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# JAGGED ARRAY IN JAVA



- In computer science, a ragged array, also known as a jagged array, is an array of arrays of which the member arrays can be of different sizes and producing rows of jagged edges when visualized as output
- In contrast, two-dimensional arrays are always rectangular
- Jagged array is array of arrays such that member arrays can be of different sizes, i.e., we can create a 2-D arrays but with variable number of columns in each row



- If we don't specify an array initializer, the default value is assigned to each element of the array depending upon the type of array
- 0 is default value for int or long or short or byte, null is default value for string and 0.0 is the default value for double or float

```
int[][] arr = new int[3][];  
// this will initialize the array elements by 0
```



We can also initialize the array upon declaration like this:

```
int[][] arr = new int[][]  
{  
    new int[] { 1, 2, 3 };  
    new int[] { 4, 5, 6, 7 };  
    new int[] { 8, 9 };  
};
```

Or we can use the following shorthand form.

```
int[][] arr =  
{  
    new int[] { 1, 2, 3 };  
    new int[] { 4, 5, 6, 7 };  
    new int[] { 8, 9 };  
};
```

```
// Declaring 2-D array with 2 rows
int arr[][] = new int[2][];

// Making the above array Jagged

// First row has 3 columns
arr[0] = new int[3];

// Second row has 2 columns
arr[1] = new int[2];
```

```
// Initializing array
int count = 0;
for (int i=0; i<arr.length; i++)
    for(int j=0; j<arr[i].length;
j++)
        arr[i][j] = count++;

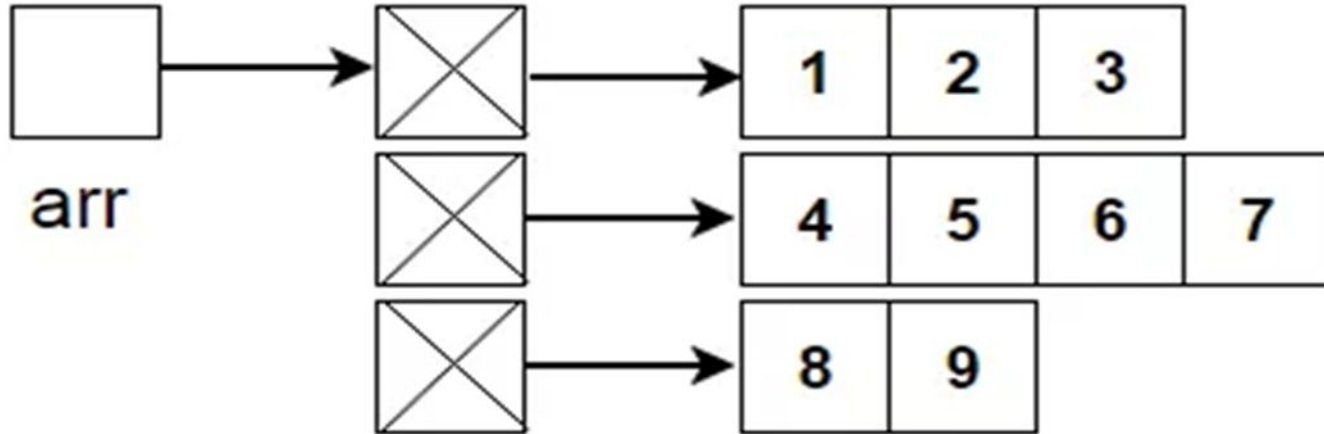
// Displaying the values of 2D
Jagged array
System.out.println("Contents of 2D
Jagged Array");
for (int i=0; i<arr.length; i++)
{
    for (int j=0; j<arr[i].length;
j++)
        System.out.print(arr[i][j] +
" ");
    System.out.println();
}
```

## EXAMPLE

```
import java.util.Arrays;
class JaggedArray
{
    // Program to illustrate Jagged array in Java
    public static void main(String[] args)
    {
        // Declare a jagged array containing three elements
        int[][] arr = new int[3][];
        // Initialize the elements
        arr[0] = new int[] { 1, 2, 3 };
        arr[1] = new int[] { 4, 5, 6, 7 };
        arr[2] = new int[] { 8, 9 };
        // print the array elements
        for (int[] row : arr)
            System.out.println(Arrays.toString(row)); }
}
```



Memory representation of jagged array for the above example program



THANK YOU

