Tuple

A tuple is a collection which is ordered and unchangeable/Immutable.

Tuple Creation

In [1]:
```
#empty tuple
empty_tuple = ()
print(empty_tuple)

#tuple having integers
tuple_integers = (1, 2, 3)
print(tuple_integers)

#tuple with mixed datatypes
tuple_datatypes = (1, 'raju', 28, 'abc')
print(tuple_datatypes)

#nested tuple
nested_tuple = (1, (2, 3, 4), [1, 'raju', 28, 'abc'])
print(nested_tuple)
```

```
()
(1, 2, 3)
(1, 'raju', 28, 'abc')
(1, (2, 3, 4), [1, 'raju', 28, 'abc'])
```

Accessing Elements in Tuple

In [3]:
```
tuple_access = ('one', 'two', 'three', 'four', 'five')

print(tuple_access[1])
```

```
two
```

In [6]:
```
#nested tuple
nested_tuple = ('ABC', ('three', 'four', 'five'))

print(nested_tuple[1])
```

```
('three', 'four', 'five')
```

Tuple Slicing

In [7]:
```
#Slicing
tuple_slicing = (1, 2, 3, 4, 5, 6)

print(tuple_slicing[1:4])

#print elements from starting to 2nd last elements
print(tuple_slicing[:-2])

#print elements from starting to end
print(tuple_slicing[:])
```

```
(2, 3, 4)
(1, 2, 3, 4)
(1, 2, 3, 4, 5, 6)
```

Tuple Concatenation

In [8]:
```
tuple_concat = (1, 2, 3) + (4, 5, 6)
print(tuple_concat)
```

```
(1, 2, 3, 4, 5, 6)
```

Tuple Deletion

In [11]:
```
#delete entire tuple using del keyword
tuple_deletion = (1, 2, 3, 4, 5, 6)

#delete entire tuple
del tuple_deletion
```

Tuple Count

In [10]:
```
tuple_count = (1, 2, 3, 1, 3, 3, 4, 1)

#get the frequency of particular element appears in a tuple
tuple_count.count(1)
```

Out[10]:
```
3
```

Tuple Indexing

In [13]:
```
tuple_index = (1, 2, 3, 1, 3, 3, 4, 1)

print(tuple_index.index(3)) #return index of the first element is equal to 3

#print index of the 1
print(tuple_index.index(1))
```

```
2
0
```

Tuple Length

In [14]:
```
tuple_length = (1, 2, 3, 4, 5, 6)
print(len(tuple_length))
```

```
6
```