn the basics. To begin with, interview preparations improve your data structures concepts with Python DS Course. Recommended posts:If you like GeeksforGeeks and want to contribute, you can also write an article using contribute.geeksforgeeks.org or send your article to contribute@geeksforgeeks.org. See your article that appears on geeksforGeeks main page and help others Improve this if you find something wrong by clicking the Improve Article button below. To get the size of a Python list, we use the len() function. The len() function provides the length or size of a python programming language list object, which means the number of items in the list object. Let's understand the len() method by example. Examples of len() Function of the list in Python myList = ['a','b','c'] listLength = len (myList) print (listLength) Output: 3 In the example above, we used the len() function to myList and it counts the three elements in myList. There are three elements in myList. Keep in mind that we used object myList as parameter to len() function. Let's take another example. #Add item using append and extend method myList = [] myList.append('aa') myList.append('bb') myList.append('cc') print(myList) myList.extend([1,3,5,7]) print(myList) myList.extend(myList) print(myList) listLength = len(myList) print(listLength) Output: ['aa', 'bb', 'cc'] ['aa', 'bb', 'cc', 1, 3, 5, 7] ['aa', 'bb', 'cc', 1, 3, 5, 7, 'aa', 'bb', 'cc', 1, 3, 5, 7] 14 In the above example we create a continuously increasing list using append() and extend() method. And our items in the list reach up to 14 items when we print the size of the list. Now can calculate the size of a slightly larger list. Look at the following example len() method. #Add item using append and extend method myList = [] myList.append('aa') myList.append('bb') myList.append('cc') print(myList) myList.extend([1,3,5,7]) print(myList) myList.extend(myList) print(myList) listLength = len (myList) print('The size of small list: ', listLength) biggerList = myList*999999 newListLength = len(biggerList) print('The size of bigger list:', newListLength) Output: ['aa', 'bb', 'cc'] ['aa', 'bb', 'cc', 1, 3, 5, 7] ['aa', 'bb', 'cc', 1, 3, 5, 7, 'aa', 'bb', 'cc', 1, 3, 5, 7] 14 The size of small list: 14 The size of bigger list: 13999986 In the above example we create such a big list, the items of which cannot be even presented over this post. However, the len() method calculates the size of the list. report this ad Tutorialdeep » knowhow » Python Faqs » How to find the size of list items or gain length in Python City : Roshan Parihar / I : Python Faqs < > In this tutorial, learn how to find the size of the list item using Python. The short answer is: Use the Python len() function to get the length of list items. The items in the list variable are the items that are enclosed in single or double quotations. A list variable can contain items that are the same as the element we find in an array in other programming languages such as Java. You can also read how to create variables in Python to create other types of variables. How to find the size of list items in python To find the length of the list variable in Python, you must use the len() function. Inside the len(), you must pass the list variable as an argument for it. Now, if you print as indicated in the example below. You will the exact number of list items available in the list variable. It counts the string as well as integer and float elements of the python list variable. myList = ['Dhammo', 'Bahubali', 20, 'Katappa', 24.5, 'Suresh']; print(len(myList)); myList = ['Dhammo', 'Bahubali', 20, 'Katappa', 24.5, 'Suresh']; Output 6 The above example provides 6 as the output of the len() function. There are six items in the list variable. However, you can add more items to the list in Python. Next, you need to use the Python print statement to find the size of list items and print the length of the output. You can also read Hope, you like this tutorial on how to get the length and find the size of list items in Python. If you have any questions about the tutorial, please comment below. References Also tell me which method you use to get the length of the list items in Python. Python is a very expressive language that gives different structures to simple developers work. The list is one of the most popular data structures offered by python. In a typical workflow, we add and remove items in and from the list. But in this fluid situation we need to get the length of the list. How can we get the length of the list? In this tutorial we will look at different ways to get a list of length. The short answer is: Use the Python len() function to get the length of list items. The items in the list variable are the items that are enclosed in single or double quotations. A list variable can contain items that are the same as the element we find in an array in other programming languages such as Java. You can also read how to create variables in Python to create other types of variables. How to find the size of list items in python To find the length of the list variable in Python, you must use the len() function. The syntax is very simple we will only give the list, array, tip or dictionary type variable in the len() function as an array. name_list=['ismail','ahmet','ali'] len(name_list) fruit_list = ['apple', 'banana', 'carrot', 'melon', 'tomato'] len(fruit_list) number_list = [1,2,3,4,5,6,7,8,9,10,12,13,14,15] len(number_list) Using built-in len() Function Get multi dimension list length In the past we have seen the length of a single dimension list. But in real situations there will be multi-dimensional lists. We can also get the length of this list single dimension length only provides the index of the related sublist as below. In this example, we want to get the length of the first submatic. name_list=['ismail','elif','ahmet','ali',[7,8,9,10],1,2,3,['apple', 'banana', 'carrot' , 'melon', 'tomato']] len (name_list) len (name_list[0]) len (name_list[7]) Get multi-dimension list length We provide the sublist element index as is ['ismail','elif'] and get the length of this sublist as 2 Count Length with For Loop By Iterating Each Element len() function provides a very convenient, easy and efficient way to get the length or size of a matrix. But in some cases, we may want to calculate a list length or size by counting it one by one. Even we want to eliminate some items in a list and do not count them. In this example, we can achieve using for loop with a list. name_list=['ismail','ahmet','ali'] count=0 for item in name_list: count=count+count1 print(count) name_list=['ismail','elif','ahmet','ali',[7,8,9,10],1,2,3,['apple', 'banana', 'carrot', 'melon', 'tomato']] count=0 for item in name_list: count=count+count1 print(count) Count length with For Loop By Iterating Each Element Dictionary Length len() function is very useful where it can be used to get the length or size of different array types as the dictionary. We can use the same syntax to count dictionary key, value type items. This counts 1 a single key and value pairs. name_surname={'ismail':'baydan','ahmet':'baydan','ali':'baydan'} len(name_surname) Dictionary Length LEARN MORE Php - Array Variable Type In this article we will discuss different ways to count the number of items in a flat list, lists or nested lists. Counting items in a flat list Assume we have a list, that is # List of strings listOfElems = ['Hello', 'Ok', 'is', 'Ok', 'test', 'this', 'is', 'a', 'test'] To count the items in this list, we have different ways. Let's explore them, use len () function to get the size of a list Python provides a built-in function to get the size of a sequence, that is, len(s) Arguments: s : A sequence as object as, list, string, byte, tuple etc. It returns the length of the object, that is, the number of items in the object. Now let's use this len() function to get the size of a list, that is. listOfElems = ['Hello', 'Ok', 'is', 'Ok', 'test', 'this', 'is', 'a', 'test'] print('Number of items in the list : ', length) Output:Number of items in the list : 9 How does len() function work? When the len(s) function is called, it calls the internal __len__() of the passed objects. The default sequential containers such as list, tuple, and string have the implementation of the __len__() function, which returns the number of items in that sequence. So, in our case, we sent the list object to the len () function. As internally called __len__() for the list object, to retrieve the number of items in the list. Use list.__len__() to count items in a list We can call __len__() member function of the list to get the size of the list, that is. listOfElems = ['Hello', 'Ok', 'is', 'Ok', 'test', 'this', 'is', 'a', 'test'] # Get size of a list using list.__len__() length = listOfElems.__len__() Output:Number of items in the list : 9 Although we got the size of the list using __len__() function. It is not a recommended way, we should always prefer len() to get the size of the list. Counting items in the list of lists Assume we have a list of list, that is. # List of lists listOfElems2D = [[1,2,3,45,6,7], [22,33,44,55], [11,13,14,15]] Now we want to count all the items list, that is, the total number in the list. But if we call the len () function on the list above we will have the number of lists in the main list, it will. 3. But we want to count the total number of items in the list, including these three lists. Let's see how you do it. Use for loop to count items in the list of lists Iterate above the list, add the size of all internal lists using len() that is # List of lists listOfElems2D = [[1,2,3,45,6,7], [22,33,44,55], [11,13,14,15]] count = 0 for listElem in listOfElems2D: count += len(listElem) print('Total number of items : ', count) Output:Number of items in the list : 9 Count items in the list of lists using List Comprehension. Build a new list of internal list sizes. Then send the list to sum() to get the total number of items in the list of lists, that is # List of listsListOfElems2D = [[1,2,3,45,6,7], [22,33,44,55], [11,13,14,15]] # Size Get on the list above using list comprehension & sum() function count = sum([len(listElem) for listElem in the listOfElems2D]) print('Total number of items : ', count) Output: Total number of items : 14 Count items in a nested list Assume we have a nested list, that is, a list containing items and other lists. These internal lists may also contain other lists, that is. # Nested List nestedList = [2.3, [44,55,66], 66, [5,6,7, [1,2,3], 6] , 10, [11, [12, [13, 24]]]] Now how to calculate the number of items in this type nested list ? For this we have created a recursive function that will use the recursion to go inside this nested list and calculate the total number of elements in it i.e. def getSizeOfNestedList(listOfElem): "" Get number of elements in a nested list" count = 0 # Iterate over the list for elem in listOfElem: # Check if type of element is list if type(elem) == list: # again call this function to get the size of this element count += getSizeOfNestedList(elem) else: count += 1 return count Now let's use this function to count elements in a nested list i.e.# Nested List nestedList = [2 ,3, [44,55,66], 66, [5,6,7, [1,2,3], 6] , 10, [11, [12, [13, 24]]]] count = getSizeOfNestedList(nestedList) print('Total Number of elements : ', count) OutputTotal Number of elements : 18 There will be above items in the list, and for each item will check if the type is list, then it will again call this function to get the size otherwise returns 1. Complete example is as follows, def getSizeOfNestedList(listOfElem): "" Get the number of items in a nested list" count = 0 # Iterate above the list for elem in listOfElem: # Check if type item is list if type(elem) == list: # again this function to get the size of this item count += getSizeOfNested(elem) other: count += 1 return def main(): # List of strings listOfElems = ['Hello', 'Ok', 'is', 'Ok', 'test', 'this', 'is', 'a', 'test'] print('**** Count number of elements in a flat list ****') print('** Using len() to get the size of a list **') # Get size of a list using list.__len__() length = listOfElems.__len__() print('Number of items in list : ', length) print('*** Using Iteration to get the number of elements in list of lists **') # Iterate over the list and add the size of all internal lists count = 0 for listElem in listOfElems2D : count += len(listElem) print('Total number of items : ', count) print('** Count number of elements in list of lists ****') # List of lists listOfElems2D = [[1,2,3,45,6,7], [22,33,44,55], [11,13,14,15]] print('Try len() on list of lists') length = len(listOfElems2D) print('Number of lists in list = ', length) print('*** Using Iteration to get the number of items in list of lists **') # Iterate over the list and add the size of all internal lists count = 0 for listElem in listOfElems2D : count += len(listElem) print('Total number of items : ', count) print('Use list comprehension') count = getSizeOfNestedList(listOfElems2D) print('Total items : ', number) print('**** Count items in a nested list ****') # Nested List nestedList = [2,3, [44,55,66], 66, [5,6,7, [1,2,3], 6] , 10, [11, [12, [13, 24]]] count = getSizeOfNestedList(nestedList) print('Total number of items : ', count) if __name__ == '__main__': main() Output: **** Count the number of items in a flat list **** Use len() to get the size of a list ** Number of items in the list : 9 ** Use list.__len__() to size a list ** Number of items in the list : 9 **** Count the number of items in the list of lists **** Try len() in the list Number of lists in the list = 3 ** Use Iteration to get the number of items in the lists ** Total number of items : 14 ** Use List understanding to get the number of items in the list of lists ** Total number of items : 14 Use list understanding Total number of items: 14 **** Counting items in a nested list **** Total items : 18 Total items : 9 Join a list of 2000 + Programmers for latest Tips & Guides Tutorials