**PYTHON: Unit-3/ Exersise1**

**CODE:**

import numpy as np

# 1. Create a 3x3 NumPy array filled with random integers between 1 and 10.

array = np.random.randint(1, 11, size=(3, 3))

print("Original 3x3 Array:\n", array)

# 2. Find the sum of all the elements in the array.

array\_sum = np.sum(array)

print("Sum of all elements:", array\_sum)

# 3. Calculate the mean value of the elements in the array.

array\_mean = np.mean(array)

print("Mean value of elements:", array\_mean)

# 4. Identify the minimum and maximum values in the array.

array\_min = np.min(array)

array\_max = np.max(array)

print("Minimum value:", array\_min)

print("Maximum value:", array\_max)

# 5. Reshape the array into a 1x9 array.

reshaped\_array = np.reshape(array, (1, 9))

print("Reshaped 1x9 Array:\n", reshaped\_array)

# 6. Sort the reshaped array in ascending order.

sorted\_array = np.sort(reshaped\_array)

print("Sorted 1x9 Array:\n", sorted\_array)

# 7. Find the index of the maximum value in the sorted array.

max\_index = np.argmax(sorted\_array)

print("Index of maximum value in sorted array:", max\_index)

**OUTPUT:**

