**Numpy Basics**

**Assignment 1**

1. Write a NumPy program to get the numpy version and show numpy build configuration.
2. Write a NumPy program to  get help on the add function.
3. Write a NumPy program to test whether none of the elements of a given array is zero.
4. Write a NumPy program to test if any of the elements of a given array is non-zero.
5. Write a NumPy program to test a given array element-wise for finiteness (not infinity or not a Number).
6. Write a NumPy program to test element-wise for positive or negative infinity.
7. Write a NumPy program to test element-wise for NaN of a given array.
8. Write a NumPy program to test element-wise for complex number, real number of a given array. Also test if a given number is a scalar type or not.
9. Write a NumPy program to create an element-wise comparison (greater, greater\_equal, less and less\_equal) of two given arrays.
10. Write a NumPy program to create an array of 10 zeros, an array of 10 ones, and an array of 10 fives.
11. Write a NumPy program to create an array of the integers from 30 to70.
12. Write a NumPy program to create an array of all the even integers from 30 to 70.
13. Write a NumPy program to create a 3x3 identity matrix.
14. Write a NumPy program to generate a random number between 0 and 1.
15. Write a NumPy program to generate an array of 15 random numbers from a standard normal distribution.
16. Write a NumPy program to create a vector with values ​​ranging from 15 to 55 and print all values ​​except the first and last.
17. Write a NumPy program to create a vector of length 10 with values evenly distributed between 5 and 50.
18. Write a NumPy program to multiply the values ​​of two given vectors.
19. Write a NumPy program to create a 3x4 matrix filled with values ​​from 10 to 21.
20. Write a NumPy program to create a 5x5 zero matrix with elements on the main diagonal equal to 1, 2, 3, 4, 5.
21. Write a NumPy program to compute sum of all elements, sum of each column and sum of each row of an given array.