

# Stack.Pop Method

Namespace: [System.Collections](#)

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

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Removes and returns the object at the top of the [Stack](#).

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

## Returns

[Object](#)

The [Object](#) removed from 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 [Peek](#) 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

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