

System.CharEnumerator Class

```
[ILAsm]
.class public sealed serializable CharEnumerator extends System.Object
implements System.ICloneable, System.Collections.IEnumerator

[C#]
public sealed class CharEnumerator: ICloneable, IEnumerator
```

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)

Implements:

- **System.Collections.IEnumerator**
- **System.ICloneable**

Summary

Supports iteration over and provides read-only access to the individual characters in a `System.String`.

Inherits From: System.Object

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.CharEnumerator` is used to support the `foreach` statement of the C# programming language.

Several independent instances of `System.CharEnumerator` across one or more threads can have access to a single instance of `System.String`.

For more information regarding the use of an enumerator, see `System.Collections.IEnumerator`.

]

CharEnumerator.Clone() Method

```
[ILAsm]  
.method public final hidebysig virtual object Clone()  
  
[C#]  
public object Clone()
```

Summary

Creates a copy of the current instance.

Return Value

A `System.Object` with the same state as the current instance.

Description

The return value is a `System.Object` containing a copy of the state of the current instance when this method is invoked. This `System.Object` must be cast explicitly to a `System.CharEnumerator` to be made usable as one.

[Note: This method is useful for saving the state of a `System.CharEnumerator` object while iterating through the characters of a `System.String`.

This method is implemented to support the `System.ICloneable` interface.

]

CharEnumerator.MoveNext() Method

```
[ILAsm]  
.method public final hidebysig virtual bool MoveNext()  
  
[C#]  
public bool MoveNext()
```

Summary

Advances the current instance to the next element of the `System.String` if and only if the current instance is not already placed beyond the final element of the `System.String`.

Return Value

`true` if the enumerator was successfully advanced to the next element; otherwise, `false`.

Description

If the enumerator is positioned after the final element of the `System.String` when this method is called, the current instance remains in its current position and `false` is returned.

CharEnumerator.Reset() Method

```
[ILAsm]  
.method public final hidebysig virtual void Reset()  
  
[C#]  
public void Reset()
```

Summary

Repositions the current instance to its initial position, immediately before the first character in the `System.String`.

CharEnumerator.Current Property

```
[ILAsm]
.property valuetype System.Char Current { public hideby sig specialname
instance valuetype System.Char get_Current() }

[C#]
public char Current { get; }
```

Summary

Gets the element in the `System.String` over which the current instance is positioned.

Property Value

The `System.Char` in the `System.String` over which the current instance is positioned.

Exceptions

Exception	Condition
System.InvalidOperationException	The current instance is positioned before the first element or after the last element of the <code>System.String</code> .

CharEnumerator.System.Collections.IEnumerator.Current Property

```
[ILAsm]  
.property object IEnumerator.Current { public hidebysig virtual abstract  
specialname object get_IEnumerator.Current() }  
  
[C#]  
object IEnumerator.Current { get; }
```

Summary

Implemented to support the System.Collections.IEnumerator interface. [Note: For more information, see System.Collections.IEnumerator.Current.]