Tuple Creation

In [2]:
```
tuple1 =() #creating a empty tuple
tuple1
```

Out[2]:
```
()
```

In [14]:
```
tuple2 = (10,30,60) # tuples for integers
tuple2
```

Out[14]:
```
(10, 30, 60)
```

In [16]:
```
tupleString = ('Vinay', 'Vedasree', 'Meenusree', 'Harika') # tuples for strings
tupleString
```

Out[16]:
```
('Vinay', 'Vedasree', 'Meenusree', 'Harika')
```

In [18]:
```
tupleNested = (1, 2, (10,30,60), ('Vinay', 'Vedasree', 'Meenusree', 'Harika')) # nested tupleswith different data types
tupleNested
```

Out[18]:
```
(1, 2, (10, 30, 60), ('Vinay', 'Vedasree', 'Meenusree', 'Harika'))
```

In [20]:
```
len(tupleNested) # gets the number of items in tuple
```

Out[20]:
```
4
```

Tuple indexing

In [35]:
```
tuple2[0] # gets the first item in tuple
```

Out[35]:
```
10
```

In [37]:
```
tupleString[0] # gets the first string item in tuple
```

Out[37]:
```
'Vinay'
```

In [43]:
```
print(tupleString[0][0]) # prints the tuple index items
print(tupleString[0][1]) # prints the tuple index items
print(tupleString[0][2])
print(tupleString[0][3])
print(tupleString[0][4])
```

```
V
i
n
a
y
```

In [47]:
```
tupleString[-1] # prints the tuple index for -1 item
```

Out[47]:
```
'Harika'
```

Tuple Slicing

In [56]:
```
myTuple = ('one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight', 'nine', 'ten')
myTuple
```

Out[56]:
```
('one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight', 'nine', 'ten')
```

In [60]:
```
myTuple[0:3] # gets the first 3 items
```

Out[60]:
```
('one', 'two', 'three')
```

In [62]:
```
myTuple[2:5] # gets the items from 2nd index to (5-1)
```

Out[62]:
```
('three', 'four', 'five')
```

In [64]:
```
myTuple[:2]
```

Out[64]:
```
('one', 'two')
```

In [70]:
```
myTuple[-3]
```

Out[70]:
```
'eight'
```

In [75]:
```
myTuple[-1]
```

Out[75]:
```
'ten'
```

In [80]:
```
myTuple[:]
```

Out[80]:
```
('one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight', 'nine', 'ten')
```

Remove and change Tuple

In [91]:
```
myTuple[1] = 3
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[91], line 1
----> 1 myTuple[1] = 3

TypeError: 'tuple' object does not support item assignment
```

In [97]:
```
myTuple2 = myTuple
```

In [99]:
```
myTuple2
```

Out[99]:
```
('one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight', 'nine', 'ten')
```

In [120…
```
del myT
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[120], line 1
----> 1 del myT

NameError: name 'myT' is not defined
```

In [130…
```
del myTuple2
```

Loop through Tuple

In [133…
```
for i in myTuple:
    print(i)
```

```
one
two
three
four
five
six
seven
eight
nine
ten
```

In [148…
```
for i in enumerate(myTuple):
    print(i)
```

```
(0, 'one')
(1, 'two')
(2, 'three')
(3, 'four')
(4, 'five')
(5, 'six')
(6, 'seven')
(7, 'eight')
(8, 'nine')
(9, 'ten')
```

In [150…
```
myTuple
```

Out[150…
```
('one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight', 'nine', 'ten')
```

In [157…
```
'one' in myTuple
```

Out[157…
```
True
```

In [159…
```
'eleven' in myTuple
```

Out[159…
```
False
```

In [168…
```
if 'one' in myTuple:
    print('Found the item in Tuple')
else:
    print('Not Found the item in Tuple')
```

```
Found the item in Tuple
```

In [170…
```
if 'eleven' in myTuple:
    print('Found the item in Tuple')
else:
    print('Not Found the item in Tuple')
```

```
Not Found the item in Tuple
```

Index position in Tuple

In [180…
```
myTuple
```

Out[180…
```
('one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight', 'nine', 'ten')
```

In [193…
```
myTuple.index('two')
```

Out[193…
```
1
```

In [195…
```
myTuple.index('five')
```

Out[195…
```
4
```

Sorting

In [207…
```
sorted(myTuple, reverse=True)
```

Out[207…
```
['two', 'three', 'ten', 'six', 'seven', 'one', 'nine', 'four', 'five', 'eight']
```

In [209…
```
sorted(myTuple, reverse=False)
```

Out[209…
```
['eight', 'five', 'four', 'nine', 'one', 'seven', 'six', 'ten', 'three', 'two']
```

In [211…
```
myTuple
```

Out[211…
```
('one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight', 'nine', 'ten')
```

In [ ]:

In [ ]:

In [ ]:

In [ ]: