

Indexing and slicing will only works with string,list,tuple and dictionary

string:

In [1]:

```
1 a='Hello World'
```

syntax for indexing is variablename[startposition] it will start from zeroth position

In [2]:

```
1 a[0]
```

Out[2]:

'H'

In [3]:

```
1 a[1]
```

Out[3]:

'e'

In [4]:

```
1 a[2]
```

Out[4]:

'l'

In [5]:

```
1 a[3]
```

Out[5]:

'l'

In [6]:

```
1 a[4]
```

Out[6]:

'o'

slicing: grabbing sequence of elements

- syntax: variablename[start: stop+1]

In [8]:

```
1 a
```

Out[8]:

```
'Hello World'
```

In [10]:

```
1 a[0:4]
```

Out[10]:

```
'Hell'
```

In [11]:

```
1 a[0:5]
```

Out[11]:

```
'Hello'
```

In [12]:

```
1 a[6:11]
```

Out[12]:

```
'World'
```

In [13]:

```
1 ##### list
```

In [14]:

```
1 a=[1,2,'apple',4,'orange']
```

In [15]:

```
1 a[0]
```

Out[15]:

```
1
```

In [16]:

```
1 a[1]
```

Out[16]:

```
2
```

In [17]:

```
1 a[2]
```

Out[17]:

'apple'

variablename[start:stop+1]

In [19]:

```
1 a[0:2]
```

Out[19]:

[1, 2]

In [20]:

```
1 a
```

Out[20]:

[1, 2, 'apple', 4, 'orange']

In [21]:

```
1 a[0:3]
```

Out[21]:

[1, 2, 'apple']

In [22]:

```
1 ##### tuple
```

In [23]:

```
1 t=(1,2,3,'apple')
```

variablename[start:stop+1]

In [25]:

```
1 t[1]
```

Out[25]:

2

In [26]:

```
1 t[0]
```

Out[26]:

1

In [27]:

```
1 t[1:4]
```

Out[27]:

```
(2, 3, 'apple')
```

Dictionary

In [30]:

```
1 d={'key1':'apple','ab':'orange','key3':45}
```

In [31]:

```
1 d[0]
```

```
-----  
KeyError                                Traceback (most recent call last)  
<ipython-input-31-123a9cc6df61> in <module>  
----> 1 d[0]
```

KeyError: 0

In [32]:

```
1 d['key1']
```

Out[32]:

```
'apple'
```

In [34]:

```
1 d['key3']
```

Out[34]:

```
45
```

In [35]:

```
1 d['key1':'key3']
```

```
-----  
TypeError                                Traceback (most recent call last)  
<ipython-input-35-b3bcbcbce63f3> in <module>  
----> 1 d['key1':'key3']
```

TypeError: unhashable type: 'slice'

In []:

```
1
```

