

# 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 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>`
- `ldlema`
- `stelem.<type>`

## Example

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

```

1
2     [C#]

3 using System;
4 public class IndexRangeTest {
5     public static void Main() {
6         int[] array = {0,0,0};
7         try {
8             for (int i = 0; i<4; i++) {
9                 Console.WriteLine("array[{0}] = {1}",i,array[i]);
10            }
11        }
12        catch (IndexOutOfRangeException e) {
13            Console.WriteLine("Error: {0}",e);
14        }
15    }
16 }
17
18 The output is
19
20 array[0] = 0
21 array[1] = 0
22 array[2] = 0
23 Error: System.IndexOutOfRangeException: Index was outside the bounds of the
24 array.
25     at IndexRangeTest.Main()
26
27

```

# 1 IndexOutOfRangeException() Constructor

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

## 6 Summary

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

## 9 Description

10 This constructor initializes the `System.IndexOutOfRangeException.Message` property of  
11 the new instance to a system-supplied message that describes the error, such as "An  
12 array index is out of range." This message takes into account the current system  
13 culture.  
14

15 The `System.IndexOutOfRangeException.InnerException` property is initialized to  
16 `null`.  
17

# 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`.]