System.Reflection.FieldInfo Class

```
[ILASM]
.class public abstract serializable FieldInfo extends
System.Reflection.MemberInfo

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

Assembly Info:

- *Name:* mscorlib
- *Public Key:* [00 00 00 00 00 00 00 00 04 00 00 00 00 00 00 00]
- *Version:* 1.0.x.x
- *Attributes:*
  - CLSCompliantAttribute(true)

Summary

Provides access to field metadata.

Inherits From: System.Reflection.MemberInfo

Library: Reflection

Thread Safety: All public static members of this type are safe for multithreaded operations. No instance members are guaranteed to be thread safe.

FieldInfo() Constructor

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

[C#]
```
protected FieldInfo()
```

Summary

Constructs a new instance of the **System.Reflection.FieldInfo** class.

FieldInfo.GetValue(System.Object) Method

```
[ILASM]
.method public hidebysig virtual abstract object
GetValue(object obj)

[C#]
public abstract object GetValue(object obj)
```

Summary

Obtains the value of the field that is reflected by the current instance and contained in the specified object.

Parameters

Parameter	Description
obj	An object that contains the field value to be returned. If the field reflected by the current instance is static, *obj* is ignored. For non-static fields, *obj* is required to be an instance of a class that inherits or declares the field.

Return Value

A **System.Object** that contains the value of the field reflected by the current instance.

Behaviors

Before returning the value, the system checks to see if the user has access permission.

Exceptions

Exception	Condition
System.NotSupportedException	A field is marked literal, but the field does not have one of the accepted literal types. [*Note:* For information regarding the accepted literal types, see Partition II of the CLI Specification.]
System.FieldAccessException	The field reflected by the current instance is non-public, and the caller does not have permission to access non-public members.

System.ArgumentException	The field reflected by the current instance is declared neither directly in *obj* nor in any class from which *obj* derives.
System.Reflection.TargetException	The field reflected by the current instance is non-static, and *obj* is **null**.

Permissions

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

FieldInfo.SetValue(System.Object, System.Object, System.Reflection.BindingFlags, System.Reflection.Binder, 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, class
System.Globalization.CultureInfo culture)

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

Summary

Assigns the specified value to the field that is reflected by the current instance and contained in the specified object.

Parameters

Parameter	Description
obj	The object whose field value will be set. If the field is static, *obj* is ignored. For non-static fields, *obj* is required to be an instance of a class that inherits or declares the field.
value	An object that contains the value to assign to the field contained by *obj*.
invokeAttr	A **System.Reflection.BindingFlags** value that controls the binding process.
binder	A **System.Reflection.Binder** instance that enables the binding, coercion of argument types, and invocation of members through reflection. If *binder* is **null**, the default binder of the current implementation is used.
culture	The only defined value for this parameter is **null**.

Behaviors

Before setting the value, the system verifies that the user has access permission.

Exceptions

Exception	Condition
System.ArgumentException	The field reflected by the current instance is declared neither directly in *obj* nor in any class from which *obj* derives. *value* is not assignment-compatible with the type of the field reflected by the current instance.
System.FieldAccessException	The field reflected by the current instance is non-public, and the caller does not have permission to access non-public members.
System.Reflection.TargetException	The field reflected by the current instance is non-static, and *obj* is **null**.

Permissions

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

FieldInfo.SetValue(System.Object, System.Object) Method

```
[ILASM]
.method public hidebysig instance void SetValue(object obj,
object value)

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

Summary

Assigns the specified value to the field that is reflected by the current instance and contained in the specified object.

Parameters

Parameter	Description
obj	The object whose field value will be set. If the field is static, *obj* is ignored. For non-static fields, *obj* is required to be an instance of a class that inherits or declares the field.
value	A **System.Object** that contains the value to assign to the field contained by *obj*.

Description

Before setting the value, the system verifies that the user has access permission. If the user does not have access permission, a **System.FieldAccessException** is thrown.

Exceptions

Exception	Condition
System.ArgumentException	The field reflected by the current instance is declared neither directly in *obj* nor in any class from which *obj* derives. *value* is not assignment-compatible with the type of the field reflected by the current instance.
System.FieldAccessException	The field reflected by the current instance is non-public, and the caller does not have permission to access non-public members.

System.Reflection.TargetException	The field reflected by the current instance is non-static, and *obj* is **null**.

Permissions

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

FieldInfo.Attributes Property

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

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

Summary

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

Property Value

A **System.Reflection.FieldAttributes** value that indicates the attributes of the field reflected by the current instance.

Behaviors

This property is read-only.

Usage

Use this property to determine the accessibility of the field reflected by the current instance. Also use this property to determine if the field reflected by the current instance can be set after it is initialized, is implemented in native code, is a literal, or has a special name.

Example

The following example demonstrates obtaining the attributes of two fields.

[C#]

```
using System;
using System.Reflection;

class MyClass
{

   public int MyPublicInstanceField;
   private const int MyPrivateConstField = 10;

}
```

```
class FieldAttributesExample
{

   public static void Main()
   {

      Type t = (typeof(MyClass));
      string str;
      FieldInfo[] fiAry = t.GetFields(BindingFlags.Static |
         BindingFlags.Instance | BindingFlags.Public |
         BindingFlags.NonPublic |
BindingFlags.DeclaredOnly);
      foreach (FieldInfo fi in fiAry)
      {
         Console.WriteLine("Field {0} is: ", fi.Name);
         str = ((fi.Attributes & FieldAttributes.Static) !=
0) ?
            "Static": "Instance";
         Console.Write(str + " ");
         str = ((fi.Attributes & FieldAttributes.Public) !=
0) ?
            "Public": "Not-Public";
         Console.Write(str + " ");
         str = ((fi.Attributes & FieldAttributes.Literal)
!= 0) ?
            "Literal": String.Empty;
         Console.WriteLine(str);

      }

   }

}
```

The output is

```
Field MyPublicInstanceField is:


Instance Public


Field MyPrivateConstField is:
```

```
1
2         Static Not-Public Literal
3
4
```

FieldInfo.FieldType Property

```
[ILASM]
.property class System.Type FieldType { public hidebysig
virtual abstract specialname class System.Type
get_FieldType() }

[C#]
public abstract Type FieldType { get; }
```

Summary

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

Property Value

The **System.Type** of the field reflected by the current instance.

Description

This property is read-only.