e-data-types

February 21, 2020

1

1.1 Mutable

```
In [1]: a = [1,2,3,4]
        a

Out[1]: [1, 2, 3, 4]
```

```
In [2]: a[0] = 100
        a

Out[2]: [100, 2, 3, 4]
```

```
In [3]: a.insert(3, 200)
        a

Out[3]: [100, 2, 3, 200, 4]
```

```
In [4]: a.sort()
        a

Out[4]: [2, 3, 4, 100, 200]
```

1.2 Immutable

```
In [5]: s = "hello world"
        s

Out[5]: 'hello world'
```

```
In [6]: s[0] = 'z'
```

```
---------------------------------------------------------------------------

TypeError                                 Traceback (most recent call last)

<ipython-input-6-5994e1a74598> in <module>
----> 1 s[0] = 'z'


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

```
In [7]: print (s.replace('world', 'Mars'))
        print (s)
```

```
hello Mars
hello world
```

```
In [8]: s = "hello world"
        s = s.replace('world', 'Mars')
        print (s)
```

```
hello Mars
```

bytearray

```
In [9]: str = bytearray('abcde' ,'utf-8')
        str[1:3] = b'12'
        str
```

```
Out[9]: bytearray(b'a12de')
```

list, dictionary, set, numpy array, user defined objects	integer, float, long, complex, string, tuple, frozenset

1.3

```
In [10]: a = [1, 2, 3, 4]
         b = a

    a b b a

In [11]: b[0] = 100
         a

Out[11]: [100, 2, 3, 4]
```

Python

```
In [16]: from multiprocessing import cpu_count


         print("CPU{}".format(cpu_count()))
         print(type(cpu_count()))

CPU12
<class 'int'>
```