System.WeakReference Class

```
[ILAsm]
.class public serializable beforefieldinit WeakReference extends
System.Object implements System.Runtime.Serialization.ISerializable

[C#]
public class WeakReference: System.Runtime.Serialization.ISerializable
```

Assembly Info:

- *Name:* mscorlib
- *Public Key:* [00 00 00 00 00 00 00 00 04 00 00 00 00 00 00 00]
- *Version:* 4.0.0.0
- *Attributes:*
  - CLSCompliantAttribute(true)

Implements:

- **System.Runtime.Serialization.ISerializable**

Summary

Represents a weak reference, which references an object while still allowing that object to be reclaimed by garbage collection.

Inherits From: System.Object

Library: BCL

Permissions

Permission	Description
System.Security.Permissions.SecurityPermission	for the ability to call unmanaged code. Demand value: `System.Security.Permissions.SecurityAction.InheritanceDemand`; Permission value: `System.Security.Permissions.SecurityPermissionFlag.UnmanagedCode`

Description

A weak reference allows the garbage collector to collect an object while still allowing an application to access the object. If you need the object, you can still obtain a strong reference to it and prevent it from being collected.

WeakReference(System.Object) Constructor

```
[ILAsm]
.method public hidebysig specialname rtspecialname instance void
.ctor(object target) cil managed

[C#]
public WeakReference (object target)
```

Summary

Initializes a new instance of the `System.WeakReference` class, referencing the specified object.

Parameters

Parameter	Description
target	The object to track or `null`.

Description

This constructor creates a short weak reference to *target*.

WeakReference(System.Object, System.Boolean) Constructor

```
[ILAsm]
.method public hidebysig specialname rtspecialname instance void
.ctor(object target, bool trackResurrection) cil managed

[C#]
public WeakReference (object target, bool trackResurrection)
```

Summary

Initializes a new instance of the `System.WeakReference` class, referencing the specified object and using the specified resurrection tracking.

Parameters

Parameter	Description
target	An object to track.
trackResurrection	Indicates when to stop tracking the object. If `true`, the object is tracked after finalization; if `false`, the object is only tracked until finalization.

Description

If *trackResurrection* is `false`, a short weak reference is created. If *trackResurrection* is `true`, a long weak reference is created.

WeakReference.Finalize() Method

[ILAsm]

```
.method family hidebysig virtual instance void Finalize() cil managed
```

[C#]

```
~WeakReference ()
```

Summary

Discards the reference to the target represented by the current `System.WeakReference` object.

Description

To be added.

WeakReference.IsAlive Property

```
[ILAsm]
.property instance bool IsAlive

[C#]
public virtual bool IsAlive { get; }
```

Summary

Gets an indication whether the object referenced by the current `System.WeakReference` object has been garbage collected.

Property Value

`true` if the object referenced by the current `System.WeakReference` object has not been garbage collected and is still accessible; otherwise, `false`.

Description

Because an object could potentially be reclaimed for garbage collection immediately after the `System.WeakReference.IsAlive` property returns `true`, using this property is not recommended unless you are testing only for a `false` return value.

WeakReference.Target Property

```
[ILAsm]
.property instance object Target

[C#]
public virtual object Target { set; get; }
```

Summary

Gets or sets the object (the target) referenced by the current `System.WeakReference` object.

Property Value

`null` if the object referenced by the current `System.WeakReference` object has been garbage collected; otherwise, a reference to the object referenced by the current `System.WeakReference` object.

Description

After setting this property to the target object, make sure that there are no other strong references to the object; otherwise, it will not be collected. The object should also be set to null.

Exceptions

Exception	Condition
System.InvalidOperationException	The reference to the target object is invalid. This exception can be thrown while setting this property if the value is a null reference or if the object has been finalized during the set operation.

WeakReference.TrackResurrection Property

[ILAsm]

```
.property instance bool TrackResurrection
```

[C#]

```
public virtual bool TrackResurrection { get; }
```

Summary

Gets an indication whether the object referenced by the current `System.WeakReference` object is tracked after it is finalized.

Property Value

`true` if the object the current `System.WeakReference` object refers to is tracked after finalization; or `false` if the object is only tracked until finalization.

Description

If `true`, the weak reference is a long weak reference and `true` was specified for the *trackResurrection* parameter in the `System.WeakReference` constructor.