```
class Test
{
    public static void Main()
    {
            float sal1, sal2, sal3, sal4, sal5;
            float Total;
            Console.WriteLine("Enter Salary 1");
            sal1 = float.Parse(Console.ReadLine());
            Console.WriteLine("Enter Salary 2");
            sal2 = float.Parse(Console.ReadLine());
            Console.WriteLine("Enter Salary 3");
            sal3 = float.Parse(Console.ReadLine());
            Console.WriteLine("Enter Salary 4");
            sal4 = float.Parse(Console.ReadLine());
            Console.WriteLine("Enter Salary 5");
            sal5 = float.Parse(Console.ReadLine());
            Total = sal1 + sal2 + sal3 + sal4 + sal5;
            Console.WriteLine($"Total = {Total}");
    }
}
class Test
{
    public static void Main()
    {
            float []sal;
            float Total = 0;
            sal = new float[5];
            for(int i = 0 ; i < 5 ; i++)
            {
                Console.WriteLine($"Enter Salary {i+1}");
                sal[i] = float.Parse(Console.ReadLine());
            }
            for(i = 0 ; i < 5 ; i++)
            {    Total = Total + sal[i];    }
            Console.WriteLine($"Total = {Total}");
    }
}
```

<u>Array</u> (reference type)

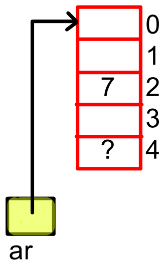
Single Dimension

Declaration:	data_type []array_name;
Creation:	array_name = new data_type[size];

```
int []ar;            //Declaration
ar = new int[5];     //Creation

int []ar = new int[5]; //Declaration&Creation

ar[2] = 7;
ar[4] = int.Parse(Console.ReadLine());
```



*) the size of array is established when it is created not when it is declared
*) array element access expression (index) is automatically checked to ensure that the index is valid
   (this feature because c# is type safe language), otherwise will throw "OutOfRangeException"
*) Once Created, we CAN'T Expand or shrink the array
*) the arrays are implicitly initialized by 0 or false if it is of type boolean

Example:

```
        string []books;                         //Declaration
        books = new string[3];                  //Creation
OR
        string []books;                                          //Declaration
        books = new string[3]{"C#", "DotNet", "VB.Net"};        //Creation & Initialization
OR
        string []books = new string[3]{"C#", "DotNet", "VB.Net"};//Declaration & Creation & Initialization
OR
        string []books = {"C#", "DotNet", "VB.Net"};  //Declaration & Creation & Initialization
```

Multi-Dimension Array

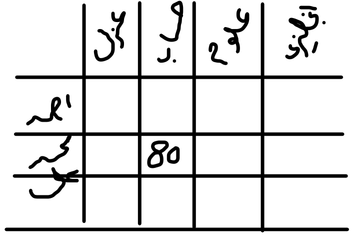
```
data_type [ , , , , ]arrayName                                  //Declaration
arrayName = new data_type[size1, size2, ......, sizeN];         //Creation

class Test
{
    public static void Main()
    {
            int [ , ]ar;
            ar = new int[3, 4];
            int col, count = 1, row;

            for(row = 0 ; row < 3 ; row++)
            {
                for(col = 0 ; col < 4 ; col++)
                {
                        ar[row, col] = count;
                        count++;
                }
            }

            for(col = 0 ; col < 4 ; col++)
            {
                for(row = 0 ; row < 3 ; row++)
                {
                        Console.Write($"{ar[row, col]} ");
                }
                Console.WriteLine();
            }


            ar = new int[3, 4]{{1, 2, 3, 4}, {5, 6, 7, 8}, {9, 10, 11, 12}};
    }
}
```

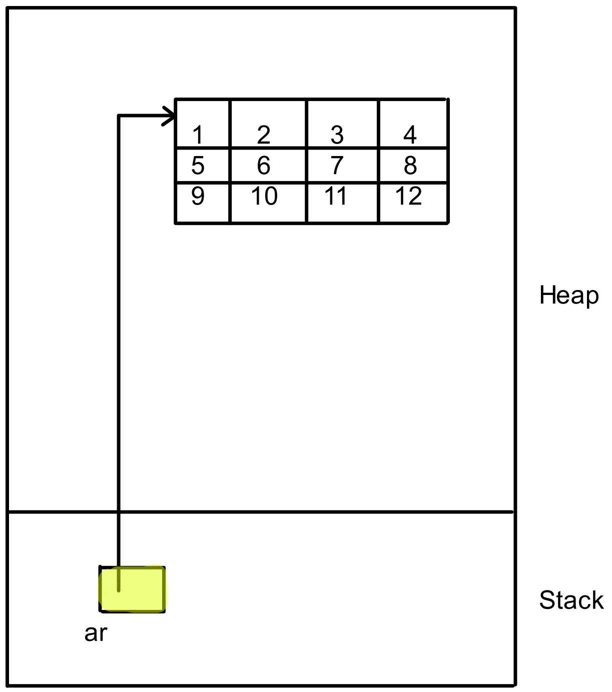


row	col	count
3	4	13
0	1	

$$\begin{array}{c|cccc} & 0 & 1 & 2 & 3 \\ \hline 0 & 1 & 2 & 3 & 4 \\ 1 & 5 & 6 & 7 & 8 \\ 2 & 9 & 10 & 11 & 12 \end{array}$$

```
O/P
1 5 9
2 6 10
3 7 11
4 8 12


 1 5 9
 2
```



Jagged Array (array of arrays)

data_type []arrayName;

data_type [][]arrayName;

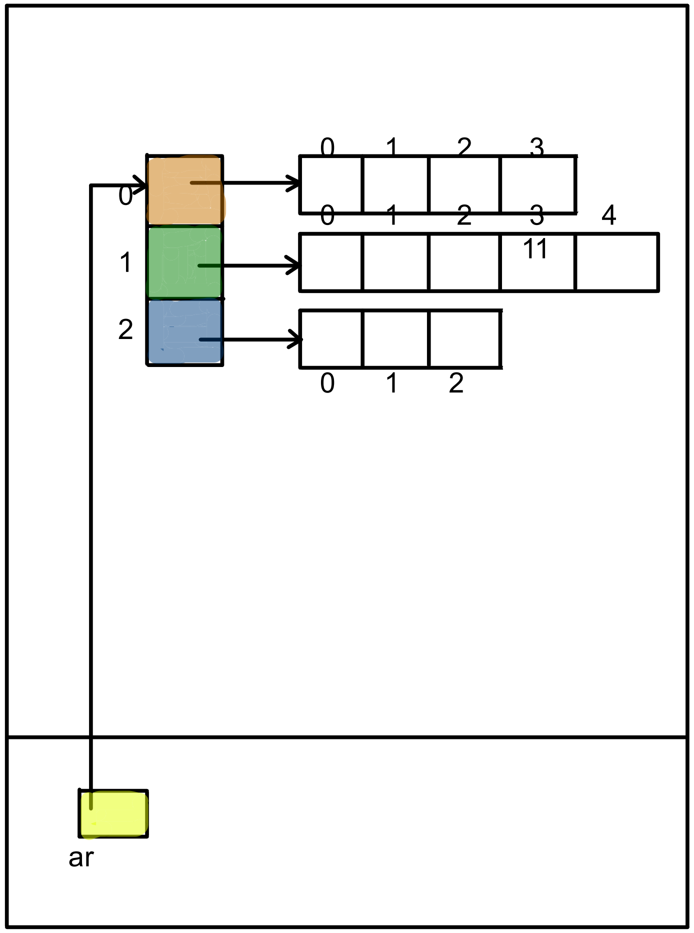
C# allows you to create a special type of 2 dimension array called Jagged array

Jagged array is array of arrays

type [][] arrayName;

```
class Test
{
    public static void Main()
    {
        int [][]ar;                 //Declaration
        ar = new int[3][];          //Creation of ar & Declaration for the 2nd arrays
        ar[0] = new int[4];         //Creation of 1st array in the arrays
        ar[1] = new int[5];         //Creation of 2nd array in the arrays
        ar[2] = new int[3];         //Creation of 3rd array in the arrays

        ar[1][3] = 11;
    }
}
```



0
1
2
0 1 2 3
0 1 2 3 4
11
0 1 2
ar