

# Code:

```
1  int main()
2  {
3      int x[10][10], y[10][10], z[10][10];
4      int ro1=0, ro2=0, col=0, co2=0;
5
6      cout << "enter the number of rows and columns for the first array";
7      cin >> ro1;
8      cin >> col;
9      cout << "enter the number of rows and columns for the second array";
10     cin >> ro2;
11     cin >> co2;
12
13     if (col != ro2) {
14         cout << "the number of column in the first array is not equal to second array rows";
15         return 0;
16     }
17
18     cout << endl << "Enter elements of the first matrix:" << endl;
19     for (int i = 0; i < ro1; i++)
20     for (int j = 0; j < col; j++)
21     {
22         cout << "Enter element a" << i + 1 << j + 1 << " : ";
23         cin >> x[i][j];
24     }
25
26     cout << endl << "Enter elements of the second matrix:" << endl;
27     for (int i = 0; i < ro2; i++)
28     for (int j = 0; j < co2; j++)
```

Output:

```
Source output from: Debug
arrayMultiply.exe [initial]: loaded 'C:\Windows\System32\user32.dll'.
arrayMultiply.exe [initial]: loaded 'C:\Windows\System32\user32.dll'.
arrayMultiply.exe [initial]: loaded 'C:\Windows\System32\user32.dll'.
The thread 0x1234 has exited with code 0 (0x0).
arrayMultiply.exe [initial]: loaded 'C:\Windows\System32\kernel.appcore.dll'.
arrayMultiply.exe [initial]: loaded 'C:\Windows\System32\user32.dll'.
arrayMultiply.exe [initial]: loaded 'C:\Windows\System32\user32.dll'.
arrayMultiply.exe [initial]: loaded 'C:\Windows\System32\user32.dll'.
The thread 0x1234 has exited with code 0 (0x0).
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The thread 0x1234 has exited with code 0 (0x0).
The program '[1596] arrayMultiply.exe' has exited with code 0 (0x0).
```

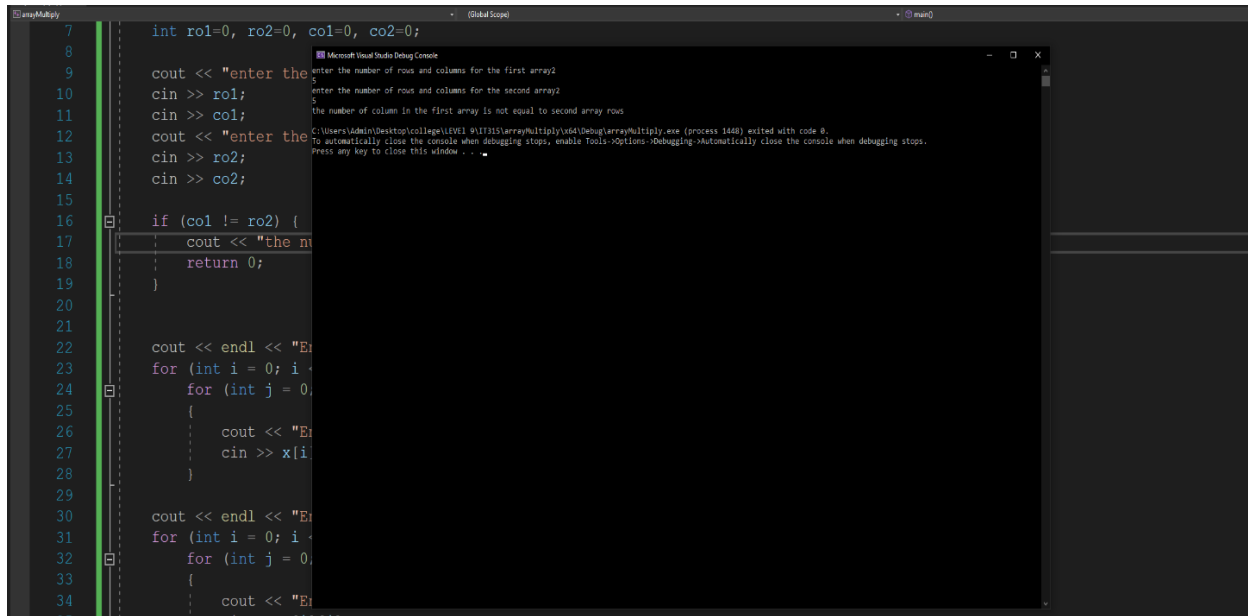
```
31     for (int i = 0; i < ro2; i++)
32     for (int j = 0; j < co2; j++)
33     {
34         cout << "Enter element b" << i + 1 << j + 1 << " : ";
35         cin >> y[i][j];
36     }
37
38     for (int i = 0; i < ro1; i++)
39     for (int j = 0; j < co2; j++)
40     {
41         z[i][j]=0;
42     }
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     cout << endl << "Output Matrix: " << endl;
52     for (int i = 0; i < ro1; i++)
53     for (int j = 0; j < co2; j++)
54     {
55         cout << " " << z[i][j];
56         if (j == co2-1)
57             cout << endl;
58     }
59 }
```

Output:

```
Source output from: Debug
arrayMultiply.exe [initial]: loaded 'C:\Windows\System32\user32.dll'.
arrayMultiply.exe [initial]: loaded 'C:\Windows\System32\user32.dll'.
arrayMultiply.exe [initial]: loaded 'C:\Windows\System32\user32.dll'.
The thread 0x1234 has exited with code 0 (0x0).
arrayMultiply.exe [initial]: loaded 'C:\Windows\System32\kernel.appcore.dll'.
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The program '[1596] arrayMultiply.exe' has exited with code 0 (0x0).
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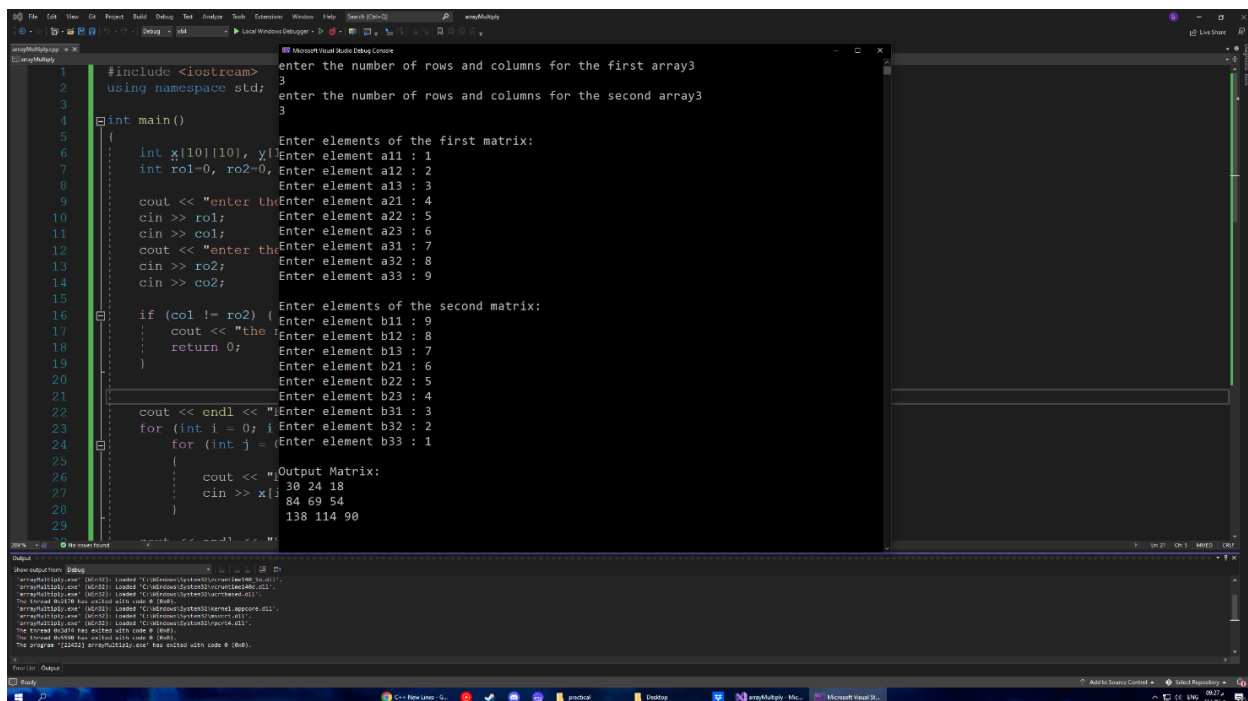
Output:

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
22 cout << endl << "Enter elements of the first matrix:\n";
23 for (int i = 0; i < ro1; i++)
24     for (int j = 0; j < col; j++)
25     {
26         cout << "Enter element a" << i << " " << j << ": ";
27         cin >> x[i][j];
28     }
29
30 cout << endl << "Enter elements of the second matrix:\n";
31 for (int i = 0; i < ro2; i++)
32     for (int j = 0; j < co2; j++)
33     {
34         cout << "Enter element b" << i << " " << j << ": ";
35         cin >> y[i][j];
36     }
37
38 cout << endl << "Output Matrix:\n";
39 for (int i = 0; i < ro1; i++)
40     for (int j = 0; j < co2; j++)
41     {
42         cout << x[i][j] << " ";
43     }
44     cout << endl;
45 }
```

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        }
43    cout << endl;
44 }
```