Python Assignment - 2

Section: NumPy Basics

Points covered:

1. Working with ndarray
2. Examining ndarray
3. Common functions
4. Statistical Analysis
5. Reshaping
    a. Slicing
    b. Stepping

Exercise:

1. Create a 1D array of numbers from 0 to 20

2. Create a 1D array of numbers from 1 to 20

3. Create a 1D array of numbers from 1 to 10 with a step of 4

4. Display the dimension,shape,size,type of the array

5. Create the following:
    a. A list of 5 integers
    b. A multidimensional array of dimensions 3x3
    c. A multidimensional array of zeros of dimensions 4x3
    d. A multidimensional array of zeros of dimensions 2x3 of type int32
    e. Use linspace to create a list of floats between 3 and 5
    f. Use linspace to create a list of 5 floats between 1 and 4

6. Create an array of dimensions 3x4 having random values

7. Create an array of dimensions 4x4 with random values and perform the following:
    a. Find maximum value from the array
    b. Find the row whose sum of values is maximum
    c. Find the column whose sum of values is maximum
    d. Find minimum value from the array
    e. Find mean value from the array
    f. Find median value from the array
    g. Find standard value from the array
    h. Find sum of the values from the array

8. Reshape the above dataset to dimensions 8x2,2x8,16x1

9. Create an array of dimension 3x4 and perform the following:
    a. Print the first row of the array
    b. Print the first element of the row
    c. Print the element in the 2nd row and 3rd column
    d. Slice the array such that the new array has 2nd and 3rd row
    e. Slice the array such that the new array has the second element from the 2nd and 3rd row