1 System.Boolean Structure

```
[ILAsm]
.class public sequential sealed serializable Boolean extends
System.ValueType implements System.IComparable,
System.IComparable`1<bool>, System.IEquatable`1<bool>


[C#]
public struct Boolean: IComparable, IComparable<Boolean>,
IEquatable<Boolean>
```

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:*
    o CLSCompliantAttribute(true)

Implements:

- **System.IComparable**
- **System.IComparable<System.Boolean>**
- **System.IEquatable<System.Boolean>**

Summary

Represents a Boolean value.

Inherits From: System.ValueType

Library: BCL

Thread Safety: This type is safe for multithreaded operations.

Description

The `System.Boolean` value type represents the logical values `true` and `false`. The size of this type is 8 bits, the representation of `false` is all-bits-zero, and the representation of `true` is unspecified except that it shall have at least one bit set.

Boolean.FalseString Field

```
[ILAsm]
.field public static initOnly string FalseString

[C#]
public static readonly string FalseString
```

Summary

Contains a `System.String` representation of the logical value `false`.

Description

This field is read-only.

The value of this `System.String` is "False".

Boolean.TrueString Field

```
[ILAsm]
.field public static initOnly string TrueString

[C#]
public static readonly string TrueString
```

Summary

Contains a `System.String` representation of the logical value `true`.

Description

This field is read-only.

The value of this `System.String` is "True".

Boolean.CompareTo(System.Boolean) Method

```
[ILAsm]
.method public final hidebysig virtual int32 CompareTo(bool value)

[C#]
public int CompareTo(bool value)
```

Summary

Returns the sort order of the current instance compared to the specified `System.Boolean`.

Parameters

Parameter	Description
value	A `System.Boolean` to compare to the current instance.

Return Value

The return value is a negative number, zero, or a positive number reflecting the sort order of the current instance as compared to *value*. For non-zero return values, the exact value returned by this method is unspecified. The following table defines the return value:

Return Value	Condition
A negative number	Current instance is `false` and *value* is `true`.
Zero	Current instance == *value*.
Any positive number	Current instance is `true` and *value* is `false`.

Description

[*Note:* This method is implemented to support the `System.IComparable<Boolean>` interface.]

Boolean.CompareTo(System.Object) Method

```
[ILAsm]
.method public final hidebysig virtual int32 CompareTo(object obj)

[C#]
public int CompareTo(object obj)
```

Summary

Returns the sort order of the current instance compared to the specified `System.Object`.

Parameters

Parameter	Description
obj	A `System.Object` to compare to the current instance.

Return Value

The return value is a negative number, zero, or a positive number reflecting the sort order of the current instance as compared to *obj*. For non-zero return values, the exact value returned by this method is unspecified. The following table defines the return value:

Return Value	Condition
A negative number	Current instance is `false` and *obj* is `true`.
Zero	Current instance == *obj*.
Any positive number	Current instance is `true` and *obj* is `false`, or *obj* is a null reference.

Description

[*Note:* This method is implemented to support the `System.IComparable` interface.]

Exceptions

Exception	Condition

| System.ArgumentException | *obj* is not a `System.Boolean` and is not a null reference. |

1

2

Boolean.Equals(System.Boolean) Method

```
[ILAsm]
.method public hidebysig virtual bool Equals(bool obj)

[C#]
public override bool Equals(bool obj)
```

Summary

Determines whether the current instance and the specified `System.Boolean` represent the same value.

Parameters

Parameter	Description
obj	The `System.Boolean` to compare to the current instance.

Return Value

`true` if *obj* has the same value as the current instance; otherwise, `false`.

[*Note:* This method is implemented to support the `System.IEquatable<Boolean>` interface.]

Boolean.Equals(System.Object) Method

```
[ILAsm]
.method public hidebysig virtual bool Equals(object obj)

[C#]
public override bool Equals(object obj)
```

Summary

Determines whether the current instance and the specified System.Object represent the same type and value.

Parameters

Parameter	Description
obj	The System.Object to compare to the current instance.

Return Value

true if *obj* is a System.Boolean with the same value as the current instance. If *obj* is a null reference or is not an instance of System.Boolean, returns false.

Description

[*Note:* This method overrides System.Object.Equals.]

Boolean.GetHashCode() Method

```
[ILAsm]
.method public hidebysig virtual int32 GetHashCode()

[C#]
public override int GetHashCode()
```

Summary

Generates a hash code for the current instance.

Return Value

A `System.Int32` value containing a hash code for the current instance.

Description

The algorithm used to generate the hash code is unspecified.

[*Note:* This method overrides `System.Object.GetHashCode`.]

1   Boolean.Parse(System.String) Method

```
[ILAsm]
.method public hidebysig static bool Parse(string value)


[C#]
public static bool Parse(string value)
```

6   **Summary**

7   Returns the specified `System.String` converted to a `System.Boolean` value.

8   **Parameters**

Parameter	Description
value	A `System.String` containing the value to convert. The string is equivalent to either `System.Boolean.TrueString` or `System.Boolean.FalseString`, can contain leading and/or trailing whitespace, and is parsed in a case-insensitive manner.

9

10   **Return Value**

11   `true` if *value* is equivalent to `System.Boolean.TrueString`; otherwise, `false`.

12   **Exceptions**

Exception	Condition
System.ArgumentNullException	*value* is a null reference.
System.FormatException	*value* is not equivalent to either `System.Boolean.TrueString` or `System.Boolean.FalseString`.

13

14   **Example**

15   The following example demonstrates the `System.Boolean.Parse` method.

16
17   [C#]

```
using System;
public class BoolParse {
    public static void Main() {
        Boolean b = Boolean.Parse("  true  ");
        Console.WriteLine("\"  true  \" parses to \"{0}\".", b);
```

```
    }
}
```

The output is

```
" true " parses to "True".
```

Boolean.ToString(System.IFormatProvider) Method

```
[ILAsm]
.method public final hidebysig virtual string ToString(class
System.IFormatProvider provider)

[C#]
public string ToString(IFormatProvider provider)
```

Summary

Converts the value of this instance to its equivalent `String` representation.

Parameters

Parameter	Description
provider	(Reserved) A `System.IFormatProvider` object.

Return Value

`System.Boolean.TrueString` if the value of this instance is `true`, or
`System.Boolean.FalseString` if the value of this instance is `false`.

Description

The *provider* parameter is reserved. It does not participate in the execution of this method.

Boolean.ToString() Method

```
[ILAsm]
.method public hidebysig virtual string ToString()

[C#]
public override string ToString()
```

Summary

Returns a `System.String` representation of the value of the current instance.

Return Value

`System.Boolean.FalseString` if the value of the current instance is `false`; otherwise, `System.Boolean.TrueString`.

Description

[*Note:* This method overrides `System.Object.ToString`.]