

C# - Jagged Arrays

A Jagged array is an array of arrays. You can declare a jagged array named `scores` of type `int` as –

```
int [][] scores;
```

Declaring an array, does not create the array in memory. To create the above array –

```
int[][] scores = new int[5][];  
for (int i = 0; i < scores.Length; i++) {  
    scores[i] = new int[4];  
}
```

You can initialize a jagged array as –

```
int[][] scores = new int[2][]{new int[]{92,93,94},new int[]{85,66,87,88}};
```

Where, `scores` is an array of two arrays of integers - `scores[0]` is an array of 3 integers and `scores[1]` is an array of 4 integers.

Example

The following example illustrates using a jagged array –

```
using System;  
  
namespace ArrayApplication {  
    class MyArray {  
        static void Main(string[] args) {  
  
            /* a jagged array of 5 array of integers*/  
            int[][] a = new int[][]{new int[]{0,0},new int[]{1,2},  
                                    new int[]{2,4},new int[]{ 3, 6 }, new int[]{ 4, 8 } };  
            int i, j;  
  
            /* output each array element's value */  
            for (i = 0; i < 5; i++) {  
                for (j = 0; j < 2; j++) {  
                    Console.WriteLine("a[{0}][{1}] = {2}", i, j, a[i][j]);  
                }  
            }  
            Console.ReadKey();  
        }  
    }  
}
```

[Live Demo](#)

When the above code is compiled and executed, it produces the following result –

```
a[0][0]: 0  
a[0][1]: 0  
a[1][0]: 1  
a[1][1]: 2  
a[2][0]: 2  
a[2][1]: 4  
a[3][0]: 3  
a[3][1]: 6  
a[4][0]: 4  
a[4][1]: 8
```