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

In [ ]: `# 1) Write a Python program to sum all the items in a list.`

```
In [1]: n=[2,3,4,8,10,23]
        s=sum(n)
        print(s)
```

50

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

In [ ]: `# 2) Write a Python program to get the largest number from a list.`

```
In [26]: n=[23,8,67,43,20,11,1]
         n.sort()
         n[-1]
```

Out[26]: 67

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.

In [ ]: `# 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`

```
In [4]: list= ['abc', 'xyz', 'aba', '1221']
        len([i  for i in list if len(i)>1 and i[0]==i[-1]])
```

Out[4]: 2

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

In [ ]: `# 4) Write a Python program to remove duplicates from a list.`

```
In [16]: n = [10,20,30,20,10,50,60,40,80,50,40]
         print(n)
         N=[]
         for i in n:
             if i not in N:
                 N.append(i)
         print("List after removal of duplicates :",N)
```

```
[10, 20, 30, 20, 10, 50, 60, 40, 80, 50, 40]
List after removal of duplicates [10, 20, 30, 50, 60, 40, 80]
```

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

In [ ]: `# 5) Write a Python program to check if a list is empty or not.`

```
In [20]: a=[3,6,8,1,0]
         if a!=[]:
             print("List is not empty")
         else:
             print("List is empty")
```

List is not empty

```
In [21]: a=[]
         if a!=[]:
             print("List is not empty")
         else:
             print("List is empty")
```

List is empty

6. Write a Python program to filter the list if the length of the character is < 4

In [ ]: `# 6) Write a Python program to filter the list if the length of the character is < 4`

```
In [23]: list=['Umbrella','Bat','Door','Urn','Kiwi','Mango','Ice',]
         [i for i in list if len(i)<4  ]
```

Out[23]: ['Bat', 'Urn', 'Ice']

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

```
In [ ]: # 7) Write a Python program to find the second largest number in a list.
```

```
In [25]: n=[23,8,67,43,20,11,1]
         n.sort()
         n[-2]
```

Out[25]: 43

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

```
In [ ]: # 8)  Write a Python program to reverse a list at a specific location.
```

```
In [30]: n=[23,8,67,43,20,11,1]
         p=int(input("Enter the position:"))
         n[p::-1]
```

Enter the position:4

Out[30]: [20, 43, 67, 8, 23]

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

```
In [ ]: # 9) Write a Python program to check if a list is a palindrome or not. Return true otherwise false.
```

```
In [33]: l= [1, 4, 5, 4, 1]
         r=l[::-1]
         if r==l:
             print("True")
         else:
             print("False")
```

True

```
In [34]: l= [1, 4, 5, 7, 0]
         r=l[::-1]
         if r==l:
             print("True")
         else:
             print("False")
```

False

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

```
In [ ]: # 10) Write a Python a program to find the union and intersection of two lists.
```

```
In [48]: a = [45,23,44,90,56,60,8]
         b = [6,88,56,10,23,21]
         u=a+b
         print("Union of lists :",u)
         print("Intersection of list :",[i for i in a if i in b])
```

Union of lists : [45, 23, 44, 90, 56, 60, 8, 6, 88, 56, 10, 23, 21]
Intersection of list : [23, 56]

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

```
In [ ]: # 11) Write a Python script to sort (ascending and descending) a dictionary by value
```

```
In [69]: #Ascending Order
         l={'d':4,'a':1,'e':5,'c':3,'b':2,}
         d=sorted([(k,v) for k,v in l.items()])
         d
```

Out[69]: [('a', 1), ('b', 2), ('c', 3), ('d', 4), ('e', 5)]

```
In [70]: #Descending Order
         d[::-1]
```

Out[70]: [('e', 5), ('d', 4), ('c', 3), ('b', 2), ('a', 1)]

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

```
In [ ]: # 12) Write a Python script to check whether a given key already exists in a dictionary.
```

```
In [68]: l={'d':4,'a':1,'e':5,'c':3,'b':2,}
         n=input("Enter the key:")
         if n in l:
             print("Yes")
         else:
             print("No")
```

Enter the key:f
No

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

```
In [ ]:  # 13) Write a Python program to sum all the values in a dictionary.
```

```
In [71]: l={'d':4,'a':1,'e':5,'c':3,'b':2,}
         print(sum(l.values()))

         15
```

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 [ ]:  # 14) Write a Python program to create a dictionary with a number and its corresponding square from 1 to input number. And also o
```

```
In [75]: n=int(input("Enter the input number:"))
         {i:i**2 for i in range(1,n+1) if n<10}

         Enter the input number:8
Out[75]: {1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64}
```

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

```
In [ ]:  # 15) Write a Python program to sort a given dictionary by key.
```

```
In [80]: l={'Maharasta':12,'Kerala':45,'Andra Pradesh':9,'Sikkim':15,'Himachal':10,'Bihar':2}
         {i for i in l.keys()}
Out[80]: {'Andra Pradesh', 'Bihar', 'Himachal', 'Kerala', 'Maharasta', 'Sikkim'}
```

16. Write a Python program to create a dictionary from a string.

```
In [ ]:  # 16) Write a Python program to create a dictionary from a string.
```

```
In [82]: s="GOOD MORNING"
         {i:s.count(i) for i in s}
Out[82]: {'G': 2, 'O': 3, 'D': 1, ' ': 1, 'M': 1, 'R': 1, 'N': 2, 'I': 1}
```

17. Write a Python program to get the top three items in a shop.

```
In [ ]:  # 17) Write a Python program to get the top three items in a shop.
```

```
In [98]: d={'Washing Machine':12500,'Refrigerator':28000,'Smart TV':18000,'JBL Speaker':11000,'AC':15000}
         x=d.values()
         y=sorted(x, reverse=True)
         for i in range(0,3):
             for j in d:
                 if y[i]==d[j]:
                     print(j,':',y[i])

         Refrigerator : 28000
         Smart TV : 18000
         AC : 15000
```