

## Code:

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

int main()
{
    int x[10][10], y[10][10], z[10][10];
    int ro1=0, ro2=0, col=0, co2=0;

    cout << "enter the number of rows and columns for the first array";
    cin >> ro1;
    cin >> col;
    cout << "enter the number of rows and columns for the second array";
    cin >> ro2;
    cin >> co2;

    if (col != ro2) {
        cout << "the number of column in the first array is not equal to second
array rows\n";
        return 0;
    }

    cout << endl << "Enter elements of the first matrix:" << endl;
    for (int i = 0; i < ro1; i++)
        for (int j = 0; j < col; ++j)
        {
            cout << "Enter element a" << i + 1 << j + 1 << " : ";
            cin >> x[i][j];
        }

    cout << endl << "Enter elements of the second matrix:" << endl;
    for (int i = 0; i < ro2; i++)
        for (int j = 0; j < co2; j++)
        {
            cout << "Enter element b" << i + 1 << j + 1 << " : ";
            cin >> y[i][j];
        }
    for (int i = 0; i < ro1; i++)
        for (int j = 0; j < co2; j++)
        {
            z[i][j]=0;
        }

    for (int i = 0; i < ro1; i++)
        for (int j = 0; j < co2; j++)
            for (int k = 0; k < col; ++k)
            {
                z[i][j] += x[i][k] * y[k][j];
            }

    cout << endl << "Output Matrix: " << endl;
    for (int i = 0; i < ro1; i++)
        for (int j = 0; j < co2; j++)
        {
            cout << " " << z[i][j];
```

```

        if(j == co2-1)
            cout << endl;
    }
}

```

```

4 int main()
5 {
6     int x[10][10], y[10][10], z[10][10];
7     int ro1=0, ro2=0, col=0, co2=0;
8
9     cout << "enter the number of rows and columns for the first array";
10    cin >> ro1;
11    cin >> col;
12    cout << "enter the number of rows and columns for the second array";
13    cin >> ro2;
14    cin >> co2;
15
16    if (col != ro2) {
17        cout << "The number of column in the first array is not equal to second array rows";
18        return 0;
19    }
20
21
22    cout << endl << "Enter elements of the first matrix:" << endl;
23    for (int i = 0; i < ro1; i++)
24        for (int j = 0; j < col; j++)
25        {
26            cout << "Enter element a" << i + 1 << j + 1 << " : ";
27            cin >> x[i][j];
28        }
29
30    cout << endl << "Enter elements of the second matrix:" << endl;
31    for (int i = 0; i < ro2; i++)
32        for (int j = 0; j < co2; j++)

```

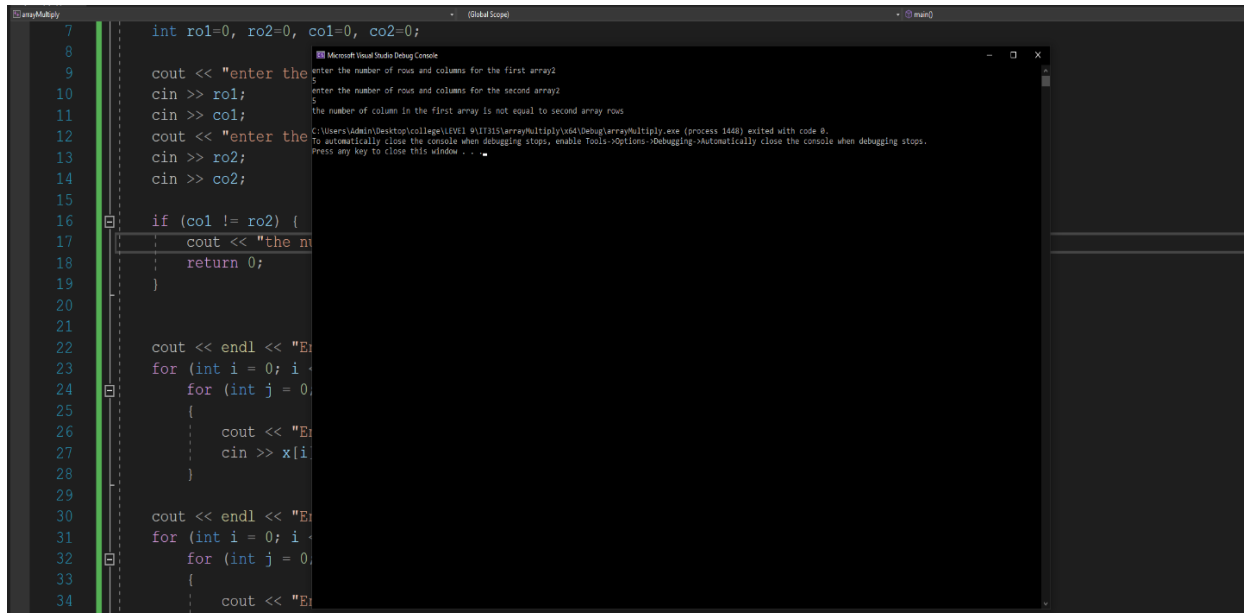
```

31    for (int i = 0; i < ro2; i++)
32        for (int j = 0; j < co2; j++)
33        {
34            cout << "Enter element b" << i + 1 << j + 1 << " : ";
35            cin >> y[i][j];
36        }
37
38    for (int i = 0; i < ro1; i++)
39        for (int j = 0; j < co2; j++)
40        {
41            z[i][j]=0;
42        }
43
44    for (int i = 0; i < ro1; i++)
45        for (int j = 0; j < co2; j++)
46            for (int k = 0; k < col; k++)
47            {
48                z[i][j] += x[i][k] * y[k][j];
49            }
50
51
52    cout << endl << "Output Matrix: " << endl;
53    for (int i = 0; i < ro1; i++)
54        for (int j = 0; j < co2; j++)
55        {
56            cout << " " << z[i][j];
57            if(j == co2-1)
58                cout << endl;
59        }
60    }
61    }

```

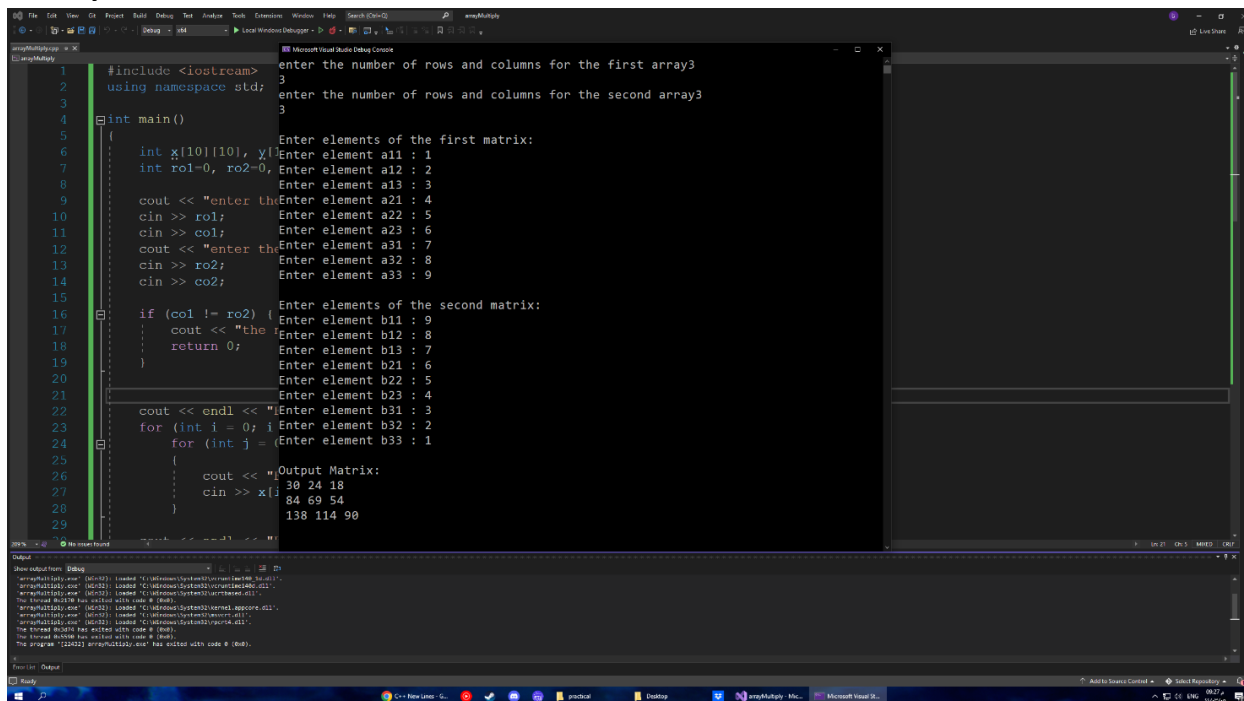
Output:

If number of columns in array 1 is not equal to number of rows in array 2



```
7 int ro1=0, ro2=0, col=0, co2=0;
8
9 cout << "enter the number of rows and columns for the first array1\n";
10 cin >> ro1;
11 cin >> col;
12 cout << "enter the number of rows and columns for the second array2\n";
13 cin >> ro2;
14 cin >> co2;
15
16 if (col != ro2) {
17     cout << "the number of columns in the first array is not equal to the number of rows in the second array\n";
18     return 0;
19 }
20
21 cout << endl << "Enter elements of the first matrix:\n";
22 for (int i = 0; i < ro1; i++)
23     for (int j = 0; j < col; j++)
24     {
25         cout << "Enter element a" << i << " " << j << ": ";
26         cin >> x[i][j];
27     }
28
29 cout << endl << "Enter elements of the second matrix:\n";
30 for (int i = 0; i < ro2; i++)
31     for (int j = 0; j < co2; j++)
32     {
33         cout << "Enter element b" << i << " " << j << ": ";
34         cin >> y[i][j];
35     }
```

If number of columns in array 1 is equal to number of rows in array 2



```
1 #include <iostream>
2 using namespace std;
3
4 int main()
5 {
6     int x[10][10], y[10][10];
7     int ro1=0, ro2=0, col=0, co2=0;
8
9     cout << "enter the number of rows and columns for the first array3\n";
10    cin >> ro1;
11    cin >> col;
12    cout << "enter the number of rows and columns for the second array3\n";
13    cin >> ro2;
14    cin >> co2;
15
16    if (col != ro2) {
17        cout << "the number of columns in the first array is not equal to the number of rows in the second array\n";
18        return 0;
19    }
20
21    cout << endl << "Enter elements of the first matrix:\n";
22    for (int i = 0; i < ro1; i++)
23        for (int j = 0; j < col; j++)
24        {
25            cout << "Enter element a" << i << " " << j << ": ";
26            cin >> x[i][j];
27        }
28
29    cout << endl << "Enter elements of the second matrix:\n";
30    for (int i = 0; i < ro2; i++)
31        for (int j = 0; j < co2; j++)
32        {
33            cout << "Enter element b" << i << " " << j << ": ";
34            cin >> y[i][j];
35        }
36
37    cout << endl << "Output Matrix:\n";
38    for (int i = 0; i < ro1; i++)
39        for (int j = 0; j < co2; j++)
40        {
41            cout << " " << x[i][j] << " ";
42            if (j % 3 == 2)
43                cout << "\n";
44        }
45    return 0;
46 }
```