

## Collections : Stack

- C# includes a special type of collection which stores elements in LIFO style (Last In First Out).
- C# includes a generic and non-generic Stack.
- Stack allows null value and also duplicate values.
- It provides a Push() method to add a value and Pop() or Peek() methods to retrieve values.

### Property of Stack class

#### Count

Gets the number of elements contained in the Stack.

### Methods of ArrayList

#### **public virtual void Clear();**

Removes all elements from the Stack.

#### **public virtual bool Contains(object obj);**

Determines whether an element is in the Stack.

#### **public virtual object Peek();**

Returns the object at the top of the Stack without removing it.

#### **public virtual object Pop();**

Removes and returns the object at the top of the Stack.

#### **public virtual void Push(object obj);**

Inserts an object at the top of the Stack.

#### **public virtual object[] ToArray();**

Copies the Stack to a new array.

### Application Program which demonstrate use of Stack methods and properties.

```
using System;
using System.Collections;

public class Marvellous
{
    public static void Main(string[] args)
    {
        Stack st = new Stack();

        st.Push('E');
        st.Push('N');
        st.Push('U');
        st.Push('P');
```

```
Console.WriteLine("Elements from stack: ");
foreach (char c in st)
{
    Console.Write(c + " ");
}

st.Push('2');
st.Push('1');

Console.WriteLine("peek stack: {0}", st.Peek());

Console.WriteLine("Pop element from stack : {0}", st.Pop());

Console.WriteLine("Elements from stack:");
foreach (char c in st)
{
    Console.Write(c + " ");
}

Console.WriteLine("Removing values ");
st.Pop();
st.Pop();
st.Pop();

Console.WriteLine("Current stack: ");
foreach (char c in st)
{
    Console.Write(c + " ");
}
}
```