Advanced python

**(28-10-2023)**

Slicing in list:

In Python, slicing is a technique for extracting a portion of a sequence (such as a string, list, or tuple) by specifying a range of indices. Slicing allows you to create a new sequence containing the elements from the original sequence within the specified range.

Code:

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

print(lis[:])# sequence[start:stop:step]

print(lis[0:5])

print(lis[::])

print(lis[::-1])

print(lis[::-2])

out:

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

[1, 2, 3, 4, 5]

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

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

[8, 6, 4, 2]

Coping list:

* list only copied using list.copy() or list[:]. We should not assign the list to new list variable that only pointing to same list.

lis\_copy=lis[:]

lis\_copy=lis.copy()

print(lis\_copy)

* we can also copy or do some operations by using list comprehension. It is the modern way of creating copy of list and applying some expression for each item in list.

lis=[1,2,3,4,5,6,7,8,9]

print(lis)

lis1=[i for i in lis if i%2==0]#new\_list = [expression for item in iterable if condition]

print(lis1)

lis2=[i\*2 for i in lis]

print(lis2)

out:

[1, 2, 3, 4, 5, 6, 7, 8, 9]

[2, 4, 6, 8]

[2, 4, 6, 8, 10, 12, 14, 16, 18]