

NumPy Basic (1 – 20)

1. Write a Numpy program to get the Numpy version and show the Numpy build configuration.
2. Write a NumPy program to get help with the add function.
3. Write a NumPy program to test whether none of the elements of a given array are zero.
4. Write a NumPy program to test if any of the elements of a given array are 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 elements-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 numbers, real numbers in a given array. Also test if a given number is of a scalar type or not.
9. Write a NumPy program to test whether two arrays are element-wise equal within a tolerance.
10. Write a NumPy program to create an element-wise comparison (greater, greater_equal, less and less_equal) of two given arrays.
11. Write a NumPy program to create an element-wise comparison (equal, equal within a tolerance) of two given arrays.
12. Write a NumPy program to create an array with the values 1, 7, 13, 105 and determine the size of the memory occupied by the array.
13. Write a NumPy program to create an array of 10 zeros, 10 ones, and 10 fives.
14. Write a NumPy program to create an array of integers from 30 to 70.
15. Write a NumPy program to create an array of all even integers from 30 to 70.
16. Write a NumPy program to create a 3x3 identity matrix.

17. Write a NumPy program to generate a random number between 0 and 1.
18. Write a NumPy program to generate an array of 15 random numbers from a standard normal distribution.
19. Write a NumPy program to create a vector with values ranging from 15 to 55 and print all values except the first and last.
20. Write a NumPy program to create a 3X4 array and iterate over it.