

Lab Manual 8

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Class: ME-15(C)

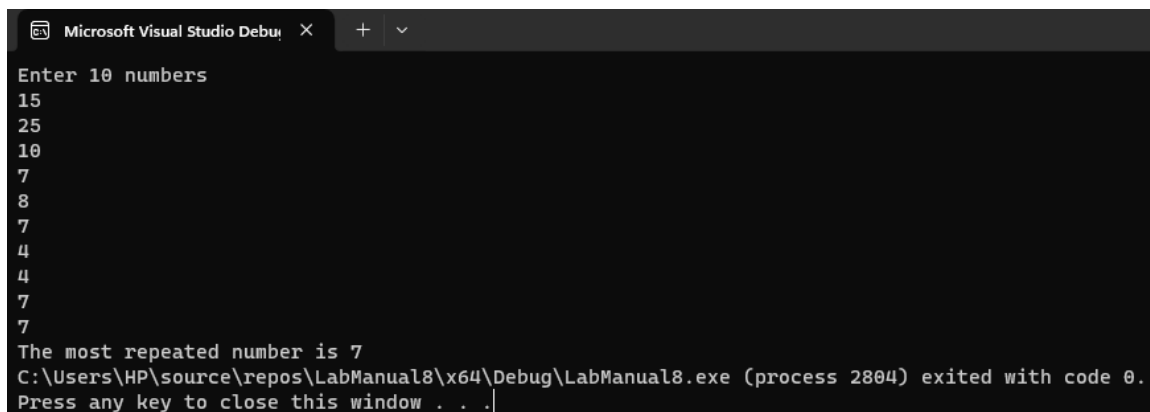
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Home Task

Task 1:

Take an array and find the most repeated element in that array.

```
#include <iostream>
using namespace std;
int main()
{
    int num[10];
    int a = 0;
    int repeat = 0;
    int highest = 0;
    int mostRepeated = 0;
    cout << "Enter 10 numbers\n";
    for (int i = 0; i < 10; i++)
    {
        cin >> num[i];
    }
    for (int j = 0; j < 10; j++)
    {
        a = num[j];
        repeat = 0;
        for (int k = 0; k < 10; k++)
        {
            if (num[k] == a)
            {
                repeat += 1;
                if (repeat > highest)
                {
                    highest = repeat;
                    mostRepeated = a;
                }
            }
        }
    }
    cout << "The most repeated number is " << mostRepeated;
    return 0;
}
```

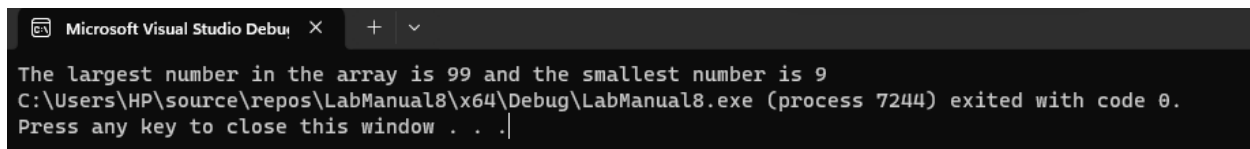


```
Microsoft Visual Studio Debug Console
Enter 10 numbers
15
25
10
7
8
7
4
4
7
7
The most repeated number is 7
C:\Users\HP\source\repos\LabManual8\x64\Debug\LabManual8.exe (process 2804) exited with code 0.
Press any key to close this window . . .
```

Task 2:

Let's say an array is `a[8] = {13, 15, 17, 9, 99, 77, 65, 43}`. Find largest and smallest element.

```
#include <iostream>
using namespace std;
int main()
{
    int a[8] = {13,15,17,9,99,77,65,43};
    int smallest=a[0];
    int largest = a[0];
    for(int i=0;i<8;i++)
    {
        if (a[i] < smallest)
        {
            smallest = a[i];
        }
        if (a[i] > largest)
        {
            largest = a[i];
        }
    }
    cout << "The largest number in the array is " << largest << " and the smallest number is " << smallest;
    return 0;
}
```



The screenshot shows the Microsoft Visual Studio Debug Console. The title bar reads "Microsoft Visual Studio Debug". The console output is as follows:

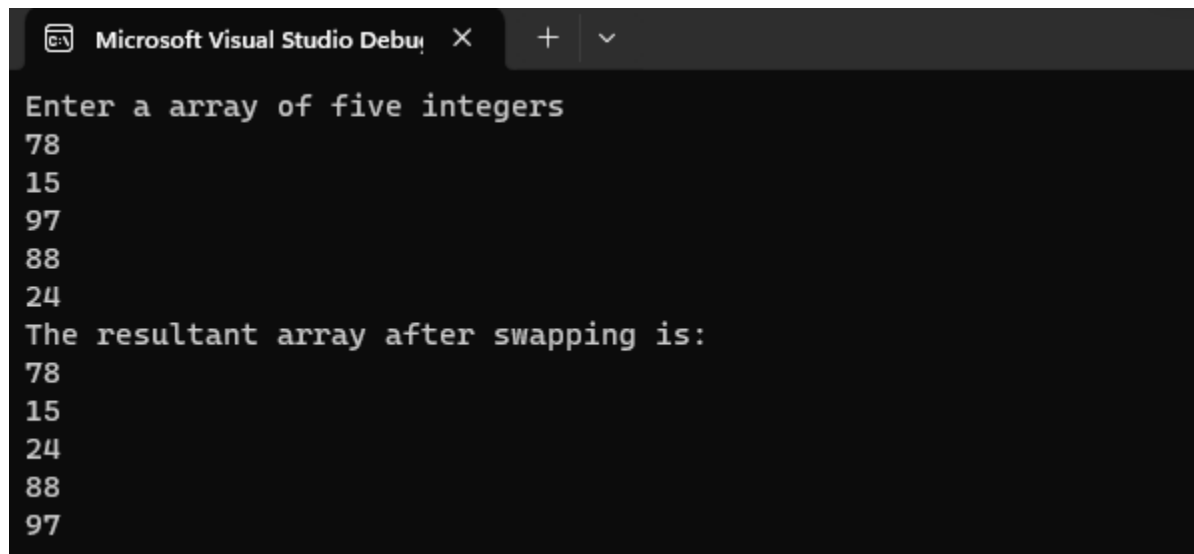
```
The largest number in the array is 99 and the smallest number is 9
C:\Users\HP\source\repos\LabManual8\x64\Debug\LabManual8.exe (process 7244) exited with code 0.
Press any key to close this window . . .|
```

Task 3:

Develop a program that takes 5 array elements from user. Swap position [2] element with position [4] element.

```
#include <iostream>
using namespace std;
int main()
{
    cout << "Enter a array of five integers\n";
    int num[5];
    for (int i = 0; i < 5; i++)
    {
        cin >> num[i];
    }
    int temp = 0;
    temp = num[2];
    num[2] = num[4];
    num[4] = temp;
    cout << "The resultant array after swapping is:\n";
    for (int j = 0; j < 5; j++)
    {
```

```
        cout << num[j] << endl;  
    }  
    return 0;  
}
```



The screenshot shows the Microsoft Visual Studio Debug Console window. The title bar indicates it is the 'Debug Console' for a C++ application. The console output is as follows:

```
Enter a array of five integers  
78  
15  
97  
88  
24  
The resultant array after swapping is:  
78  
15  
24  
88  
97
```