

1. Write a Python program to sum all the items in a list.

```
In [94]: l= [3,5,3,30,6,5,9,23,13,6,25]
sum=0
for i in l:
    sum= sum + i
print(f"sum is",sum)
```

sum is 128

2. Write a Python program to get the largest number from a list.

```
In [95]: l= [3,5,3,30,6,5,9,23,13,6,25]
l.sort()
print(l)
print(f"largest number is",l[-1])
```

[3, 3, 5, 5, 6, 6, 9, 13, 23, 25, 30]  
largest number is 30

3. Write a Python program to count the number of strings from a given list of strings. The string length is 2 or more and the first and last characters are the same. Sample List : ['abc', 'xyz', 'aba', '1221'] Expected Result : 2

```
In [70]: list=['abc', 'xyz', 'aba', '1221']
count=0
for i in list:
    if len(i)>=2 and i[0]==i[-1]:
        count=count+1
print(count)
```

2

4. Write a Python program to remove duplicates from a list.

```
In [72]: newlist=[1,2,2,3,3,3,4,4,4,4]
c=set(newlist)
print(c)
```

{1, 2, 3, 4}

5. Write a Python program to check if a list is empty or not.

```
In [79]: d=[]
if len(d)==0:
    print("list is empty")
```

list is empty

6. Write a Python program to filter the list if the length of the character is < 4 Sample List : ['abc', 'xyz', 'aba', '1221'] Expected Result: ['abc', 'xyz', 'aba']

```
In [13]: a= ['abc', 'xyz', 'aba', '1221']
for i in a:
    if len(i)<4:
        print(i)
```

abc  
xyz  
aba

7. Write a Python program to find the second largest number in a list.

```
In [96]: b=[10,8,12,6,14,4,2]
b.sort()
print(f"second largest number is",b[-2])
```

second largest number is 12

8. Write a Python program to reverse a list at a specific location.

```
In [32]: list=[1,2,3,4,5,6,7,8,9,10]
number=int(input("Enter the number: "))
a= list[:number]
b= list[number:]
b.reverse()
print(a+b)
```

```
Enter the number: 3
[1, 2, 3, 10, 9, 8, 7, 6, 5, 4]
```

9. Write a Python program to check if a list is a palindrome or not. Return true otherwise false.

```
In [40]: x= [1,2,3,4,3,2,1]
y=x[::-1]
if x == y:
    print("TRUE")
else:
    print("FALSE")
```

```
TRUE
```

10. Write a Python a program to find the union and intersection of two lists.

```
In [21]: l_1= [1,2,2,]
l_2= [2,2,3,3,3]
union=set(l_1+l_2)
print(f"union:",union)
intersection=[]
for i in l_1:
    if i in l_2:
        intersection.append(i)
print(f"intersection:",set(intersection))
```

```
union: {1, 2, 3}
intersection: {2}
```

11. Write a Python script to sort (ascending and descending) a dictionary by value

```
In [19]: dict={"red": "4", "black": "1", "orange": "3", "blue": "2"}
mydict_a=sorted(dict.items(), key=lambda x:x[1])
print(f"ascending:",mydict_a)
mydict_d=sorted(dict.items(), key=lambda x:x[1], reverse=True)
print(f"descending:",mydict_d)
```

```
ascending: [('black', '1'), ('blue', '2'), ('orange', '3'), ('red', '4')]
descending: [('red', '4'), ('orange', '3'), ('blue', '2'), ('black', '1')]
```

12. Write a Python script to check whether a given key already exists in a dictionary.

```
In [22]: dict={"red": "4", "black": "1", "orange": "3", "blue": "2"}
key=input("Enter the key name:")
if key in dict:
    print("given key already exists")
```

Enter the key name:red  
given key already exists

13. Write a Python program to sum all the values in a dictionary.

```
In [97]: dict={"red":4, "black":1, "orange":3, "blue":2}
sum=0
for i in dict.values():
    sum= sum + i
print(f"sum is",sum)
```

sum is 10

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. Eg: Input : 3 Output : {1:1, 2:4, 3:9}

```
In [98]: num=int(input("Enter the number:"))
dict={}
if num<10:
    for i in range(1,num+1):
        dict[i]=i*i
print(dict)
```

Enter the number:3  
{1: 1, 2: 4, 3: 9}

15. Write a Python program to sort a given dictionary by key.

```
In [61]: a={3:"apple",1:"banana",4:"orange",2:"peach"}
b=sorted(a.items())
print(b)
```

[(1, 'banana'), (2, 'peach'), (3, 'apple'), (4, 'orange')]

16. Write a Python program to create a dictionary from a string. Note: Track the count of the letters from the string. Sample string : 'learnpython' Expected output: {'l': 1, 'e': 1, 'a': 1, 'r': 1, 'n': 2, 'p': 1, 'y': 1, 't': 1, 'h': 1, 'o': 1}

```
In [99]: st="learnpython"
d={}
c=0
for i in st:
    if i in d:
        c=d[i]+1
    else:
        c=1
    d[i]=c
print(d)
```

{ 'l': 1, 'e': 1, 'a': 1, 'r': 1, 'n': 2, 'p': 1, 'y': 1, 't': 1, 'h': 1, 'o': 1 }

17. Write a Python program to get the top three items in a shop. Sample data: {'item1': 45.50, 'item2': 35, 'item3': 41.30, 'item4': 55, 'item5': 24} Expected Output: item4 55 item1 45.5 item3 41.3

```
In [93]: dict={'item1': 45.50, 'item2': 35, 'item3': 41.30, 'item4': 55, 'item5': 24}
a=sorted(dict.items(), key=lambda x:x[1], reverse=True)
print(a[:3])
```

[('item4', 55), ('item1', 45.5), ('item3', 41.3)]