

System.IndexOutOfRangeException Class

```
[ILAsm]
.class public sealed serializable IndexOutOfRangeException extends
System.SystemException

[C#]
public sealed class IndexOutOfRangeException: SystemException
```

Assembly Info:

- *Name:* mscorlib
- *Public Key:* [00 00 00 00 00 00 00 00 04 00 00 00 00 00 00]
- *Version:* 2.0.x.x
- *Attributes:*
 - CLSCompliantAttribute(true)

Summary

Represents the error that occurs when an attempt is made to access an element of an array with an index that is outside the bounds of the array.

Inherits From: System.SystemException

Library: BCL

Thread Safety: All public static members of this type are safe for multithreaded operations. No instance members are guaranteed to be thread safe.

Description

[*Note:* The following CIL instructions throw `System.IndexOutOfRangeException`:

- `ldelem.<type>`
- `ldelema`
- `stelem.<type>`

]

Example

The following example demonstrates an error that causes a `System.IndexOutOfRangeException` exception.

```
[C#]
```

```
using System;
```

```

1 public class IndexRangeTest {
2     public static void Main() {
3         int[] array = {0,0,0};
4         try {
5             for (int i = 0; i<4; i++) {
6                 Console.WriteLine("array[{0}] = {1}",i,array[i]);
7             }
8         }
9         catch (IndexOutOfRangeException e) {
10            Console.WriteLine("Error: {0}",e);
11        }
12    }
13 }
14

```

15 The output is

```

16
17 array[0] = 0
18 array[1] = 0
19 array[2] = 0
20 Error: System.IndexOutOfRangeException: Index was outside the bounds of the
21 array.
22     at IndexRangeTest.Main()
23

```

24

IndexOutOfRangeException() Constructor

```
[ILAsm]  
public rtspecialname specialname instance void .ctor()  
  
[C#]  
public IndexOutOfRangeException()
```

Summary

Constructs and initializes a new instance of the `System.IndexOutOfRangeException` class.

Description

This constructor initializes the `System.IndexOutOfRangeException.Message` property of the new instance to a system-supplied message that describes the error, such as "An array index is out of range." This message takes into account the current system culture.

The `System.IndexOutOfRangeException.InnerException` property is initialized to `null`.

IndexOutOfRangeException(System.String) Constructor

```
[ILAsm]  
public rtspecialname specialname instance void .ctor(string message)  
  
[C#]  
public IndexOutOfRangeException(string message)
```

Summary

Constructs and initializes a new instance of the `System.IndexOutOfRangeException` class.

Parameters

Parameter	Description
<i>message</i>	A <code>System.String</code> that describes the error. The content of <i>message</i> is intended to be understood by humans. The caller of this constructor is required to ensure that this string has been localized for the current system culture.

Description

This constructor initializes the `System.IndexOutOfRangeException.Message` property of the new instance using *message*. If *message* is null, the `System.IndexOutOfRangeException.Message` property is initialized to the system-supplied message provided by the constructor that takes no arguments. The `System.IndexOutOfRangeException.InnerException` property is initialized to null.

IndexOutOfRangeException(System.String, System.Exception) Constructor

```
[ILAsm]
public rtspecialname specialname instance void .ctor(string message, class
System.Exception innerException)

[C#]
public IndexOutOfRangeException(string message, Exception innerException)
```

Summary

Constructs and initializes a new instance of the `System.IndexOutOfRangeException` class.

Parameters

Parameter	Description
<i>message</i>	A <code>System.String</code> that describes the error. The content of <i>message</i> is intended to be understood by humans. The caller of this constructor is required to ensure that this string has been localized for the current system culture.
<i>innerException</i>	An instance of <code>System.Exception</code> that is the cause of the current exception. If <i>innerException</i> is non-null, then the current exception was raised in a catch block handling <i>innerException</i> .

Description

This constructor initializes the `System.IndexOutOfRangeException.Message` property of the new instance using *message*, and the `System.IndexOutOfRangeException.InnerException` property using *innerException*. If *message* is null, the `System.IndexOutOfRangeException.Message` property is initialized to the system-supplied message provided by the constructor that takes no arguments.

[*Note:* For information on inner exceptions, see `System.Exception.InnerException`.]