

# Tuples - part 3

## Lecture 19

**Once a tuple is created, you cannot change its values. Tuples are unchangeable, or immutable as it also is called.**

## Converting tuple into list

```
In [2]: x = ("data", "python", "science", "swati")
print(x)
print(type(x))

y = list(x)
print(y)
print(type(y))
```

```
('data', 'python', 'science', 'swati')
<class 'tuple'>
['data', 'python', 'science', 'swati']
<class 'list'>
```

## add items

```
In [6]: a = (25,2,27,28,29)
y = list(a)
print(y)
print(type(y))

y.append(30)
print("the new list is")
print(y)

x = tuple(y)
print("the new item added on tuple is")
print(x)
```

```
[25, 2, 27, 28, 29]
<class 'list'>
the new list is
[25, 2, 27, 28, 29, 30]
the new item added on tuple is
(25, 2, 27, 28, 29, 30)
```

## Add tuple to a tuple

```
In [7]: tup1 = ("python", "data","science", 'swati')
y = ("code",)
tup1+=y
print(tup1)
```

```
('python', 'data', 'science', 'swati', 'code')
```

## Remove items

```
In [10]: fruits = ("apple","banana", "cherry", "date", "fig")

fruit_list = list(fruits)
print(fruit_list)

fruit_list.remove("cherry")
print(fruit_list)

fruit_tup = tuple(fruit_list)
print(fruit_tup)
```

```
['apple', 'banana', 'cherry', 'date', 'fig']
['apple', 'banana', 'date', 'fig']
('apple', 'banana', 'date', 'fig')
```

## changing the item in a tuple

```
In [13]: x = ("apple", "banana", "cherry", "date", "fig")
y = list(x)
print(y)

y[1] = "blueberry"
print(y)

z = tuple(y)
print(z)
```

```
['apple', 'banana', 'cherry', 'date', 'fig']
['apple', 'blueberry', 'cherry', 'date', 'fig']
('apple', 'blueberry', 'cherry', 'date', 'fig')
```

## del keyword

```
In [14]: x = (2,9,598,4,84,8)
del x
```

-----

**TypeError**

Traceback (most recent call last)

Cell In[14], line 1

```
----> 1 x = (2,9,598,4,84,8)
      2 del x
```

**TypeError:** unsupported operand type(s) for -: 'tuple' and 'tuple'

## loop through a tuple

```
In [15]: thistuple = ("a","b","c")
for x in thistuple:
    print(x)
```

```
a
b
c
```

## join two tuples

```
In [16]: tuple1 = ("a","b","c")
tuple2 = (1,2,3)

tuple3 = tuple1+tuple2
print(tuple3)
```

```
('a', 'b', 'c', 1, 2, 3)
```

# Multiply tuples

```
In [17]: fruits = ("apple", "banana","cherry")  
mytup = fruits*2  
print(mytup)
```

('apple', 'banana', 'cherry', 'apple', 'banana', 'cherry')

```
In [18]: fruits = ("apple", "banana","cherry")  
mytup = fruits*3  
print(mytup)
```

('apple', 'banana', 'cherry', 'apple', 'banana', 'cherry', 'apple', 'banana', 'cherry')

```
In [ ]:
```