

C# - JAGGED ARRAYS

http://www.tutorialspoint.com/csharp/csharp_jagged_arrays.htm

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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();  
        }  
    }  
}
```

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
```