

5-mar

March 5, 2025

0.1 string list slicing(data type)

```
[1]: s1='nit'  
s1
```

```
[1]: 'nit'
```

```
[3]: s1[0]
```

```
[3]: 'n'
```

```
[5]: s1[1]
```

```
[5]: 'i'
```

```
[7]: s1[2]
```

```
[7]: 't'
```

```
[9]: s1[3]
```

```
-----  
IndexError                                Traceback (most recent call last)  
Cell In[9], line 1  
----> 1 s1[3]  
  
IndexError: string index out of range
```

```
[11]: s1
```

```
[11]: 'nit'
```

```
[13]: for i in s1:  
      print(i)
```

```
n  
i  
t
```

```
[15]: s1
```

```
[15]: 'nit'
```

0.2 list slicing

```
[17]: l=[40,50,60,80,90,60,30]  
l
```

```
[17]: [40, 50, 60, 80, 90, 60, 30]
```

```
[19]: l1=[1,2,3,4,5,6,7,8]  
l1
```

```
[19]: [1, 2, 3, 4, 5, 6, 7, 8]
```

```
[21]: l2=[9,8,7,6,5,4,3,2]  
l2
```

```
[21]: [9, 8, 7, 6, 5, 4, 3, 2]
```

```
[23]: l[:]
```

```
[23]: [40, 50, 60, 80, 90, 60, 30]
```

```
[27]: l[0:8]
```

```
[27]: [40, 50, 60, 80, 90, 60, 30]
```

```
[29]: l[1:8]
```

```
[29]: [50, 60, 80, 90, 60, 30]
```

```
[31]: l[3:]
```

```
[31]: [80, 90, 60, 30]
```

```
[33]: l[:8]
```

```
[33]: [40, 50, 60, 80, 90, 60, 30]
```

```
[35]: l[0:8:2]
```

```
[35]: [40, 60, 90, 30]
```

```
[37]: l
```

```
[37]: [40, 50, 60, 80, 90, 60, 30]
```

```
[39]: 1[0:8:5]
```

```
[39]: [40, 60]
```

```
[41]: 1[3:8:3]
```

```
[41]: [80, 30]
```

```
[43]: 1[::-1]
```

```
[43]: [30, 60, 90, 80, 60, 50, 40]
```

```
[45]: 1[::-2]
```

```
[45]: [30, 90, 60, 40]
```

```
[47]: 1[::-3]
```

```
[47]: [30, 80, 40]
```

```
[49]: 11[0]
```

```
[49]: 1
```

```
[51]: 11
```

```
[51]: [1, 2, 3, 4, 5, 6, 7, 8]
```

```
[53]: 11[0]=20
```

```
[55]: 11
```

```
[55]: [20, 2, 3, 4, 5, 6, 7, 8]
```

```
[57]: 11[-1]='nit'
```

```
[59]: 11
```

```
[59]: [20, 2, 3, 4, 5, 6, 7, 'nit']
```

```
[63]: 11[-1][0]# nested slicing
```

```
[63]: 'n'
```

```
[65]: print(l1[-1][0])  
      print(l1[-1][1])  
      print(l1[-1][0])
```

```
n  
i  
n
```

```
[67]: 11
```

```
[67]: [20, 2, 3, 4, 5, 6, 7, 'nit']
```

```
[69]: 12
```

```
[69]: [9, 8, 7, 6, 5, 4, 3, 2]
```

```
[71]: 13=12+11
```

```
[73]: 13
```

```
[73]: [9, 8, 7, 6, 5, 4, 3, 2, 20, 2, 3, 4, 5, 6, 7, 'nit']
```

```
[75]: 14=13+11
```

```
[77]: 14
```

```
[77]: [9,  
      8,  
      7,  
      6,  
      5,  
      4,  
      3,  
      2,  
      20,  
      2,  
      3,  
      4,  
      5,  
      6,  
      7,  
      'nit',  
      20,  
      2,  
      3,  
      4,  
      5,
```

```
6,  
7,  
'nit']
```

```
[79]: 20 in l4
```

```
[79]: True
```

```
[81]: 10 in l4
```

```
[81]: False
```

```
[83]: 1 in l1
```

```
[83]: False
```

```
[93]: for i in enumerate(l1):  
      print(i)
```

```
(0, 20)  
(1, 2)  
(2, 3)  
(3, 4)  
(4, 5)  
(5, 6)  
(6, 7)  
(7, 'nit')
```

```
[87]: l1
```

```
[87]: [20, 2, 3, 4, 5, 6, 7, 'nit']
```

```
[89]: l3
```

```
[89]: [9, 8, 7, 6, 5, 4, 3, 2, 20, 2, 3, 4, 5, 6, 7, 'nit']
```

```
[91]: all(l3)
```

```
[91]: True
```

```
[97]: any(l3)
```

```
[97]: True
```

```
[99]: l3.append(0)
```

```
[101]: l3
```

```
[101]: [9, 8, 7, 6, 5, 4, 3, 2, 20, 2, 3, 4, 5, 6, 7, 'nit', 0]
```

```
[103]: all(13)
```

```
[103]: False
```

```
[105]: any(13)
```

```
[105]: True
```

```
[ ]:
```