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學習

winforms

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1: winforms

Windows Forms “WinForms”.NET FrameworkGUI。 [Win32 API.NET Framework](#)Windows。

WinForms 。 。 。

WindowsWinForms。 Control。 Control。 Form UserControl TableLayoutPanel FlowLayoutPanel 。

.NET Frameworkv1.0WinFormsv4.5。 。 [Build 20149](#)

Windows Forms。 。

[Mono](#)Windows FormsMicrosoft.NET 2.0。 WinFormsMonoWindows API。

- MSDN[Windows](#)

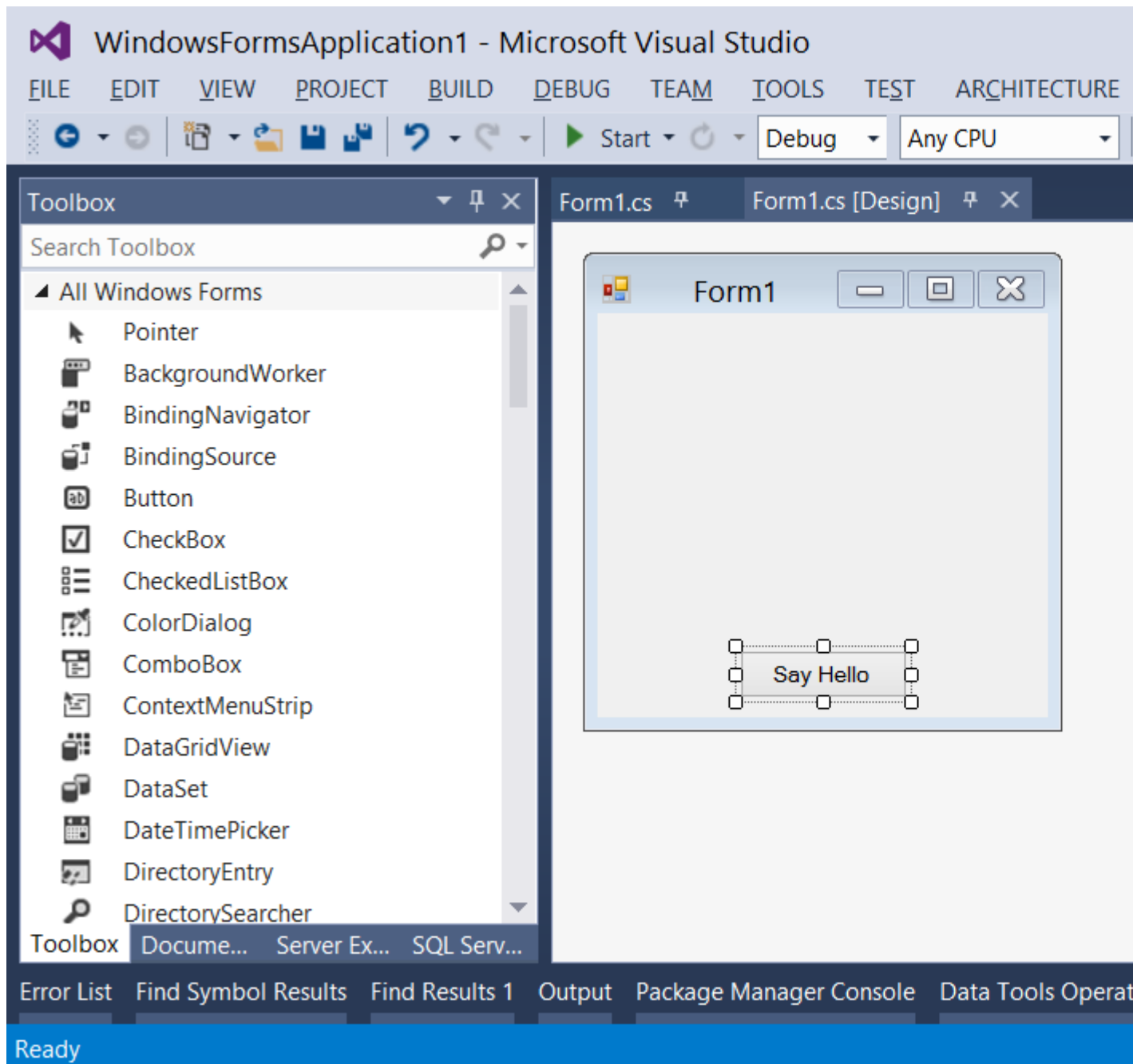
Examples

Visual StudioWinForms

Visual StudioWindows。

Windows

1. Visual Studio。
2. “ ” “ ” “ ” 。 “ ” 。
3. “ ” “Visual C” “Visual Basic” 。
4. 。
5. **Windows** 。
6. “ ” 。
7. “ ” 。
8. 。
9. Windows**Form1** 。
1. “ ” “ **Button** ” 。
2. 。 “ ” “Text” “ **Say Hello** ” 。



1. Click .

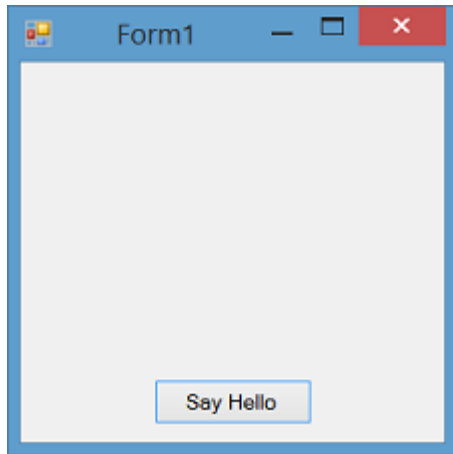
2. **C**

```
MessageBox.Show("Hello, World!");
```

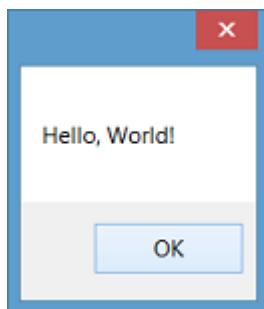
VB.NET

```
MessageBox.Show("Hello, World!")
```

1. **F5**



2. "HelloWorld".



3. Visual Studio.

CWinForms

- ```
using System;
using System.ComponentModel;
using System.Drawing;
using System.Windows.Forms;

namespace SampleApp
{
 public class MainForm : Form
 {
 private Button btnHello;

 // The form's constructor: this initializes the form and its controls.
 public MainForm()
 {
 // Set the form's caption, which will appear in the title bar.
 this.Text = "MainForm";

 // Create a button control and set its properties.
 btnHello = new Button();
 btnHello.Location = new Point(89, 12);
 btnHello.Name = "btnHello";
 btnHello.Size = new Size(105, 30);
 btnHello.Text = "Say Hello";

 // Wire up an event handler to the button's "Click" event
 // (see the code in the btnHello_Click function below).
 btnHello.Click += new EventHandler(btnHello_Click);
 }
 }
}
```



```

 // Add the button to the form's control collection,
 // so that it will appear on the form.
 this.Controls.Add(btnHello);
 }

 // When the button is clicked, display a message.
 private void btnHello_Click(object sender, EventArgs e)
 {
 MessageBox.Show("Hello, World!");
 }

 // This is the main entry point for the application.
 // All C# applications have one and only one of these methods.
 [STAThread]
 static void Main()
 {
 Application.EnableVisualStyles();
 Application.Run(new MainForm());
 }
}

```

2. /o - X:\MainForm.cs o

### 3. C

```
%WINDIR%\Microsoft.NET\Framework64\v4.0.30319\csc.exe /target:winexe "X:\MainForm.cs"
```

C.NET%WINDIR%\Microsoft.NETo CC o

4. MainForm.exeo o

## VB.NET WinForms

```

1. Imports System.ComponentModel
Imports System.Drawing
Imports System.Windows.Forms

Namespace SampleApp
 Public Class MainForm : Inherits Form
 Private btnHello As Button

 ' The form's constructor: this initializes the form and its controls.
 Public Sub New()
 ' Set the form's caption, which will appear in the title bar.
 Me.Text = "MainForm"

 ' Create a button control and set its properties.
 btnHello = New Button()
 btnHello.Location = New Point(89, 12)
 btnHello.Name = "btnHello"
 btnHello.Size = New Size(105, 30)
 btnHello.Text = "Say Hello"

 ' Wire up an event handler to the button's "Click" event
 ' (see the code in the btnHello_Click function below).

```

```

 AddHandler btnHello.Click, New EventHandler(AddressOf btnHello_Click)

 ' Add the button to the form's control collection,
 ' so that it will appear on the form.
 Me.Controls.Add(btnHello)
 End Sub

 ' When the button is clicked, display a message.
 Private Sub btnHello_Click(sender As Object, e As EventArgs)
 MessageBox.Show("Hello, World!")
 End Sub

 ' This is the main entry point for the application.
 ' All VB.NET applications have one and only one of these methods.
 <STAThread> _
 Public Shared Sub Main()
 Application.EnableVisualStyles()
 Application.Run(New MainForm())
 End Sub
End Class
End Namespace

```

2. /◦ - X:\MainForm.vb ◦

### 3. VB.NET

```
%WINDIR%\Microsoft.NET\Framework64\v4.0.30319\vbc.exe /target:winexe "X:\MainForm.vb"
```

VB.NET.NET%WINDIR%\Microsoft.NET◦ VB.NETHello World ◦

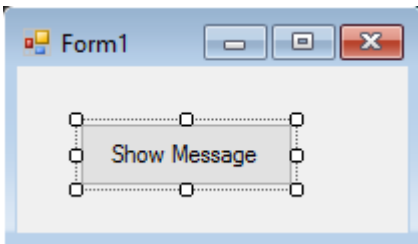
4. MainForm.exe◦ ◦

winforms <https://riptutorial.com/zh-TW/winforms/topic/1018/winforms>

## 2:

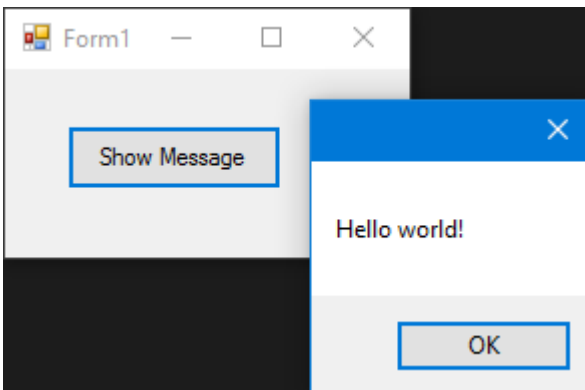
## Examples

- 
- cmdShowMessage Show Message◦



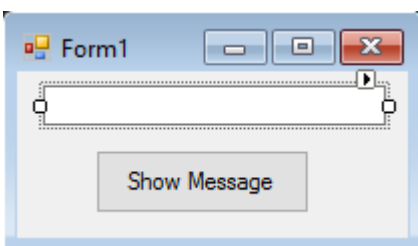
Visual Studio click◦ MessageBox

```
private void cmdShowMessage_Click(object sender, EventArgs e)
{
 MessageBox.Show("Hello world!");
}
```



TextBoxes◦

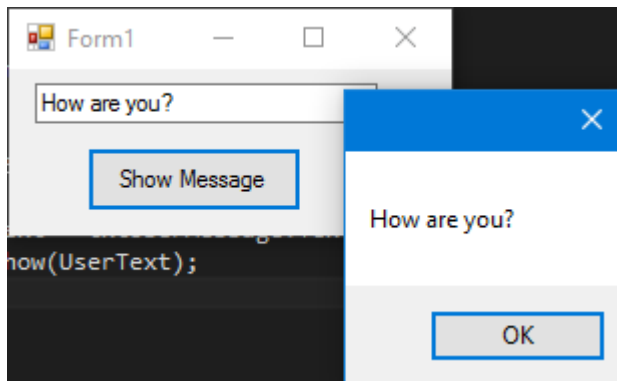
- 



```
private void cmdShowMessage_Click(object sender, EventArgs e)
{
 string UserText = txtUserMessage.Text;
 MessageBox.Show(UserText);
}
```

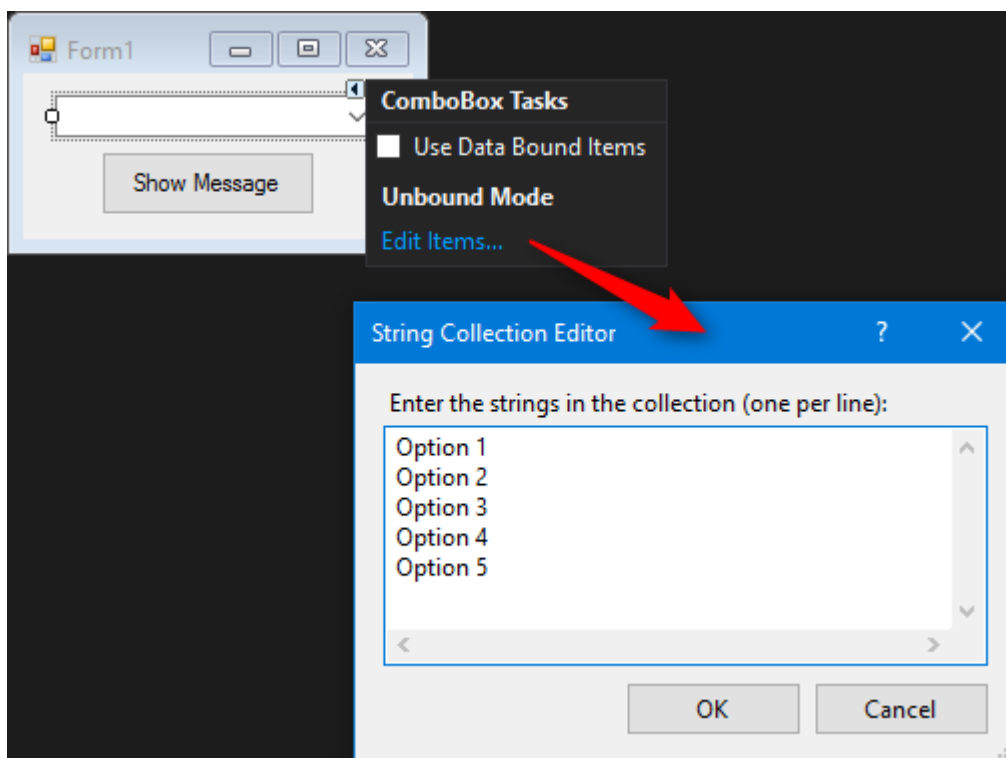
Textbox.Texttextbox.

- MessageBox



ComboBoxes.

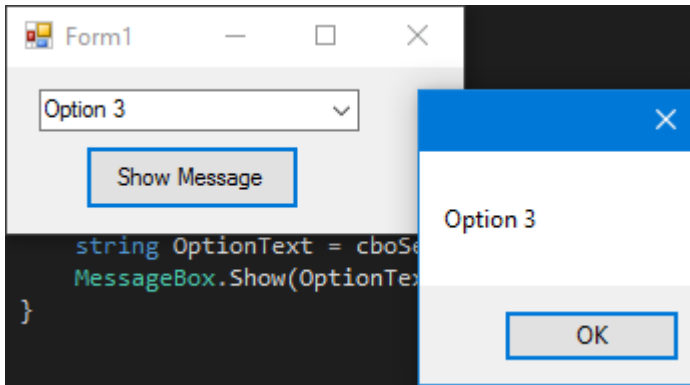
- 
- Items



click

```
private void cmdShowMessage_Click(object sender, EventArgs e)
{
 string OptionText = cboSelectOption.SelectedItem.ToString();
 MessageBox.Show(OptionText);
}
```

SelectedItem. ToString().

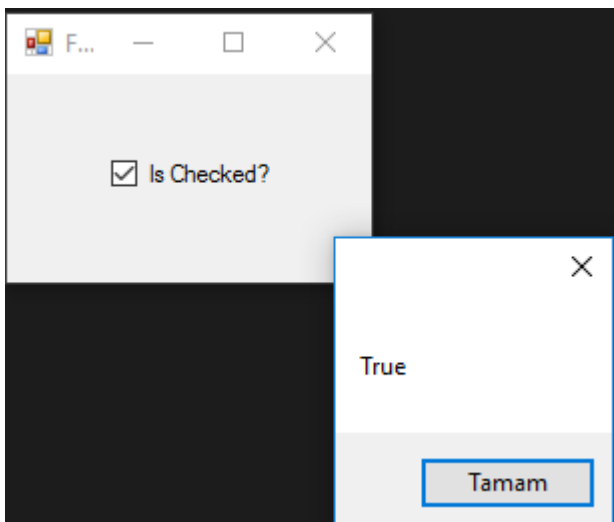


SelectionChangeCommitted◦ SelectedIndexChanged◦

Checkbox""boolean""◦

CheckedChangedcheck◦

CheckBox""◦



CheckedChangedMessageBox

```
private void checkBox1_CheckedChanged(object sender, EventArgs e)
{
 bool IsChecked = checkBox1.Checked;
 MessageBox.Show(IsChecked.ToString());
}
```

**CheckBox** - > IsCheckedtrue◦

**CheckBox** - > IsCheckedfalse◦

Listbox◦ ListboxComboboxCombobox ;◦ Listbox ;◦

## Listbox

```
private void Form3_Load(object sender, EventArgs e)
{
```

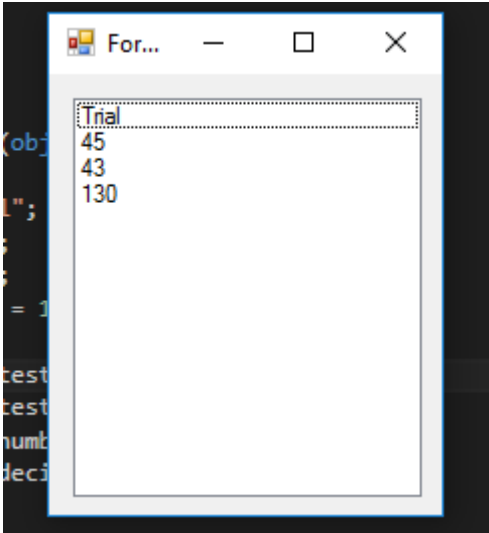
```

 string test = "Trial";
 string test2 = "45";
 int numberTest = 43;
 decimal decimalTest = 130;

 listBox1.Items.Add(test);
 listBox1.Items.Add(test2);
 listBox1.Items.Add(numberTest);
 listBox1.Items.Add(decimalTest);
 }

```

;



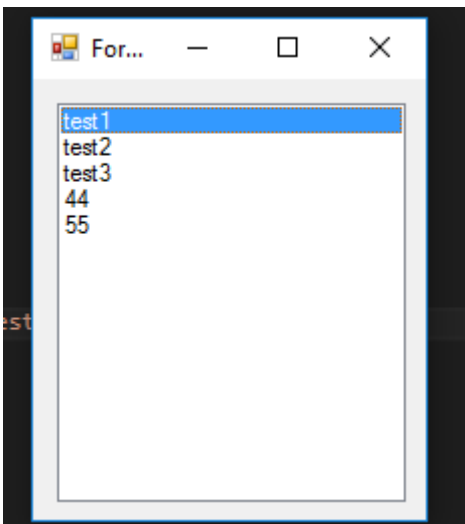
datasources

```

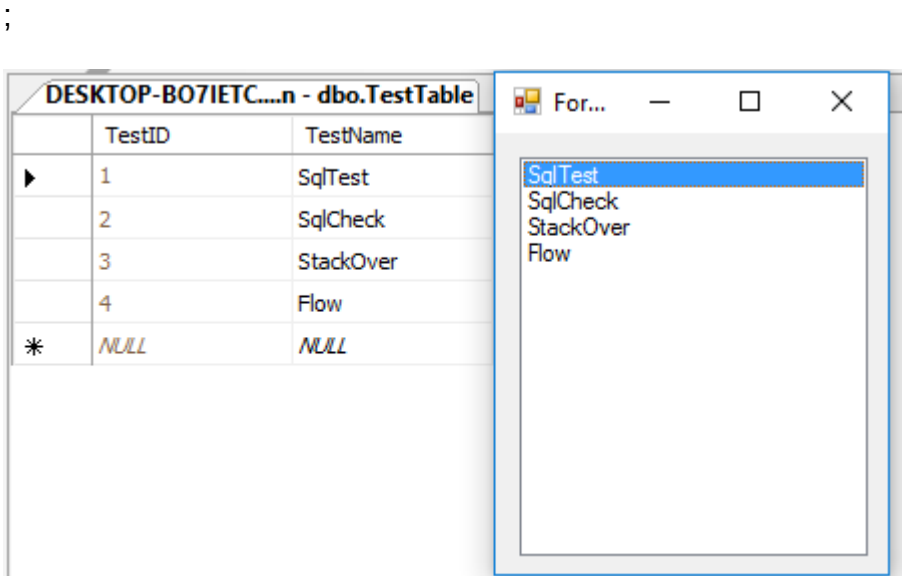
private void Form3_Load(object sender, EventArgs e)
{
 List<string> TestList = new List<string> { "test1", "test2", "test3", "44", "55" };
};
listBox1.DataSource = TestList;
}

```

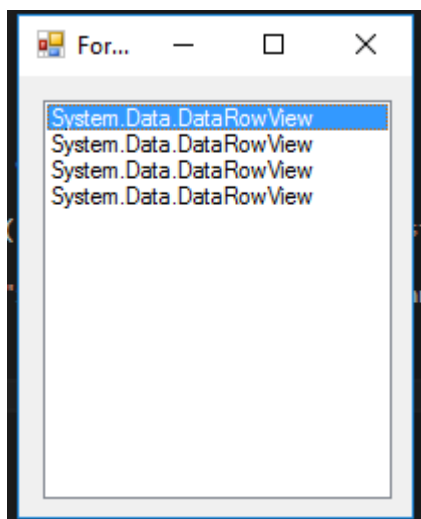
;



```
private void Form3_Load(object sender, EventArgs e)
{
 SqlConnection Connection = new
SqlConnection("Server=serverName;Database=db;Trusted_Connection=True;"); //Connetion to MS-
SQL (RDBMS)
 Connection.Open(); //Connection open
 SqlDataAdapter Adapter = new SqlDataAdapter("Select * From TestTable",
Connection); // Get all records from TestTable.
 DataTable DT = new DataTable();
 Adapter.Fill(DT); // Fill records to DataTable.
 listBox1.DataSource = DT; // DataTable is the datasource.
 listBox1.ValueMember = "TestID";
 listBox1.DisplayMember= "TestName";
}
```



sqlValueMemberDisplayMember



;

**SelectedIndex\_Changed;**

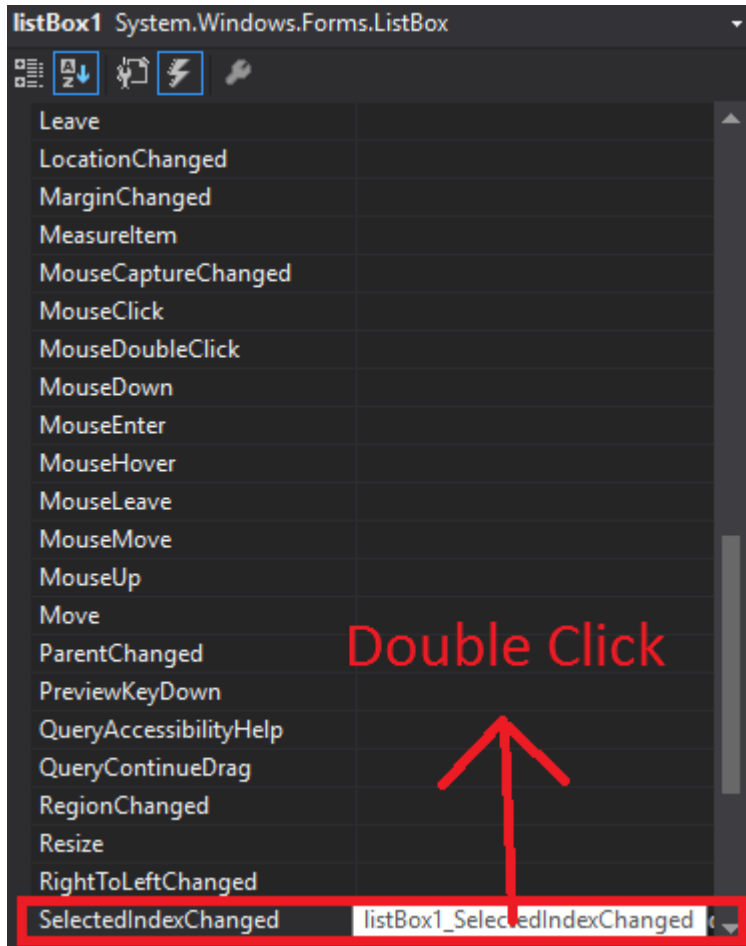
```
private void Form3_Load(object sender, EventArgs e)
```

```

 {
 List<string> DataList = new List<string> { "test1" , "test2" , "test3" , "44" ,
"45" };
 listBox1.DataSource = TestList;
 }

```

Listbox F4lightning。



Visual Studio listBox1\_SelectedIndexChangedlistBox1\_SelectedIndexChanged 。

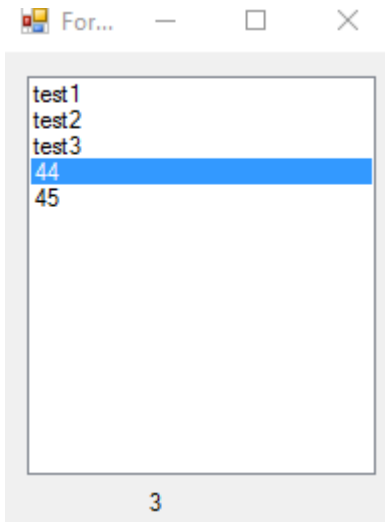
```

private void listBox1_SelectedIndexChanged(object sender, EventArgs e)
{
 int Index = listBox1.SelectedIndex;
 label1.Text = Index.ToString();
}

```

SelectedIndex\_Changed;

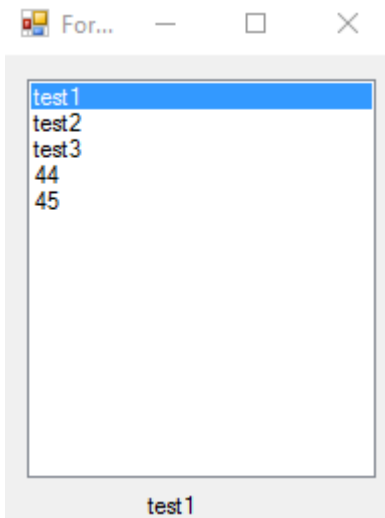




## SelectedValue\_Changed; SelectedIndex\_Changed

```
private void listBox1_SelectedValueChanged(object sender, EventArgs e)
{
 label1.Text = listBox1.SelectedValue.ToString();
}
```

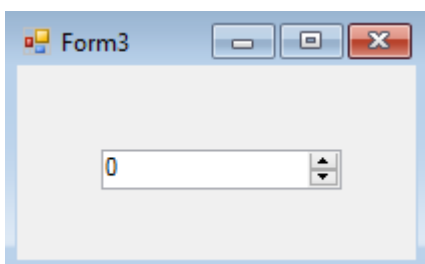
```
;
```



## NumericUpDown

NumericUpDownUpDownTextBox。 /。 。

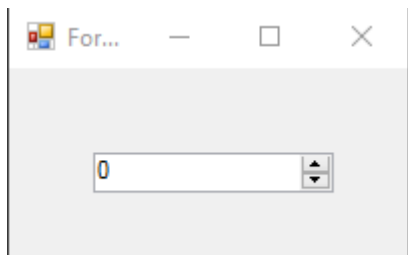
```
;
```



Form\_Load°

```
private void Form3_Load(object sender, EventArgs e)
{
 numericUpDown1.Maximum = 10;
 numericUpDown1.Minimum = -10;
}
```

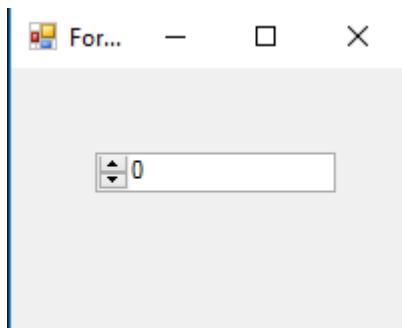
;



**UpDownAlign;**

```
private void Form3_Load(object sender, EventArgs e)
{
 numericUpDown1.UpDownAlign = LeftRightAlignment.Left;
}
```

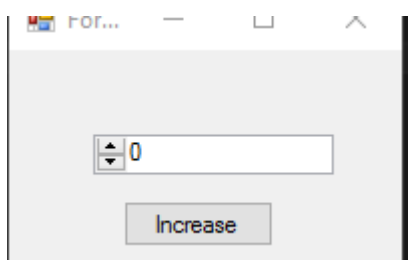
;



UpButton()° ° button°

```
private void button1_Click(object sender, EventArgs e)
{
 numericUpDown1.UpButton();
}
```

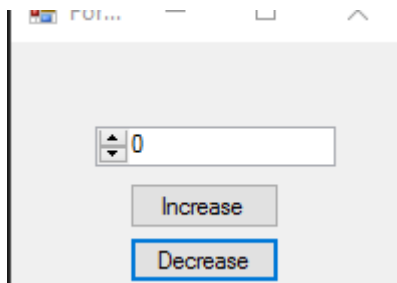
\*\*



DownButton()。 。 button。

```
private void button2_Click(object sender, EventArgs e)
{
 numericUpDown1.DownButton();
}
```

;

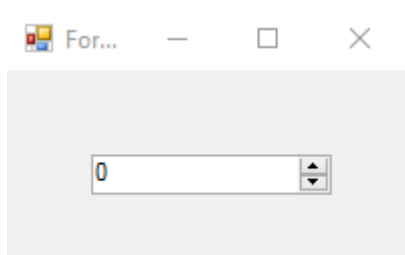


## ValueChanged;

。

```
private void numericUpDown1_ValueChanged(object sender, EventArgs e)
{
 decimal result = numericUpDown1.Value; // it will get the current value
 if (result == numericUpDown1.Maximum) // if value equals Maximum value that we set
in Form_Load.
 {
 label1.Text = result.ToString() + " MAX!"; // it will add "MAX" at the end of
the label
 }
 else if (result == numericUpDown1.Minimum) // if value equals Minimum value that
we set in Form_Load.
 {
 label1.Text = result.ToString() + " MIN!"; // it will add "MIN" at the end of
the label
 }
 else
 {
 label1.Text = result.ToString(); // If Not Max or Min, it will show only the
number.
 }
}
```

;



<https://riptutorial.com/zh-TW/winforms/topic/5816/>

## 3:

Windows。 CHMURL。 。

## HelpProvider

`HelpProvider`。 F1

- 
- CHM
- URL

`Help`

- 
- CHM
- URL

## HelpRequested

`ControlForm` `HelpRequested` F1 “”。

`Form` “” “”?`HelpProvider`。

## MessageBoxCommonDialogs

“”`MessageBox` `OpenFileDialog` `SaveDialog` `ColorDialog`。

`ToolTip`。 `ToolTip`。

`HelpProvider` `Help` `HTML.chm` `HTML`。 。 。 `HTML Help Workshop` `HTML Help 1.x`。 `HTML` `Microsoft HTML` “`HTML Help Workshop`” `HTML`。

## Examples

`Help Class` `HTML Help 1.0`。 “” `HTML.chm` `HTML`。 。 。 `Microsoft` `HTML Help Workshop` `HTML Help 1.x`。

## C

```
Help.ShowHelp(this, helpProviderMain.HelpNamespace);
```

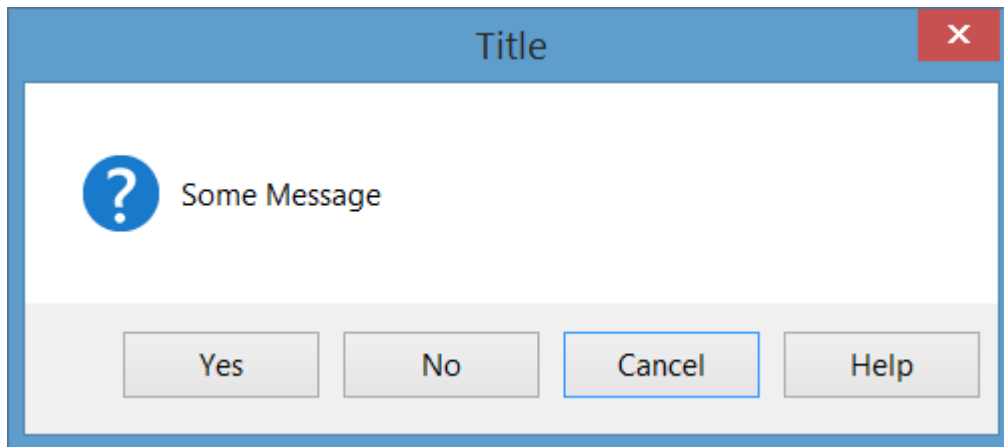
## VB.NET

```
Help.ShowHelp(Me, hlpProviderMain.HelpNamespace)
```

## MessageBox

◦ MessageBox “ Help ◦ MessageBox “”F1CHMURL◦ ◦

MessageBox



## CHM

```
MessageBox.Show("Some Message", "Title", MessageBoxButtons.YesNoCancel,
 MessageBoxIcon.Question, MessageBoxDefaultButton.Button3, 0,
 "help.chm", HelpNavigator.KeywordIndex, "SomeKeyword");
```

## CHM

```
MessageBox.Show("Some Message", "Title", MessageBoxButtons.YesNoCancel,
 MessageBoxIcon.Question, MessageBoxDefaultButton.Button3, 0,
 "help.chm", HelpNavigator.Topic, "/SomePath/SomePage.html");
```

## CHM

```
MessageBox.Show("Some Message", "Title", MessageBoxButtons.YesNoCancel,
 MessageBoxIcon.Question, MessageBoxDefaultButton.Button3, 0,
 "help.chm");
```

## URL

```
MessageBox.Show("Some Message", "Title", MessageBoxButtons.YesNoCancel,
 MessageBoxIcon.Question, MessageBoxDefaultButton.Button3, 0,
 "http://example.com");
```

## “”F1

MessageBox[HelpRequested](#)

```
private void Form1_HelpRequested(object sender, HelpEventArgs hlpevent)
{
 // Perform custom action, for example show a custom help form
 var f = new Form();
 f.ShowDialog();
}
```

“MessageBox

```
MessageBox.Show("Some Message", "Title", MessageBoxButtons.YesNoCancel,
 MessageBoxIcon.Question, MessageBoxDefaultButton.Button3, 0, true);
```

```
MessageBox.Show("Some Message", "Title", MessageBoxButtons.YesNoCancel,
 MessageBoxIcon.Question, MessageBoxDefaultButton.Button3, 0, false);
```

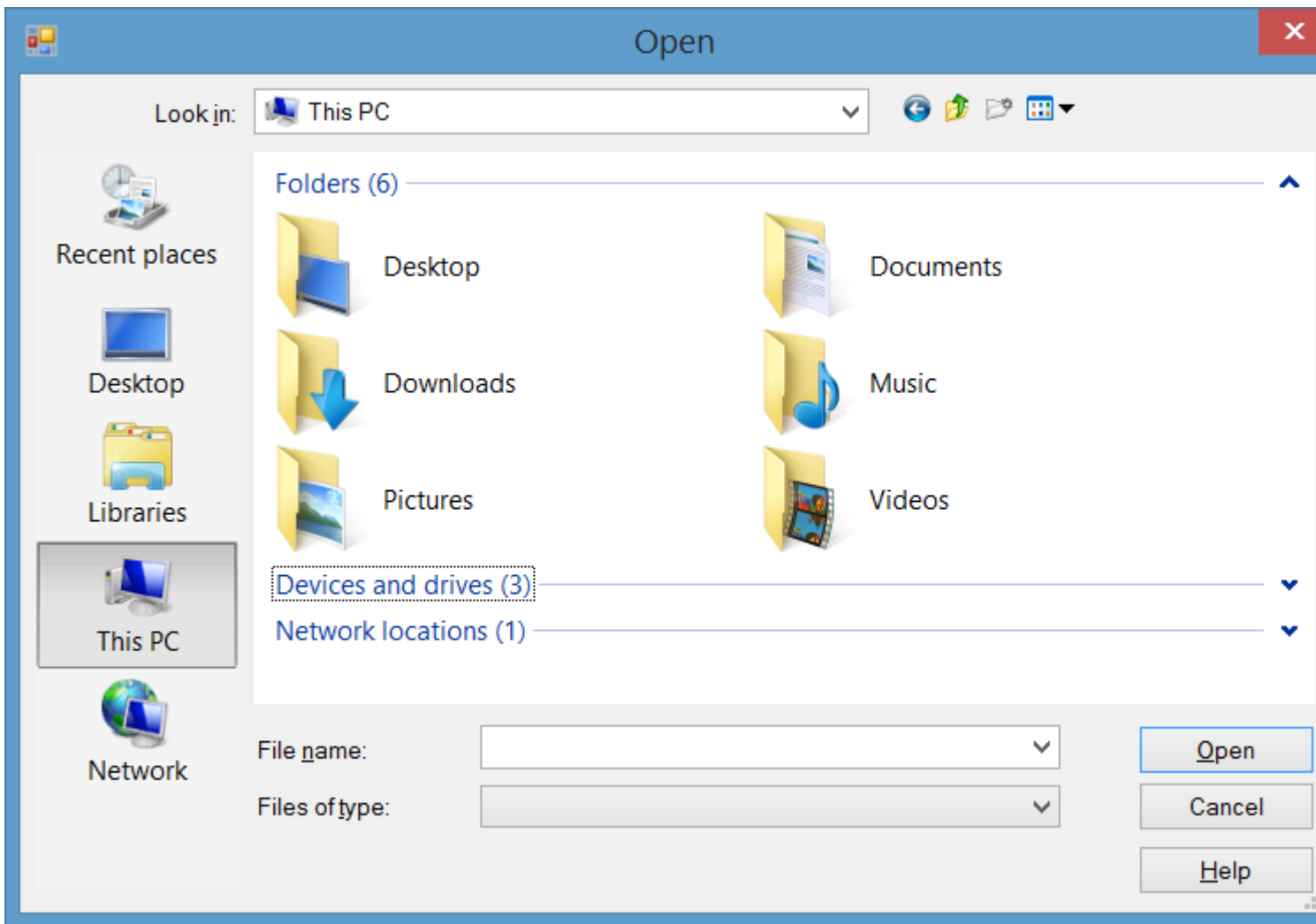
## CommonDialogs

OpenFileDialog SaveFileDialogColorDialog◦ ShowHelptrueHelpRequest

```
void openFileDialog1_HelpRequest(object sender, EventArgs e)
{
 //Perform custom action
 Help.ShowHelp(this, "Http://example.com");
}
```

- ShowHelptrue◦
- “Help**F1**◦

“OpenFileDialog



## HelpConquered

F1 `HelpRequested`

◦

`HelpRequested` `argHandled` `true` ◦

`HelpRequestedF1textBox1`

```
private void Form1_HelpRequested(object sender, HelpEventArgs hlpevent)
{
 var c = this.ActiveControl;
 if(c!=null)
 MessageBox.Show(c.Name);
}
private void textBox1_HelpRequested(object sender, HelpEventArgs hlpevent)
{
 hlpevent.Handled = true;
 MessageBox.Show("Help request handled and will not bubble up");
}
```

URL`HelpCHM`◦

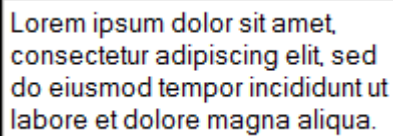
## Help

- 
- CHM
- URL

“”

## Help.ShowPopup

```
private void control_MouseClick(object sender, MouseEventArgs e)
{
 var c = (Control)sender;
 var help = "Lorem ipsum dolor sit amet, consectetur adipiscing elit, " +
 "sed do eiusmod tempor incididunt ut labore et dolore magna aliqua."
 if (c != null)
 Help.ShowPopup(c, "Lorem ipsum dolor sit amet.", c.PointToScreen(e.Location));
}
```



## CHM

### Help.ShowHelpCHM

```
Help.ShowHelp(this, "Help.chm");
```

```
Help.ShowHelp(this, "Help.chm", HelpNavigator.Index, "SomeKeyword");
```

```
Help.ShowHelp(this, "Help.chm", HelpNavigator.Topic, "/SomePath/SomePage.html");
```

### ShowHelpURL

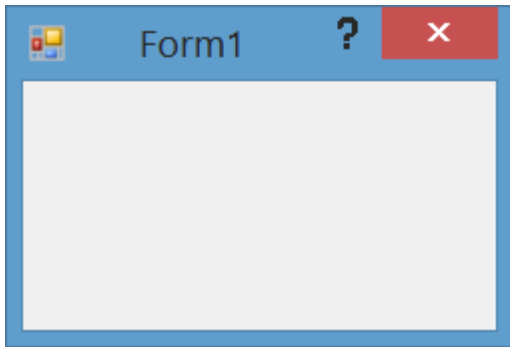
```
Help.ShowHelp(this, "Http://example.com");
```

## Form

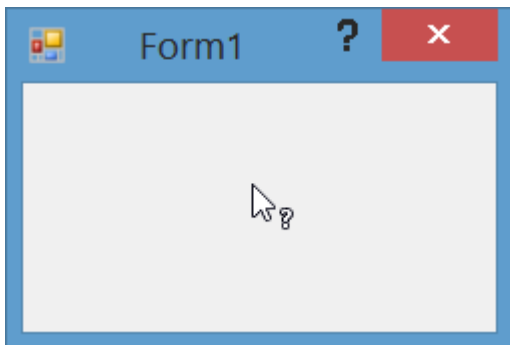
1. `HelpButton` true
2. `MinimizeBox` `MaximizeBox` false

## Form





“”?



ControlForm HelpRequestedHelpProvider HelpProvider°

## Form HelpButton

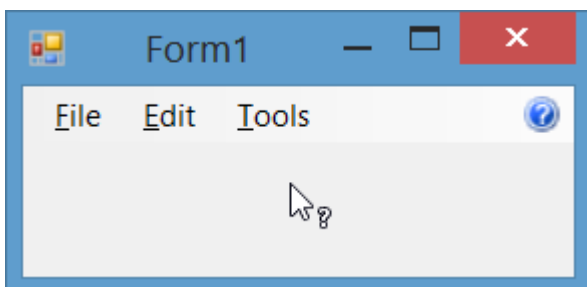
FormMinimizeBoxMaximizeBoxtrue Form°

MenuStrip° MenuStripToolStripMenuItem Click

```
private const int WM_SYSCOMMAND = 0x0112;
private const int SC_CONTEXTHELP = 0xF180;
[System.Runtime.InteropServices.DllImport("user32.dll")]
static extern IntPtr SendMessage(IntPtr hWnd, int Msg, int wParam, int lParam);
private void helpToolStripMenuItem_Click(object sender, EventArgs e)
{
 SendMessage(this.Handle, WM_SYSCOMMAND, SC_CONTEXTHELP, 0);
}
```

Buttonbutton1.Capture = false;° ToolStripMenuItem°

?



## FormHelpButtonClicked

HelpButton.HelpButtonClicked ◦ args.Cancel = true ◦

```
private void Form1_HelpButtonClicked(object sender, CancelEventArgs e)
{
 e.Cancel = true;
 //Perform some custom action
 MessageBox.Show("Some Custom Help");
}
```

<https://riptutorial.com/zh-TW/winforms/topic/3285/>

## 4:

| propertyName      | ◦                |
|-------------------|------------------|
|                   | Object◦          |
|                   | ◦                |
| formattingEnabled | ◦                |
| UpdateMode        |                  |
| NullValue         | boundDBNull◦     |
| formatString      |                  |
| formatInfo        | IFormatProvider◦ |

<https://msdn.microsoft.com/en-us/library/ef2xyb33.aspx>

## Examples

DataBindings System.Windows.Forms.Binding◦ Add -

```
textBox.DataBindings.Add("Text", dataObj, "MyProperty");
```

changeevent◦ dataObj.MyPropertychangeeventtextBox.Text◦ textBox.TextChanged  
dataObj.MyProperty◦

<https://riptutorial.com/zh-TW/winforms/topic/7362/>

## 5:

## Examples

```
var source = new AutoCompleteStringCollection();

// Add your collection of strings.
source.AddRange(new[] { "Guybrush Threepwood", "LeChuck" });

var textBox = new TextBox
{
 AutoCompleteCustomSource = source,
 AutoCompleteMode = AutoCompleteMode.SuggestAppend,
 AutoCompleteSource = AutoCompleteSource.CustomSource
};

form.Controls.Add(textBox);
```

### GL °

AutoCompleteMode.SuggestAppendAppendSuggest °

```
textBox.KeyPress += (sender, e) => e.Handled = !char.IsControl(e.KeyChar) &&
!char.IsDigit(e.KeyChar);
```

TextBoxHandletrue °

/TextChanged

```
textBox.TextChanged += (sender, e) => textBox.Text = Regex.Match(textBox.Text, @"\d+").Value
```

°

### NumericUpDown °

```
textBox.SelectionStart = textBox.TextLength;
textBox.ScrollToCaret();
```

SelectionStart0 °

### C

```
private void Form_load(object sender, EventArgs e)
{
 textBox.Text = "Place Holder text...";
}

private void textBox_Enter(object sender, EventArgs e)
{
 if(textBox.Text == "Place Holder text...")
```

```

 {
 textBox.Text = "";
 }
}

private void textBox_Leave(object sender, EventArgs e)
{
 if(textBox.Text.Trim() == "")
 {
 textBox.Text = "Place Holder text...";
 }
}

```

## VB.NET

```

Private Sub Form_Load(sender As Object, e As EventArgs) Handles MyBase.Load
 textBox.Text = "Place Holder text..."
End Sub

Private Sub textBox_GotFocus(sender as Object,e as EventArgs) Handles textBox.GotFocus
 if Trim(textBox.Text) = "Place Holder text..." Then
 textBox.Text = ""
 End If
End Sub

Private Sub textBox_LostFocus(sender as Object,e as EventArgs) Handles textBox.LostFocus
 if Trim(textBox.Text) = "" Then
 textBox.Text = "Place Holder text..."
 End If
End Sub

```

<https://riptutorial.com/zh-TW/winforms/topic/4674/>

## 6:

◦ ◦ ◦

## Examples

WinFormsWPF。 “”。

WinForms。

TextBox。 WindowsTextBox。 TextBox。

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Windows.Forms;

namespace StackOverflowDocumentation
{
 public class SOTextBox : TextBox
 {
 public SOTextBox() : base()
 {
 base.BackColor = SOUserPreferences.BackColor;
 base.ForeColor = SOUserPreferences.ForeColor;
 }
 protected override void OnEnter(EventArgs e)
 {
 base.BackColor = SOUserPreferences.FocusColor;
 base.OnEnter(e);
 }
 protected override void OnLeave(EventArgs e)
 {
 base.BackColor = SOUserPreferences.BackColor;
 base.OnLeave(e);
 }
 }
}
```

◦ ◦ **TextBox**。

◦

```
using System;
using System.Threading;
using Microsoft.Win32;
using System.Globalization;
using System.Data;
using System.Drawing;

namespace StackOverflowDocumentation
{
 public class SOUserPreferences
```

```

{
 private static string language;
 private static string logPath;
 private static int formBackCol;
 private static int formForeCol;
 private static int backCol;
 private static int foreCol;
 private static int focusCol;

 static SOUserPreferences()
 {
 try
 {
 RegistryKey HKCU = Registry.CurrentUser;
 RegistryKey kSOPrefs = HKCU.OpenSubKey("SOPrefs");
 if (kSOPrefs != null)
 {
 language = kSOPrefs.GetValue("Language", "EN").ToString();
 logPath = kSOPrefs.GetValue("LogPath", "c:\\windows\\logs\\").ToString();
 formForeCol = int.Parse(kSOPrefs.GetValue("FormForeColor", "-2147483630").ToString());
 formBackCol = int.Parse(kSOPrefs.GetValue("FormBackColor", "-2147483633").ToString());
 foreCol = int.Parse(kSOPrefs.GetValue("ForeColor", "-2147483640").ToString());
 backCol = int.Parse(kSOPrefs.GetValue("BackColor", "-2147483643").ToString());
 focusCol = int.Parse(kSOPrefs.GetValue("FocusColor", "-2147483643").ToString());
 }
 else
 {
 language = "EN";
 logPath = "c:\\windows\\logs\\";
 formForeCol = -2147483630;
 formBackCol = -2147483633;
 foreCol = -2147483640;
 backCol = -2147483643;
 focusCol = -2147483643;
 }
 }
 catch (Exception ex)
 {
 //handle exception here;
 }
 }

 public static string Language
 {
 get
 {
 return language;
 }
 set
 {
 language = value;
 }
 }

 public static string LogPath
 {

```

```

 get
 {
 return logPath;
 }
 set
 {
 logPath = value;
 }
 }

 public static Color FormBackColor
 {
 get
 {
 return ColorTranslator.FromOle(formBackCol);
 }
 set
 {
 formBackCol = ColorTranslator.ToOle(value);
 }
 }

 public static Color FormForeColor
 {
 get
 {
 return ColorTranslator.FromOle(formForeCol);
 }
 set
 {
 formForeCol = ColorTranslator.ToOle(value);
 }
 }

 public static Color BackColor
 {
 get
 {
 return ColorTranslator.FromOle(backCol);
 }
 set
 {
 backCol = ColorTranslator.ToOle(value);
 }
 }

 public static Color ForeColor
 {
 get
 {
 return ColorTranslator.FromOle(foreCol);
 }
 set
 {
 foreCol = ColorTranslator.ToOle(value);
 }
 }

 public static Color FocusColor
 {
 get

```



```

 {
 return ColorTranslator.FromOle(focusCol);
 }
 set
 {
 focusCol = ColorTranslator.ToOle(value);
 }
 }
}
}

```

Windows。 。 。 saveRegistry。 ;。 。

。 。

## NumberBox

。

```

using System;
using System.Windows.Forms;
using System.Globalization;

namespace StackOverflowDocumentation
{
 public class SONumberBox : SOTextBox
 {
 private int decPlaces;
 private int extraDecPlaces;
 private bool perCent;
 private bool useThouSep = true;
 private string decSep = ".";
 private string thouSep = ",";
 private double numVal;

 public SONumberBox() : base()
 {
 }

 public bool PerCent
 {
 get
 {
 return perCent;
 }
 set
 {
 perCent = value;
 }
 }

 public double Value
 {
 get
 {
 return numVal;
 }
 }
 }
}

```

```

 set
 {
 numVal = value;
 if (perCent)
 {
 double test = numVal * 100.0;
 this.Text = FormatNumber(test) + "%";
 }
 else
 {
 this.Text = FormatNumber(value);
 }
 }
 }
}
public bool UseThousandSeparator
{
 get
 {
 return useThouSep;
 }
 set
 {
 useThouSep = value;
 }
}
public int DecimalPlaces
{
 get
 {
 return decPlaces;
 }
 set
 {
 decPlaces = value;
 }
}
public int ExtraDecimalPlaces
{
 get
 {
 return extraDecPlaces;
 }
 set
 {
 extraDecPlaces = value;
 }
}
protected override void OnTextChanged(EventArgs e)
{
 string newVal = this.Text;
 int len = newVal.Length;
 if (len == 0)
 {
 return;
 }
 bool neg = false;
 if (len > 1)
 {
 if (newVal.Substring(0, 1) == "-")
 {
 newVal = newVal.Substring(1, len - 1);
 }
 }
}

```

```

 len = newVal.Length;
 neg = true;
 }
}
double val = 1.0;
string endChar = newVal.Substring(newVal.Length - 1);
switch (endChar)
{
 case "M":
 case "m":
 if (len > 1)
 {
 val = double.Parse(newVal.Substring(0, len - 1)) * 1000000.0;
 }
 else
 {
 val *= 1000000.0;
 }
 if (neg)
 {
 val = -val;
 }
 this.Text = FormatNumber(val);
 break;
 case "T":
 case "t":
 if (len > 1)
 {
 val = double.Parse(newVal.Substring(0, len - 1)) * 1000.0;
 }
 else
 {
 val *= 1000.0;
 }
 if (neg)
 {
 val = -val;
 }
 this.Text = FormatNumber(val);
 break;
}

base.OnTextChanged(e);
}
protected override void OnKeyPress(KeyPressEventArgs e)
{
 bool handled = false;
 switch (e.KeyChar)
 {
 case '-':
 if (this.Text.Length == 0)
 {
 break;
 }
 else if (this.SelectionStart == 0)
 {
 //negative being inserted first
 break;
 }
 else
 {

```

```

 handled = true;
 break;
 }
 case '1':
 case '2':
 case '3':
 case '4':
 case '5':
 case '6':
 case '7':
 case '8':
 case '9':
 case '0':
 case (char)Keys.Back:
 break;
 case 'M':
 case 'm':
 case 'T':
 case 't':
 case '%':
 //check last pos
 int l = this.Text.Length;
 int sT = this.SelectionStart;
 int sL = this.SelectionLength;
 if ((sT + sL) != l)
 {
 handled = true;
 }
 break;
 default:
 string thisChar = e.KeyChar.ToString();
 if (thisChar == decSep)
 {
 char[] txt = this.Text.ToCharArray();
 for (int i = 0; i < txt.Length; i++)
 {
 if (txt[i].ToString() == decSep)
 {
 handled = true;
 break;
 }
 }
 break;
 }
 else if (thisChar != thouSep)
 {
 handled = true;
 }
 break;
 }

 if (!handled)
 {
 base.OnKeyPress(e);
 }
 else
 {
 e.Handled = true;
 }
}

```

```

protected override void OnLeave(EventArgs e)
{
 string tmp = this.Text;
 if (tmp == "")
 {
 tmp = "0";
 numVal = NumberLostFocus(ref tmp);
 this.Text = tmp;
 }
 if (tmp.Substring(tmp.Length - 1) == "%")
 {
 tmp = tmp.Substring(0, tmp.Length - 1);
 numVal = 0.0;
 numVal = NumberLostFocus(ref tmp) / 100.0;
 double test = numVal * 100.0;
 this.Text = FormatNumber(test) + "%";
 }
 else if (perCent)
 {
 numVal = NumberLostFocus(ref tmp);
 double test = numVal * 100.0;
 this.Text = FormatNumber(test) + "%";
 }
 else
 {
 numVal = NumberLostFocus(ref tmp);
 this.Text = tmp;
 }
 base.OnLeave(e);
}

private string FormatNumber(double amount)
{
 NumberFormatInfo nF = new NumberFormatInfo();
 nF.NumberDecimalSeparator = decSep;
 nF.NumberGroupSeparator = thouSep;

 string decFormat;
 if (useThouSep)
 {
 decFormat = "#,##0";
 }
 else
 {
 decFormat = "#0";
 }
 if (decPlaces > 0)
 {
 decFormat += ".";
 for (int i = 0; i < decPlaces; i++)
 {
 decFormat += "0";
 }
 if (extraDecPlaces > 0)
 {
 for (int i = 0; i < extraDecPlaces; i++)
 {
 decFormat += "#";
 }
 }
 }
 else if (extraDecPlaces > 0)

```

```

 {
 decFormat += ".";
 for (int i = 0; i < extraDecPlaces; i++)
 {
 decFormat += "#";
 }
 }
 return (amount.ToString(decFormat, nF));
}
private double NumberLostFocus(ref string amountBox)
{
 if (amountBox.Substring(0, 1) == decSep)
 amountBox = "0" + amountBox;
 NumberFormatInfo nF = new NumberFormatInfo();
 nF.NumberDecimalSeparator = decSep;
 nF.NumberGroupSeparator = thouSep;

 try
 {
 double d = 0.0;
 int l = amountBox.Length;
 if (l > 0)
 {
 char[] c = amountBox.ToCharArray();
 char endChar = c[l - 1];

 switch (endChar)
 {
 case '0':
 case '1':
 case '2':
 case '3':
 case '4':
 case '5':
 case '6':
 case '7':
 case '8':
 case '9':
 {
 stripNonNumerics(ref amountBox);
 d = Double.Parse(amountBox, nF);
 break;
 }
 case 'm':
 case 'M':
 {
 if (amountBox.Length == 1)
 d = 1000000.0;
 else
 {
 string s = amountBox.Substring(0, l - 1);
 stripNonNumerics(ref s);
 d = Double.Parse(s, nF) * 1000000.0;
 }
 break;
 }
 case 't':
 case 'T':
 {

```

```

 if (amountBox.Length == 1)
 d = 1000.0;
 else
 {
 string s = amountBox.Substring(0, 1 - 1);
 stripNonNumerics(ref s);
 d = Double.Parse(s, nF) * 1000.0;
 }
 break;
 }
default:
 {
 //remove offending char
 string s = amountBox.Substring(0, 1 - 1);
 if (s.Length > 0)
 {
 stripNonNumerics(ref s);
 d = Double.Parse(s, nF);
 }
 else
 d = 0.0;
 break;
 }
}

}
amountBox = FormatNumber(d);
return (d);
}
catch (Exception e)
{
 //handle exception here;
 return 0.0;
}
}

private void stripNonNumerics(ref string amountBox)
{
 bool dSFound = false;
 char[] tmp = decSep.ToCharArray();
 char dS = tmp[0];
 string cleanNum = "";
 int l = amountBox.Length;
 if (l > 0)
 {
 char[] c = amountBox.ToCharArray();
 for (int i = 0; i < l; i++)
 {
 char b = c[i];
 switch (b)
 {
 case '0':
 case '1':
 case '2':
 case '3':
 case '4':
 case '5':
 case '6':
 case '7':
 case '8':
 case '9':
 cleanNum += b;
 break;
 }
 }
 }
}

```

```

 case '-':
 if (i == 0)
 cleanNum += b;
 break;
 default:
 if ((b == dS) && (!dSFound))
 {
 dSFound = true;
 cleanNum += b;
 }
 break;
 }
}
amountBox = cleanNum;
}
}

```

◦ Valuedouble10M10,000,000.00 ◦ ◦ ◦

<https://riptutorial.com/zh-TW/winforms/topic/6476/>



# 7:

WinForms。

## Examples

WinForms。

- -

```
Form1 aForm1Instance = new Form1();
aForm1Instance.Show();
```

- -

```
Form2 aForm2Instance = new Form2();
aForm2Instance.ShowDialog();
```

◦ ◦ ◦

MDI。

◦ Close

◦

```
theGlobalInstance.Close();
theGlobalInstance.Dispose();
theGlobalInstance = null;
```

Application.OpenForms。

Close

```
Form2 toClose = Application.OpenForms.OfType<Form2>().FirstOrDefault();
if(toClose != null)
{
 toClose.Close();
 toClose.Dispose();
}
```

ShowDialogDialogResult。 [DialogResult](#)。

DialogResultDialogResult.None。 WinForm.ShowDialog。

```
private cmdClose_Click(object sender, EventArgs e)
{
 this.DialogResult = DialogResult.Cancel;
}
```

ShowDialog() ShowDialog()using()

OpenFileDialog()

```
using (var form = new OpenFileDialog())
{
 DialogResult result = form.ShowDialog();
 if (result == DialogResult.OK)
 {
 MessageBox.Show("Selected file is: " + form.FileName);
 }
}
```

DialogResult() DialogResult() DialogResult()

OKDialogResult.OKShowDialog()DialogResult.OK()

<https://riptutorial.com/zh-TW/winforms/topic/8768/>

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