

## slicing

List = [ 4, 6, 8, 10, 12 ]

↑   ↑   ↑   ↑   ↑  
0   1   2   3   4  
-5 -4 -3 -2 -1

List [ start : stop : step ]

↓   ↓   ↓  
index index increment  
or decrement.

List [ 0, 3, 1 ] means start from 0<sup>th</sup> index, stop at 3<sup>rd</sup> index, every time increase the index by 1.

index (start)

increment (next index)

0

$$0 + 1 = 1$$

1

$$1 + 1 = 2$$

2

$$2 + 1 = 3 \geq \text{stop index.}$$

Do not increment any more

List = [ 4, 6, 8, 10, 12 ]

↑   ↑   ↑   ↑   ↑  
0   1   2   3   4  
-5 -4 -3 -2 -1

$$\text{list} [ 0 : 3 : 1 ] = [ 4, 6, 8 ]$$

steps can be negative as well, if so, starting index should be greater than ending (stopping) index.

List [3:1:-1] means start from 3<sup>rd</sup> index, stop before 1<sup>st</sup> index, every time decrement the index 1.

index (start)      increment (next index)

3

$$3 - 1 = 2$$

2

$$2 - 1 = 1 \Rightarrow \text{stop}$$

List = [ 4, 6, 8, 10, 12 ]  
          ↑   ↑   ↑   ↑   ↑  
          0   1   2   3   4  
         -5 -4 -3 -2 -1

List [3:1:-1] = [8, 10]