

```
using System;
namespace advanced_oop_task
{
    0 references
    internal class Program
    {
        0 references
        static void Main(string[] args)
        {
            Console.WriteLine("Enter the elements of the array that it consists of 4 rows and 3 columns");
            int y = 0;
            int[,] array_2d = Readmethod();
            int[] ArrayRows = Sum_Row(array_2d);
            int[] ArrayCols = Sum_cols(array_2d);

            int index = ArrayCols[2];
            ArrayCols[2] = ArrayRows[2];
            ArrayRows[2] = index;

            Console.WriteLine(" after swap ArrayRow is ");
            PrintIdArray(ArrayRows);
            Console.WriteLine(" afetr swap ArrayCols is ");
            PrintIdArray(ArrayCols);

            for (int i = 0; i < 4; i++)
            {
                ArrayRows[i] = ArrayRows[i] * 2;
            }
            Console.WriteLine(" after maximize the values in ArrayRow by 2");
            PrintIdArray(ArrayRows);
            Print_Average_Max(ArrayCols);
            Console.ReadKey();
        }
    }
}
```

```
1 reference
static int[,] Readmethod()
{
    int x = 0;
    int[,] array_2d = new int[4, 3];
    for (int i = 0; i < 4; i++)
    {
        for (int z = 0; z < 3; z++)
        {
            Console.WriteLine("Enter the value of row {0} and coloumn {1}", i + 1, z + 1);
            x = int.Parse(Console.ReadLine());
            array_2d[i, z] = x;
        }
    }
    return array_2d;
}

1 reference
static int[] Sum_Row (int[,] array_2d)
{
    int[] ArrayRow = new int[4];
    int x = 0;
    int sum = 0;
    for (int i = 0; i < 4; i++)
    {
        for (int z = 0; z < 3; z++)
        {
            x = array_2d[i, z];
            sum += x;
        }
        ArrayRow[i] = sum;
    }
    Console.WriteLine(" summation ArrayRow is ");
    for (int v = 0; v < 4; v++)
    {
        Console.WriteLine(ArrayRow[v]);
    }
    return ArrayRow;
}
```

```

1 reference
static int[] Sum_cols (int[,] array_2d)
{
    int x = 0;
    int sum = 0;
    int[] ArrayCols = new int[3];
    for (int i = 0; i < 3; i++)
    {
        for (int z = 0; z < 4; z++)
        {
            x = array_2d[z, i];
            sum += x;
        }
        ArrayCols[i] = sum;
    }
    Console.WriteLine(" summation ArrayCols is ");
    for (int n = 0; n < 3; n++)
    {
        Console.WriteLine(ArrayCols[n]);
    }
    return ArrayCols;
}

3 references
static void PrintIdArray(int[] swap)
{
    for (int i = 0; i < swap.Length; i++)
    {
        Console.WriteLine(swap[i]);
    }
}

```

```

1 reference
static void Print_Average_Max(int[] ArrayCols)
{
    int sum = 0;
    int x = 0;
    int average = 0;
    int max = ArrayCols[0];
    for (int i = 0; i < 3; i++)
    {
        x = ArrayCols[i];
        sum += x;
        if (i > 0)
        {
            if (ArrayCols[i] > ArrayCols[i] - 1)
            {
                max = ArrayCols[i];
            }
        }
    }
    average = sum / 3;
    Console.WriteLine("Average is {0}", average);
    Console.WriteLine("Max number is {0}", max);
}

```

```
namespace advanced_oop_task
{
    E:\college of cs\second year\2nd term\OOP\ConsoleApp3\ConsoleApp3\bin\Debug\ConsoleApp3.exe
    Enter the elements of the array that it consists of 4 rows and 3 columns
    Enter the value of row 1 and coloumn 1
    1
    Enter the value of row 1 and coloumn 2
    2
    Enter the value of row 1 and coloumn 3
    3
    Enter the value of row 2 and coloumn 1
    3
    Enter the value of row 2 and coloumn 2
    2
    Enter the value of row 2 and coloumn 3
    1
    Enter the value of row 3 and coloumn 1
    4
    Enter the value of row 3 and coloumn 2
    5
    Enter the value of row 3 and coloumn 3
    6
    Enter the value of row 4 and coloumn 1
    6
    Enter the value of row 4 and coloumn 2
    5
    Enter the value of row 4 and coloumn 3
    4
}
```

```
    summation ArrayRow is
    6
    12
    27
    42
    summation ArrayCols is
    14
    28
    42
    after swap ArrayRow is
    6
    12
    42
    42
    afetr swap ArrayCols is
    14
    28
    27
    after maximize the values in ArrayRow by 2
    12
    24
    84
    84
    Average is 23
    Max number is 27
```