

```

using System;

namespace Coding
{
    class Program
    {
        static void Main(string[] args)
        {
            int [,] a;
            int [,] b;
            int [,] c;
            // r1: row1
            // c1: columns1
            int r1 ,c1 ,r2 ,c2 , i ,j;

            Console.WriteLine(" enter row side r1 and columns c1 first matrix
");
            r1 = int.Parse(Console.ReadLine());

            c1 = int.Parse(Console.ReadLine());
            Console.WriteLine("enter row side  r2 and columns c2 2 matrix");

            r2 = int.Parse(Console.ReadLine());
            c2= int.Parse(Console.ReadLine());

            if (r1 == c2)
            {
                a = new int[r1,c1];
                b = new int [r2,c2];
                c = new int [r1,c2];
                Console.WriteLine("Enter matrix 1");

                for (i=0; i<r1;i++)

                {
                    for (j=0 ; j<c1;j++)

                    {
                        a[i,j]= int.Parse(Console.ReadLine());

                    }

                }
                Console.WriteLine("Enter matrix 2");

                for (i=0; i<r2;i++)

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        {
            for (j=0 ; j<c2;j++)

            {

                b[i,j]= int.Parse(Console.ReadLine());

            }
        }

        for ( i =0;i<r1; i++)

        {
            for(j =0;j<c2; j++)
            {
                c[i,j]=0;

                for ( r1=0 ; r1<c1;r1++)

                    c[i,j] = c[i,j] + a[i,r1]*b[r1,j];

            }

        }

        Console.WriteLine("after multiplication result is :");

        for (i=0; i<r1;i++)
        {
            for (j=0;j<c2;j++)
            {
                Console.Write( c [i,j]+ " ");

            }

            Console.WriteLine();

        }

    }
    else
    {
        Console.WriteLine(" Error Matrix Multiplication is Wrong");

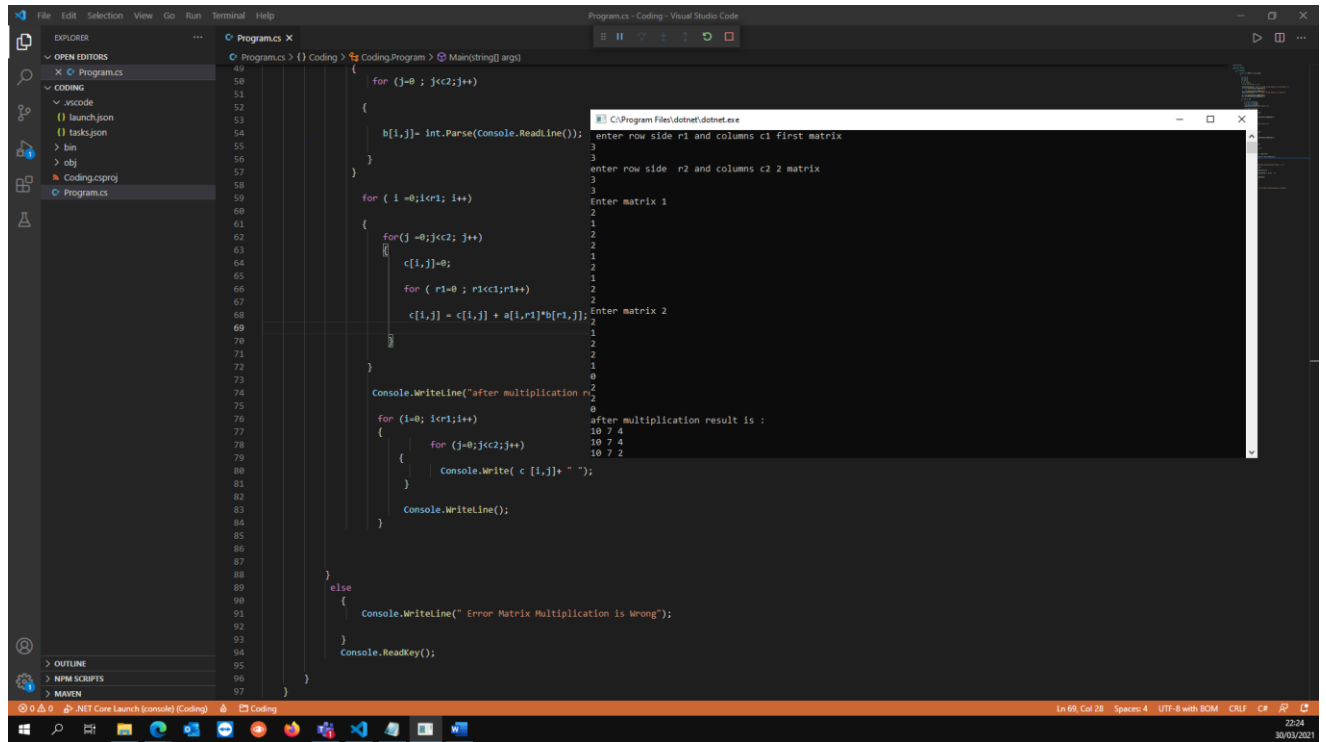
    }

    Console.ReadKey();

```

```
}  
}  
}
```

Result



The screenshot displays the Visual Studio Code interface with a C# program for matrix multiplication. The code is located in `Coding>Program.cs` and includes the following logic:

- It prompts the user to enter the row side `r1` and column side `c1` for the first matrix.
- It prompts the user to enter the row side `r2` and column side `c2` for the second matrix.
- It checks if the multiplication is valid (i.e., `c1 == r2`). If not, it prints "Error Matrix Multiplication is Wrong".
- If valid, it calculates the product matrix `c` using nested loops.
- It prints the resulting matrix `c`.

The output window shows the following execution results:

```
enter row side r1 and columns c1 first matrix  
3  
enter row side r2 and columns c2 2 matrix  
3  
Enter matrix 1  
2  
1  
2  
2  
1  
1  
Enter matrix 2  
2  
2  
1  
0  
0  
after multiplication result is :  
10 7 4  
10 7 4  
10 7 2
```