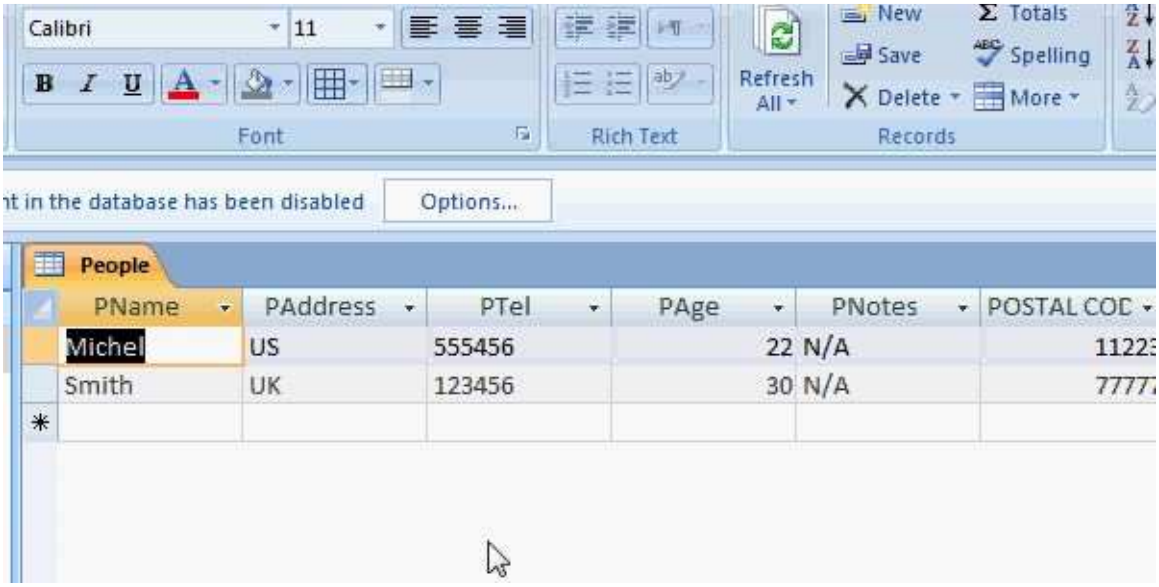
Database Tutorials

Hello everyone… welcome to database tutorials. These are going to be very basic tutorials about using the database to create simple applications, hope you enjoy it. If you have any notes about it, please send them to **notes@mka-soft.com.** Finally if you find these tutorials are useful, it would be nice from you to send a small donation via PayPal to **donation@mka-soft.com**.

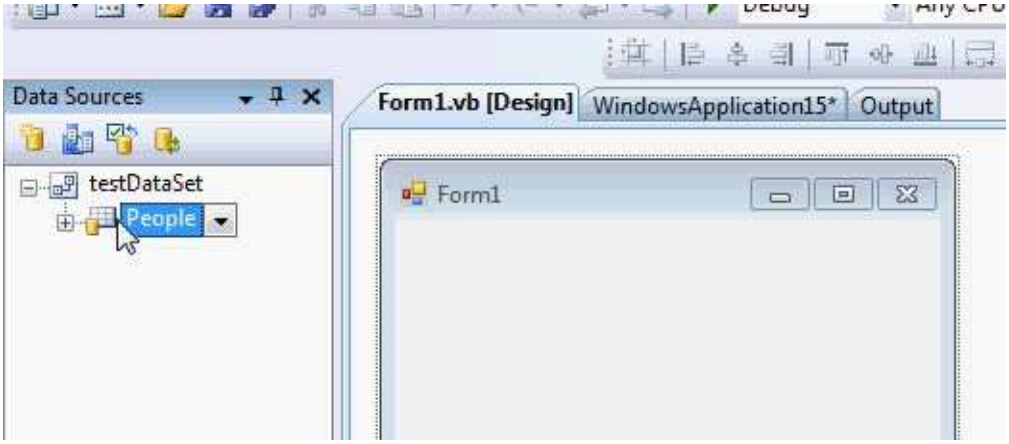
The work with this tutorial started on 2010-SEPTEMBER-30.

Validation

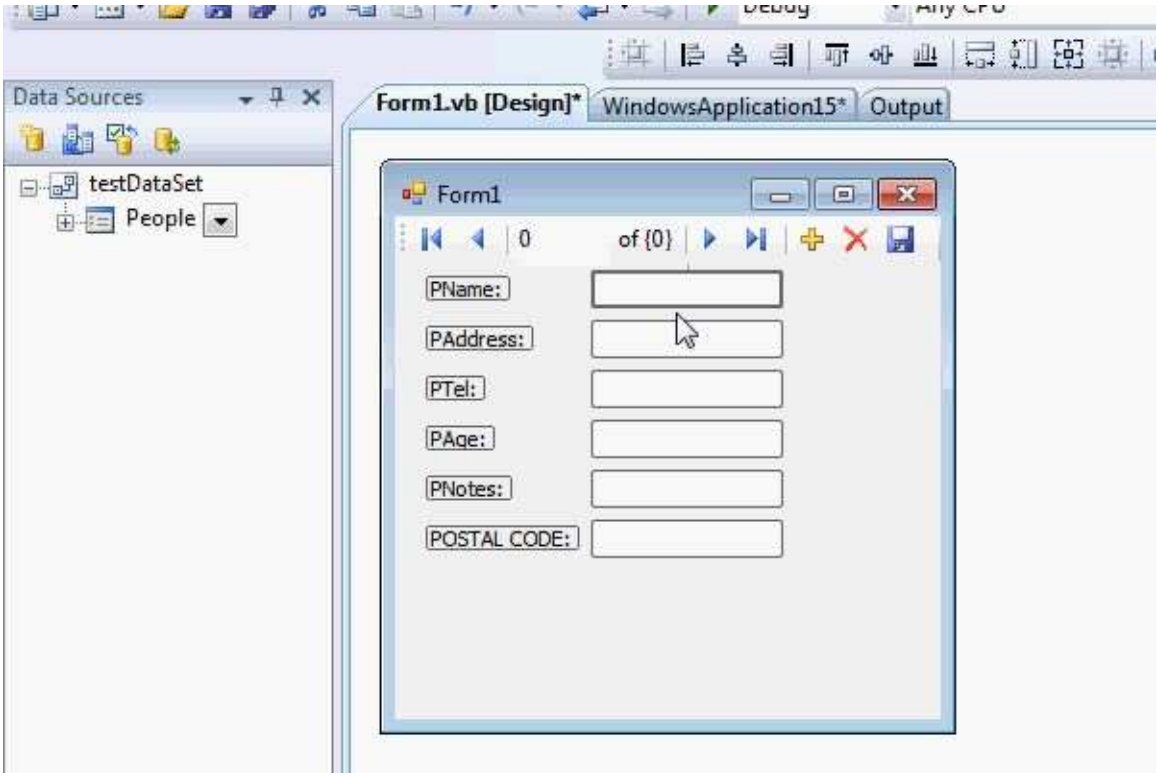
Today's tutorial is about Validation. The validation processes is needed to make sure that the data entered by the user are correct. For the sake of example, consider the following table:



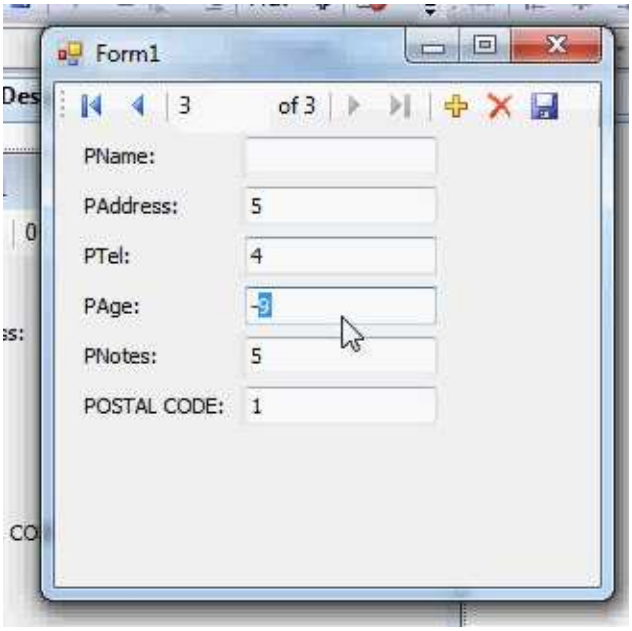
Now create a datasource in your project



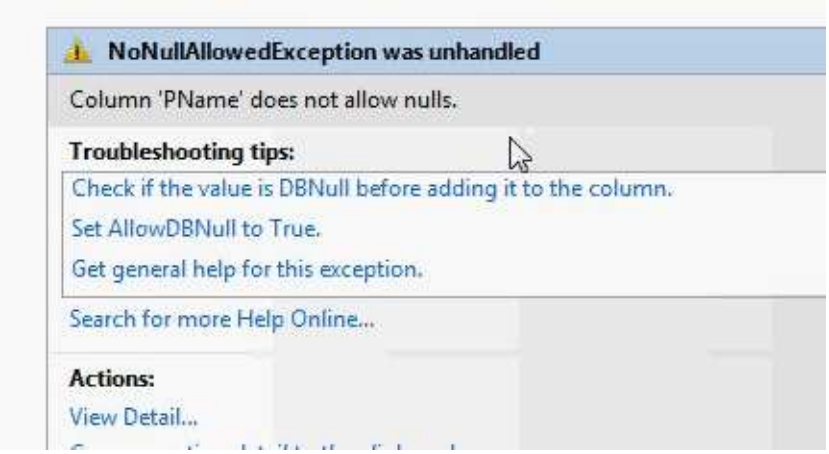
Drag and drop the table on the form as Details.



If you try to enter a new record, you can enter any wrong data.



If you try to save the data, you will get an error similar to this:



So now let us add validation to the controls. Double click the textbox control that stores the name of the person, and write the following in the validating event:

```
    Private Sub PNameTextBox_Validating(ByVal sender As Object, ByVal e As
System.ComponentModel.CancelEventArgs) Handles PNameTextBox.Validating

        ' check if the name is not null
        If PNameTextBox.Text = "" Then
            e.Cancel = True
            Exit Sub
        End If

        ' Check the name is no more than 10 chars
        If PNameTextBox.Text.Length > 10 Then
            e.Cancel = True
            Exit Sub
        End If

    End Sub
```

The validating event is triggered whenever the focus of the control is transferred to another one. In this event, you should check the input, if it is not correct, then set the cancel parameter to true to signal to the application that the input is wrong, and the user should correct it.

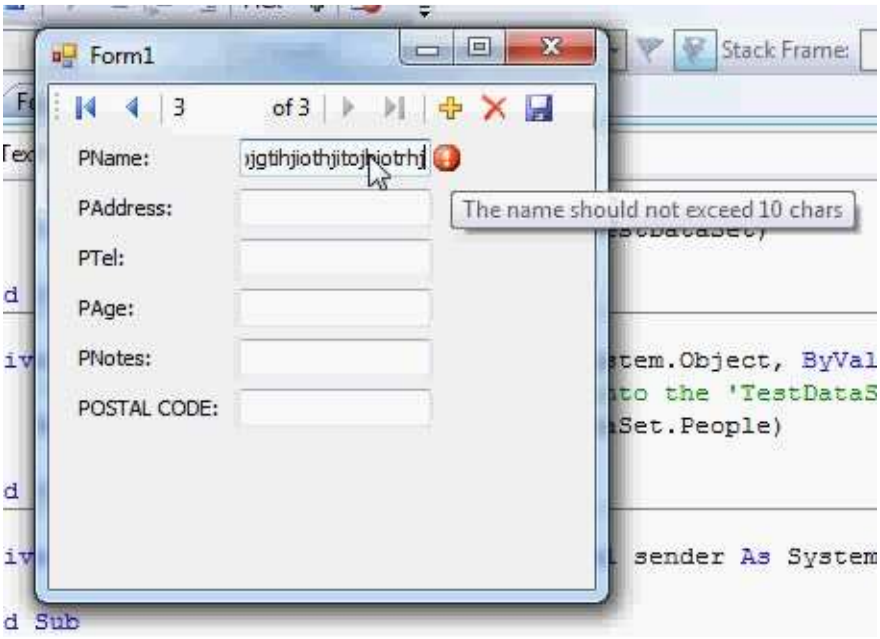
Now run the application, add a new record, and try not to enter data into the name textbox, you will find that you are unable to leave the textbox. Try to write a name more than 10 character in length, and again you will not be able to leave the control. Finally make the length of the name equal to 10 chars or less. You will find you are able to navigate into another control.

Now, the problem with this code is that the user can't figure out what is the problem with the data entered, so you need to display a message. To do that add an ErrorProvider control into the form, and modify the code to be similar to the following:

```
    Private Sub PNameTextBox_Validating(ByVal sender As Object, ByVal e As
System.ComponentModel.CancelEventArgs) Handles PNameTextBox.Validating

        ' check if the name is not null
        If PNameTextBox.Text = "" Then
            e.Cancel = True
            ErrorProvider1.SetError(PNameTextBox, "A name should be entered")
```

```
            Exit Sub
        End If

        ' Check the name is no more than 10 chars
        If PNameTextBox.Text.Length > 10 Then
            e.Cancel = True
            ErrorProvider1.SetError(PNameTextBox, "The name should not exceed 10 chars")
            Exit Sub
        End If

        ' no error, hide the error message
        ErrorProvider1.SetError(PNameTextBox, "")
    End Sub
```

You should be able to see an error message now whenever you enter invalid data



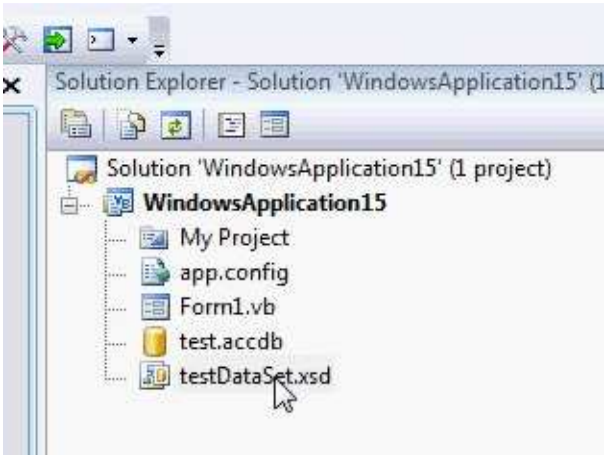
Similarly, add validation to the other controls

```
    Private Sub PAddressTextBox_Validating(ByVal sender As Object, ByVal e As
System.ComponentModel.CancelEventArgs) Handles PAddressTextBox.Validating
        ' the address can't be null
        If PAddressTextBox.Text = "" Then
            e.Cancel = True
            ErrorProvider1.SetError(PAddressTextBox, "You should provide an address")
            Exit Sub
        End If
        ErrorProvider1.SetError(PAddressTextBox, "")
    End Sub

    Private Sub PAgeTextBox_Validating(ByVal sender As Object, ByVal e As
System.ComponentModel.CancelEventArgs) Handles PAgeTextBox.Validating
        ' the age is +ve integer
        Try
            Dim I As Integer
            I = Integer.Parse(PAgeTextBox.Text)
            If I <= 0 Then
                Err.Raise(1)
            End If
        Catch ex As Exception
            e.Cancel = True
            ErrorProvider1.SetError(PAgeTextBox, "The age is a +ve integer value")
            Exit Sub
        End Try
```

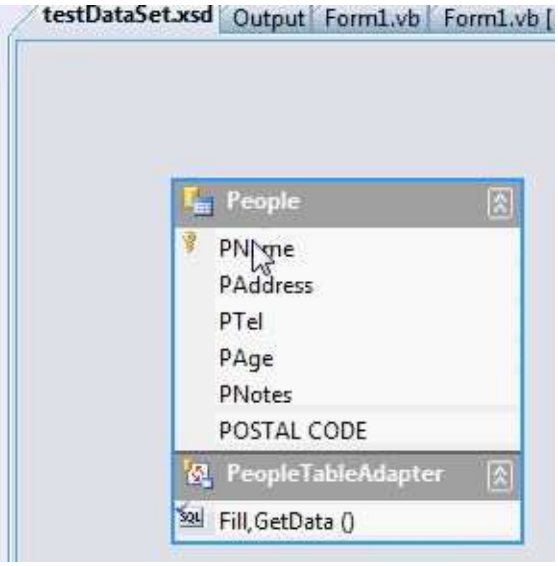
```
        ErrorProvider1.SetError(PAgeTextBox, "")
    End Sub

    Private Sub POSTAL_CODETextBox_Validating(ByVal sender As Object, ByVal e As
System.ComponentModel.CancelEventArgs) Handles POSTAL_CODETextBox.Validating
        ' the postal code is 5 digits
        Try
            If POSTAL_CODETextBox.Text.Length <> 5 Then
                Err.Raise(1)
            End If
            Dim I As Integer
            I = Integer.Parse(POSTAL_CODETextBox.Text)
            If I < 0 Then
                Err.Raise(1)
            End If
        Catch ex As Exception
            e.Cancel = True
            ErrorProvider1.SetError(POSTAL_CODETextBox, "The postal code is 5 digits")
            Exit Sub
        End Try
        ErrorProvider1.SetError(POSTAL_CODETextBox, "")

    End Sub
```

Now as you see, the validation for any field entered is done by writing the code into the Validating event of the control.

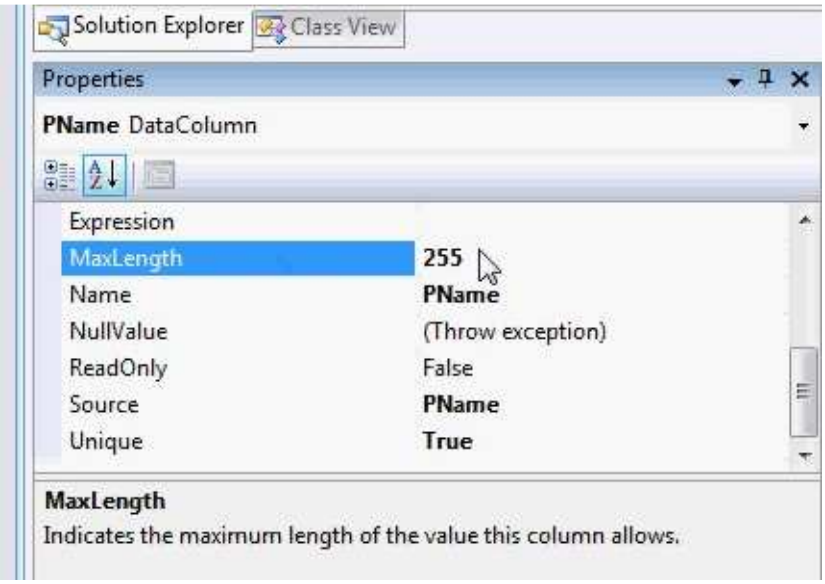
Finally, another method for validating data is to use the properties of the dataset.



When you double click to dataset, you get into the designer.



Click on any field, and check its properties



In the properties window you can specify a number of properties such as the length of the field, datatype, null values, and unique constraints.

So this will be all for today. If you have questions or notes, send them to notes@mka-soft.com.

Thank you.

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