

## TwoD\_fun

In this problem, you will implement three static methods from the `TwoD_fun` class.

The first static method, `getLargest(int a, int b, int c, int d)`, which given four nonnegative numbers, arranges them to form the largest integer possible. The four parameters will all be greater than or equal to 0, and the values may repeat. You may assume the return value will be a valid `int` value.

The following code shows the results of the `getLargest` method.

The following code	Returns
<code>TwoD_fun td = new TwoD_fun();</code>	
<code>td.getLargest(1, 5, 2, 3);</code>	5321
<code>td.getLargest(13, 21, 8, 15);</code>	8211513
<code>td.getLargest(60, 52, 79, 8);</code>	8796052
<code>td.getLargest(8, 6, 9, 12);</code>	98612
<code>td.getLargest(1, 20, 2, 10);</code>	220110
<code>td.getLargest(1, 10, 13, 130);</code>	13130110

The second static method is `findLargest(int[][] arr)`. This method, given a 4 x 4 array, returns the largest integer that can be formed by rearranging the values in any row or any column. You may assume all values are greater than or equal to 0 and the numbers may repeat. You may also assume the return value will be a valid `int` value.

The following code shows the results of the `findLargest` method.

The following code	Returns
<code>TwoD_fun td = new TwoD_fun();</code>	
<code>int[][] arr1 = {{1, 2, 3, 4}, { 2, 3, 4, 5},                   {3, 4, 5, 6}, {4, 5, 6, 7} };</code>	
<code>ans = td.findLargest(arr1); // column 4</code>	7654
<code>int[][] arr2 = {{16, 9, 3, 14},                   { 24, 38, 7, 8}, {6, 42, 55, 0}, {4, 5, 29, 7} };</code>	
<code>td.findLargest(arr2) // column 2</code>	954238
<code>int[][] arr3 = {{9, 63, 25, 14}, { 24, 38, 7, 8},                   {63, 42, 55, 0}, {14, 5, 29, 7} };</code>	
<code>td.findLargest(arr3)</code>	9632514

The third static method is `biggestSquare(int[][] arr)`. This method, given an `int[][]` containing only 0's and 1's, and returns the area of largest square made of all 1's. You may assume:

- `arr.length == arr[0].length`
- `arr[k].length == arr[m].length, 0 <= k, m < arr.length`
- `arr[k] == 0 || arr[k] == 1, 0 <= k, m < arr.length`

The following code shows the results of the `biggestSquare` method with `m == 1`.

The following code	Returns
<code>TwoD_fun td = new TwoD_fun();</code>	
<code>int[][] arr1b = {{1, 1, 1},                   {1, 1, 1},                   {1, 1, 1} };</code>	
<code>td.biggestSquare(arr1b);</code>	9
<code>int[][] arr2b = {{1, 1, 1, 1, 1},                   {1, 1, 1, 1, 1},                   {1, 1, 1, 1, 1},                   {1, 1, 1, 1, 1},                   {1, 1, 1, 1, 0} };</code>	
<code>td.biggestSquare(arr2b);</code>	16
<code>int[][] arr3b = {{1, 0, 1, 1, 1},                   {1, 1, 1, 1, 1},                   {1, 1, 1, 1, 0},                   {0, 1, 1, 1, 1},                   {1, 1, 1, 1, 1} };</code>	
<code>td.biggestSquare(arr3b);</code>	9
<code>int[][] arr4b = {{1, 1, 1, 0, 1},                   {1, 0, 1, 1, 1},                   {1, 1, 1, 0, 1},                   {1, 0, 1, 1, 1},                   {1, 1, 0, 1, 1} };</code>	
<code>td.biggestSquare(arr4b);</code>	4