

1. write a python program to sum all the items in a list

```
In [2]: mylist=[1,2,3,4,5]
        sum([i for i in mylist])
```

Out[2]: 15

2. write a python program to get the largest number from a list

```
In [4]: mylist=[1,2,3,4,5,6,7,8,9,10,11,5,6]
        mylist.sort()
        mylist[-1]
```

Out[4]: 11

3.write a python program to count the number of strings from a given list of strings

The strings length is 2 or more and the first and last characters are the same

```
In [7]: item=["apple","orange","mango","banana","malayalam","australia","5454"]
        len([i for i in item if i[0]==i[-1]])
```

Out[7]: 2

4. write a python program to remove duplicates from a list

```
In [9]: group=["apple","orange",1,2,5,5,3.1,4.1,"apple"]
        a=set(group)
        list(a)
```

Out[9]: [1, 2, 3.1, 4.1, 5, 'orange', 'apple']

5. write a python program to check if a list is empty or not.

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```
In [25]: group=["apple","orange",1,2,5,5,3.1,4.1,"apple"]
if group:
    print("list is not empty")
else:
    print("list is empty")
```

list is not empty

```
In [27]: item=[]
if item :
    print("list is not empty")
else:
    print("list is empty")
```

list is empty

6. write a python program to filter the length of the character is < 4

```
In [36]: mylist=["apple","12345","sky","23","book"]
[i for i in mylist if len(i)<4]
```

Out[36]: ['sky', '23']

7. write a python to find the second largest number in a list

```
In [29]: mylist=[1,2,3,4,5,6,7,9,15,8]
mylist.sort()
mylist[-2]
```

Out[29]: 9

8. write a python program to reverse a list at a specific location.

```
In [41]: a=[20,30,40,50]
b=len(a)
i=int(input("enter the position: "))
c=a[i:b]
a[0:i]+c[::-1]
```

enter the position: 1

Out[41]: [20, 50, 40, 30]

9. write a python program to check if a list is a palindrome or not. return true otherwise false.

```
In [42]: mylist=['a','n','u','k','r','i','z']
l=len(mylist)
if mylist[:l]==mylist[::-1]:
    print("true")
else:
    print("false")
```

false

10. write a python a program to find the union and intersection of two lists

```
In [44]: #union
list_1=[1,3,5,7,10]
list_2=[2,4,6,8,10]
a=set(list_1+list_2)
list(a)
```

Out[44]: [1, 2, 3, 4, 5, 6, 7, 8, 10]

```
In [45]: #intersection
[i for i in list_1 if i in list_2]
```

Out[45]: [10]

11. write a python scripts to sort (ascending and descending) a dictionary by value

```
In [48]: mydict={"men":50,"women":40,"children":25}
d=sorted(mydict.items(),key=lambda mydict: mydict[1])
d
```

Out[48]: [('children', 25), ('women', 40), ('men', 50)]

```
In [49]: d[::-1]
```

Out[49]: [('men', 50), ('women', 40), ('children', 25)]

12. write a python script to check whether a given key already exists in a dictionary.

```
In [50]: mydict={"men":50,"women":40,"children":25}
         if "men" in mydict:
             print("yes")
```

yes

13. write a python program to sum all the values in a dictionary.

```
In [54]: mydict={"men":50,"women":40,"children":25}
         values_1=mydict.values()
         values_1
         sum({i for i in values_1})
```

Out[54]: 115

14. write a python program to create a dictionary with a number and its corresponding square from 1 to input number.

And also check if the input number is less than 10

```
In [55]: length=int(input("input : "))
         {i:i**2 for i in range(1,length+1)if length<10}
```

input : 9

Out[55]: {1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81}

15. write a python program to sort a given dictionary by key.

```
In [56]: mydict={"men":50,"women":40,"children":25}
         for i in sorted(mydict.keys()):
             print(i)
```

children
men
women

16.write a python program to create a dictionary from a string.

```
In [57]: mystrings="malayalam"  
{i:mystrings.count(i) for i in mystrings}
```

```
Out[57]: {'m': 2, 'a': 4, 'l': 2, 'y': 1}
```

17. write a python program to get the top three items in a shop

```
In [69]: items={'item': 45.50, 'item2': 41.30, 'item': 55, 'item5': 24}  
a=sorted( item.items(),key=lambda item:item[1])  
i=len(item)  
j=int(input("number of top items: "))  
a[i-j:i]
```

```
number of top items: 3
```

```
Out[69]: [('item5', 24), ('item2', 41.3), ('item', 55)]
```