

1. Create a NumPy array of shape (3, 3) with values ranging from 1 to 9.
2. Given a 1D NumPy array `[10, 20, 30, 40, 50]`, write code to reverse the array.
3. Create a 5x5 NumPy array filled with zeros and set the value of the middle element to 1.
4. Generate a NumPy array with 20 random integers between 1 and 100. Replace all even numbers with -1.
5. Given a NumPy array `a = np.array([[1, 2], [3, 4], [5, 6]])`, extract the second column.
6. Create a NumPy array with values `[1, 2, 3, 4]` and convert it into a 2x2 matrix.
7. Create two NumPy arrays of shape (2, 2) and perform element-wise addition, subtraction, multiplication, and division.
8. Use NumPy to create an array of 10 linearly spaced values between 0 and 1.
9. Create a NumPy array and demonstrate how to compute its mean, median, and standard deviation.
10. Given a 2D NumPy array, write a function to normalize each column (subtract mean and divide by std deviation).