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:* 1.0.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 IL instructions throw **System.IndexOutOfRangeException**:

- Idelem.<type>

- Idelema

- stelem.<type>

]

Example

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

[C#]

```
using System;
public class IndexRangeTest {
 public static void Main() {
    int[] array = {0,0,0};
    try {
      for (int i = 0; i<4; i++) {
        Console.WriteLine("array[{0}] = {1}",i,array[i]);
      }
    }
    catch (IndexOutOfRangeException e) {
      Console.WriteLine("Error: {0}",e);
    }
  }
}
```

The output is

```
array[0] = 0
array[1] = 0
array[2] = 0
Error: System.IndexOutOfRangeException: Index was outside
the bounds of the array.
   at IndexRangeTest.Main()
```

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
message	A **System.String** that describes the error. The content of *message* 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
message	A **System.String** that describes the error. The content of *message* 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.
innerException	An instance of **System.Exception** that is the cause of the current exception. If *innerException* is non-null, then the current exception was raised in a catch block handling *innerException*.

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.]