

Assignment-1**1. Create and Inspect Arrays**

Question: Create a 1D NumPy array with values from 10 to 50. Then, find its shape, size, and data type.

2. Indexing and Slicing

Question: Create a 2D array of shape (4, 5) with random integers between 1 and 100. Extract:

The first two rows.

All elements of the last column.

The element at the 3rd row, 2nd column.

3. Array Operations

Question: Create two arrays:

`A = np.array([1, 2, 3, 4])`

`B = np.array([10, 20, 30, 40])` Perform the following operations:

Add A and B.

Multiply A and B.

Compute the dot product of A and B.

4. Broadcasting

Question: Create a 3x3 matrix with all elements equal to 1. Add a 1D array [1, 2, 3] to each row of the matrix using broadcasting.

5. Boolean Indexing

Question: Create an array of integers from 1 to 20. Extract all values that are:
Even numbers.

Greater than 10.

Divisible by both 3 and 5.