

```
In [4]: l=["sudh",234,45.56,[45,56,6,"c"], True]
```

```
In [5]: for i in l:  
        print(i)
```

```
sudh  
234  
45.56  
[45, 56, 6, 'c']  
True
```

```
In [6]: l[0]
```

```
Out[6]: 'sudh'
```

```
In [7]: l[::-1]
```

```
Out[7]: [True, [45, 56, 6, 'c'], 45.56, 234, 'sudh']
```

```
In [8]: for i in l:  
        if type(i)==list:  
            print("this is a list",i)  
        else:  
            print("not a list",i)
```

```
not a list sudh  
not a list 234  
not a list 45.56  
this is a list [45, 56, 6, 'c']  
not a list True
```

```
In [9]: l
```

```
Out[9]: ['sudh', 234, 45.56, [45, 56, 6, 'c'], True]
```

```
In [10]: l1=[345,2345,"ineuron","tech"]
```

```
In [11]: l+l1
```

```
Out[11]: ['sudh', 234, 45.56, [45, 56, 6, 'c'], True, 345, 2345, 'ineuron', 'tech']
```

```
In [12]: l*2
```

```
Out[12]: ['sudh',  
234,  
45.56,  
[45, 56, 6, 'c'],  
True,  
'sudh',  
234,  
45.56,  
[45, 56, 6, 'c'],  
True]
```

```
In [13]: len(l)
```

Out[13]: 5

In [14]: `345 in l`

Out[14]: False

In [15]: `234 in l`

Out[15]: True

In [18]: `print(max([2,3,4,5]))`

5

In [19]: `print(max(["sdfs", "sdfs", 234]))`

```
-----  
TypeError                                Traceback (most recent call last)  
<ipython-input-19-831d4c8fe763> in <module>  
----> 1 print(max(["sdfs", "sdfs", 234]))  
  
TypeError: '>' not supported between instances of 'int' and 'str'
```

In [20]: `max("sudh", "ineuron", "AI")` *#output based on alphabetical order*

Out[20]: 'sudh'

In [21]: `max("sudh", "ineuron", "AI", "z")`

Out[21]: 'z'

In [22]: `min("fsds", "fsds", "sdfs")`

Out[22]: 'fsds'

In [23]: `min([2,7,8,0,4])`

Out[23]: 0

In [24]: `min(["sdfs", "sdfs", 234])`

```
-----  
TypeError                                Traceback (most recent call last)  
<ipython-input-24-533995d4d0cb> in <module>  
----> 1 min(["sdfs", "sdfs", 234])  
  
TypeError: '<' not supported between instances of 'int' and 'str'
```

In [25]: `l=[1,2,3,4]`

In [26]: `l.append("sudh")`

In [27]:

```
1
```

Out[27]: [1, 2, 3, 4, 'sudh']

In [28]:

```
1.append([1,3,6,8])
```

In [29]:

```
1
```

Out[29]: [1, 2, 3, 4, 'sudh', [1, 3, 6, 8]]

In [30]:

```
1.append(6+6j)
```

In [31]:

```
1
```

Out[31]: [1, 2, 3, 4, 'sudh', [1, 3, 6, 8], (6+6j)]

In [32]:

```
1 + "sudh"
```

```
-----  
TypeError                                Traceback (most recent call last)  
<ipython-input-32-c2dbfee94b38> in <module>  
----> 1 1 + "sudh"  
  
TypeError: can only concatenate list (not "str") to list
```

In [33]:

```
1.append("sudh")
```

In [34]:

```
1
```

Out[34]: [1, 2, 3, 4, 'sudh', [1, 3, 6, 8], (6+6j), 'sudh']

In [35]:

```
1 =[1,2,3,4,5]
```

In [36]:

```
1.append("sudh")
```

In [37]:

```
1
```

Out[37]: [1, 2, 3, 4, 5, 'sudh']

In [38]:

```
1.insert(3,"ineuron")
```

In [39]:

```
1
```

Out[39]: [1, 2, 3, 'ineuron', 4, 5, 'sudh']

In [40]:

```
1.insert(-1,"test")
```

In [41]:

```
1
```

Out[41]: [1, 2, 3, 'ineuron', 4, 5, 'test', 'sudh']

In [42]:

```
1.insert(-1,"test2")
```

In [43]:

```
1
```

Out[43]: [1, 2, 3, 'ineuron', 4, 5, 'test', 'test2', 'sudh']

In [44]:

```
1.count("test")
```

Out[44]: 1

In [45]:

```
l=[1,2,3,4]
```

In [46]:

```
l.append("sudh")
```

In [47]:

```
l
```

Out[47]: [1, 2, 3, 4, 'sudh']

In [48]:

```
l.append([1,2,4,56])
```

In [49]:

```
l
```

Out[49]: [1, 2, 3, 4, 'sudh', [1, 2, 4, 56]]

In [50]:

```
l.extend("test1")
```

In [51]:

```
l.extend(45)
```

```
-----  
TypeError                                Traceback (most recent call last)  
<ipython-input-51-d9eeb70b1f51> in <module>  
----> 1 l.extend(45)
```

```
TypeError: 'int' object is not iterable
```

In []:

```
l
```

In []:

```
s="test"  
list(s)
```

In []:

```
l.extend([3,4,7,89])
```

In [52]:

```
l
```

```
Out[52]: [1, 2, 3, 4, 'sudh', [1, 2, 4, 56], 't', 'e', 's', 't', '1']
```

```
In [53]: 1.extend([3,4,7,89,["sdfusf",4,5]])
```

```
In [54]: l1=[2,3,4,5]
```

```
In [55]: l1.pop()
```

```
Out[55]: 5
```

```
In [56]: l1
```

```
Out[56]: [2, 3, 4]
```

```
In [57]: l1.pop(0)
```

```
Out[57]: 2
```

```
In [58]: l1
```

```
Out[58]: [3, 4]
```

```
In [59]: l2=[24,56,6,66,9,3,61]
```

```
In [60]: l2.remove(6)
```

```
In [61]: l2
```

```
Out[61]: [24, 56, 66, 9, 3, 61]
```

```
In [62]: l2=[24,56,6,9,9,9,66,9,3,61]
```

```
In [63]: l2.remove(9) #only remove 1st occurence
```

```
In [64]: l2
```

```
Out[64]: [24, 56, 6, 9, 9, 66, 9, 3, 61]
```

```
In [68]: l2.sort()
```

```
In [69]: l2
```

```
Out[69]: [3, 6, 9, 9, 9, 24, 56, 61, 66]
```

```
In [70]: 13=[3,4,5,6,78,"sudh", "ineuron", 45.67]
```

```
In [71]: 13.sort()
```

```
-----  
TypeError                                Traceback (most recent call last)  
<ipython-input-71-4ece838cd89d> in <module>  
----> 1 13.sort()
```

```
TypeError: '<' not supported between instances of 'str' and 'int'
```

```
In [72]: 14=[3,4,5,6,78, 45.67]
```

```
In [73]: 14
```

```
Out[73]: [3, 4, 5, 6, 78, 45.67]
```

```
In [78]: 1=[[1,2,3],[4,5,6],[7,8,9,'xyz'],10,'vishal',True]  
#PART1  
1.insert(2,[11,12])  
1.insert(-1,[13,14])  
1.append(12+3j)
```

```
In [79]: 1
```

```
Out[79]: [[1, 2, 3],  
[4, 5, 6],  
[11, 12],  
[7, 8, 9, 'xyz'],  
10,  
'vishal',  
[13, 14],  
True,  
(12+3j)]
```

```
In [1]: 1=[[1,2,3],[11,12,'b','b','b'],[21,'t',223,44],[4,5,6],[7,8,9],'demo',12.5]  
  
for i in 1:  
    if type(i)==list:  
        j=0  
        while j<len(i):  
            if type(i[j]) is str:  
                print("Index of string {} is : ".format(i[j]),j)  
                j=j+1  
        j=0  
        while j<len(i):  
            if type(i[j]) is str:  
                print("The string in the nested list is '{}'.format(i[j]))  
                i.remove(i[j])  
                continue  
            j=j+1  
print("List after removal of string from nested list is\r", 1, '\n')
```

```
Index of string b is : 2  
Index of string b is : 3  
Index of string b is : 4  
The string in the nested list is 'b'  
The string in the nested list is 'b'  
The string in the nested list is 'b'
```

```
Index of string t is : 1
The string in the nested list is 't'
[[1, 2, 3], [11, 12], [21, 223, 44], [4, 5, 6], [7, 8, 9], 'demo', 12.5]
```

In []:

In []:

In []:

```
In [80]: l=[]
         for i in range(5):
             l.append(int(input()))
         print(l)
```

```
45
54
9
5
9
[45, 54, 9, 5, 9]
```

```
In [82]: input()
```

```
4,45,65,90,2
```

```
Out[82]: '4,45,65,90,2'
```

```
In [83]: list(input())
```

```
45, 56, 92
```

```
Out[83]: ['4', '5', ',', ' ', '5', '6', ',', ' ', '9', '2']
```

```
In [10]: l=[1,2,3,4,5]
```

```
In [11]: l1=[]
```

```
In [12]: for i in "sudh":
         l1.append(i)
```

```
In [13]: l1
```

```
Out[13]: ['s', 'u', 'd', 'h']
```

```
In [16]: [i for i in "sudh"]
```

```
Out[16]: ['s', 'u', 'd', 'h']
```

```
In [17]: [[i] for i in "sudh"]
```

```
Out[17]: [['s'], ['u'], ['d'], ['h']]
```

In [18]:

```
l=[]
for i in range(10):
    if i%2==0:
        l.append(i)
```

In [19]:

```
l
```

Out[19]: [0, 2, 4, 6, 8]

In [21]:

```
[i for i in range(10) if i%2==0]
```

Out[21]: [0, 2, 4, 6, 8]

In [22]:

```
l=[]
for i in range(10):
    if i%2!=0:
        l.append("odd")
    else:
        l.append("even")
```

In [23]:

```
l
```

Out[23]: ['even', 'odd', 'even', 'odd', 'even', 'odd', 'even', 'odd', 'even', 'odd']

In [1]:

```
["odd" if i%2!=0 else "even" for i in range(10)]
```

Out[1]: ['even', 'odd', 'even', 'odd', 'even', 'odd', 'even', 'odd', 'even', 'odd']

In [2]:

```
mat=[]
for i in range(3):
    mat.append([])
    for j in range(3):
        mat[i].append(j)
mat
```

Out[2]: [[0, 1, 2], [0, 1, 2], [0, 1, 2]]

In [4]:

```
[[j for j in range(3)] for i in range(3)]
```

Out[4]: [[0, 1, 2], [0, 1, 2], [0, 1, 2]]

In [6]:

```
[i for i in range(8) if i%2==0 if i%3==0]
```

Out[6]: [0, 6]

In [7]:

```
l=[]
for i in range(8):
    if i%2==0:
        if i%3==0:
            l.append(i)
```


In [8]:

```
1
```

Out[8]: [0, 6]

In [9]:

```
l=[]  
for i in range(10):  
    l.append(i)
```

In [10]:

```
1
```

Out[10]: [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]

In [11]:

```
["yes" if i==1 else "no" if i==2 else "test" for i in l]
```

Out[11]: ['test', 'yes', 'no', 'test', 'test', 'test', 'test', 'test', 'test', 'test']

In [15]:

```
1
```

Out[15]: [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]

In [17]:

```
res=[]  
for i in l:  
    if i==1:  
        res.append("yes")  
    elif i==2:  
        res.append("no")  
    else:  
        res.append("test")
```

In [18]:

```
res
```

Out[18]: ['test', 'yes', 'no', 'test', 'test', 'test', 'test', 'test', 'test', 'test']

In []:

In []:

In []:

In []:

In []: