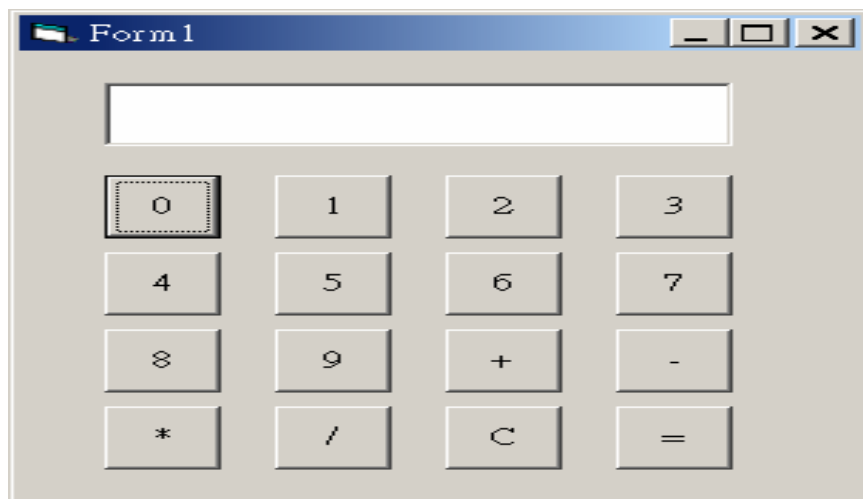


VB簡易型計算機

林偉川

命令按鈕陣列製作小算盤部分功能



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使用物件

- 16個命令按鈕 → 命令按鈕陣列(VB6)
- 16個命令按鈕 → 命令按鈕 (VB.NET)
- 1個文字方塊

- 限制
 - 運算式以=作為運算結束
 - 運算是中途有其他運算原則不理會Ex. 12+37-6

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注意事項

- 輸入資料收集時如何分辨為第一個或是第二個運算元(ff=0或ff=1) → 以運算子來區分
- 收集完運算子及運算元後如何計算?
(common())
- 如何將作出的值當作第一個運算元繼續運算?
- 若不用按鈕直接輸入運算式怎麼作?(t1_keyPress()來處理)

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注意事項

- STR(數值)→數值轉字串
- VAL(字串)→字串轉數值
- UBound(opp1)→傳回陣列儲存值中指標最大者
- IsNumeric(opp1(0)) → 判斷opp1(0)是否為正確數值
- Split(字串,分隔符號) → 例如： Split("12+23","+") → 會分出"12"與"23"分別放於一個陣列值

```
dim opp1() as string
opp1=split("12+23","+")
opp1(0)→"12" , opp1(1)→"23"
ubound(opp1) → 1 , IsNumeric(opp1(0)) → True
```

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開始設定(vb6)

```
Private Sub Form_Load()
op1 = 0: op2 = 0: op = "": ff = 0: C1(0).Caption = "0"
C1(1).Caption = "1": C1(2).Caption = "2"
C1(3).Caption = "3": C1(4).Caption = "4"
C1(5).Caption = "5":C1(6).Caption = "6"
C1(7).Caption = "7": C1(8).Caption = "8"
C1(9).Caption = "9": C1(10).Caption = "+"
C1(11).Caption = "-":C1(12).Caption = "*"
C1(13).Caption = "/" :C1(14).Caption = "C"
C1(15).Caption = "=" :T1.Text = ""
End Sub
```

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數字如何輸入於文字方塊(vb6)

```
If Index >= 0 And Index <= 9 Then ' number
  If ff = 1 Then T1.Text = "" ' 判斷第2個運算元
  If Index <> 0 Or T1.Text <> "" Then
    T1.Text = T1.Text & Index ' 去除前置0
  ff = 0
End If
End If
```

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運算子+-*/*要做何事? (vb6)

```
If Index >= 10 And Index <= 13 Then
  If op1 = 0 Then
    op1 = Val(T1.Text)
    ff = 1 ' 準備清除第一個運算元
  End If
  op = C1(Index).Caption
End If
```

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運算子=要做何事? (vb6)

```
If Index = 15 Then
  op2 = Val(T1.Text)
  common op1, op, op2
  op1 = Val(T1.Text)
  ff = 1
  op2 = 0
End If
```

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Common要作何事? (vb6)

```
Dim op1, op2, op, ff
Public Sub common(op1, op, op2)
  Select Case op
    Case "+": T1.Text = Str(op1 + op2)
    Case "-": T1.Text = Str(op1 - op2)
    Case "*": T1.Text = Str(op1 * op2)
    Case "/": T1.Text = Str(op1 / op2)
  End Select
End Sub
```

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開始設定(VB.NET)

```
Dim op1, op, op2, ff
Private Sub Form1_Load(ByVal sender As
    System.Object, ByVal e As
    System.EventArgs) Handles
    MyBase.Load
    op1 = 0 : op2 = 0 : op = "" : ff = 0
End Sub
```

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數字如何輸入於文字方塊(VB.NET)

```
Private Sub BT_click(ByVal sender As System.Object,
    ByVal e As System.EventArgs) Handles B1.Click,
    B3.Click, B4.Click, B5.Click, B6.Click, B7.Click,
    B8.Click, B9.Click, B10.Click, B2.Click
    Dim bt As Button
    bt = CType(sender, Button)
    If ff = 1 Then op1 = Val(T1.Text) : T1.Text = "0"
    Select Case bt.Name
        Case "B1" : T1.Text &= "0"
        Case "B2" : T1.Text &= "1"
        Case "B3" : T1.Text &= "2"
        Case "B4" : T1.Text &= "3"
```

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數字如何輸入於文字方塊(VB.NET)

```
Case "B5" : T1.Text &= "4"  
Case "B6" : T1.Text &= "5"  
Case "B7" : T1.Text &= "6"  
Case "B8" : T1.Text &= "7"  
Case "B9" : T1.Text &= "8"  
Case "B10" : T1.Text &= "9"  
End Select  
T1.Text = Str(Val(T1.Text)) : ff = 0  
End Sub
```

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運算子+-*/*要做何事? (VB.NET)

```
Private Sub BT1_click(ByVal sender As  
System.Object, ByVal e As System.EventArgs)  
Handles B11.Click, B12.Click, B13.Click,  
B14.Click, B15.Click, B16.Click  
Dim bt As Button  
bt = CType(sender, Button)  
Select Case bt.Name  
Case "B11" : op = "+" : ff = 1  
Case "B12" : op = "-" : ff = 1
```

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運算子+*/要做何事? (VB.NET)

```
Case "B13" : op = "*" : ff = 1
Case "B14" : op = "/" : ff = 1
Case "B15" : op = "" : ff = 0 : op1 = 0 : op2
= 0 : T1.Text = "0" 'C
Case "B16" : op2 = Val(T1.Text) :
common(op1, op, op2) ' =
End Select
End Sub
```

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Common 要作何事? (VB.NET)

```
Sub common(ByVal aa, ByVal bb, ByVal cc)
Select Case bb
Case "+" : T1.Text = Str(aa + cc)
Case "-" : T1.Text = Str(aa - cc)
Case "*" : T1.Text = Str(aa * cc)
Case "/" : T1.Text = Str(aa / cc)
End Select
End Sub
```

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若不用按鈕直接輸入運算式要做的事

```
Private Sub T1_KeyPress(ByVal sender As Object, ByVal e As
System.Windows.Forms.KeyPressEventArgs) Handles
T1.KeyPress
    If e.KeyChar = Chr(13) Then
        Dim opp1(2) As String
        Dim i As Integer
        opp1 = Split(T1.Text, "+")
        If UBound(opp1) = 1 Then
            If IsNumeric(opp1(0)) And IsNumeric(opp1(1)) Then
                op1 = Val(opp1(0)) : op2 = Val(opp1(1)) : op = "+"
                common(op1, op, op2)
            End If
        End If
    End If
```

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若不用按鈕直接輸入運算式要做的事

```
    opp1 = Split(T1.Text, "-")
    If UBound(opp1) = 1 Then
        If IsNumeric(opp1(0)) And IsNumeric(opp1(1)) Then
            op1 = Val(opp1(0)) : op2 = Val(opp1(1)) : op = "-"
            common(op1, op, op2)
        End If
    End If
    opp1 = Split(T1.Text, "*")
    If UBound(opp1) = 1 Then
        If IsNumeric(opp1(0)) And IsNumeric(opp1(1)) Then
            op1 = Val(opp1(0)) : op2 = Val(opp1(1)) : op = "*"
            common(op1, op, op2)
        End If
    End If
```

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若不用按鈕直接輸入運算式要做的事

```
    opp1 = Split(T1.Text, "/")
    If UBound(opp1) = 1 Then
        If IsNumeric(opp1(0)) And IsNumeric(opp1(1)) Then
            op1 = Val(opp1(0)) : op2 = opp1(1) : op = "/" : common(op1, op, op2)
        End If
    End If
End If
End Sub
```