**Tasks**

1. **Array Creation**
   * Create a 1D array of numbers from 10 to 50.
   * Create a 3x3 array of random numbers between 0 and 1.
2. **Array Attributes**
   * Find the shape, size, and data type of the array you created in the previous task.
3. **Basic Operations**
   * Add 5 to every element of a 1D array.
   * Multiply two 2D arrays element-wise.
4. **Indexing and Slicing**
   * Create a 5x5 array of integers from 1 to 25. Extract:
     + The first row.
     + The last column.
     + A subarray of the first three rows and first two columns.
5. **Aggregation**
   * Create a 10-element array of random integers between 1 and 100. Find:
     + The maximum value.
     + The minimum value.
     + The mean and standard deviation.
6. **Reshaping**
   * Convert a 1D array of numbers from 1 to 12 into a 3x4 matrix.
7. **Broadcasting**
   * Create a 3x3 matrix of ones. Add a 1D array [1, 2, 3] to each row.
8. **Filtering**
   * Create a 1D array of random integers between 1 and 50. Extract all elements that are divisible by 5.
9. **Matrix Multiplication**
   * Create two 2x2 matrices and perform matrix multiplication.
10. **Advanced Indexing**
    * Given a 4x4 array, use fancy indexing to extract the diagonal elements.