Array: Represents a group of elements of same datatype.

List can store different types of data types but array can store only one type of data.

List stores on random location but arrays store the element in contiguous location

Arrays are faster than list.

1. Single dimensional arrays.:

Represents only one row or only one column of data.

Creating 1 dimensional array:

1. Array()
2. Iinspace(): will create the array that represents the elements as points on line.Linspace(0,10,5) 5 is the no of points in between 0 to 10.
3. Logspace():will create the array that represents the logarithmic elements as points on line.Linspace(1,10,5) 5 is the no of points in between 10 to the power 1to 10 to the power 10.
4. Arange()
5. Zeros() and ones()

* Properties on array:

1. Arr.ndim=It will showcase the dimension of the array.
2. Shape=It represents no of elements in row/column.
3. Size=It will give total no of the elements
4. Itemsize= it will give the byte size of array.
5. Nbytes=It will give total size of the memory in bytes.
6. Dtype=It will give data type of array.
7. Reshape()=covert 1d into 2d.
8. Flatten()=convert 2d into 1d.
9. Multi-dimensional arrays:

Represents several rows and column of elements.

Ex: marks of group of student in 5 subject.

* Creating two dimensional array

1. Array()
2. Zeros() and ones()
3. Eye()

* Operations on 2d array same as 1d.

Slicing in 2d array:

Arr[r1:r2,c1:c2]

1. Matrices:

Represents a group of elements arranged in rows and columns

A matrix with 1 row is called row matrix.

A matrix with 1 column is called column matrix.

A matrix with m rows and n columns is called as mxn matrix.

* Creating matrix:

1. Matrix(string)
2. Matrix(2darray)