

Stack.Peek Method

Namespace: [System.Collections](#)

Assemblies: System.Collections.NonGeneric.dll, mscorlib.dll, netstandard.dll

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Returns the object at the top of the [Stack](#) without removing it.

C#	 Copy
<pre>public virtual object Peek ();</pre>	

Returns

[Object](#)

The [Object](#) at the top of the [Stack](#).


Exceptions

[InvalidOperationException](#)

The [Stack](#) is empty.

Examples

The following example shows how to add elements to the [Stack](#), remove elements from the [Stack](#), or view the element at the top of the [Stack](#).

C#	 Copy
<pre>using System; using System.Collections; public class SamplesStack {</pre>	

```
public static void Main() {

    // Creates and initializes a new Stack.
    Stack myStack = new Stack();
    myStack.Push( "The" );
    myStack.Push( "quick" );
    myStack.Push( "brown" );
    myStack.Push( "fox" );

    // Displays the Stack.
    Console.Write( "Stack values:" );
    PrintValues( myStack, '\t' );

    // Removes an element from the Stack.
    Console.WriteLine( "(Pop)\t\t{0}", myStack.Pop() );

    // Displays the Stack.
    Console.Write( "Stack values:" );
    PrintValues( myStack, '\t' );

    // Removes another element from the Stack.
    Console.WriteLine( "(Pop)\t\t{0}", myStack.Pop() );

    // Displays the Stack.
    Console.Write( "Stack values:" );
    PrintValues( myStack, '\t' );

    // Views the first element in the Stack but does not remove it.
    Console.WriteLine( "(Peek)\t\t{0}", myStack.Peek() );

    // Displays the Stack.
    Console.Write( "Stack values:" );
    PrintValues( myStack, '\t' );
}

public static void PrintValues( IEnumerable myCollection, char mySeparator )
{
    foreach ( Object obj in myCollection )
        Console.Write( "{0}{1}", mySeparator, obj );
    Console.WriteLine();
}

}

/*
This code produces the following output.

Stack values:   fox    brown    quick    The
(Pop)          fox
```

```
Stack values:    brown    quick    The
(Pop)           brown
Stack values:    quick    The
(Peek)           quick
Stack values:    quick    The
*/
```

Remarks

This method is similar to the [Pop](#) method, but [Peek](#) does not modify the [Stack](#).

`null` can be pushed onto the [Stack](#) as a placeholder, if needed. To distinguish between a null value and the end of the stack, check the [Count](#) property or catch the [InvalidOperationException](#), which is thrown when the [Stack](#) is empty.

This method is an O(1) operation.

Applies to

.NET Core

3.0 Preview 2, 2.2, 2.1, 2.0, 1.1, 1.0

.NET Framework

4.8, 4.7.2, 4.7.1, 4.7, 4.6.2, 4.6.1, 4.6, 4.5.2, 4.5.1, 4.5, 4.0, 3.5, 3.0, 2.0, 1.1

.NET Standard

2.0

UWP

10.0

Xamarin.Android

7.1

Xamarin.iOS

10.8

Xamarin.Mac

3.0

See also

- [Pop\(\)](#)
- [Push\(Object\)](#)