

Python Sequences

- Length
- Select
- Slice
- Count
- Index
- Membership
- Concatenation
- Max Value
- Min Value
- Sum
- list Assignment
- list Copying

- Length

In [1]:

```
name="Python"  
lst=[1,2,3,4,5,6,7]  
tp=(10,20,30,40,50,60)  
len(name)
```

Out[1]:

6

In [2]:

```
len(lst)
```

Out[2]:

7

In [3]:

```
len(tp)
```

Out[3]:

6

- Select

In [4]:

```
name[2]
```

Out[4]:

't'

In [5]:

```
lst[4]
```

Out[5]:

5

In [6]:

```
tp[4]
```

Out[6]:

50

- Slice

In [7]:

```
name="GITAM"  
name[1:6]
```

Out[7]:

'ITAM'

In [8]:

```
lst1=[1,2,3,4,5.6,9.8,100,40]  
lst1[1:6]
```

Out[8]:

[2, 3, 4, 5.6, 9.8]

In [10]:

```
lst1[::-1]
```

Out[10]:

[40, 100, 9.8, 5.6, 4, 3, 2, 1]

In [13]:

```
lst1[:-3]
```

Out[13]:

[1, 2, 3, 4, 5.6]

In [14]:

```
tp1=(10,2.5,9.6,3.3,77,15)  
tp1[:4]
```

Out[14]:

(10, 2.5, 9.6, 3.3)

In [15]:

```
tp1[:-2]
```

Out[15]:

```
(10, 2.5, 9.6, 3.3)
```

- Count

In [16]:

```
fruit='banana'  
fruit.count('a')
```

Out[16]:

```
3
```

In [18]:

```
fruit.count('n')
```

Out[18]:

```
2
```

In [19]:

```
l=[10,20,30,10,50,10,89,10,75]  
l.count(10)
```

Out[19]:

```
4
```

In [20]:

```
t=(50,80,90,50,70,50,80,50,100,50)  
t.count(50)
```

Out[20]:

```
5
```

- index

In [23]:

```
print(fruit)  
fruit.index('n')
```

```
banana
```

Out[23]:

```
2
```

In [24]:

```
print(l)
```

```
[10, 20, 30, 10, 50, 10, 89, 10, 75]
```

In [25]:

```
l.index(50)
```

Out[25]:

```
4
```

In [26]:

```
l.index(10)
```

Out[26]:

```
0
```

In [28]:

```
print(t)  
t.index(70)
```

```
(50, 80, 90, 50, 70, 50, 80, 50, 100, 50)
```

Out[28]:

```
4
```

- Membership

In [29]:

```
animal="elephant"  
'p' in animal
```

Out[29]:

```
True
```

In [30]:

```
'p' not in animal
```

Out[30]:

```
False
```

In [31]:

```
l=[10,20,5.5,6.5,7.5,8.5,9.5]  
7.5 in l
```

Out[31]:

```
True
```

- Concatenation

In [34]:

```
s="      welcome"
animal+s
```

Out[34]:

```
'elephant      welcome'
```

In [35]:

```
print(l)
```

```
[10, 20, 5.5, 6.5, 7.5, 8.5, 9.5]
```

In [36]:

```
l1=[1,2,3,4,5,6,7,8]
l+l1
```

Out[36]:

```
[10, 20, 5.5, 6.5, 7.5, 8.5, 9.5, 1, 2, 3, 4, 5, 6, 7, 8]
```

In [37]:

```
print(l)
```

```
[10, 20, 5.5, 6.5, 7.5, 8.5, 9.5]
```

In [38]:

```
print(t)
```

```
(50, 80, 90, 50, 70, 50, 80, 50, 100, 50)
```

In [39]:

```
l+t
```

```
-----
-
TypeError                                Traceback (most recent call las
t)
<ipython-input-39-73665499ceb1> in <module>
----> 1 l+t
```

TypeError: can only concatenate list (not "tuple") to list

- Min and Max

In [40]:

```
s1="Hyderabad"  
min(s1)
```

Out[40]:

'H'

In [42]:

```
s2="hyderabad"  
min(s2)
```

Out[42]:

'a'

In [43]:

```
max(s1)
```

Out[43]:

'y'

In [44]:

```
max(s2)
```

Out[44]:

'y'

In [45]:

```
print(l)
```

[10, 20, 5.5, 6.5, 7.5, 8.5, 9.5]

In [46]:

```
max(l)
```

Out[46]:

20

In [47]:

```
min(l)
```

Out[47]:

5.5

In [48]:

```
print(t)
min(t)
```

(50, 80, 90, 50, 70, 50, 80, 50, 100, 50)

Out[48]:

50

In [49]:

```
max(t)
```

Out[49]:

100

- Sum

In [50]:

```
print(lst1)
```

[1, 2, 3, 4, 5.6, 9.8, 100, 40]

In [52]:

```
sum(lst1)
```

Out[52]:

165.4

In [53]:

```
print(tp1)
```

(10, 2.5, 9.6, 3.3, 77, 15)

In [54]:

```
sum(tp1)
```

Out[54]:

117.4

- list Assignment

In [55]:

```
l1=[1,5,10,15,20,25]
l2=l1
print(l1)
print(l2)
```

```
[1, 5, 10, 15, 20, 25]
[1, 5, 10, 15, 20, 25]
```

In [56]:

```
l1[0]="one"
print(l1)
```

```
['one', 5, 10, 15, 20, 25]
```

In [57]:

```
print(l2)
```

```
['one', 5, 10, 15, 20, 25]
```

In [58]:

```
l1.pop()
print(l1)
```

```
['one', 5, 10, 15, 20]
```

In [59]:

```
print(l2)
```

```
['one', 5, 10, 15, 20]
```

In [60]:

```
10 is l1
```

```
<>:1: SyntaxWarning: "is" with a literal. Did you mean "=="?
<>:1: SyntaxWarning: "is" with a literal. Did you mean "=="?
<ipython-input-60-9f6704574ff0>:1: SyntaxWarning: "is" with a literal. Did
you mean "=="?
10 is l1
```

Out[60]:

False

In [61]:

```
l1 is l2
```

Out[61]:

True

In [62]:

```
id(l1)
```

Out[62]:

2746315938624

In [63]:

```
id(l2)
```

Out[63]:

2746315938624

- Copying

In [65]:

```
print(l1)  
l3=list(l1)  
l3
```

['one', 5, 10, 15, 20]

Out[65]:

['one', 5, 10, 15, 20]

In [66]:

```
l1[1]="FIVE"  
print(l1)
```

['one', 'FIVE', 10, 15, 20]

In [67]:

```
print(l3)
```

['one', 5, 10, 15, 20]

In [68]:

```
id(l1)
```

Out[68]:

2746315938624

In [69]:

```
id(l3)
```

Out[69]:

2746315957120

In [70]:

```
11 is 13 # comparison operator ==---->bool
```

Out[70]:

False

In [72]:

```
11 is not 13
```

Out[72]:

True

In []: