Python Lists

In [2]:
```
# help(list)
```

In [3]:
```
# list?
```

Creating a List / Defining a List / Making a List

In [4]:
```
data_1 = []  # empty list
```

In [5]:
```
type(data_1)
```

Out[5]:
```
list
```

In [7]:
```
data_2 = list([])  # empty list
```

In [9]:
```
data_3 = [3, 6, 7, True, 23.43, [2, 5, 7], {2, 6, 9}, (2, 6, 8
)]  # mix data list
```

In [10]:
```
type(data_3)
```

Out[10]:
```
list
```

In [11]:
```
data_4 = [2, 6, 7, 8]  # integer
```

In [12]:
```
data_5 = list(["xyz", "abc", "pqr"])  # string
```

In [16]:
```
data_6 = [3, [1, 5, 7], [1, 5, 7], [1, 6, 8]]  # Matrix 3 x 3
# 2D list
```

In [17]:
```
data_6
```

Out[17]:
```
[3, [1, 5, 7], [1, 5, 7], [1, 6, 8]]
```

In [ ]:
```

```

Adding / Appending Elements to a List

In [18]:
```
data_7 = []
```

In [19]:
```
data_7.append(3)
data_7.append(3.5)
data_7.append(True)
data_7.append("xyz")
```

In [20]:
```
data_7
```

Out[20]:
```
[3, 3.5, True, 'xyz']
```

In [21]:
```
data_8 = [3, [1, 5, 7], [1, 5, 7], [1, 6, 8]]
```

In [24]:
```
data_8[2].append("xyz")
```

In [25]:
```
data_8
```

Out[25]:
```
[3, [1, 5, 7], [1, 5, 7, 'xyz'], [1, 6, 8]]
```

In [ ]:
```

```

Accessing / Getting Elements from the List

In [33]:
```
data_9 = [3, 7, 8, 1, 4, 0]
```

In [34]:
```
data_9[-3:]
```

Out[34]:
```
[1, 4, 0]
```

In [35]:
```
data_10 = [3, [1, 5, 7], [1, 5, 7], [1, 6, 8]]
```

In [37]:
```
data_10[-1][:2]
```

Out[37]:
```
[1, 6]
```

In [ ]:
```

```

Copying List Elements

In [43]:
```
x = [2, 6, 8, 1]
```

In [48]:
```
y = x.copy()
```

In [45]:
```
y[-1] = 10
```

In [46]:
```
y
```

Out[46]:
```
[2, 6, 8, 10]
```

In [47]:
```
x
```

Out[47]:
```
[2, 6, 8, 1]
```

In [51]:
```
# import copy
```

In [ ]:
```

```

Replacing / Modifying / Updating List Elements

In [52]:
```
x = [2, 6, 7, 8, 10]
```

In [53]:
```
x[-1] = "Umar"
```

In [54]:
```
x
```

Out[54]:
```
[2, 6, 7, 8, 'Umar']
```

In [56]:
```
x[-3:] = (0, 0, 0)
```

In [57]:
```
x
```

Out[57]:
```
[2, 6, 0, 0, 0]
```

In [ ]:
```

```

Happy Learning :)