

# LIST AND TUPLE

## LIST :

- 1) Represented within Square brackets [ ]
- 2) Allows Duplicate values
- 3) Maintain insertion order
- 4) Sub-scriptable [ Allows to access individual elements by it's position ]
- 5) Mutable [ After creation the values Can be Added / Remove / Modified... ]

Ex :

Input	Output
a = [10,20,10,30,10]	
print(a)	Allows duplicate values and Maintain insertion order [10,20,10,30,10]
print(a[0])	Sub-scriptable 10
a[2] = 50	
print(a)	Mutable ( Modified value ) [10,20,50,30,10]

## TUPLE :

- 1) Represented within Round brackets ( )
- 2) Allows Duplicate values
- 3) Maintain insertion order
- 4) Sub-scriptable [ Allows to access individual elements by it's position ]
- 5) Im-mutable [ After creation the values Can't be Added / Remove / Modified... ]

Ex :

Input	Output
a = (10,20,10,30,10)	
print(a)	Allows duplicate values and Maintain (10,20,10,30,10) insertion order
print(a[1])	Sub-scriptable 20

# Types of List and Tuple functions :

S.NO	LIST	TUPLE
1	append()	
2	extend()	
3	insert()	
4	sort()	
5	reverse()	
6	count()	count()
7	index()	index()
8	copy()	
9	len()	len()
10	pop()	
11	remove()	
12	clear()	

## **LIST :**

### **1) append()**

List oda end position la Single value mattum add pannum.

**Syntax :**

**listname.append(Value)**

### **2) extend()**

List oda end position la 2 or More than values add pannum.

**Syntax :**

**listname.extend([Value1,Value2,.....])**

### **3) insert()**

List la index oda specific position ah use panni andha specific position la single value va add pannum.

**Syntax :**

**listname.insert(index,Value)**

### **4) sort()**

List la irukira values ah Ascending order format ah change pannum.

**Syntax :**

**listname.sort( )**

### **5) reverse()**

List la irukira values ah Reverse and Desending order format ah change pannum.

**Syntax :**

**listname.reverse()**

## 6) count()

List la irukira same number evlo irukunu correct ah find pannum.

Syntax :

**listname.count(Value)**

## 7) index()

List la irukira one specific value endha index position la irukkunu correct ah find pannum.

Syntax :

**listname.index(Value)**

## 8) copy()

One list kulla irukira ella Data's um copy panna use aagum.

Syntax :

**listname.copy( )**

## 9) len()

List kulla irukira total values evlo irukunu find pannum.

Syntax :

**len(listname)**

## 10) pop()

List la irukira index position oda value va Delete or Remove pannum.

Syntax :

**listname.pop(index)**

## **11) remove()**

List la irukira one specific value va Remove or Delete pannum.

**Syntax :**

**listname.remove(Value)**

## **12) clear()**

List la irukira ella values um Remove pannum.

**Syntax :**

**listname.clear( )**

## **TUPLE :**

### **1) count()**

Tuple la irukira same number evlo irukunu correct ah find pannum.

**Syntax :**

**tuplename.count(Value)**

### **2) index()**

Tuple la irukira values endha index position la irukkunu correct ah find pannum.

**Syntax :**

**tuplename.index(Value)**

### **3) len()**

Tuple kulla irukira total values evlo irukunu find pannum.

**Syntax :**

**len(tuplename)**

# LIST Programs :

**append(),extend(),insert(),sort(),reverse()**

## INPUT

```
a = [2,4,8,10,6]

a.append(1)      # append()
print(a)

a.extend([0,3,5])      # extend()
print(a)

a.insert(1,100)      # insert()
print(a)

a.reverse()      #reverse() as Reverse method
print(a)

a.sort()      #sort() as Ascending order
print(a)

a.reverse()      #reverse() as Desending order
print(a)
```

## OUTPUT

```
[2, 4, 8, 10, 6, 1]      # append()

[2, 4, 8, 10, 6, 1, 0, 3, 5]      # extend()

[2, 100, 4, 8, 10, 6, 1, 0, 3, 5]      # insert()

[5, 3, 0, 1, 6, 10, 8, 4, 100, 2]      #reverse() as Reverse method

[0, 1, 2, 3, 4, 5, 6, 8, 10, 100]      #sort() as Ascending order

[100, 10, 8, 6, 5, 4, 3, 2, 1, 0]      #reverse() as Desending order
```

## count(),index(),copy(),len()

### INPUT

```
n = [10,20,50,50,40,40,55,50]

print(len(n))      # len()

c = n.count(50)    # count()
print(c)

i = n.index(10)    # index()
print(i)

c = n.copy()       # copy()
print(c)
```

### OUTPUT

```
8      # len()

3      # count()

0      # index()

[10, 20, 50, 50, 40, 40, 55, 50]      # copy()
```

## pop(),remove(),clear()

### INPUT

```
l = [1,3,5,7,9]

l.pop(1)      # pop()
print(l)

l.remove(5)    # remove()
print(l)

l.clear()     # clear()
print(l)
```

### OUTPUT

```
[1, 5, 7, 9]      # pop()

[1, 7, 9]        # remove()

[]                # clear()
```

# TUPLE Programs :

count(),index(),len()

**INPUT**

```
t = (10,20,50,50,40,40,55,50)

print(len(t))      # len()

c = t.count(50)    # count()
print(c)

i = t.index(10)    # index()
print(i)
```

**OUTPUT**

```
8      # len()

3      # count()

0      # index()
```