## NUMPY

NumPy is a Python library used for working with arrays, linear algebra, fourier transform, and matrices.
A numpy array is similar to a list
NumPy stands for Numerical Python and it is an open source project.
The array object in NumPy is called **ndarray**

**Linspace**
A useful function for plotting mathematical functions is linspace. Linspace returns evenly spaced
numbers over a specified interval.

**numpy.linspace(start, stop, num = int value)**

start : start of interval range
stop : end of interval range
num : Number of samples to generate.

| Syntax | np.array([[1,2,3,4] , [ 2,3,4,5]]) | l = [[1,2,3,4] , [ 2,3,4,5]] | Indexing of list elements is similar to indexing of array elements. Array involves dimensions which makes it different from list |
|--------|-----------------------------------|------------------------------|---------|
| Output | array([[1, 2, 3, 4],<br>        [2, 3, 4, 5]]) | [[1,2,3,4] , [ 2,3,4,5]] | |

**Array is also called nested sequence.**