

# Add Length property to FailSoftArray

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/*
C#: The Complete Reference
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*/

// Add Length property to FailSoftArray.

using System;

class FailSoftArray {
int[] a; // reference to underlying array
int len; // length of array – underlies Length property

public bool errflag; // indicates outcome of last operation

// Construct array given its size.
public FailSoftArray(int size) {
a = new int[size];
len = size;
}

// Read-only Length property.
public int Length {
get {
return len;
}
}

// This is the indexer for FailSoftArray.
public int this[int index] {
// This is the get accessor.
```

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get {
    if(ok(index)) {
        errflag = false;
        return a[index];
    } else {
        errflag = true;
        return 0;
    }
}

// This is the set accessor
set {
    if(ok(index)) {
        a[index] = value;
        errflag = false;
    }
    else errflag = true;
}

// Return true if index is within bounds.
private bool ok(int index) {
    if(index >= 0 & index < Length) return true; return false; } }
// Demonstrate the improved fail-soft array. public class
ImprovedFSDemo { public static void Main() { FailSoftArray fs
= new FailSoftArray(5); int x; // can read Length for(int i=0;
i < fs.Length; i++) fs[i] = i*10; for(int i=0; i < fs.Length;
i++) { x = fs[i]; if(x != -1) Console.Write(x + " "); }
Console.WriteLine(); // fs.Length = 10; // Error, illegal! } }
[/csharp]

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