

# AND

In the previous lesson we had to check two conditions in order to allow a user to login.

To check both these conditions we used a nested if statement.

```
If (userName = userNameAttempt) Then
    If (password = passwordAttempt) Then
        MsgBox("Correct Login")
    Else
        MsgBox("Correct UserName Wrong Password")
    End If

Else
    MsgBox("Wrong Login")
End If
```

# Two Conditions

It is possible to code an if statement that occurs only when both conditions are true. To do this we use the AND keyword.

```
Public Class Form1
    Dim userName As String = "homer"
    Dim password As String = "secret"
    Dim userAttempt As String
    Dim passwordAttempt As String

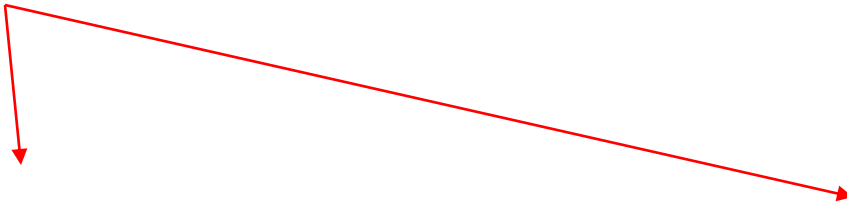

---


    Private Sub Form1_Load(ByVal sender As System.Object, ByVal e As System.EventArgs)
        userAttempt = InputBox("Enter UserName")
        passwordAttempt = InputBox("Enter Password")

        If (userAttempt = userName) And (passwordAttempt = password) Then
            MsgBox("Welcome " & userName)
        Else
            MsgBox("Go Away " & userAttempt)
        End If
    End Sub
End Class
```

## Condition 1 **And** Condition 2

Both conditions must evaluate as true for if statement to run



```
If (userAttempt = userName) And (passwordAttempt = password) Then
    MsgBox("Welcome " & userName)
Else
    MsgBox("Go Away " & userAttempt)
End If
```

Modify this program so that the username is case insensitive, but the password remain case sensitive.

# Password Characters

Modifiers	<b>Friend</b>
Multiline	False
PasswordChar	*
ReadOnly	False
RightToLeft	No
ScrollBars	None
ShortcutsEnabled	True
Size	<b>100, 22</b>
TabIndex	<b>1</b>

By setting the PasswordChar property of txtPassword to an asterix, the text shows up as asterix(plural?) when the user types in a password.

Form1

Username: homer

Password: \*\*\*\*\*

Login

[-] Module Module1

```
Dim strOne As String
```

```
Dim strTwo As String
```

```
Dim sOne As String
```

```
Dim sTwo As String
```

[-] Sub Main()

```
    strOne = "Santa"
```

```
    strTwo = "Claus"
```

```
    sOne = InputBox("Enter first String")
```

```
    sTwo = InputBox("Enter first String")
```

[-] If strOne.Equals(sOne) And strTwo.Equals(sTwo) Then

```
    MsgBox("Both pairs of Strings match.")
```

```
Else
```

```
    MsgBox("One or both pairs of Strings do not match.")
```

```
End If
```

```
End Sub
```

```
End Module
```

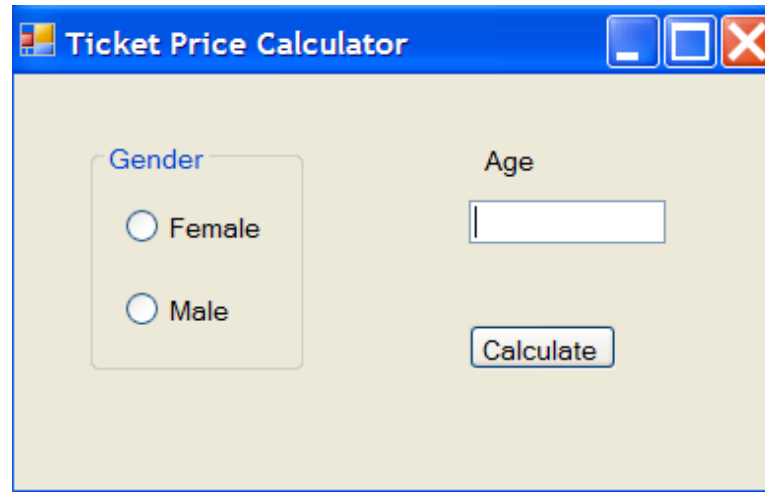
# Ladies' Night

The Peterborough Petes are playing a home game this Thursday. As a promotion, all females regardless of age will receive a 25% discount on their regular ticket price.

Adult prices are \$14.00

Kids under 12 years of age pay \$8.00

Write a program which calculates the cost of a ticket. Use interface shown here.



The screenshot shows a window titled "Ticket Price Calculator". The window contains two input sections: "Gender" with radio buttons for "Female" and "Male", and "Age" with a text input field. A "Calculate" button is located below the "Age" input field.

## Finish the code...

```
Public Class Form1
    Dim gender As String
    Dim age As Integer
    Dim cost As Decimal


---


    Private Sub btnCalculate_Click(ByVal sender As System
        If (radFemale.Checked = True) Then
            gender = "f"
        Else
            gender = "m"
        End If
        age = Val(txtAge.Text)

        If (gender = "f") And (age >= 12) Then
            cost = 14 - (14 * 0.25)
        ElseIf (gender = "f") And (age < 12) Then
            cost = 8 - (8 * 0.25)

            'continue.....

        End If
    End Sub
End Class
```

## Finished Code

```
Private Sub btnCalculate_Click(ByVal sender As
    If (radFemale.Checked = True) Then
        gender = "f"
    Else
        gender = "m"
    End If
    age = Val(txtAge.Text)

    If (gender = "f") And (age >= 12) Then
        cost = 14 - (14 * 0.25)
    ElseIf (gender = "f") And (age < 12) Then
        cost = 8 - (8 * 0.25)
    ElseIf (gender = "m") And (age >= 12) Then
        cost = 14
    Else
        cost = 8
    End If
    MsgBox("$" & cost)
End Sub
```



# The OR Operator

The Or operator looks at two or more conditions and will evaluate as true as long as at least one condition is true.

For example

```
If(snowstorm = true) or (bomb threat = true) Then  
    School will be cancelled
```

Only one of these conditions needs to be true in order for the code below(a day off school) to occur.

## OR Example

The Galaxy Theater charges 10.00 for adult tickets.

However it has a special rate of \$7.50 for customers who 14 and under, and for customers that are 65 and over.

Create a program that prompts the user to enter their age in an InputBox and then displays the ticket cost in a Message box.

The code should be written in the Form Load section of the program.

## The Code

```
Private Sub Form1_Load(ByVal sender As System.Object,  
    Dim age As Integer  
    Dim ticketPrice As Decimal  
    age = Val(InputBox("Enter Age"))  
    If (age <= 14) Or (age >= 65) Then  
        ticketPrice = 7.5  
    Else  
        ticketPrice = 10.0  
    End If  
  
    MessageBox.Show("Price: $" & ticketPrice)  
End Sub
```

# Truth Table

## AND Operator

A	B	Result
True	True	True
False	True	False
True	False	False
False	False	False

## OR Operator

A	B	Result
True	True	True
False	True	True
True	False	True
False	False	False

# The NOT Operator

Owen and Patrick have be barred from the computer lab.  
Create a program that will welcome everyone else except for these two characters when prompted for their name.