

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]
- *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 }
```

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

1 `ArgumentOutOfRangeException()`

2 Constructor

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

7 Summary

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

10 Description

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

15
16 The `System.ArgumentOutOfRangeException.ParamName` and
17 `System.ArgumentOutOfRangeException.ActualValue` properties are initialized to null.

18

1
2 **ArgumentOutOfRangeException(System.String)**
3 **Constructor**

```
4 [ILAsm]  
5 public rtspecialname specialname instance void .ctor(string paramName)  
6 [C#]  
7 public ArgumentOutOfRangeException(string paramName)
```

8 **Summary**

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

11 **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.

12
13 **Description**

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

18
19 The `System.ArgumentOutOfRangeException.ActualValue` property is initialized to
20 null.

21

1
2 **ArgumentOutOfRangeException(System.String, System.String) Constructor**
3

```
4 [ILAsm]  
5 public rtspecialname specialname instance void .ctor(string paramName,  
6 string message)  
7 [C#]  
8 public ArgumentOutOfRangeException(string paramName, string message)
```

9 **Summary**

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

12 **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.

13
14 **Description**

15 This constructor initializes the `System.ArgumentOutOfRangeException.ParamName`
16 property of the new instance using *paramName*, and the
17 `System.ArgumentOutOfRangeException.Message` property using *message*. If *message*
18 is null, the `System.ArgumentOutOfRangeException.Message` property is initialized to
19 the system-supplied message provided by the constructor that takes no arguments.
20

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

23

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*.]

1 **ArgumentOutOfRangeException.ActualValue**

2 **Property**

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

8 **Summary**

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

10 **Property Value**

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

13 **Description**

14 This property is read-only.

15 **Behaviors**

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

18

19 **How and When to Override**

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

22

23 **Usage**

24 Use this property to retrieve the invalid argument.

25

26

1 ArgumentOutOfRangeException.Message

2 Property

```
3 [ILAsm]  
4 .property string Message { public hidebysig virtual specialname string  
5 get_Message() }  
  
6 [C#]  
7 public override string Message { get; }
```

8 Summary

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

10 Property Value

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

13 Description

14 This property is read-only.

15