**Python Advance Assignment 1**

1. What makes NumPy.shape() different from NumPy.size()?

Numpy.shape gives total shape of the dataframe or array.Eg:10x2,whereas Numpy.size gives total number of elements in the dataframe or array.Eg:20(10x2)

2. In NumPy, describe the idea of broadcasting.

Broadcasting in Numpy helps in performing mathematical operation by prepending 1 to the shape of the array.Eg:[1,0,1]+3=[4,3,4], here 3 is reshaped as (1,3)

3. What makes Python better than other libraries for numerical computation?

Numpy helps in better memory management as it helps us specify the datatype along with lot of algebra operations which comes along with it

4. How does NumPy deal with files? We can load files using numpy by inbuilt functions “loadtxt” for loading text files and “genfromtxt” for loading csv files.

5. Mention the importance of NumPy.empty().

Numpy.empty helps create an empty array which is initialised with random numbers but can be be changed later as per requirement. Shape can be specified to generate the shape of empty array