ASSIGNMENT -2

Assignment objectives:-

1. Arrays
2. Methods

1. Create a function to find common value from two arrays

    a. Int[] TeamA ={45,78,45,34,65,89};

    b. Int[] TeamB ={78,4,8,9,65,3,7,34};

2. Create 3*3 multi dimension array and find the sum of 1st column

3. Create a function by name GetData with following logic

    Object[] myObjects = new Object[5];

    ```
    myObjects[0] = "hello";
    myObjects[1] = 123;
    myObjects[2] = 123.4;
    myObjects[3] = null;
    myObjects[4]="Mphasis"
    ```

    Using is Expression find out the string form from this array and print the value it contains

4.

String[] st = {"Srilanka","Singapore","India","Swedan","Canada"};

Develop a code to print all country names starting with S and greater than 7 characters long. Print the output in uppercase
(hint: use length property and startswith , toUpper function)

5. Count Even and Odd Numbers

Task:
Count the number of even and odd numbers in an integer array.

Hint:
Use % operator and conditional statements inside a loop.

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6. Find Duplicate Elements

Task:
Write a method to find and print duplicate elements from an integer array.

Hint:
Use nested loops or a dictionary for frequency counting.

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7. Merge Two Arrays

Task:
Create two arrays and merge them into a third array.

Hint:
Use Array.Copy() or manual iteration to merge.

8. Create a method DisplayArray(int[] arr, bool reverse = false) that displays elements. If reverse is true, display in reverse order.

Hint:
Use if (reverse) logic inside the loop.

9. Create a program that adds two 2x2 matrices.

```
int[,] matrix1 = {

    {1, 2},

    {3, 4}

};


int[,] matrix2 = {

    {5, 6},

    {7, 8}

};


// Expected result:

// 6 8

// 10 12
```

10. Write a method that prints the sum of each row in a 3x3 matrix.

```
int[,] mat = {

{1, 2, 3},

{4, 5, 6},

{7, 8, 9}

};


// Expected:

// Row 1 sum: 6

// Row 2 sum: 15

// Row 3 sum: 24.
```

11. Print the main diagonal elements of a square matrix.

```
int[,] matrix = {
    {11, 2, 3},
    {4, 55, 6},
    {7, 8, 99}
};
// Output: 11, 55, 99
```

12. Calculate and print the average of each row in a jagged array.

```
int[][] scores = new int[][] {
    new int[] { 80, 90 },
    new int[] { 70, 85, 90 },
    new int[] { 100 }
};

// Output:
// Average of row 1: 85
// Average of row 2: 81.67
// Average of row 3: 100
```

13. Write a method that takes a string array and returns the longest string.

```
string[] fruits = { "Apple", "Banana", "Watermelon", "Kiwi" };
// Output: Watermelon
```

14.

Join all strings in an array using a hyphen - as a separator.

```
string[] parts = { "2025", "05", "03" };
// Output: 2025-05-03
```

15.Replace the word "Java" with "C#" in every string that contains "Java".

```
string[] techs = {
    "I love Java",
    "Java is versatile",
    "Python is cool"
};
// Output:
// I love C#
// C# is versatile
// Python is cool
```