

```
'CSE 1530 Winter 2006 Section M
',
' Solution to Exercise 5-5
' Wednesday, March 1 2006
',
' By: Bill Kapralos
',
' Note that the purpose of this program is to allow you to practise with
' strings and loops - it may not always produce gramatically correct results!
```

```
Option Explicit
```

```
' Definitions of any constants used throughout the code
```

```
Const C_UPPER As String = "C"
```

```
Const C_LOWER As String = "c"
```

```
Const FIND_STR As String = "ei"
```

```
Const REPLACE_STR As String = "ie"
```

```
' Exit button
```

```
Private Sub btnExit_Click()
```

```
    Unload Form1
```

```
    End
```

```
End Sub
```

```
' Clear button - reset the input and output textboxes
```

```
Private Sub btnClear_Click()
```

```
    txtInput.Text = vbNullString
```

```
    txtOutput.Text = vbNullString
```

```
End Sub
```

```
' "Check and Correct" button - perform all the work here
```

```
Private Sub btnCheck_Click()
```

```
    ' Local variable declarations
```

```
    Dim firstHalf As String
```

```
    Dim secondHalf As String
```

```
    Dim position As Integer
```

```
    Dim char As String
```

```
    Dim inputStr As String
```

```
    inputStr = txtInput.Text
```

```
    position = 1
```

```
    Do While (InStr(position, txtInput, FIND_STR) > 0)
```

```
        ' Obtain the position of the occurrence of "ei" (position of "e")
```

```
        position = InStr(position, inputStr, FIND_STR)
```

```
        ' Need to check for the case when "ei" are the first two characters of the
        ' input string. If so, then ignore this since we cannot extract the
        ' previous character since it does not exist!
```

```
        If (position <> 1) Then
```

```
            ' Obtain the character one position before the occurrence of "ei"
```

```
            char = Mid(inputStr, position - 1, 1)
```

```
            ' Check if character is an upper or lower case "c"
```

```
            If ((char <> C_LOWER) And (char <> C_UPPER)) Then
```

```
' Extract portion of string before the occurrence of "ei"  
' e.g., from beginning of string to the occurrence of "c" before "ei"  
firstHalf = Mid(inputStr, 1, position - 1)
```

```
' Replace the "ei" with "ie" and extract everything to the left  
' of "ie" including "ie" itself  
secondHalf = Replace(inputStr, FIND_STR, REPLACE_STR, position, 1)
```

```
'catenate the two "halves"  
inputStr = firstHalf + secondHalf
```

```
End If
```

```
End If
```

```
' Check for the next occurrence of "ei" starting at the next position  
position = position + 1
```

```
Loop
```

```
'Display corrected string  
txtOutput.Text = inputStr
```

```
End Sub
```