

## List Inbuilt Functions

```
# Max function  
# Min function  
# Sum function  
# Count  
# Index  
# Reverse  
# L + L1  
# Extend  
# In operator in list
```

```
runs = [10, 99, 100, 50, 80, 200, 150, 20, 99, 99]
```

```
# max function
```

```
max(runs)
```

```
200
```

```
# min function
```

```
min(runs)
```

```
10
```

```
## sum function
```

```
sum(runs)
```

```
907
```

```
## count
```

```
runs
```

```
[10, 99, 100, 50, 80, 200, 150, 20, 99, 99]
```

```
runs.count(99)
```

```
3
```

```
# index
```

```
runs
```

```
[10, 99, 100, 50, 80, 200, 150, 20, 99, 99]
```

```
runs.index(99)
```

```
1
```

```

#dir(runs)

# reverse

runs
[99, 99, 20, 150, 200, 80, 50, 100, 99, 10]
runs.reverse()

runs
[10, 99, 100, 50, 80, 200, 150, 20, 99, 99]

runs = [10, 99, 100, 50, 80, 200, 150, 20, 99, 99]

# Addidng 2 lists
l = [1, 2, 3]
l1 = [4, 5, 6, 7, 8]
l3 = l + l1
l3
[1, 2, 3, 4, 5, 6, 7, 8]

# Extend

print(l)
print(l1)

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

l.extend(l1) # l = l + l1

#l.extend(l)

l
[1, 2, 3, 4, 5, 6, 7, 8]

l.append(l1)

l
[1, 2, 3, 4, 5, 6, 7, 8, [4, 5, 6, 7, 8]]

runs
[10, 99, 100, 50, 80, 200, 150, 20, 99, 99]

```

```
max(runs)
200
runs.index(max(runs))
5
```

```
runs
[10, 99, 100, 50, 80, 200, 150, 20, 99, 99]
# In operator in lists
200 in runs
True
nums = [12, 2, 1, 22, 22, 23, 36]
print(nums.count(4), end=' ')
print(nums.count(22), end=' ')
print(nums.index(1), end=' ')
0 2 2
l = [1, 2]
l.append(0)
l2 = [3]
l.extend(l2)
l = l + l2
print(l)
[1, 2, 0, 3, 3]
l = [1, 2, 3, 4]
l.reverse()
l.append(5)
print(l)
[4, 3, 2, 1, 5]
```

```
## List slicing
```

```
l = [10, 2, 5, 3, 6]
```

```
l[0:len(l)]
```

```
[10, 2, 5, 3, 6]
```

```
l[0:5:2]
```

```
[10, 5, 6]
```

```
l[-1]
```

```
6
```

```
l[-1:-6:-1]
```

```
[6, 3, 5, 2, 10]
```

```
l[::-1]
```

```
[6, 3, 5, 2, 10]
```

```
l[::-]
```

```
[10, 2, 5, 3, 6]
```

```
runs
```

```
[10, 99, 100, 50, 80, 200, 150, 20, 99, 99]
```

```
runs[-1:-6:-1]
```

```
[99, 99, 20, 150, 200]
```

```
runs[5:]
```

```
[200, 150, 20, 99, 99]
```

```
len(runs)
```

```
10
```

```
runs[:6]
```

```
[10, 99, 100, 50, 80, 200]
```

```
nums = [0, 25, 50, 75, 100]
```

```
nums[0:9:2]
```

```
[0, 50, 100]
```

```
nums = [1, 1, 2, 3, 5, 8, 13]  
nums[1:5]
```

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

```
# Sum of odd index elements  
# Sum of even index elements  
# Sum of Sachin scores in first 5 matches, last 5 matches
```

```
runs
```

```
[10, 99, 100, 50, 80, 200, 150, 20, 99, 99]
```

```
for i in range(0, 10, 2):  
    print(i, end=" ")
```

```
0 2 4 6 8
```

```
# Total runs scored by Sachin in odd matches
```

```
total = sum(runs[1::2])
```

```
total
```

```
468
```

```
# Total runs scored by Sachin in even matches
```

```
sum(runs[::2])
```

```
439
```

```
# Sum of Sachin scores in first 5 matches, last 5 matches
```

```
runs
```

```
[10, 99, 100, 50, 80, 200, 150, 20, 99, 99]
```

```
sum(runs[:5])
```

```
339
```

## Nested Lists Introduction

```
odi = [120, 30, 50]
test = [248, 200, 100]
t20 = [100, 50, 60]

runs = [odi, test, t20]

runs

[[120, 30, 50], [248, 200, 100], [100, 50, 60]]

l = []

l.append(odi)

l

[[120, 30, 50]]

total = []

total.append(odi)
total.append(test)
total.append(t20)

total

[[120, 30, 50], [248, 200, 100], [100, 50, 60]]

len(runs)

3

runs[0]

[120, 30, 50]

for i in runs:
    print(i)

[120, 30, 50]
[248, 200, 100]
[100, 50, 60]

# It is printing all the lists inside parent list
for i in range(0, len(runs)):
    print(runs[i])

[120, 30, 50]
[248, 200, 100]
[100, 50, 60]

runs
```

```
[[120, 30, 50], [248, 200, 100], [100, 50, 60]]
```

```
for i in range(len(runs)):
    for j in range(len(runs[i])):
        print(runs[i][j], end= " ")
    print()
```

```
120 30 50
248 200 100
100 50 60
```

```
for i in range(len(runs)):
    for j in range(len(runs[i])):
        print(runs[j], end= " ")
    print()
```

```
[120, 30, 50] [248, 200, 100] [100, 50, 60]
[120, 30, 50] [248, 200, 100] [100, 50, 60]
[120, 30, 50] [248, 200, 100] [100, 50, 60]
```

*# Printing index for you all*

```
for i in range(0, len(runs)):
    for j in range(0, len(runs[i])):
        print(i, j, end= " ")
    print()
```

```
0 0 0 1 0 2
1 0 1 1 1 2
2 0 2 1 2 2
```

runs

```
[[120, 30, 50], [248, 200, 100], [100, 50, 60]]
```

```
for i in runs:
    for j in i:
        print(j, end=" ")
    print()
```

```
120 30 50
248 200 100
100 50 60
```

```
nums = [[10, 20, 30], [98, 99]]  
nums[1][1]
```

99

```
nums = [[10, 20, 30], [98, 99]]  
nums[0][0]
```

10

```
l = [1, 2, 3]  
l1 = [4, 5, 6]
```

```
l + l1
```

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

```
l
```

[1, 2, 3]

```
l1
```

[4, 5, 6]

```
l.extend(l1)
```

```
l
```

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

```
l1
```

[4, 5, 6]