

- Exercise 2 (lab 2)

```
#include <iostream>
using namespace std;

void GetData(int* array, int size) {
    for (int i = 0; i < size; i++) {
        cin >> array[i];
    }
}

int* Merge(int* array1, int size1, int* array2, int size2) {
    int size3 = size1 + size2;
    int* array3 = new int[size3];

    for (int i = 0; i < size1; i++) {
        array3[i] = array1[i];
    }

    for (int i = 0; i < size2; i++) {
        array3[size1 + i] = array2[i];
    }

    return array3;
}

void DisplayData(int* array, int size) {
    for (int i = 0; i < size; i++) {
        cout << array[i] << " ";
    }
    cout << endl;
}

int RemoveDuplicates(int* array, int size) {
    int newSize = 0;

    for (int i = 0; i < size; i++) {
        bool isDuplicate = false;

        for (int j = 0; j < newSize; j++) {
            if (array[i] == array[j]) {
                isDuplicate = true;
                break;
            }
        }

        if (!isDuplicate) {
            array[newSize++] = array[i];
        }
    }

    return newSize;
}

int main() {
    int size1, size2, size3;
    cout << "Enter size of both arrays with space" << endl;
    cin >> size1 >> size2;
```

```

size3 = size1 + size2;

int* array1 = new int[size1];
int* array2 = new int[size2];
cout << "Enter elements for array 1" << endl;
GetData(array1, size1);
cout << "Enter elements for array 2" << endl;
GetData(array2, size2);

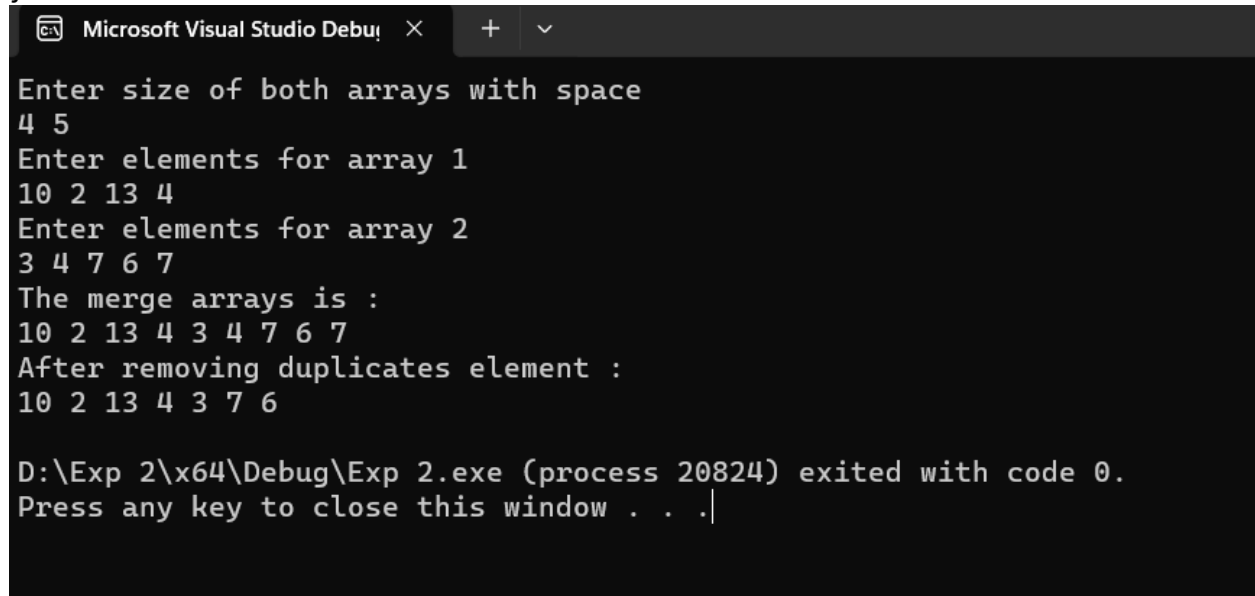
int* array3 = Merge(array1, size1, array2, size2);
cout << "The merge arrays is : " << endl;
DisplayData(array3, size3);

cout << "After removing duplicates element : " << endl;
int nSize = RemoveDuplicates(array3, size3);
DisplayData(array3, nSize);

delete[] array1;
delete[] array2;
delete[] array3;

return 0;
}

```



```

Microsoft Visual Studio Debug Console
Enter size of both arrays with space
4 5
Enter elements for array 1
10 2 13 4
Enter elements for array 2
3 4 7 6 7
The merge arrays is :
10 2 13 4 3 4 7 6 7
After removing duplicates element :
10 2 13 4 3 7 6
D:\Exp 2\x64\Debug\Exp 2.exe (process 20824) exited with code 0.
Press any key to close this window . . .

```