

Masked TextBox Host

```
/*
User Interfaces in C#: Windows Forms and Custom Controls
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```

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*/

```
using System;
using System.Drawing;
using System.Collections;
using System.ComponentModel;
using System.Windows.Forms;
using System.Data;
```

```
namespace MaskedTextBoxHost
```

```
{
```

```
///
```

```
/// Summary description for MaskedTextBoxHost.
```

```
///
```

```
public class MaskedTextBoxHost : System.Windows.Forms.Form
```

```
{
```

```
///
```

```
/// Required designer variable.
```

```
///
```

```
private System.ComponentModel.Container components = null;
```

```
public MaskedTextBoxHost()
```

```
{
```

```
//
```

```
// Required for Windows Form Designer support
```

```
//
```

```
InitializeComponent();
```

```
//  
// TODO: Add any constructor code after InitializeComponent  
call  
//  
}  
  
///  
  
/// Clean up any resources being used.  
///  
protected override void Dispose( bool disposing )  
{  
if( disposing )  
{  
if (components != null)  
{  
components.Dispose();  
}  
}  
base.Dispose( disposing );  
}  
  
///  
  
/// Required method for Designer support – do not modify  
/// the contents of this method with the code editor.  
///  
private void InitializeComponent()  
{  
//  
// MaskedTextBoxHost  
//  
this.AutoScaleBaseSize = new System.Drawing.Size(5, 13);  
this.ClientSize = new System.Drawing.Size(292, 266);  
this.Name = "MaskedTextBoxHost";  
this.Text = "MaskedTextBoxHost";  
this.Load += new  
System.EventHandler(this.MaskedTextBoxHost_Load);
```

```
}

/// 

/// The main entry point for the application.
///

[STAThread]
static void Main()
{
    Application.Run(new MaskedTextBoxHost());
}

private void MaskedTextBoxHost_Load(object sender,
System.EventArgs e)
{
    MaskedTextBox txtMask = new
    MaskedTextBox();
    txtMask.Location = new Point(10, 10);
    txtMask.Mask = "(###) ###-####";
    this.Controls.Add(txtMask);

}

}

public class MaskedTextBox : TextBox
{
    private string mask;
    public string Mask
    {
        get
        {
            return mask;
        }
        set
        {
            mask = value;
            this.Text = "";
        }
    }
}
```

```
protected override void OnKeyPress(KeyPressEventArgs e)
{
if (Mask != "")
{
// Suppress the typed character.
e.Handled = true;

string newText = this.Text;

// Loop through the mask, adding fixed characters as needed.
// If the next allowed character matches what the user has
// typed in (a number or letter), that is added to the end.
bool finished = false;
for (int i = this.SelectionStart; i < mask.Length; i++) {
switch (mask[i].ToString()) { case "#" : // Allow the keypress
as long as it is a number. if (Char.IsDigit(e.KeyChar)) {
newText += e.KeyChar.ToString(); finished = true; break; }
else { // Invalid entry; exit and don't change the text.
return; } case "." : // Allow the keypress as long as it is a
letter. if (Char.IsLetter(e.KeyChar)) { newText +=
e.KeyChar.ToString(); finished = true; break; } else { // Invalid
entry; exit and don't change the text. return; }
default : // Insert the mask character. newText += mask[i];
break; } if (finished) { break; } } // Update the text.
this.Text = newText; this.SelectionStart = this.Text.Length; }
} protected override void OnKeyDown(KeyEventEventArgs e) { // Stop
special characters. e.Handled = true; } } } [/csharp]
```