LIST

```
list=[] #empty list

list1 = [10,1,23] #list of integers

list3 = [0.4,1.3,44.5] #list of float numbers

list4 = ['hello','one','two','three'] #string list

list5 = ['revanth',1,2,7.7,[1,89]] #nested list

len(list5) # length of list
```

```
5
```

+ Code + Text

LIST INDEXING

```
list = [1,2,3,4,5,6,7,8,9,[1,2,3]]

list
```

```
[1, 2, 3, 4, 5, 6, 7, 8, 9, [1, 2, 3]]
```

```
list[0] # first element
```

```
1
```

```
list[-1] #last element
```

```
[1, 2, 3]
```

```
list[9][0]  #for nested indexing
```

```
1
```

LIST SLICING

```
list
```

```
[1, 2, 3, 4, 5, 6, 7, 8, 9, [1, 2, 3]]
```

```
list[0:3] # from index 0-2
```

```
[1, 2, 3]
```

```
list[4:8] # from index 3-7
```

```
[5, 6, 7, 8]
```

```
list[:5] # first 5 elements
```

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

```
list[-5:] #last five elements
```

```
[6, 7, 8, 9, [1, 2, 3]]
```

```
list[-1] #last element
```

```
[1, 2, 3]
```

```
list[:] #returns whole list
```

```
[1, 2, 3, 4, 5, 6, 7, 8, 9, [1, 2, 3]]
```

ADD,REMOVE AND CHANGE ITEMS

```
list.append(11) # add element at the end
list
```

```
[1, 2, 3, 4, 5, 6, 7, 8, 9, [1, 2, 3], 11]
```

```
list.insert(6,'six') #insert 'six' at 5th index
list
```

```
[1, 2, 3, 4, 5, 6, 'six', 'six', 'six', 'six', 7, 8, 9, [1, 2, 3], 11]
```

```
list.remove('six') #remove element 'six'
list
```

```
[1, 2, 3, 4, 5, 6, 'six', 'six', 'six', 7, 8, 9, [1, 2, 3], 11]
```

```
list.pop() #removes last element
```

```
11
```

```
list
```

```
[1, 2, 3, 4, 5, 6, 'six', 'six', 'six', 7, 8, 9, [1, 2, 3]]
```

```
list.pop(7) #removes element from 6th index
```

```
'six'
```

```
list
```

```
[1, 2, 3, 4, 5, 6, 'six', 'six', 7, 8, 9, [1, 2, 3]]
```

```
list[6] = 'something'
```

```
list
```

```
[1, 2, 3, 4, 5, 6, 'something', 'six', 7, 8, 9, [1, 2, 3]]
```

```
list.clear() #clears the list
list
```

```
[]
```

```
del list
list
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
<ipython-input-37-53a972abcbfc> in <cell line: 1>()
----> 1 del list
      2 list

NameError: name 'list' is not defined
```

```
list = list1.copy()
list
```

```
[10, 1, 23]
```

JOIN LIST

```
list1 = [1,2,3]
list2 = [4,5,6]
```

```
list = list1 + list2 # joining two lists with '+'
list
```

```
[1, 2, 3, 4, 5, 6]
```

```
1 in list
```

```
True
```

```
100 in list
```

```
False
```

REVERSE & SORT LIST

```
list.reverse() #reverse the list
```

```
list
```

```
[6, 5, 4, 3, 2, 1]
```

```
list
```

```
[6, 5, 4, 3, 2, 1]
```

```
list.sort()
list
```

```
[1, 2, 3, 4, 5, 6]
```

LOOPING

```
for i in list:
  print(i)
```

```
1
2
3
4
5
6
```

```
for i in enumerate(list):
  print(i)
```

```
(0, 1)
(1, 2)
(2, 3)
(3, 4)
(4, 5)
(5, 6)
```

COUNTING

```
list.count(1)
```

```
1
```

```
list=[1,2,3,4,5,6,3,1,5]
list.count(5)
```

```
2
```