Find Element that Appears Once

Given a sorted array in which all elements appear twice (one after one) and one element appears only once. It's required to find this element (i.e. element that appears once)

Design an **efficient algorithm** that you can use for solving this problem.

Input: Already Implemented

The first line of input is an integer T (T < 30), that indicates the number of test cases. Each case consists of array items

Output: Already Implemented

A single integer that represents the element that appears once in the given array.

Function: Implement it!

```
public static int FindUniqueElement(int[] arr, int N)
```

It takes one sorted array (*which all elements appear twice except one*), it shall return the unique element in arr.

`ElementOnceAppearence.cs` includes this method.

Examples

#	Input Array	Output
1	1, 1, 3, 3, 4, 5, 5, 7, 7, 8, 8	4
2	1, 1, 3, 3, 4, 4, 5, 5, 7, 7, 8	8
3	1, 1, 2, 4, 4, 5, 5, 6, 6	2
4	4, 10, 10, 11, 11	4

C# Help

Creating 1D array
```
int [] array1D = new int [size]
```

Creating 2D array
```
int [,] array2D = new int [size1, size2]
```

Getting the size of 1D array
```
int size = array1D.GetLength(0);
```

Getting the size of 2D array

```
int size1 = array2D.GetLength(0);

int size2 = array2D.GetLength(1);
```

Sorting single array

Sort the given array "items" in ascending order

```
Array.Sort(items);
```

Sorting parallel arrays

Sort the first array "master" and re-order the 2nd array "slave" according to this sorting

```
Array.Sort(master, slave);
```