

## NumPy Basic (21 – 30)

21. Write a NumPy program to create a vector of length 10 with values evenly distributed between 5 and 50.
22. Write a NumPy program to create a vector with values from 0 to 20 and change the sign of the numbers in the range from 9 to 15.
23. Write a NumPy program to create a vector of length 5 filled with arbitrary integers from 0 to 10.
24. Write a NumPy program to multiply the values of two given vectors.
25. Write a NumPy program to create a 3x4 matrix filled with values from 10 to 21.
26. Write a NumPy program to find the number of rows and columns in a given matrix.
27. Write a NumPy program to create a 3x3 identity matrix, i.e. the diagonal elements are 1, the rest are 0.
28. Write a NumPy program to create a 10x10 matrix, in which the elements on the borders will be equal to 1, and inside 0.
29. Write a NumPy program to create a 5x5 zero matrix with elements on the main diagonal equal to 1, 2, 3, 4, 5.
30. Write a NumPy program to create a 4x4 matrix in which 0 and 1 are staggered, with zeros on the main diagonal.