

# System.NullReferenceException Class

```
[ILAsm]
.class public serializable NullReferenceException extends
System.SystemException

[C#]
public class NullReferenceException: 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 there is an attempt to dereference a null object reference.

## 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:* Applications throw the `System.ArgumentNullException` rather than `System.NullReferenceException`.

The following CIL instructions throw `System.NullReferenceException`:

- `callvirt`
- `cpblk`
- `cpobj`
- `ldlema`
- `ldelem.<type>`
- `ldfld`
- `ldflda`

- 1      • ldind.<type>
- 2      • ldlen
- 3      • stelem.<type>
- 4      • stind.<type>
- 5      • stfld
- 6      • throw
- 7      • unbox
- 8      • initblk
- 9 ]

## 10 Example

11      The following example demonstrates an error that causes a  
12      System.NullReferenceException exception.

13  
14      [C#]

```
15 using System;
16 public class Ints {
17     public int[] myInts;
18 }
19 public class NullRefExample {
20     public static void Main() {
21         Ints ints = new Ints();
22         try {
23             int i = ints.myInts[0];
24         }
25         catch( NullReferenceException e ) {
26             Console.WriteLine( "Caught error: {0}.", e);
27         }
28     }
29 }
```

30  
31 The output is

```
32
33 Caught error: System.NullReferenceException: Object reference not set to an
34 instance of an object.
35     at NullRefExample.Main().
36
```

37

# 1    **NullReferenceException() Constructor**

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

## 6    **Summary**

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

## 8    **Description**

9       This constructor initializes the `System.NullReferenceException.Message` property of  
10      the new instance to a system-supplied message that describes the error, such as "The  
11      value 'null' was found where an instance of an object was required." This message takes  
12      into account the current system culture.

13      The `System.NullReferenceException.InnerException` property is initialized to `null`.  
14  
15

# 1    **NullReferenceException(System.String)**

## 2    **Constructor**

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

### 7    **Summary**

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

### 9    **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.

### 11    **Description**

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

# NullReferenceException(System.String, System.Exception) Constructor

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

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

## Summary

Constructs and initializes a new instance of the `System.NullReferenceException` 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 <code>Exception</code> . If <i>innerException</i> is non-null, then the current <code>Exception</code> was raised in a catch block handling <i>innerException</i> .

## Description

This constructor initializes the `System.NullReferenceException.Message` property of the new instance using *message*, and the `System.NullReferenceException.InnerException` property using *innerException*. If *message* is null, the `System.NullReferenceException.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`.]