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

In [1]:
```
a=input("Input a number seperating by comma")
b=a.split(',')
print("The list is : ",b)
sum=0
for i in b:
    sum=sum+int(i)
print("Sum of the element in the list is : ",sum)
```

```
Input a number seperating by comma23,45,67,12,1,2
The list is :  ['23', '45', '67', '12', '1', '2']
Sum of the element in the list is :  150
```

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

In [2]:
```
a=input("Input a number seperating by comma")
b=a.split(',')
print("The list is : ",b)
b.sort()
print(b)
print("largest element is : ",b[-1])
```

```
Input a number seperating by comma23,45,67,12,1,2
The list is :  ['23', '45', '67', '12', '1', '2']
['1', '12', '2', '23', '45', '67']
largest element is :  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.

Sample List : ['abc', 'xyz', 'aba', '1221'] Expected Result : 2

In [11]:
```
d=0
c=['abc','xyz','aba','1221']
for i in c:
    if len(i)>1 and i[0]==i[-1]:
        print("The results are : ",i)
        d=d+1
print('The number of words are: ',d)
```

```
The results are :  aba
The results are :  1221
The number of words are:  2
```

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

In [24]:
```
a=input("Input a number seperating by comma : ")
b=a.split(',')
print("The list is : ",b)
c=list(set(b))
c.sort()
print("The non duplicate elements are :",c)
```

```
Input a number seperating by comma : 1,5,9,6,6,5,1
The list is :  ['1', '5', '9', '6', '6', '5', '1']
The non duplicate elements are :  ['1', '5', '6', '9']
```

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

In [25]:
```
c=['abc','xyz','aba','1221']
if len(c)==0:
    print("list is empty")
else:
    print("list is not empty")
```

```
list is not 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 [27]:
```
c=['abc', 'xyz', 'aba', '1221']
d=[]
for i in c:
    if (len(i)<4):
        d.append(i)
print(d)
```

```
['abc', 'xyz', 'aba']
```

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

In [29]:
```
a=input("Input a number seperating by comma : ")
b=a.split(',')
print("The list is : ",b)
b.sort()
print(b)
print("The second largest number is : ",b[-2])
```

```
Input a number seperating by comma : 1,7,9,5,3,90
The list is :  ['1', '7', '9', '5', '3', '90']
['1', '3', '5', '7', '9', '90']
The second largest number is :  9
```

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

In [32]:
```
a=input("Input a number seperating by comma : ")
b=a.split(',')
print("The list is : ",b)
for i in b:
    if len(i)>6:
        b.append(i)
print('reverse the list in a specific location ',b[6:3:-1])
```

```
Input a number seperating by comma : 1,2,3,4,5,6,7,8,9
The list is :  ['1', '2', '3', '4', '5', '6', '7', '8', '9']
reverse the list in a specific location  ['7', '6', '5']
```

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

In [35]:
```
a=input("Input a number seperating by comma : ")
b=a.split(',')
print("The list is : ",b)
rb=b[::-1]
if rb==b:
    print("Palindrome")
else:
    print("Not Palindrome")
```

```
Input a number seperating by comma : madam
The list is :  ['madam']
Palindrome
```

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

In [1]:
```
a=input("Input a number seperating by comma a : ")
b=a.split(',')
c=input("Input a number seperating by comma b : ")
d=c.split(',')
print("The list is :",set(b))
print("The list is :",set(d))
print("Union is : ", set(b) | set(d))
print("Intersection is : ", set(b) & set(d))
```

```
Input a number seperating by comma a : 2,3,4,5,6
Input a number seperating by comma b : 4,5,6,7,8
The list is :  {'2', '4', '5', '6', '3'}
The list is :  {'4', '5', '8', '6', '7'}
Union is :  {'2', '4', '7', '5', '8', '6', '3'}
Intersection is :  {'4', '6', '5'}
```

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

In [23]:
```
a=int(input("Enter the number of key and value pairs: "))
b={}
sorted_a={}
sorted_d={}
i=0
while i<a:
    key=input("Enter the key : ")
    value=input("Enter the value : ")
    b[key]=value
    i=i+1
print("The dictionary is : ",b)
sorted_a=sorted(b.items(), key= lambda i: i[1])
print("Dictionary in ascending order by value : ",sorted_a)
sorted_d=sorted(b.items(), key= lambda i : i[1],reverse=True)
print("Dictionary in descending order by value : ",sorted_d)
```

```
Enter the number of key and value pairs: 3
Enter the key : car
Enter the value : 6
Enter the key : bike
Enter the value : 2
Enter the key : bus
Enter the value : 4
The dictionary is :  {'car': '6', 'bike': '2', 'bus': '4'}
Dictionary in ascending order by value :  [('bike', '2'), ('bus', '4'), ('car', '6')]
Dictionary in descending order by value :  [('car', '6'), ('bus', '4'), ('bike', '2')]
```

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

In [26]:
```
a=int(input("Enter the number of key and value pairs: "))
b={}
sorted_a={}
sorted_d={}
i=0
while i<a:
    key=input("Enter the key : ")
    value=input("Enter the value : ")
    b[key]=value
    i=i+1
print("The dictionary is : ",b)
check_key=input('Enter a key to check :')
if check_key in b.keys():
    print("The given check_key is in b")
else:
    print('not in check_key')
```

```
Enter the number of key and value pairs: 3
Enter the key : bus
Enter the value : 5
Enter the key : car
Enter the value : 3
Enter the key : bike
Enter the value : 8
The dictionary is :  {'bus': '5', 'car': '3', 'bike': '8'}
Enter a key to check :car
The given check_key is in b
```

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

In [1]:
```
a=int(input("Enter the number of key and value pairs: "))
b={}
i=0
while i<a:
    key=input("Enter the key : ")
    value=input("Enter the value : ")
    b[key]=value
    i=i+1
print("The dictionary is : ",b)
value=list(b.values())
sum=0
for i in value:
    sum=sum+int(i)
print("The sum of all values in dictionary : ",sum)
```

```
Enter the number of key and value pairs: 3
Enter the key : car
Enter the value : 5
Enter the key : bike
Enter the value : 10
Enter the key : bus
Enter the value : 3
The dictionary is :  {'car': '5', 'bike': '10', 'bus': '3'}
The sum of all values in dictionary :  18
```

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 [2]:
```
a=int(input('Enter number of key value pairs'))
dict={}
for i in range(1,a+1):
    dict[i]=i*i
print('The dictionary is : ',dict)
```

```
Enter a number of key value pairs3
The dictionary is :  {1: 1, 2: 4, 3: 9}
```

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

In [3]:
```
a=int(input("Enter the number of key and value pairs: "))
b={}
bs={}
i=0
while i<a:
    key=input("Enter the key : ")
    value=input("Enter the value : ")
    b[key]=value
    i=i+1
print("The dictionary is : ",b)
c=list(b.keys())
c=sorted(c)
print('Dictionary sorted by keys is : ')
for key in c:
    bs[key]=b[key]
print(bs)
```

```
Enter the number of key and value pairs: 3
Enter the key : car
Enter the value : 1
Enter the key : bike
Enter the value : 9
Enter the key : jeep
Enter the value : 2
The dictionary is :  {'car': '1', 'bike': '9', 'jeep': '2'}
Dictionary sorted by keys is :
{'bike': '9', 'car': '1', 'jeep': '2'}
```

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 [19]:
```
word='learnpython'
w={}
k=0
for i in word:
    if i in word:
        knword.count(i)
        w[i]=k
print(w)
```

```
{'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 [18]:
```
item={'item1': 45.50, 'item2':35, 'item3': 41.30, 'item4':55, 'item5': 24}
e=list(item.values())
e.sort(reverse=True)
e1=e[:3]
for i in e1:
    for j in item.keys():
        if (item[j]==i):
            print(str(j)+" : "+str(item[j]))
```

```
item4 : 55
item1 : 45.5
item3 : 41.3
```

In [ ]: