System.Reflection.PropertyInfo Class

[ILAsm]
```
.class public abstract serializable PropertyInfo extends
System.Reflection.MemberInfo
```

[C#]
```
public abstract class PropertyInfo: MemberInfo
```

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

Provides access to property metadata.

Inherits From: System.Reflection.MemberInfo

Library: Reflection

Thread Safety: This type is safe for multithreaded operations.

Description

A property is a named aspect of an object's state whose value is typically accessible through `Get` and `Set` accessors. [*Note:* Properties can be read-only, in which case the `Set` accessor is not available.]

Several methods in this class assume that the `Get` and `Set` accessors of a property have certain formats. The signatures of the accessors are required to match the following conventions:

- The return type of the `Get` accessor and the last argument of the `Set` accessor are required to be identical to the type of the property reflected by the current instance.

- The `Get` and `Set` accessors are required to have the same number, type, and order of indices.

If this format is not followed, the behavior of the `System.Reflection.PropertyInfo.GetValue` and `System.Reflection.PropertyInfo.SetValue` methods is undefined.

PropertyInfo() Constructor

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

[C#]
protected PropertyInfo()
```

Summary

Constructs a new instance of the `System.Reflection.PropertyInfo` class.

PropertyInfo.GetAccessors(System.Boolean) Method

```
[ILAsm]
.method public hidebysig virtual abstract class
System.Reflection.MethodInfo[] GetAccessors(bool nonPublic)

[C#]
public abstract MethodInfo[] GetAccessors(bool nonPublic)
```

Summary

Returns an array whose elements reflect the public and, if specified, non-public `Get`, `Set`, and other accessors of the property reflected by the current instance.

Parameters

Parameter	Description
nonPublic	A `System.Boolean` value that indicates whether non-public accessors will be included in the return value. Specify `true` to include the non-public accessors; otherwise, specify `false`.

Return Value

An array of `System.Reflection.MethodInfo` objects whose elements reflect the `Get`, `Set`, and other accessors of the property reflected by the current instance. If *nonPublic* is `true`, this array contains public and non-public accessors. If *nonPublic* is `false`, this array contains only public accessors. If no accessors with the specified visibility are found, returns an array with zero elements.

Behaviors

As described above.

Permissions

Permission	Description
System.Security.Permissions.ReflectionPermission	Requires permission to reflect non-public members of a type in loaded assemblies. See `System.Security.Permissions.ReflectionPermissionFlag.TypeInformation`.

PropertyInfo.GetAccessors() Method

```
[ILAsm]
.method public hidebysig instance class System.Reflection.MethodInfo[]
GetAccessors()

[C#]
public MethodInfo[] GetAccessors()
```

Summary

Returns an array whose elements reflect the public `Get`, `Set`, and other accessors of the property reflected by the current instance.

Return Value

An array of `System.Reflection.MethodInfo` objects that reflect the public `Get`, `Set`, and other accessors of the property reflected by the current instance, if found; otherwise, returns an array with zero elements.

Description

This method is equivalent to `System.Reflection.PropertyInfo.GetAccessors`(`false`).

PropertyInfo.GetGetMethod(System.Boolean) Method

```
[ILAsm]
.method public hidebysig virtual abstract class
System.Reflection.MethodInfo GetGetMethod(bool nonPublic)

[C#]
public abstract MethodInfo GetGetMethod(bool nonPublic)
```

Summary

Returns the public possibly or, if specified, the non-public `Get` accessor for the property reflected by the current instance.

Parameters

Parameter	Description
nonPublic	A `System.Boolean` value that indicates whether a non-public `Get` accessor will be returned. Specify `true` to allow a non-public accessor; otherwise, specify `false`.

Return Value

If *nonPublic* is `true`, returns a `System.Reflection.MethodInfo` instance that reflects the `Get` accessor for the property reflected by the current instance if that accessor exists. If *nonPublic* is `false` and the `Get` accessor is non-public, or *nonPublic* is `true` but no `Get` accessor exists for the property reflected by the current instance, returns `null`.

Behaviors

As described above.

Exceptions

Exception	Condition
System.MethodAccessException	*nonPublic* is `true`, the `Get` accessor for the property reflected by the current instance is non-public, and the caller does not have `System.Security.Permissions.ReflectionPermission` to reflect on non-public methods.

Permissions

Permission	Description
System.Security.Permissions.ReflectionPermission	Requires permission to reflect non-public members of a type in loaded assemblies. See `System.Security.Permissions.ReflectionPermissionFlag.TypeInformation`.

PropertyInfo.GetGetMethod() Method

```
[ILAsm]
.method public hidebysig instance class System.Reflection.MethodInfo
GetGetMethod()

[C#]
public MethodInfo GetGetMethod()
```

Summary

Returns the public `Get` accessor for the property reflected by the current instance.

Return Value

A `System.Reflection.MethodInfo` instance that reflects the public `Get` accessor for the property reflected by the current instance. Returns `null` if no public `Get` accessor exists.

PropertyInfo.GetIndexParameters() Method

```
[ILAsm]
.method public hidebysig virtual abstract class
System.Reflection.ParameterInfo[] GetIndexParameters()

[C#]
public abstract ParameterInfo[] GetIndexParameters()
```

Summary

Returns an array of the indexers of the property reflected by the current instance.

Return Value

An array of `System.Reflection.ParameterInfo` objects that reflect the indexers of the property reflected by the current instance. If no indexers exist for the property reflected by the current instance, returns an array with zero elements.

Behaviors

As described above.

Exceptions

Exception	**Condition**
System.MethodAccessException	The property reflected by the current instance is visible, but its `Get` and `Set` accessors are not, and the caller does not have `System.Security.Permissions.ReflectionPermission`.

Permissions

Permission	**Description**
System.Security.Permissions. ReflectionPermission	Requires permission to reflect non-public members of a type in loaded assemblies. See `System.Security.Permissions.ReflectionPermissionFlag.TypeInformation`.

PropertyInfo.GetSetMethod(System.Boolean) Method

```
[ILAsm]
.method public hidebysig virtual abstract class
System.Reflection.MethodInfo GetSetMethod(bool nonPublic)

[C#]
public abstract MethodInfo GetSetMethod(bool nonPublic)
```

Summary

Returns the public possibly or, if specified, the non-public `Set` accessor for the property reflected by the current instance.

Parameters

Parameter	Description
nonPublic	A `System.Boolean` value that indicates whether a non-public `Set` accessor will be returned. Specify `true` to allow a non-public accessor; otherwise, specify `false`.

Return Value

If *nonPublic* is `true`, returns a `System.Reflection.MethodInfo` instance that reflects the `Set` accessor for the property reflected by the current instance if that accessor exists. If *nonPublic* is `false` and the `Set` accessor is non-public, or *nonPublic* is `true` but no `Set` accessor exists for the property reflected by the current instance, returns `null`.

Behaviors

As described above.

Exceptions

Exception	Condition
System.MethodAccessException	*nonPublic* is `true`, the `Set` accessor for the property reflected by the current instance is non-public, and the caller does not have `System.Security.Permissions.ReflectionPermission` to reflect on non-public methods.

Permissions

Permission	Description
System.Security.Permissions.ReflectionPermission	Requires permission to reflect non-public members of a type in loaded assemblies. See `System.Security.Permissions.ReflectionPermissionFlag.TypeInformation`.

PropertyInfo.GetSetMethod() Method

```
[ILAsm]
.method public hidebysig instance class System.Reflection.MethodInfo
GetSetMethod()

[C#]
public MethodInfo GetSetMethod()
```

Summary

Returns the public `Set` accessor for the property reflected by the current instance.

Return Value

A `System.Reflection.MethodInfo` instance that reflects the public `Set` accessor for the property reflected by the current instance. Returns `null` if no public `Set` accessor exists.

Description

This method is equivalent to `System.Reflection.PropertyInfo.GetSetMethod(false)`.

PropertyInfo.GetValue(System.Object, System.Reflection.BindingFlags, System.Reflection.Binder, System.Object[], System.Globalization.CultureInfo) Method

```
[ILAsm]
.method public hidebysig virtual abstract object GetValue(object obj,
valuetype System.Reflection.BindingFlags invokeAttr, class
System.Reflection.Binder binder, object[] index, class
System.Globalization.CultureInfo culture)
```

```
[C#]
public abstract object GetValue(object obj, BindingFlags invokeAttr,
Binder binder, object[] index, CultureInfo culture)
```

Summary

Returns the value of the property that is reflected by the current instance in the specified object and corresponds to the specified criteria.

Parameters

Parameter	**Description**
obj	The object whose property value is returned. Specify `null` to invoke a static `Get` accessor on the property reflected by the current instance.
invokeAttr	A `System.Reflection.BindingFlags` value that controls the binding process. [*Note:* Specify `System.Reflection.BindingFlags.Public` or `System.Reflection.BindingFlags.NonPublic`, and `System.Reflection.BindingFlags.Instance` or `System.Reflection.BindingFlags.Static`; or this method will not invoke any `get` accessors of the property reflected by the current instance.]
binder	A `System.Reflection.Binder` that enables the binding, coercion of argument types, invocation of members, and retrieval of `System.Reflection.MemberInfo` objects via reflection. If *binder* is `null`, the default binder is used.
index	An array of objects that is an index or values for indexed properties. This value is required to be `null` for non-indexed properties.
culture	The only defined value for this parameter is `null`.

Return Value

A `System.Object` that contains the property value for *obj*.

Behaviors

As described above.

Exceptions

Exception	Condition
System.ArgumentException	*index* does not contain the exact type of arguments needed. -or- The `Get` accessor of the property reflected by the current instance was not found.
System.MethodAccessException	The `Get` accessor of the property reflected by the current instance is non-public and the caller does not have `System.Security.Permissions.ReflectionPermission` to reflect on non-public methods.
System.Reflection.TargetException	The property reflected by the current instance is non-static, and *obj* is `null` or is of a type that does not implement the property reflected by the current instance.
System.Reflection. TargetParameterCountException	The current instance reflects an indexer and *index*.Length does not equal the rank of the indexer.

Permissions

Permission	Description
System.Security.Permissions. ReflectionPermission	Requires permission to reflect non-public members of a type in loaded assemblies. See `System.Security.Permissions.`

	ReflectionPermissionFlag.MemberAccess.

PropertyInfo.GetValue(System.Object, System.Object[]) Method

```
[ILAsm]
.method public hidebysig virtual object GetValue(object obj, object[]
index)

[C#]
public virtual object GetValue(object obj, object[] index)
```

Summary

Returns the value of the property reflected by the current instance in the specified object, using the specified index values.

Parameters

Parameter	Description
obj	The object whose property value will be returned. Specify `null` to invoke a static `Get` accessor of a property.
index	An array of objects that is an index of values for indexed properties. This value is required to be `null` for non-indexed properties.

Return Value

A `System.Object` that contains the property value for *obj*.

Behaviors

As described above.

Exceptions

Exception	Condition
System.ArgumentException	*index* does not contain the exact type of arguments needed. -or- The `Get` accessor of the property reflected by the

	current instance is not found.
System.MethodAccessException	The `Get` accessor of the property reflected by the current instance is non-public and the caller does not have `System.Security.Permissions.ReflectionPermission` to reflect on non-public methods.
System.Reflection.TargetException	The property reflected by the current instance is non-static, and *obj* is `null` or is of a type that does not implement the property reflected by the current instance.
System.Reflection. TargetParameterCountException	The current instance reflects an indexer and *index*.Length does not equal the rank of the indexer.

Permissions

Permission	Description
System.Security.Permissions. ReflectionPermission	Requires permission to reflect non-public members of a type in loaded assemblies. See `System.Security.Permissions. ReflectionPermissionFlag.MemberAccess`.

PropertyInfo.SetValue(System.Object, System.Object, System.Reflection.BindingFlags, System.Reflection.Binder, System.Object[], System.Globalization.CultureInfo) Method

```
[ILAsm]
.method public hidebysig virtual abstract void SetValue(object obj, object
value, valuetype System.Reflection.BindingFlags invokeAttr, class
System.Reflection.Binder binder, object[] index, class
System.Globalization.CultureInfo culture)

[C#]
public abstract void SetValue(object obj, object value, BindingFlags
invokeAttr, Binder binder, object[] index, CultureInfo culture)
```

Summary

Sets the value of the property that is reflected by the current instance on the specified objects and corresponds to the specified properties.

Parameters

Parameter	Description
obj	The object whose property value is returned. Specify `null` to invoke a static `Set` accessor on the property reflected by the current instance.
value	A object that contains the new value for the property.
invokeAttr	A `System.Reflection.BindingFlags` value that controls the binding process. [*Note:* Specify `System.Reflection.BindingFlags.Public` or `System.Reflection.BindingFlags.NonPublic`, and `System.Reflection.BindingFlags.Instance` or `System.Reflection.BindingFlags.Static`; otherwise, this method will not invoke any `Set` accessors of the property reflected by the current instance.]
binder	A `System.Reflection.Binder` that enables the binding, coercion of argument types, invocation of members, and retrieval of `System.Reflection.MemberInfo` objects via reflection. If *binder* is `null`, the default binder is used.
index	An array of objects that is an index or values for indexed properties. This value is required to be `null` for non-indexed properties.

culture	The only defined value for this parameter is `null`.

Behaviors

As described above.

Exceptions

Exception	Condition
System.ArgumentException	The *index* array does not contain the exact type of arguments needed. The `Set` accessor of the property reflected by the current instance is not found.
System.Reflection.TargetException	The property reflected by the current instance is non-static, and *obj* is `null` or is of a type that does not implement the property reflected by the current instance.
System.MethodAccessException	The `Set` accessor of the property reflected by the current instance is non-public and the caller does not have `System.Security.Permissions.ReflectionPermission` to reflect on non-public methods.
System.Reflection.TargetParameterCountException	The current instance reflects an indexer and *index*.Length does not equal the rank of the indexer.

Permissions

Permission	Description
System.Security.Permissions.ReflectionPermission	Requires permission to reflect non-public members of a type in loaded assemblies. See `System.Security.Permissions.ReflectionPermissionFlag.MemberAccess`.

PropertyInfo.SetValue(System.Object, System.Object, System.Object[]) Method

```
[ILAsm]
.method public hidebysig virtual void SetValue(object obj, object value,
object[] index)

[C#]
public virtual void SetValue(object obj, object value, object[] index)
```

Summary

Sets the value of the property reflected by the current instance on the specified object, using the specified index values.

Parameters

Parameter	Description
obj	The object whose property value is returned. Specify `null` to invoke a static `Set` accessor on the property reflected by the current instance.
value	A object that contains the new value for the property.
index	An array of objects that is an index or values for indexed properties. This value is required to be `null` for non-indexed properties.

Behaviors

As described above.

Exceptions

Exception	Condition
System.ArgumentException	*index* does not contain the exact type of arguments needed. -or- The `Set` accessor of the property reflected by the

	current instance was not found.
System.MethodAccessException	The `Set` accessor of the property reflected by the current instance is non-public and the caller does not have `System.Security.Permissions.ReflectionPermission` to reflect on non-public methods.
System.Reflection.TargetException	The property reflected by the current instance is non-static, and *obj* is `null` or is of a type that does not implement the property reflected by the current instance.
System.Reflection. TargetParameterCountException	The current instance reflects an indexer and *index*.Length does not equal the rank of the indexer.

Permissions

Permission	Description
System.Security.Permissions. ReflectionPermission	Requires permission to reflect non-public members of a type in loaded assemblies. See `System.Security.Permissions. ReflectionPermissionFlag.MemberAccess`.

PropertyInfo.Attributes Property

```
[ILAsm]
.property valuetype System.Reflection.PropertyAttributes Attributes {
public hidebysig virtual abstract specialname valuetype
System.Reflection.PropertyAttributes get_Attributes() }

[C#]
public abstract PropertyAttributes Attributes { get; }
```

Summary

Gets the attributes of the property reflected by the current instance.

Property Value

A `System.Reflection.PropertyAttributes` value that specifies the attributes of the property reflected by the current instance.

Behaviors

This property is read-only.

This property gets a `System.Reflection.PropertyAttributes` value that indicates the attributes set in the metadata of the property reflected by the current instance.

Usage

Use this property to determine if the property reflected by the current instance has a special name or a default value.

PropertyInfo.CanRead Property

[ILAsm]

```
.property bool CanRead { public hidebysig virtual abstract specialname
bool get_CanRead() }
```

[C#]

```
public abstract bool CanRead { get; }
```

Summary

Gets a `System.Boolean` value indicating whether the property reflected by the current instance has a `Get` accessor.

Property Value

`true` if the property reflected by the current instance has a `Get` accessor; otherwise, `false`.

Behaviors

This property is read-only.

PropertyInfo.CanWrite Property

[ILAsm]

```
.property bool CanWrite { public hidebysig virtual abstract specialname
bool get_CanWrite() }
```

[C#]

```
public abstract bool CanWrite { get; }
```

Summary

Gets a System.Boolean value indicating whether the property reflected by the current instance has a Set accessor.

Property Value

true if the property reflected by the current instance has a Set accessor; otherwise, false.

Behaviors

This property is read-only.

PropertyInfo.PropertyType Property

[ILAsm]

```
.property class System.Type PropertyType { public hidebysig virtual
abstract specialname class System.Type get_PropertyType() }
```

[C#]

```
public abstract Type PropertyType { get; }
```

Summary

Gets the type of the property reflected by the current instance.

Property Value

A `System.Type` that represents the type of the property reflected by the current instance.

Behaviors

This property is read-only.