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 hidebysig
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 System.String.

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.]