Python Programming

Negative Indexing

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Negative indexing

- Use negative indexes to start the slice from the end of the sequence

```
        #  -7  -6 -5 -4 -3 -2 -1    # 7 + neg_pos
my_list = [0, 1, 2, 3, 4, 5, 6]

ln = len(my_list)

print(my_list[ln-1])    # 6 = last number
print(my_list[ln-2])    # 5 = 2nd last number

# Negative indexing
print(my_list[-1])    # 6 = last number
print(my_list[-2])    # 5 = 2nd last number

print(my_list.pop(-1))  # 6
print(my_list.pop(-1))  # 5

#my_list: [0, 1, 2, 3, 4]

```

Slicing with -ve indexing

```
3          #-9 -8 -7 -6 -5 -4 -3 -2 -1    # 9 + neg_pos
4      my_list = [0, 1, 2, 3, 4, 5, 6, 7, 8]
5
6
7      sub_list = my_list[3:7]      # 3 4 5 6
8      # we can rewrite by finding the matched -ve indices
9      sub_list = my_list[-6:-2]    # 3 4 5 6
10     sub_list = my_list[-6:7]     # 3 4 5 6
11     sub_list = my_list[3:-2]     # 3 4 5 6
12
13     # observe: -6 < -2
14     #sub_list = my_list[-2:-6]   # Empty list!
15
16
```

Slicing with -ve indexing and -ve step

```
2
3           #-9 -8 -7 -6 -5 -4 -3 -2 -1    # 9 + neg_pos
4   my_list = [0, 1, 2, 3, 4, 5, 6, 7, 8]
5
6   sub_list = my_list[1:8:1]     # 1 2 3 4 5 6 7
7
8   sub_list = my_list[-8:-2:1]    # 1 2 3 4 5 6
9   sub_list = my_list[-2:-8:-1]   # 7 6 5 4 3 2
10
11
```

"Acquire knowledge and impart it to the people."

"Seek knowledge from the Cradle to the Grave."