

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 element-wise for NaN of a given array.
5. 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.
6. Write a NumPy program to create an array of all the even integers from 30 to 70.
7. Write a NumPy program to create a 3x3 identity matrix.
8. Write a NumPy program to generate a random number between 0 and 1.
9. Write a NumPy program to convert a list of numeric value into a one-dimensional NumPy array.

Expected Output:

Original List: [12.23, 13.32, 100, 36.32]

One-dimensional NumPy array: [12.23 13.32 100. 36.32]

10. Write a NumPy program to create a 3x3 matrix with values ranging from 2 to 10.
11. Write a NumPy program to reverse an array (first element becomes last).
Original array:
[12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37]
Reverse array:
[37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12]
12. Write a NumPy program to convert an array to a float type.
13. Write a NumPy program to convert a list and tuple into arrays
List to array:
[1 2 3 4 5 6 7 8]
Tuple to array:
[[8 4 6]
[1 2 3]]
14. Write a NumPy program to append values to the end of an array.
15. Write a NumPy program to convert the values of Centigrade degrees into Fahrenheit degrees and vice versa. Values are stored into a NumPy array.
Sample Array [0, 12, 45.21, 34, 99.91]
[-17.78, -11.11, 7.34, 1.11, 37.73, 0.]
Expected Output:

Values in Fahrenheit degrees:

```
[ 0. 12. 45.21 34. 99.91 32. ]
```

Values in Centigrade degrees:

```
[-17.78 -11.11 7.34 1.11 37.73 0. ]
```

Values in Centigrade degrees:

```
[-17.78 -11.11 7.34 1.11 37.73 0. ]
```

Values in Fahrenheit degrees:

```
[-0. 12. 45.21 34. 99.91 32. ]
```

16. Write a NumPy program to generate six random integers between 10 and 30.

Expected Output:

```
[20 28 27 17 28 29]
```

17. Write a NumPy program to create a 3x3x3 array with random values.