System.ArithmeticException Class

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


[C#]
public class ArithmeticException: 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 an error caused by an arithmetic operation.

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 Base Class Library includes two types derived from System.ArithmeticException:

- System.DivideByZeroException

- System.OverflowException

When appropriate, use these types instead of System.ArithmeticException.

]

[*Note:* The following CIL instructions throw System.ArithmeticException:

- ckfinite

- div

]

Example

The following example demonstrates an error that causes the system to throw a `System.ArithmeticException` error.

[C#]

```
using System;
class testNan {
 public static void Main() {
    double myNan = Double.NaN;
    try {
      Math.Sign(myNan);
    }
    catch (ArithmeticException e) {
      Console.WriteLine("Error: {0}",e);
    }
 }
}
```

The output is

```
Error: System.ArithmeticException: Function does not accept floating
point Not-a-Number values.


at System.Math.Sign(Double value)


at testNan.Main()
```

ArithmeticException() Constructor

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


[C#]
public ArithmeticException()
```

Summary

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

Description

This constructor initializes the `System.ArithmeticException.Message` property of the new instance to a system-supplied message that describes the error, such as "The arithmetic operation is not allowed." This message takes into account the current system culture.

The `System.ArithmeticException.InnerException` property is initialized to `null`.

ArithmeticException(System.String) Constructor

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


[C#]
public ArithmeticException(string message)
```

Summary

Constructs and initializes a new instance of the `System.ArithmeticException` 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.ArithmeticException.Message` property of the new instance using *message*. If *message* is null, the `System.ArithmeticException.Message` property is initialized to a system-supplied message. The `System.ArithmeticException.InnerException` property is initialized to `null`.

ArithmeticException(System.String, System.Exception) Constructor

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


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

Summary

Constructs and initializes a new instance of the `System.ArithmeticException` 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.ArithmeticException.Message` property of the new instance using *message*, and the `System.Exception.InnerException` property using *innerException*. If *message* is `null`, the `System.ArithmeticException.Message` property is initialized to a system-supplied message.

[*Note:* For information on inner exceptions, see `System.Exception.InnerException`.]