Numpy

Always start with import numpy as np

sequence **=** np.array([1,2,3,4,5,6,7,8,9,10])

In [4]:



sequence

Out[4]:

array([ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10])

In [5]:



*#OR -*

In [7]:



sequence**=**np.arange(10) *# does it for you but misses out the 10th entry (as per SQL)*

In [8]:



sequence

Out[8]:

array([0, 1, 2, 3, 4, 5, 6, 7, 8, 9])

Creating a multi level array

matrix**=**np.array([[1,2,3,4], [5,6,7,8], [9,10,11,12]])

In [12]:



matrix

Out[12]:

array([[ 1, 2, 3, 4],

[ 5, 6, 7, 8],

[ 9, 10, 11, 12]])

Out[13]:

(3, 4)

To reshape the array, say into a 3x4 table:

matrix2**=**matrix.reshape(4,3)

In [15]:



matrix2

Out[15]:

array([[ 1, 2, 3],

[ 4, 5, 6],

[ 7, 8, 9],

[10, 11, 12]])

Filtering / Slicing

list**=**np.arange(10)

In [17]:



list

Out[17]:

array([0, 1, 2, 3, 4, 5, 6, 7, 8, 9])

In [18]:



list[0:6]

Out[18]:

array([0, 1, 2, 3, 4, 5])

Gives the first to the fifth entries

list

Out[20]:

array([0, 1, 2, 3, 4, 5, 6, 7, 8, 9])

In [21]:



list[2:] *# gives the third to the final entries*

Out[21]:

array([2, 3, 4, 5, 6, 7, 8, 9])

list

Out[22]:

array([0, 1, 2, 3, 4, 5, 6, 7, 8, 9])

In [24]:



list[[0,5]] returns the first to the fifth entries

Out[24]:

array([0, 5])

Lots of different mathematical functions can be applied

List.sum() etc