

System.Collections.Generic ICollection<T> Interface

```
[ILAsm]  
.class interface public abstract ICollection`1<T> implements  
System.Collections.Generic.IEnumerable`1<T>  
  
[C#]  
public interface ICollection<T>: IEnumerable<T>
```

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.Generic.IEnumerable<T>**

Summary

Defines size and copying methods for all generic collections.

Library: BCL

Description

[*Note:* This interface is the base interface for classes in the System.Collections.Generic namespace.

This interface extends System.Collections.Generic.IEnumerable<T>; System.Collections.Generic.IDictionary<T,U> and System.Collections.Generic.IList<T> are more specialized interfaces that extend System.Collections.Generic.ICollection<T>.

Some collections that limit access to their elements, like the System.Collections.Generic.Queue<T> class and the System.Collections.Generic.Stack<T> class, directly implement the System.Collections.Generic.ICollection<T> interface.

]

I Collection<T>.Add(T) Method

```
[ILAsm]  
.method public hidebysig virtual abstract void Add(!0 item)  
  
[C#]  
void Add(T item)
```

Summary

Adds an item to the current collection.

Parameters

Parameter	Description
<i>item</i>	The item to add to the current collection.

Exceptions

Exception	Condition
System.NotSupportedException	The current collection is read-only.

ICollection<T>.Clear() Method

```
[ILAsm]  
.method public hidebysig virtual abstract void Clear()  
  
[C#]  
void Clear()
```

Summary

Removes all items from the current collection.

Description

System.Collections.Generic.ICollection<T>.Count is set to zero.

Exceptions

Exception	Condition
System.NotSupportedException	The current collection is read-only.

I Collection<T>.Contains(T) Method

```
[ILAsm]  
.method public hidebysig virtual abstract bool Contains(!0 item)  
  
[C#]  
bool Contains(T item)
```

Summary

Determines whether the current collection contains a specific value.

Parameters

Parameter	Description
<i>item</i>	The object to locate in the current collection.

Return Value

true, if item is found in the current collection; otherwise, false.

Description

Implementations of this interface can vary in how they determine equality of objects; for example, some types use the default comparer, while others allow the user to specify the comparer to be used.

I Collection<T>.CopyTo(T[], System.Int32)

Method

```
[ILAsm]
.method public hidebysig virtual abstract void CopyTo(!0[] array, int32
index)

[C#]
void CopyTo(T[] array, int index)
```

Summary

Copies the elements of the current collection to a `System.Array`, starting at the specified index.

Parameters

Parameter	Description
<i>array</i>	A one-dimensional, zero-based <code>System.Array</code> that is the destination of the elements copied from the current instance.
<i>index</i>	A <code>System.Int32</code> that specifies the zero-based index in <i>array</i> at which copying begins.

Description

This operation overwrites the current contents of the array.

Exceptions

Exception	Condition
System.ArgumentNullException	<i>array</i> is null.
System.ArgumentOutOfRangeException	<i>index</i> < 0.
System.ArgumentException	<i>array</i> has more than one dimension. -or-

index is greater than or equal to *array.Length*.

-or-

The sum of *index* and the
`System.Collections.ICollection.Count` of
the current instance is greater than
array.Length.

-or-

Type `T` is not assignable to the element type of
the destination array.

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I Collection<T>.Remove(T) Method

```
[ILAsm]  
.method public hidebysig virtual abstract bool Remove(!0 item)  
  
[C#]  
bool Remove(T item)
```

Summary

Removes the first occurrence of an item from the current collection.

Parameters

Parameter	Description
<i>item</i>	The item to remove from the current collection.

Return Value

true, if *item* was removed from the current collection; *false* if *item* was not found in the current collection.

Description

If *item* was found, but cannot be removed for some reason, some unspecified exception is thrown.

Implementations of this interface can vary in how they determine equality of objects; for example, some types use the default comparer, while others allow the user to specify the comparer to be used.

Exceptions

Exception	Condition
System.NotSupportedException	The current collection is read-only.

ICollection<T>.Count Property

```
[ILAsm]
.property int32 Count { public hidebysig virtual abstract specialname
int32 get_Count() }

[C#]
int Count { get; }
```

Summary

Gets the number of elements contained in the current instance.

Property Value

A `System.Int32` that indicates the number of elements contained in the current instance.

Description

This property is read-only.

I Collection<T>.IsReadOnly Property

```
[ILAsm]
.property bool IsReadOnly { public hidebysig virtual abstract specialname
bool get_IsReadOnly() }

[C#]
bool IsReadOnly { get; }
```

Summary

Indicates whether the current collection is read-only.

Property Value

true, if the current collection is read-only; otherwise, false.

Description

This property is read-only.

A collection that is read-only does not allow the addition, removal, or modification of elements after the collection is created.