In [1]:
```
#Write a Python program to find the sum of all elements in a list using loop
#Input:- [10,20,30,40]
#Output:- 100

lst=[10,20,30,40]
[i+100 for i in lst]

```
executed in 24ms, finished 15:42:14 2021-01-10

Out[1]:
```
[110, 120, 130, 140]
```

In [3]:
```
#Write a Python program to find the multiplication of all elements in a list
#Input:- [10,20,30,40]
#Output:- 240000

lst=[10,20,30,40]
j=1
for i in lst:
    j*=i
print(j)
```
executed in 16ms, finished 15:48:56 2021-01-10

```
240000
```

In [9]:
```
#Write a Python program to find the largest number from a list using loop.
#Input:- [10,100,2321, 1,200,2]
#Output:- 2321

lst=[10,100,2321, 1,200,2]

j=lst[0]
for i in lst:
    if i>j:
        j=i
    else:
        continue
print('Largest number:',j)
```
executed in 16ms, finished 15:53:40 2021-01-10

```
Largest number: 2321
```

In [10]:
```
#Write a Python program to find the smallest number from a list using loop.
#Input:- [10,100,2321, 1,200,2]
#Output:- 1

lst=[10,100,2321, 1,200,2]

j=lst[0]
for i in lst:
    if i<j:
        j=i
    else:
        continue
print('Smallest number:',j)

```

executed in 16ms, finished 15:56:45 2021-01-10

```
Smallest number: 1
```

In [24]:
```
#Write a Python program to count the number of strings having length more th
#Input:- ['ab', 'abc', 'aba', 'xyz', '1991']
#Output:- 2

lst=['ab', 'abc', 'aba', 'xyz', '1991']

j=0
for i in lst:
    if len(i)>2 and (i == i[::-1]):
        j+=1
    else:
        continue
print('Number of strings having length more than 2, and that are palindromes

```

executed in 23ms, finished 16:22:10 2021-01-10

```
Number of strings having length more than 2, and that are palindromes: 2
```

In [133]:

```
#Write a Python program to sort a list in ascending order using loop.
#Input:- [100,10,1,298,65,483,49876,2,80,9,9213]
#Output:- [1,2,9,10,65,80,100,298,483,9213,49876]
#BUBBLE SORT LOGIC

Input=[10,10,3,298,1991,483,315,2,80,9,215]
b=len(Input)

for i in range(0,b-2):
    for k in range(0,b-1):
        if Input[k]>Input[k+1]:
            a=Input[k]
            Input[k]=Input[k+1]
            Input[k+1]=a
        else:
            continue
print(Input)
```

executed in 10ms, finished 21:36:48 2021-01-10

```
[2, 3, 9, 10, 10, 80, 215, 298, 315, 483, 1991]
```

In [124]:

```
#Write a Python program to get a sorted list in increasing order of last ele
#Input:- [(5,4),(9,1),(2,3),(5,9),(7,6),(5,5)]
#output:- [(9,1),(2,3),(5,4),(5,5),(7,6),(5,9)]

Input= [(5,4),(9,1),(2,3),(5,9),(7,6),(5,5)]
lst=[]
lst2=[]
j=0

for i in Input:
    lst2.append(Input[j][1])
    j+=1
lst2.sort()
lst2

for k in lst2:
    for i in Input:
        if i[1]==k:
            lst.append(i)
print(lst)
```

executed in 10ms, finished 20:57:10 2021-01-10

```
[(9, 1), (2, 3), (5, 4), (5, 5), (7, 6), (5, 9)]
```

In [119]:

```
#Write a Python program to remove duplicate element from a list using loop.
#Input:- [10,1,11,1,29,876,768,10,11,1,92,29,876]
#Output:- [10,1,11,29,876,768,92]

Input=[10,1,11,1,29,876,768,10,11,1,92,29,876]

Input.sort()
print(Input)

lst=[]
j=Input[0]
lst.append(j)

for i in Input:
    if j==i:
        continue
    else:
        lst.append(i)
        j=i
print(lst)
```

executed in 44ms, finished 20:39:26 2021-01-10

```
[1, 1, 1, 10, 10, 11, 11, 29, 29, 92, 768, 876, 876]
[1, 10, 11, 29, 92, 768, 876]
```

In [38]:

```
#Write a Python program to check a list is empty or not?
#Input:- []
#Output:- List is empty
#Input:- [10,20,30]
#Output:- List is not empty

lst1=[]
lst2=[10,20,30]
lst=[lst1,lst2]
for i in lst:
    if len(i)==0:
        print(f'{i}: List is empty')
    else:
        print(f'{i}: List is not empty')
```

executed in 7ms, finished 18:11:07 2021-01-10

```
[]: List is empty
[10, 20, 30]: List is not empty
```

In [42]:
```
#Write a Python program to copy a list using loop.
#inp_lst = [10,10.20,10+20j, 'Python', [10,20], (10,20)]
#out_lst = [10,10.20,10+20j, 'Python', [10,20], (10,20)]

inp_lst = [10,10.20,10+20j, 'Python', [10,20], (10,20)]
out_lst=[]

for i in inp_lst:
    out_lst.append(i)
print('out_lst', out_lst)

```

executed in 10ms, finished 18:14:29 2021-01-10

```
out_lst [10, 10.2, (10+20j), 'Python', [10, 20], (10, 20)]
```

In [109]:
```
#Write a Python program to find the list of words that are longer than or eq
#Input:- 'How much wood would a woodchuck chuck if a woodchuck could chuck w
#Output:- ['much', 'wood', 'would', 'woodchuck', 'chuck', 'could']
#Note:- Duplicate should be avoided.

Input='How much wood would a woodchuck chuck if a woodchuck could chuck wood
lst=Input.split()
a=set([each for each in lst if len(each)>=4])
print(list(a))
```

executed in 9ms, finished 19:19:38 2021-01-10

```
['would', 'much', 'could', 'woodchuck', 'wood', 'chuck']
```

In [75]:
```
lst=[1,23,34]
a=set(lst)
print(a)
```

executed in 7ms, finished 18:51:50 2021-01-10

```
{1, 34, 23}
```

In [24]:
```
#Write a Python program which takes two list as input and returns True if th
#inp_lst1 = [10,20,'Python', 10.20, 10+20j, [10,20,30], (10,20,30)]
#inp_lst2 = [(10,20,30),1,20+3j,100.2, 10+20j, [10,20,30],'Python']
#Output:- True

inp_lst1 = [10,20,'Python', 10.20, 10+20j, [10,20,30], (10,20,30)]
inp_lst2 = [(10,20,30),1,20+3j,100.2, 10+20j, [10,20,30],'Python']
k=0

for i in inp_lst1:
    for j in inp_lst2:
        if i==j:
            k+=1
        else:
            continue
print([True if k>=3 else print('Number of common elements in the given lists

```

executed in 13ms, finished 21:41:07 2021-01-11

```
[True]
```

In [2]:

```
#Write a Python program to create a 4X4 2D matrix with below elements using
#Output:- [[0,0,0,0],[0,1,2,3],[0,2,4,6],[0,3,6,9]]

a=[]
b=[]
num=3
i=0
while i<=num:
    j=0
    while j<=num:
        product=i*j
        b.append(product)
        j=j+1
    a.append(b)
    i+=1
    b=[]

print(a)
```

executed in 13ms, finished 17:55:08 2021-01-13

```
[[0, 0, 0, 0], [0, 1, 2, 3], [0, 2, 4, 6], [0, 3, 6, 9]]
```

In [15]:

```
# Write a Python program to create a 3X4X6 3D matrix wiith below elements us
#Output:-
# [
#     [[0,0,0,0,0,0],[0,0,0,0,0,0],[0,0,0,0,0,0],[0,0,0,0,0,0]],
#     [[0,0,0,0,0,0],[1,1,1,1,1,1],[2,2,2,2,2,2],[3,3,3,3,3,3]],
#     [[0,0,0,0,0,0],[2,2,2,2,2,2],[4,4,4,4,4,4],[6,6,6,6,6,6]]
# ]

output1=[]
output2=[]
Output=[]
a=0

for i in range(0,3):
    for j in range(0,4):
        product=a*j
        for k in range(0,6):
            output2.append(product)
        output1.append(output2)
        output2=[]
    j=j+1
    a+=1
    Output.append(output1)
    output1=[]
print(Output)
```

executed in 14ms, finished 18:59:42 2021-01-13

```
[[[0, 0, 0, 0, 0, 0], [0, 0, 0, 0, 0, 0], [0, 0, 0, 0, 0, 0], [0, 0, 0, 0, 0,
0]], [[0, 0, 0, 0, 0, 0], [1, 1, 1, 1, 1, 1], [2, 2, 2, 2, 2, 2], [3, 3, 3, 3,
3, 3]], [[0, 0, 0, 0, 0, 0], [2, 2, 2, 2, 2, 2], [4, 4, 4, 4, 4, 4], [6, 6, 6,
6, 6, 6]]]
```

In [44]:
```
#Write a Python program which takes a list of numbers as input and prints a
#Input:- [10,21,22,98,87,45,33,1,2,100]
#Output:- [21,87,45,33,1]

Input= [10,21,22,98,87,45,33,1,2,100]
Output=[]

[Output.append(i) for i in Input  if i%2!=0]

print(Output)

```

executed in 9ms, finished 18:17:02 2021-01-10

```
[21, 87, 45, 33, 1]
```

In [9]:
```
#Write a Python program which takes a list from the user and prints it after
Input= [10,21,22,98,87,45,33,1,2,100]
#Output:- [1,87,21,10,33,2,100,45,98,22] (It may be any randon list but with

import random

random.shuffle(Input)

print(Input)

```

executed in 9ms, finished 21:27:18 2021-01-11

```
[100, 87, 1, 33, 10, 98, 21, 2, 22, 45]
```