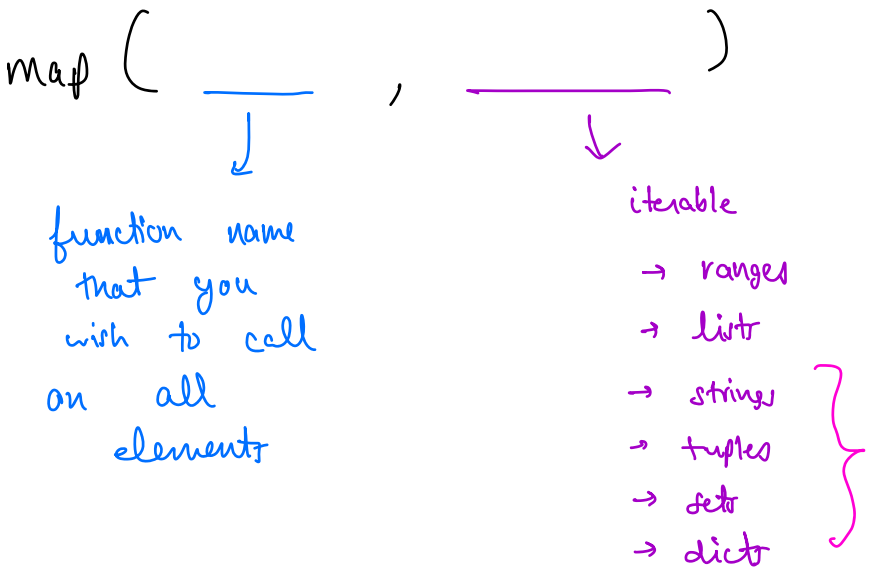
List Slicing

9:05

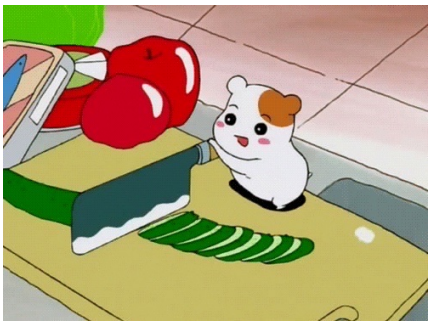
Agenda

- map function
- List slicing
- Reverse of an array

map() function

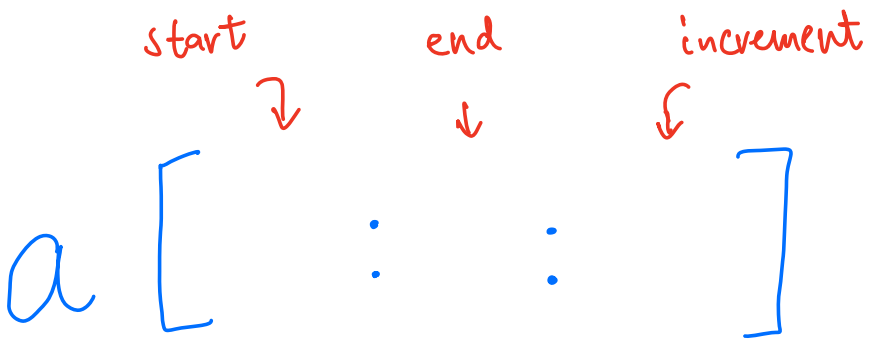


List slicing

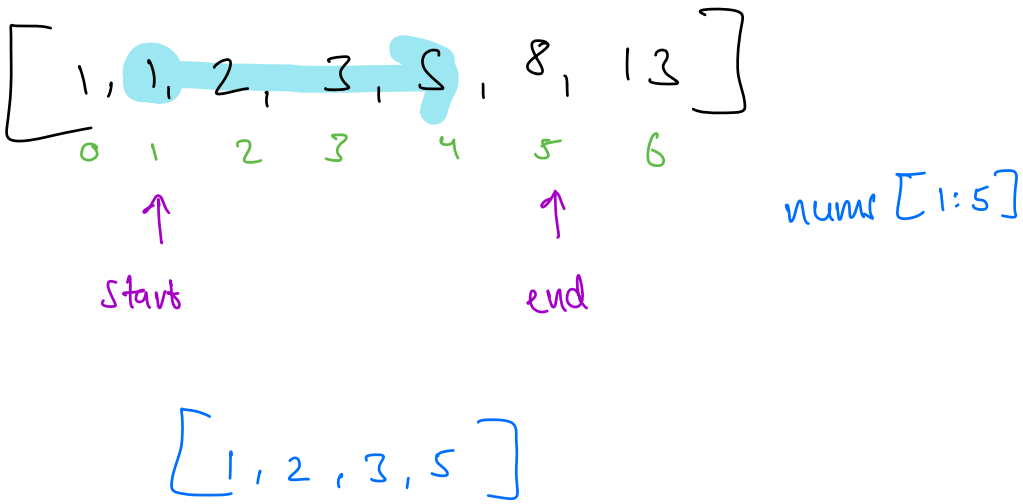


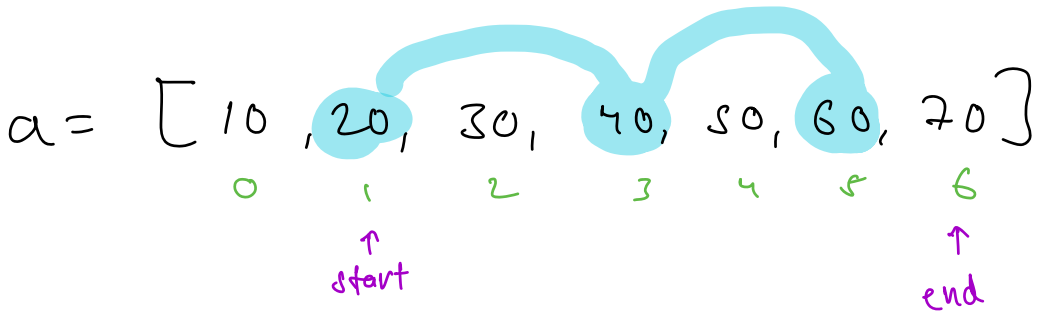
To extract some portion/slice out of your list

a =	1	9	2	8	4	3	7
	0	1	2	3	4	5	6



end is excluded

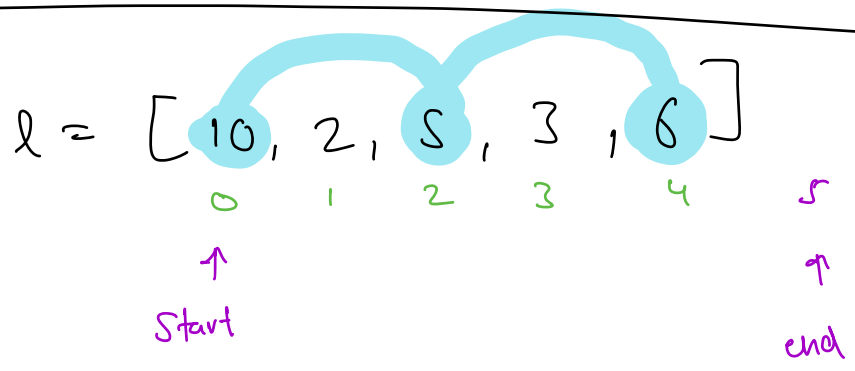




a [1 : 6 : 2]

start end step

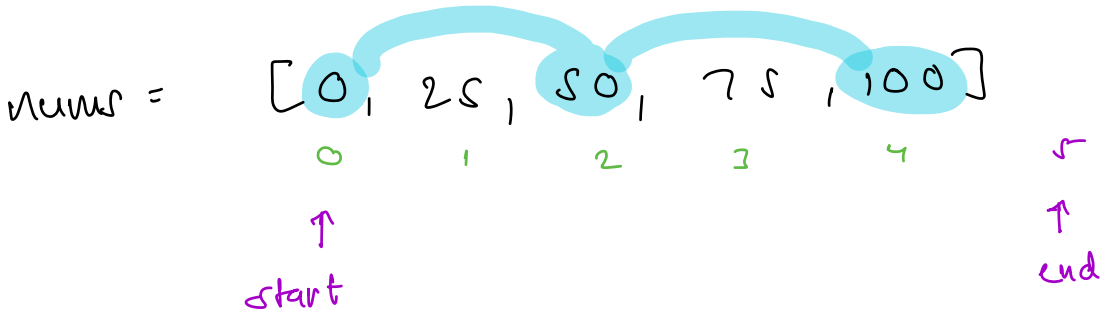
[20, 40, 60]



l [0 : 5 : 2]

step

[10, 5, 6]

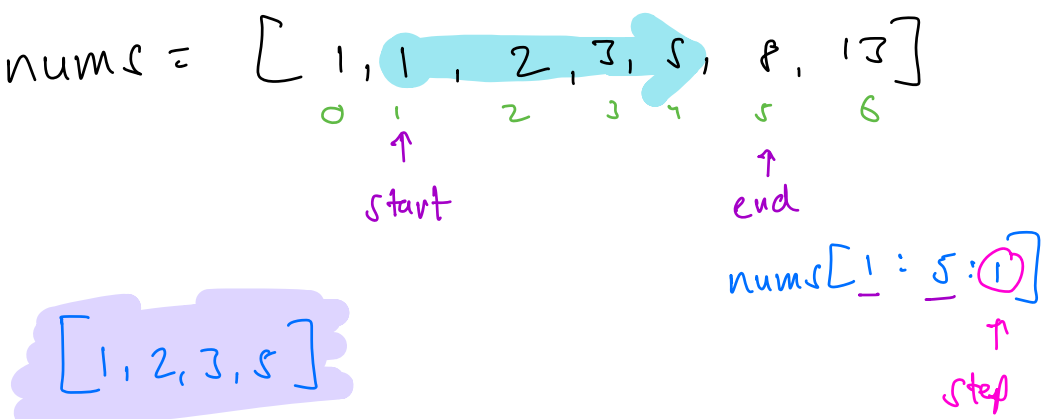


nums[0:5:2] == [25, 75]

[0, 50, 100]

False

Break till 10:05 PM



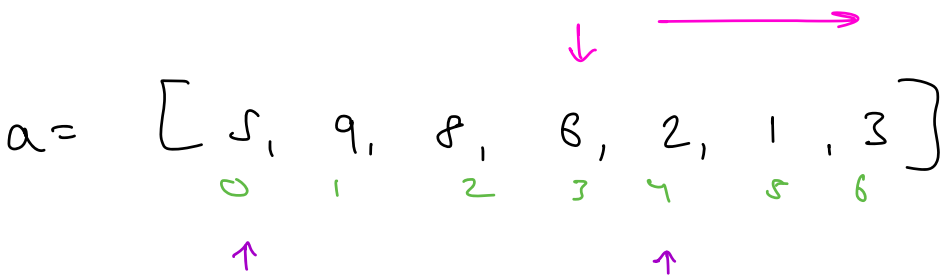
[1, 2, 3, 5]

Default values

+ve step

→ start = 0

→ end = length of list



a[:4] = [5, 9, 8, 6]

start = 0
step = 1

a[3:] = [6, 2, 1, 3]

end = 7
(Length of the List)

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

0 1 2 3 4 5 6

↑ start

↑ end

[1, 1, 2, 3, 5]

nums[:5]

start = 0

---

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

0 1 2 3 4 5

↑ end

↑ start

Ans = []

l[5:0]

step = 1

---

a = [10, 20, 30, 40, 50, 60]

0 1 2 3 4 5

-6 -5 -4 -3 -2 -1

↑ start

↑ end

a[-3:-1]

default step = 1 = [40, 50]

a[2 : -2] = [30, 40]

a[-5 : 4] = [20, 30, 40]

a[1 : -2] → a[1:4]
a[-5 : -2]

---

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

0	1	2	3	4	5	6
-7	-6	-5	-4	-3	-2	-1

↑ start ↑ end

nums [-5 : -2] = [2, 3, 5]

Negative steps

a = [10, 20, 30, 40, 50, 60]

0	1	2	3	4	5
-6	-5	-4	-3	-2	-1

↑ end ↑ start

a[5 : 2 : -1] = [60, 50, 40]

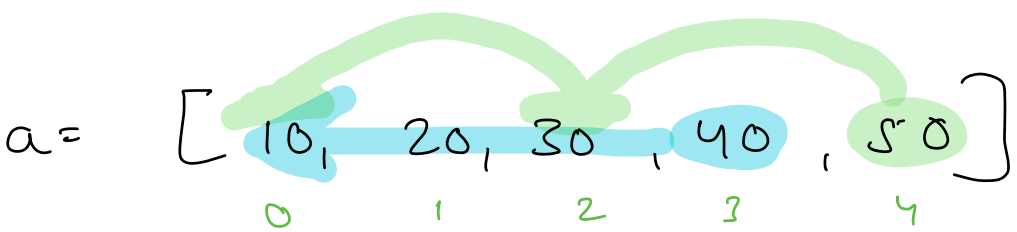
a[4 : 0 : -2] = [50, 30]

a[5 : 0 : -3] = [60, 30]

Default values for -ve steps

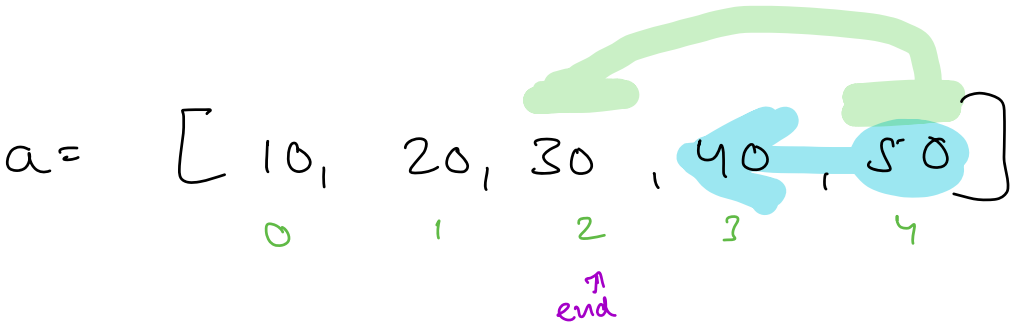
→ start = - len -1

→ end = len



a[3 : __ : -1] = 40, 30, 20, 10

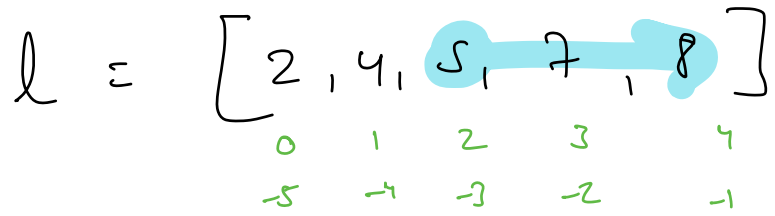
a[4 : : -2] [50, 30, 10]



a[: 2 : -1] = 50, 40

a[: 0 : -2] = [50, 30]

Negative step = Right to Left



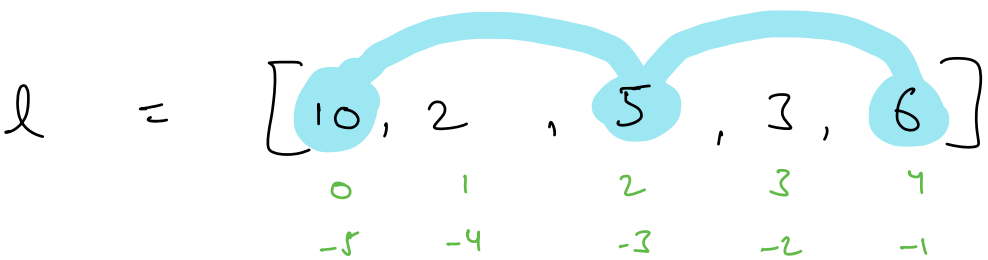
l[-3 :]

start = -3

end = ____

step = 1

[5, 7, 8]



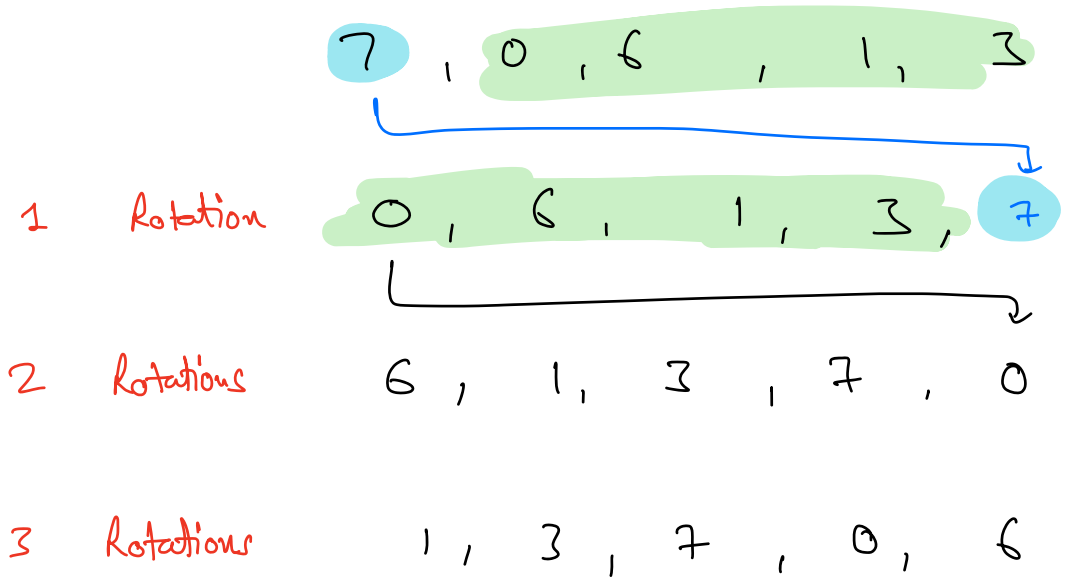
l[: : -2]

[6, 5, 10]

step = -2

R to L

Rotate Array



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a = 7, 0, 6, 1, 3

a[:3] a[3:]

b = 1, 3, 7, 0, 6

b = a[3:] + a[:3]

Doubts

Thank You

Competitive Programming → Very advanced DSA (Sport for DSA)

- codeforces.com
- codechef.com

Good Night

Thank You

Friday