

# System.ArgumentOutOfRangeException Class

```
[ILAsm]
.class public serializable ArgumentOutOfRangeException extends
System.ArgumentException

[C#]
public class ArgumentOutOfRangeException: ArgumentException
```

## 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 argument passed to a method is invalid because it is outside the allowable range of values as specified by the method.

## Inherits From: System.ArgumentException

**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:* System.ArgumentOutOfRangeException is thrown when a method is invoked and at least one of the arguments passed to the method is not null and does not contain a valid value.

System.ArgumentOutOfRangeException behaves identically to System.ArgumentException. It is provided so that application code can differentiate between exceptions caused by invalid arguments that are not null, and exceptions caused by null arguments. For errors caused by null arguments, see System.ArgumentNullException.

]

## Example

The following example demonstrates an error that causes the System.Array class to throw a System.ArgumentOutOfRangeException exception.

```
[C#]
```

```
1  using System;
2  class ArgOutOfRangeExample {
3      public static void Main() {
4          int[] array1 = {0,0};
5          int[] array2 = {0,0};
6          try {
7              Array.Copy(array1,array2,-1);
8          }
9          catch (ArgumentOutOfRangeException e) {
10             Console.WriteLine("Error: {0}",e);
11         }
12     }
13 }
14
15 The output is
16
17 Error: System.ArgumentOutOfRangeException: Non-negative number required.
18
19
20 Parameter name: length
21
22
23 at System.Array.Copy(Array sourceArray, Int32 sourceIndex, Array
24 destinationArray, Int32 destinationIndex, Int32 length)
25
26
27 at ArgOutOfRangeExample.Main()
28
29
```

# ArgumentOutOfRangeException()

## Constructor

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

### Summary

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

### Description

This constructor initializes the `System.ArgumentOutOfRangeException.Message` property of the new instance to a system-supplied message that describes the error, such as "Non-negative number required." This message takes into account the current system culture.

The `System.ArgumentOutOfRangeException.ParamName` and `System.ArgumentOutOfRangeException.ActualValue` properties are initialized to null.

# ArgumentOutOfRangeException(System.String) Constructor

```
[ILAsm]
public rtspecialname specialname instance void .ctor(string paramName)

[C#]
public ArgumentOutOfRangeException(string paramName)
```

## Summary

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

## Parameters

Parameter	Description
<i>paramName</i>	A <code>System.String</code> that contains the name of the parameter that caused the current exception. The content of <i>paramName</i> is intended to be understood by humans.

## Description

This constructor initializes the `System.ArgumentOutOfRangeException.ParamName` property of the new instance using *paramName*. The `System.ArgumentOutOfRangeException.Message` property is initialized to the system-supplied message provided by the constructor that takes no arguments.

The `System.ArgumentOutOfRangeException.ActualValue` property is initialized to `null`.

# ArgumentOutOfRangeException(System.String, System.String) Constructor

```
[ILAsm]
public rtspecialname specialname instance void .ctor(string paramName,
string message)

[C#]
public ArgumentOutOfRangeException(string paramName, string message)
```

## Summary

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

## Parameters

Parameter	Description
<i>paramName</i>	A <code>System.String</code> that contains the name of the parameter that caused the current exception. The content of <i>paramName</i> is intended to be understood by humans.
<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.ArgumentOutOfRangeException.ParamName` property of the new instance using *paramName*, and the `System.ArgumentOutOfRangeException.Message` property using *message*. If *message* is null, the `System.ArgumentOutOfRangeException.Message` property is initialized to the system-supplied message provided by the constructor that takes no arguments.

The `System.ArgumentOutOfRangeException.ActualValue` property is initialized to null.

# ArgumentOutOfRangeException(System.String, System.Object, System.String) Constructor

```
[ILAsm]
public rtspecialname specialname instance void .ctor(string paramName,
object actualValue, string message)

[C#]
public ArgumentOutOfRangeException(string paramName, object actualValue,
string message)
```

## Summary

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

## Parameters

Parameter	Description
<i>paramName</i>	A <code>System.String</code> that contains the name of the parameter that caused the current exception. The content of <i>paramName</i> is intended to be understood by humans.
<i>actualValue</i>	The value of the argument that caused the current exception.
<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.ArgumentOutOfRangeException.ParamName` property of the new instance using *paramName*, the `System.ArgumentOutOfRangeException.ActualValue` property using *actualValue*, and the `System.ArgumentOutOfRangeException.Message` property using *message*. If *message* is null, the `System.ArgumentOutOfRangeException.Message` property is initialized to the system-supplied message provided by the constructor that takes no arguments.

[Note: The *actualValue* parameter contains the invalid argument that was passed to the method. Use the `System.ArgumentOutOfRangeException.ParamName` property to retrieve the name of the parameter used to pass *actualValue*.]

# ArgumentOutOfRangeException.ActualValue Property

```
[ILAsm]  
.property object ActualValue { public hidebysig virtual specialname object  
get_ActualValue() }  
  
[C#]  
public virtual object ActualValue { get; }
```

## Summary

Gets the value of the parameter that caused the current exception.

## Property Value

A `System.Object` that contains the value of the parameter that caused the current exception, or `null` if no value was specified to the constructor for the current instance.

## Description

This property is read-only.

## Behaviors

The `System.ArgumentOutOfRangeException.ActualValue` property returns the same value as was passed into the constructor.

## How and When to Override

Override the `System.ArgumentOutOfRangeException.ActualValue` property to customize the content or format of the value.

## Usage

Use this property to retrieve the invalid argument.

# ArgumentOutOfRangeException.Message

## Property

```
[ILAsm]
.property string Message { public hidebysig virtual specialname string
get_Message() }

[C#]
public override string Message { get; }
```

## Summary

Gets the error message that explains the reason for the exception.

## Property Value

A `System.String` containing the error message. The error message should describe the expected values of the parameter that causes this exception.

## Description

This property is read-only.