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(runs)
```

```
200
```

```
min(runs)
```

```
10
```

```
sum(runs)
```

```
907
```

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

```
3
```

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

```
1
```

```
runs.reverse()
```

```
print(runs)
```

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

```
987349 in runs
```

```
False
```

```
l = [23, 4]
l1 = [6, 8]
```

```
print(l + l1)
```

```
[23, 4, 6, 8]
```

```
# Quiz

nums = [12, 2, 1, 22, 23, 36]
print(max(nums), end=' ')
print(min(nums), end=' ')
print(sum(nums), end=' ')
```

```
36 1 96
```

```
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
```

```
# max function
```

```
# min function
```

```
## sum function
```

```
## count
```

```
# index



#dir(runs)
# reverse



runs = [10, 99, 100, 50, 80, 200, 150, 20, 99, 99]
# Addidng 2 lists



# Extend
```

```
# In operator in lists
```

List slicing

```
# List slicing doesnt affect the current list

l = [2, 4, 5, 7, 8]

print(l[0])

2

print(l[:5])

[2, 4, 5, 7, 8]

# print(l[1,5])
# This is not possible


l[1:3]

[4, 5]

print(l)

[2, 4, 5, 7, 8]

# the 4 lines below from here will yield same output

x = l[:len(l)]

print(x, type(x))

[2, 4, 5, 7, 8] <class 'list'>

print(l[:])

[2, 4, 5, 7, 8]

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

[2, 4, 5, 7, 8]
```

```
# Quiz

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

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

```
nums = [0, 25, 50, 75, 100]
print(nums[0:5:2])
```

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

```
nums[0:5:2] == [25, 75]
```

```
False
```

```
[25, 75]
```

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

# Od index elements

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

print(runs[1:len(runs):2])
```

```
[99, 50, 200, 20, 99]
```

```
print(runs[1::2])
```

```
[99, 50, 200, 20, 99]
```

```
total = 0
for i in runs:
    total += i
print(total)
```

```
907
```

```
# sum function

sum(runs)
```

```
907
```

```
print(sum(runs[1::2]))
468
# sum of even index elements
print(sum(runs[0:len(runs):2]))
439
print(runs[0:len(runs):2])
[10, 100, 80, 150, 99]
runs
[10, 99, 100, 50, 80, 200, 150, 20, 99, 99]
print(sum(runs[::2]))
439
# sum of first 5 matches
print(sum(runs[:5]))
339

# Negative indexing in slicing
l
[2, 4, 5, 7, 8]
l[-1]
8
print(l[0:-1])
[2, 4, 5, 7]
print(l[5:0])
[]
print(l[4::-1])
[8, 7, 5, 4, 2]
print(l[4:-6:-1])
[8, 7, 5, 4, 2]
```

```
print(l)
```

```
[2, 4, 5, 7, 8]
```

```
print(l[::])
```

```
[2, 4, 5, 7, 8]
```

```
print(l[::-1])
```

```
[8, 7, 5, 4, 2]
```

```
l = [10, 2, 5, 3, 6]
print(l[::-2])
```

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

```
# Score in last 5 matches
runs
```

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

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

```
568
```

```
# Rotate the array
l = [1, 2, 3, 4, 5]
[l[-1]]
```

```
[5]
```

```
l[0:-1]
```

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

```
[l[-1]] + l[0:-1]
```

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

```
N = int(input())
A = list(map(int, input().split()))
```

```
new_list = [A[-1]] + A[0:-1]
for i in new_list:
    print(i, end=" ")
```

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

```
5 1 2 3 4
```

```
[5] + [3, 4, 5]
```

```
[5, 3, 4, 5]
```

```
# Doubts
```

```
A = list(map(int, input().split()))
```

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

```
print(A, type(A))
```

```
[5, 1, 2, 3, 4, 5] <class 'list'>
```

```
l = A[1:]
print(l)
```

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