

```
In [4]: """
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will allow duplicate elements

list supports index based operations

modify the list

"""

a=[] #list can be represented by square brackets
print(a)

[]
```

```
In [26]: a=[]

print(type(a)) #type give the class of object

<class 'list'>
```

```
In [25]: a=[10,20,30,10] #here we can assign multiple values (like numbers and strings)

print(a) #will allow duplicate elements

[10, 20, 30, 10]
```

```
In [4]: names=['Bhanu',1,'Teja',2,'Mounika',3] #we can give different type of data like strings and numbers

print(names)

['Bhanu', 1, 'Teja', 2, 'Mounika', 3]
```

```
In [6]: num_names=[a, names] #we can have two list working together

print(num_names)

[[10, 20, 30, 1000, 10, 188, 90, 77, 88], ['Bhanu', 1, 'Teja', 2, 'Mounika', 3]]
```

```
In [1]: a=[]
```

```
a=[10,20,30,10]
a.copy() #copy
print(a)
a.sort() #sort
print(a)
a.clear() #clear
print(a)
```

```
[10, 20, 30, 10]
[10, 10, 20, 30]
[]
```

```
In [28]: a=[]
a=[10,20,30,10]
a.append(100) #append
print(a) #modify the list
```

```
[10, 20, 30, 10, 100]
```

```
In [29]: a=[]
a=[10,20,30,10]
print(a[0]) #list supports index based operations
```

```
10
```

```
In [30]: a=[]
a=[10,20,30,10]
print(a.count(10))
```

```
print(a.count(20)) #count
```

```
2  
1
```

```
In [31]: a=[]  
a=[10,20,30,10]  
a.remove(10)  
print(a) #remove  
[20, 30, 10]
```

```
In [8]: a=[]  
a=[10,20,30,10]  
del a[1]  
print(a) #delete through index based operation  
[10, 30, 10]
```

```
In [14]: a=[]  
a=[10,20,30,10]  
a.extend([40,50]) #we can extend the list  
print(a)  
[10, 20, 30, 10, 40, 50]
```

```
In [15]: a=[]  
a=[10,20,30,10]  
min(a) #minimum value in list
```

```
Out[15]: 10
```

```
In [16]: a=[]  
a=[10,20,30,10]  
max(a) #maximum value in list
```

Out[16]: 30

```
In [17]: a=[]  
a=[10,20,30,10]  
sum(a) #sum of all the values in list
```

Out[17]: 70

```
In [32]: a=[]  
a=[10,20,30,10]  
a.pop(2)  
print(a) #pop  
a.pop()  
print(a) #in this case it will remove last element  
[10, 20, 10]
```

```
In [33]: a=[]  
a=[10,20,30,10]  
a.insert(2,1000)  
a.insert(4,88)  
a.insert(5,188)  
a.insert(6,90)
```

```
a.insert(7,77)
print(a) #insert
[10, 20, 1000, 30, 88, 188, 90, 77, 10]
```

```
In [34]: a=[]
a=[10,20,30,10]
a.reverse()
print(a) #reverse
[10, 30, 20, 10]
```

```
In [35]: a=[]
a=[10,20,30,10]
a.insert(3,1000)
a.insert(8,88)
a.insert(5,188)
a.insert(6,90)
a.insert(7,77)
print(a)
print(a[2:]) #from index 2 to all
[10, 20, 30, 1000, 10, 188, 90, 77, 88]
[30, 1000, 10, 188, 90, 77, 88]
```

```
In [36]: a=[]
a=[10,20,30,10]
a.insert(3,1000)
```

```
a.insert(8,88)
a.insert(5,188)
a.insert(6,90)
a.insert(7,77)
print(a)
print(a[::-1]) #from last to first index
```

```
[10, 20, 30, 1000, 10, 188, 90, 77, 88]
[88, 77, 90, 188, 10, 1000, 30, 20, 10]
```

In [37]:

```
a=[]
a=[10,20,30,10]
a.insert(3,1000)
a.insert(8,88)
a.insert(5,188)
a.insert(6,90)
a.insert(7,77)
print(a)
print(a[2:5]) #from index 2 to 5
```

```
[10, 20, 30, 1000, 10, 188, 90, 77, 88]
[30, 1000, 10]
```

In [1]:

```
a=[]
a=[10,20,30,10]
a.insert(3,1000)
```

```
a.insert(8,88)
a.insert(5,188)
a.insert(6,90)
a.insert(7,77)
print(a)
print(a[:5]) #from start to 4th index (n-1)
[10, 20, 30, 1000, 10, 188, 90, 77, 88]
[10, 20, 30, 1000, 10]
```

In []: