

The screenshot displays the Visual Studio 2012 IDE with the following components:

- Code Editor:** Shows the code for `frmInventory` inheriting from `System.Windows.Forms.Form`. The code includes:
 - `btnClear_Click`: Clears `txtItemNo`, `txtItemName`, `txtOnHand`, and `txtOnOrder`.
 - `btnEnd_Click`: Writes a separator line (99999) and closes the file.
 - `btnWrite_Click`: Calls the `Write` method.
 - `Write` method: Converts text inputs to integers and writes a record to the file.
 - `frmInventory_Load`: Opens the file `inven.txt` in append mode.
- Annotation:** A blue text box says: "First I am writing some records onto the file - then we will look at the code."
- Application Window:** A window titled "Inventory" is shown with the following data:

Item Number:	111		
Item Name:	Shovel		
On Hand:	12	On Order:	18

Buttons for "Write", "Clear", and "End" are visible at the bottom.
- Taskbar:** Shows the system tray with the date and time: 12:41 PM, 2/10/2015.

The screenshot displays the Microsoft Visual Studio Express 2012 IDE. The main window shows the source code for a class named `frmInvenWrite` which inherits from `System.Windows.Forms.Form`. The code includes several event handlers for buttons: `btnClear_Click`, `btnEnd_Click`, and `btnWrite_Click`. The `Write()` method is responsible for writing data to a file named "Inven.txt".

```
Public Class frmInvenWrite
    Inherits System.Windows.Forms.Form

    Windows Form Designer generated code

    Private Sub btnClear_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnClear.Click
        txtItemNo.Clear()
        txtItemName.Clear()
        txtOnHand.Clear()
        txtOnOrder.Clear()
    End Sub

    Private Sub btnEnd_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnEnd.Click
        WriteLine(1, 99999, "", 0, 0)
        FileClose(1)
    End Sub

    Private Sub btnWrite_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnWrite.Click
        Write()
    End Sub

    Sub Write()
        Dim wkItemNo As Integer, wkItemName As String
        Dim wkOnHand As Integer, wkOnOrder As Integer
        wkItemNo = CInt(txtItemNo.Text)
        wkItemName = txtItemName.Text
        wkOnHand = CInt(txtOnHand.Text)
        wkOnOrder = CInt(txtOnOrder.Text)
        WriteLine(1, wkItemNo, wkItemName, wkOnHand, wkOnOrder)
    End Sub

    Private Sub frmInvenWrite_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
        FileOpen(1, "Inven", OpenMode.Output)
    End Sub
End Class
```

Overlaid on the code editor is a window titled "Inventory". It contains four text input fields: "Item Number" (value: 122), "Item Name" (value: sand), "On Hand" (value: 1), and "On Order" (value: 100). Below the fields are three buttons: "Write", "Clear", and "End".

The Windows taskbar at the bottom shows the system tray with the date and time: 12:42 PM, 2/10/2015.

The screenshot displays the Microsoft Visual Studio Express 2012 IDE. The main window shows the source code for a class named `frmInventory` which inherits from `System.Windows.Forms.Form`. The code includes several event handlers for buttons: `btnClear`, `btnEnd`, and `btnWrite`. The `btnWrite` handler calls a `Write` method that takes item number, name, on-hand quantity, and on-order quantity as input and writes them to a file named `inven.txt`. The `frmInventory_Load` event handler opens the file for writing.

```
Public Class frmInventory
    Inherits System.Windows.Forms.Form

    'Windows Form Designer generated code
    Private Sub btnClear_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnClear.Click
        txtItemNo.Clear()
        txtItemName.Clear()
        txtOnHand.Clear()
        txtOnOrder.Clear()
    End Sub

    Private Sub btnEnd_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnEnd.Click
        WriteLine(1, 99999, " ", 0, 0)
        FileClose(1)
    End Sub

    Private Sub btnWrite_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnWrite.Click
        Write()
    End Sub

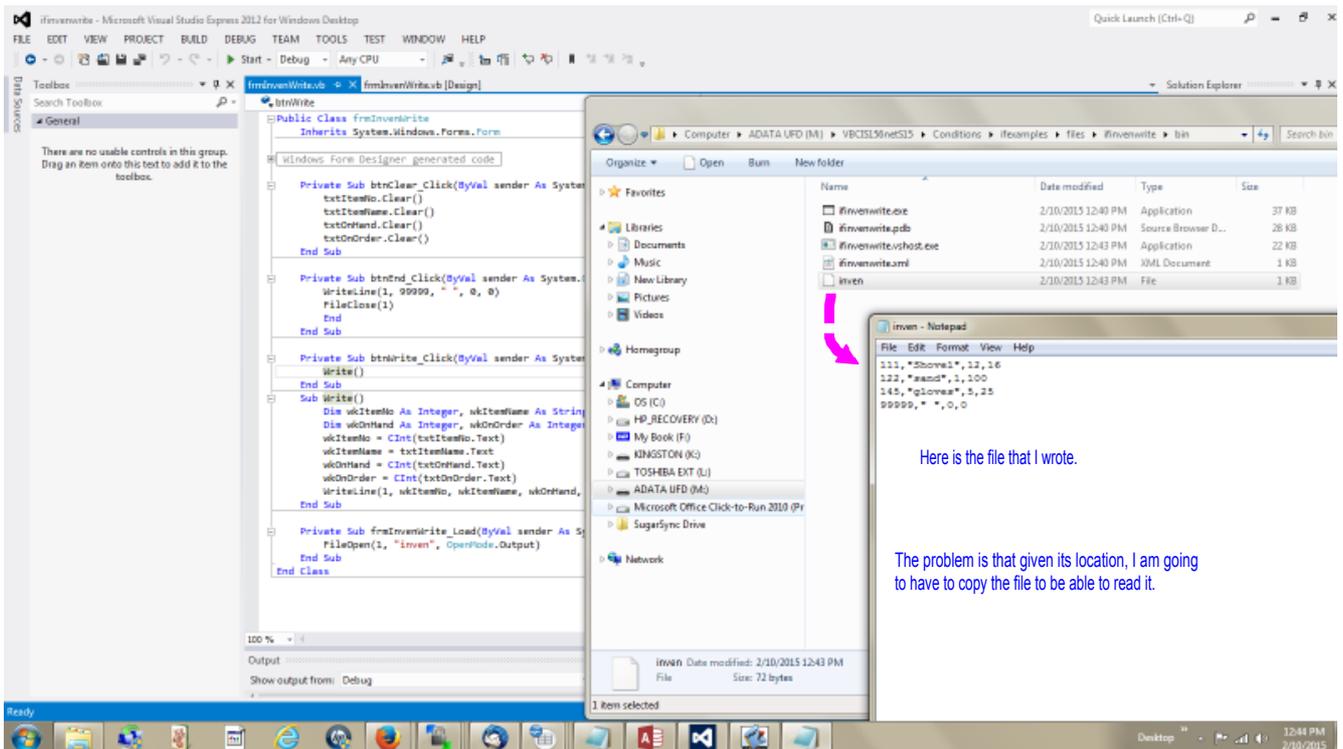
    Sub Write()
        Dim wkItemNo As Integer, wkItemName As String
        Dim wkOnHand As Integer, wkOnOrder As Integer
        wkItemNo = CInt(txtItemNo.Text)
        wkItemName = txtItemName.Text
        wkOnHand = CInt(txtOnHand.Text)
        wkOnOrder = CInt(txtOnOrder.Text)
        WriteLine(1, wkItemNo, wkItemName, wkOnHand, wkOnOrder)
    End Sub

    Private Sub frmInventory_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
        FileOpen(1, "inven", OpenMode.Output)
    End Sub
End Class
```

Overlaid on the code is a window titled "Inventory" with the following fields and buttons:

- Item Number:
- Item Name:
- On Hand:
- On Order:
- Buttons: Write, Clear, End

The Windows taskbar at the bottom shows the system tray with the date and time: 2/10/2015, 12:43 PM.



Here is the file that I wrote.

The problem is that given its location, I am going to have to copy the file to be able to read it.

Before closing I write an EOF record with all 9 as the id and space or zero in the other fields.

```
Public Class frmInvenWrite
    Inherits System.Windows.Forms.Form

    Windows Form Designer generated code

    Private Sub btnClear_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnClear.Click
        txtItemNo.Clear()
        txtItemName.Clear()
        txtOnHand.Clear()
        txtOnOrder.Clear()
    End Sub

    Private Sub btnEnd_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnEnd.Click
        WriteLine(1, 99999, " ", 0, 0)
        FileClose(1)
    End Sub

    Private Sub btnWrite_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnWrite.Click
        Write()
    End Sub

    Sub Write()
        Dim wkItemNo As Integer, wkItemName As String
        Dim wkOnHand As Integer, wkOnOrder As Integer
        wkItemNo = CInt(txtItemNo.Text)
        wkItemName = txtItemName.Text
        wkOnHand = CInt(txtOnHand.Text)
        wkOnOrder = CInt(txtOnOrder.Text)
        WriteLine(1, wkItemNo, wkItemName, wkOnHand, wkOnOrder)
    End Sub

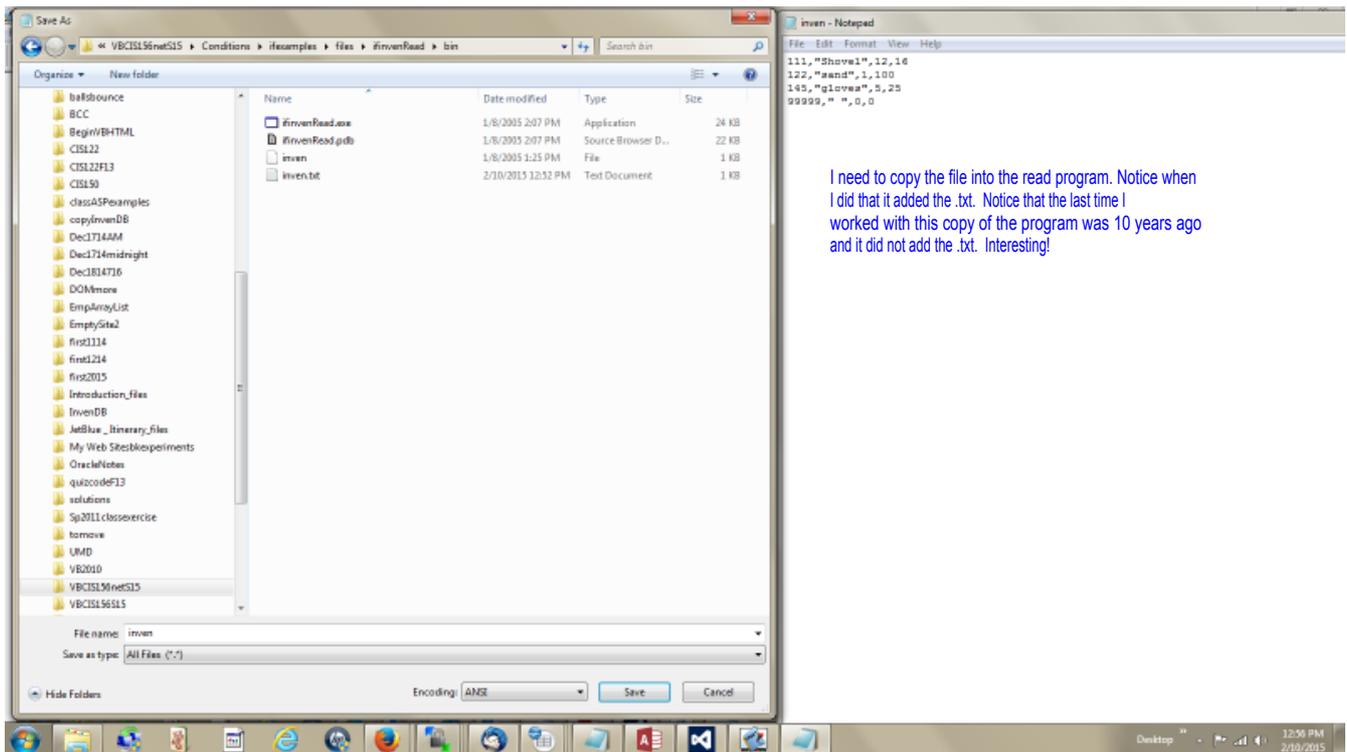
    Private Sub frmInvenWrite_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
        FileOpen(1, "inven", OpenMode.Output)
    End Sub
End Class
```

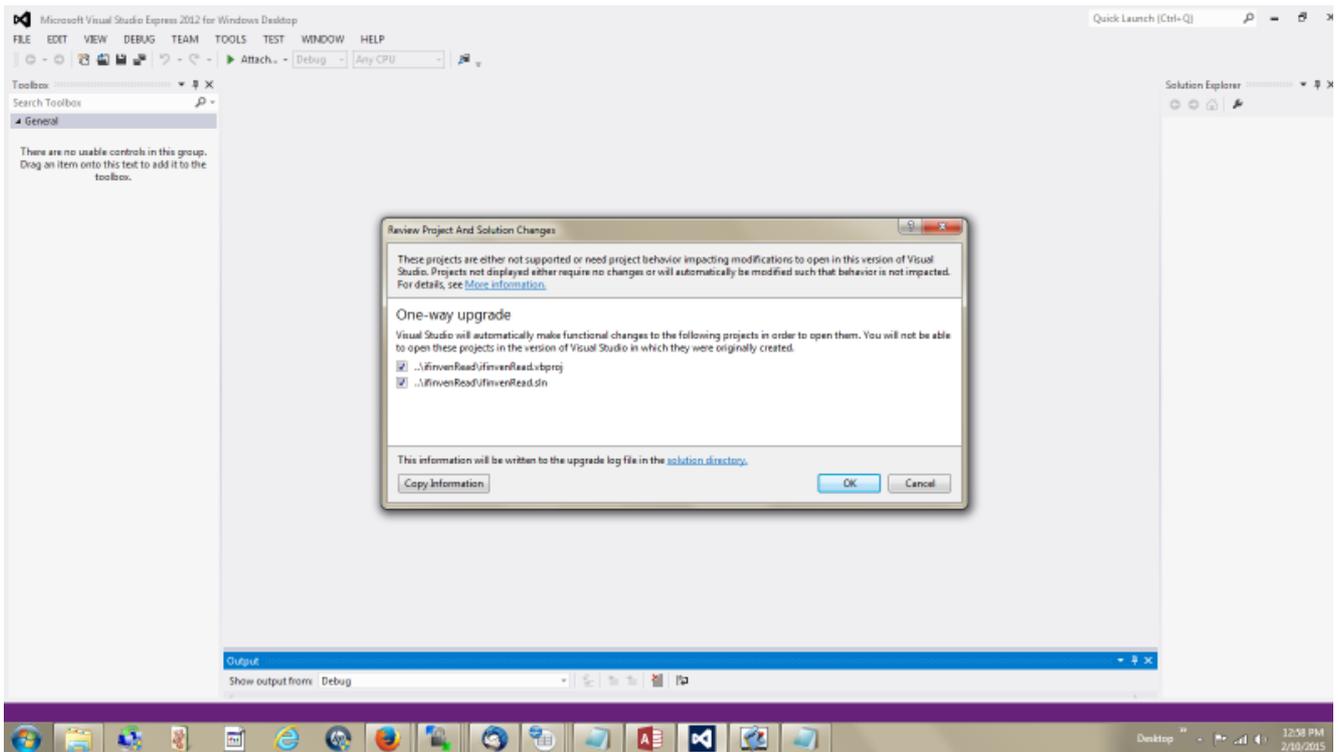
The file was opened in output mode which meant I could write on it. The 1 is because it was the first file used in this program. The name is inven could have used inven.txt.

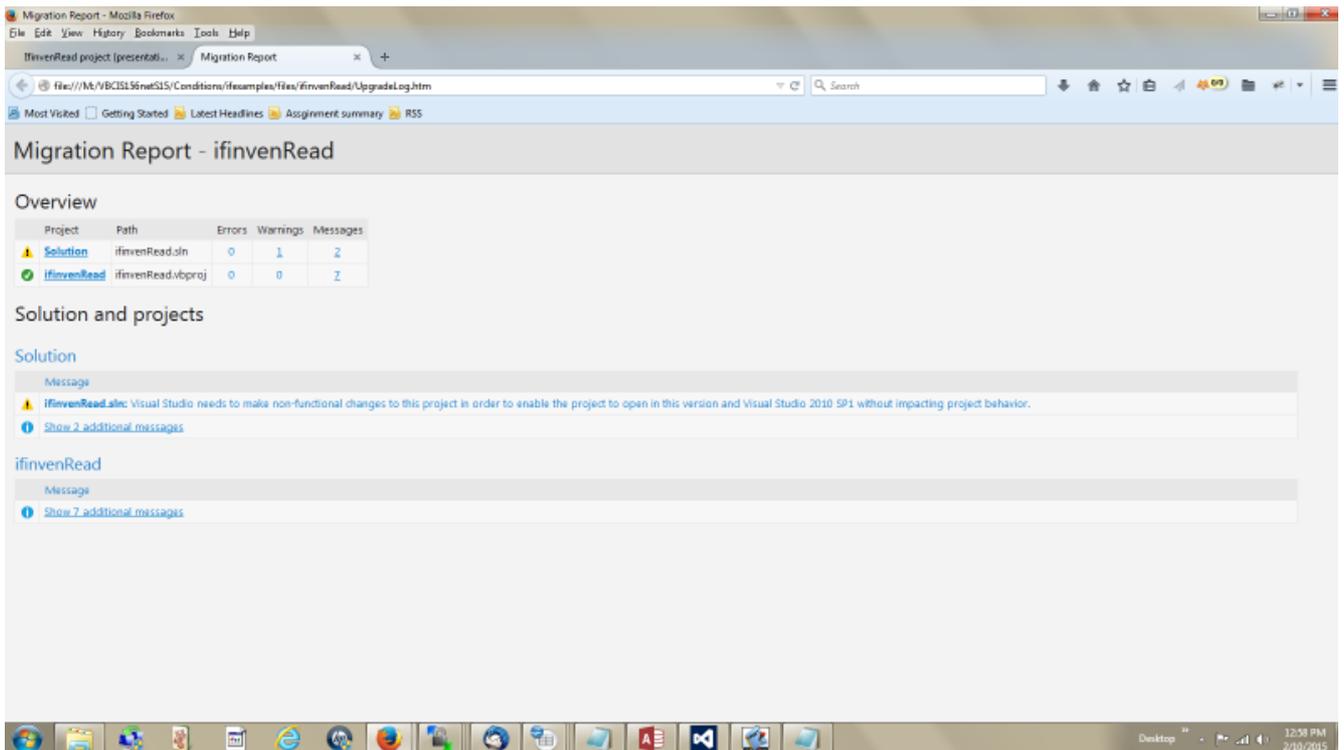
When I click on write it calls the Write() function that I wrote. In that function I move the text to work areas in memory and then I write out the line with the fields that I want listed in the order I want them. Again, the 1 stands for the first file.

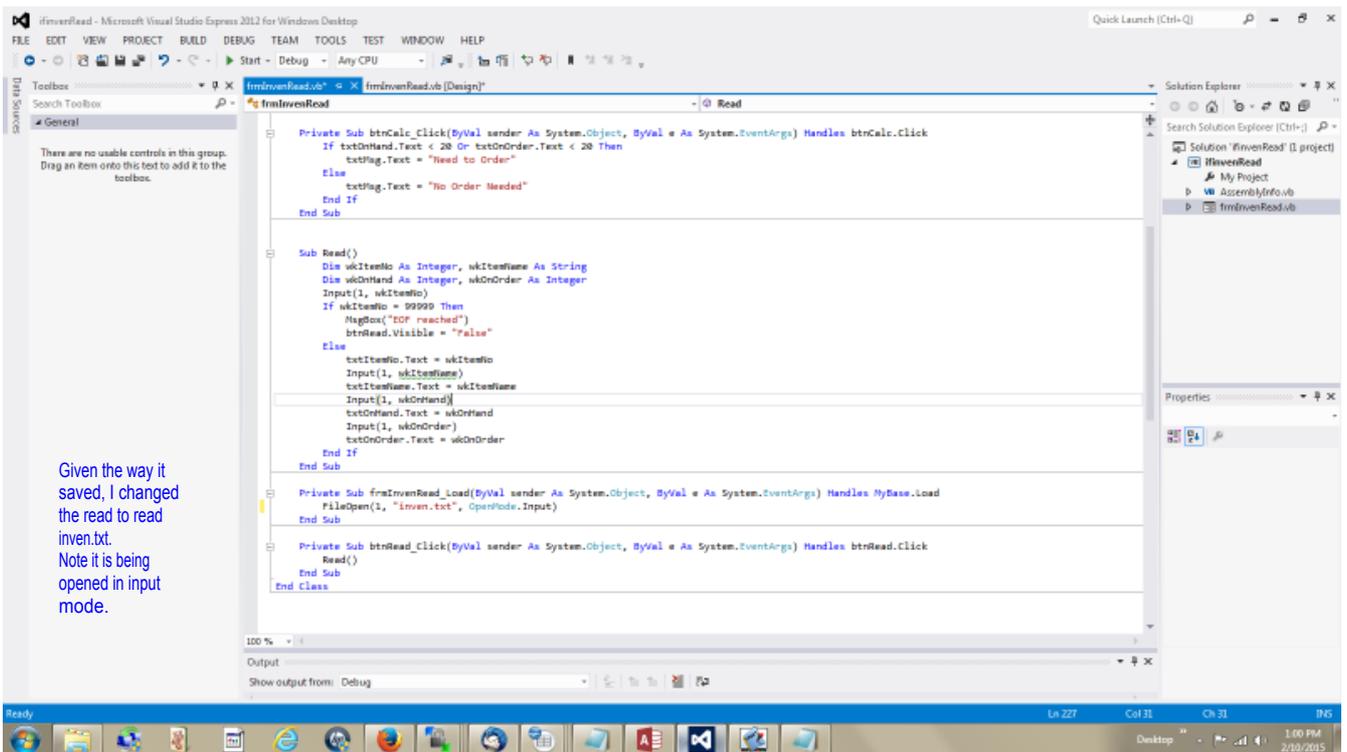
inven - Notepad

```
File Edit Format View Help
111,"Shovel",12,16
122,"sand",1,100
145,"Gloves",5,25
99999," ",0,0
```



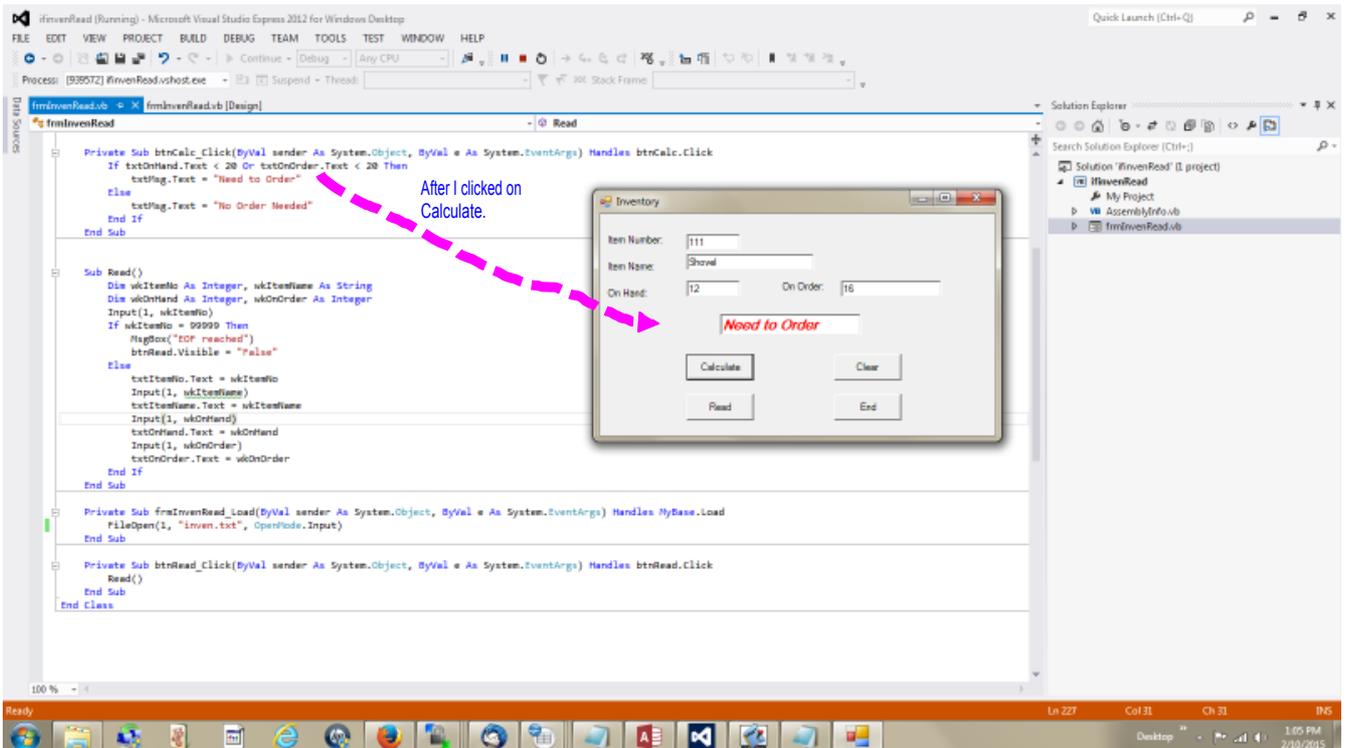


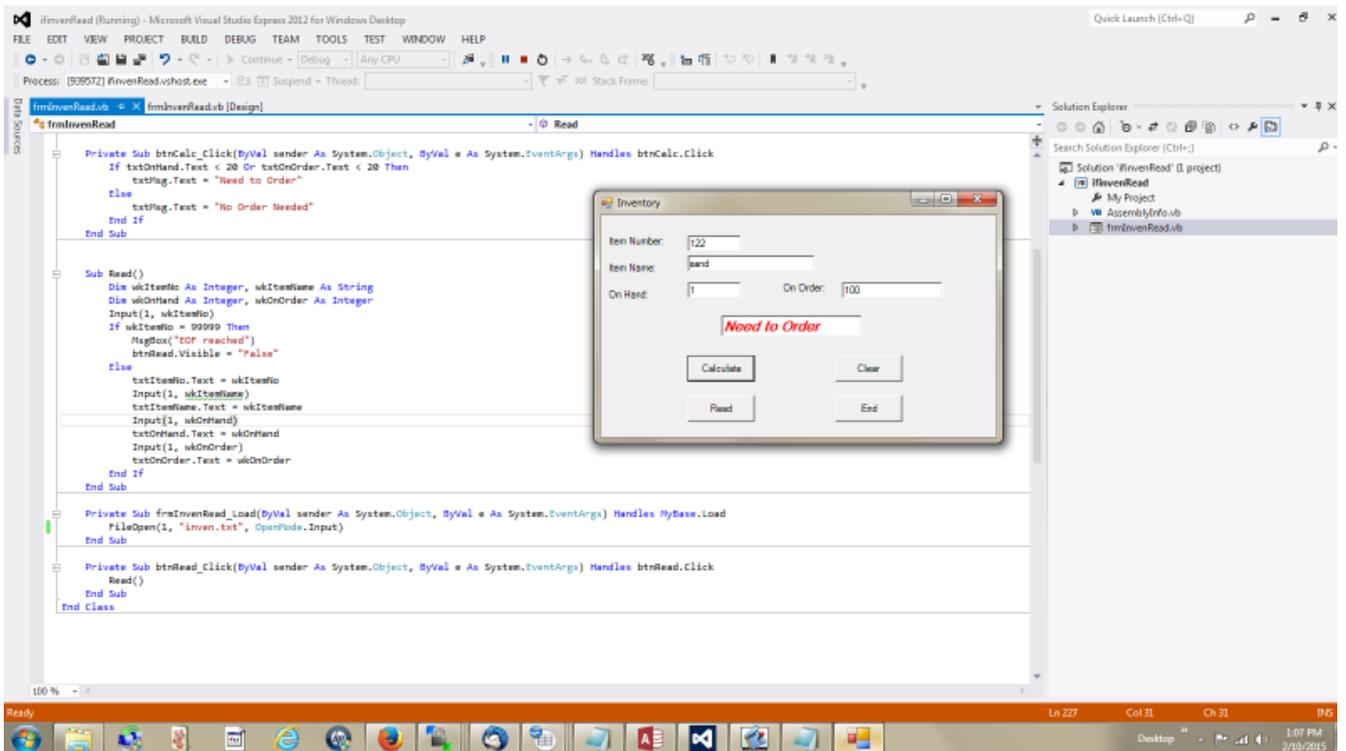




The screenshot displays the Visual Studio IDE with the following components:

- Code Editor:** Contains VB.NET code for `frmInvenRead`. The `btnCalc_Click` event handler sets `txtFlag.Text` to "Need to Order" or "No Order Needed". The `Sub Read()` function prompts for item details and checks for an EOF indicator (99999). The `btnRead_Click` event handler calls the `Read()` function.
- Annotations:** Blue text notes explain the logic: "When I click Calculate I will get a message.", "Used Input(1, wkItemNo) Checked for wkItemNo = 99999 which is my EOF indicator. If it is I end if not I move the field to the text box and then I put each additional field and move them to their text boxes.", and "The read button sends control to the Read() function that I wrote." A pink dashed arrow points from the `Read()` function call in the code to the `Read()` function definition.
- Inventory Dialog Box:** A modal window with fields for Item Number (111), Item Name (Shovel), On Hand (12), and On Order (16). It includes buttons for Calculate, Clear, Read, and End.
- UI Elements:** A pink dashed arrow points from the `Read()` function call in the code to the `Read` button in the dialog box.
- Taskbar:** Shows the Windows taskbar with various application icons and the system clock at 1:01 PM on 2/10/2015.





The screenshot shows the Visual Studio IDE with the following components:

- Code Editor:** Contains the following VB.NET code:


```

Private Sub btnCalc_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnCalc.Click
    If txtOnHand.Text < 20 Or txtOnOrder.Text < 20 Then
        txtFlag.Text = "Need to Order"
    Else
        txtFlag.Text = "No Order Needed"
    End If
End Sub

Sub Read()
    Dim wkItemNo As Integer, wkItemName As String
    Dim wkOnHand As Integer, wkOnOrder As Integer
    Input(1, wkItemNo)
    If wkItemNo = 99999 Then
        MsgBox("EOF reached")
        btnRead.Visible = "False"
    Else
        txtItemNo.Text = wkItemNo
        Input(1, wkItemName)
        txtItemName.Text = wkItemName
        Input(1, wkOnHand)
        txtOnHand.Text = wkOnHand
        Input(1, wkOnOrder)
        txtOnOrder.Text = wkOnOrder
    End If
End Sub

Private Sub frmInvenRead_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    FileOpen(1, "inven.txt", OpenMode.Input)
End Sub

Private Sub btnRead_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnRead.Click
    Read()
End Sub
End Class
            
```
- Inventory Form:** A dialog box with the following fields:
 - Item Number: 145
 - Item Name: gloves
 - On Hand: 5
 - On Order: 25
 - Text label: **Need to Order** (in red)
 - Buttons: Calculate, Clear, Read, End
- Solution Explorer:** Shows the project structure: My Project > AssemblyInfo.vb > frmInvenRead.vb
- Taskbar:** Shows the Windows taskbar with various application icons and the system tray displaying the time as 1:07 PM on 2/10/2015.

The screenshot shows the Visual Studio IDE with the following components:

- Code Editor:** Contains the following VB.NET code:


```

Private Sub btnCalc_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnCalc.Click
    If txtOnHand.Text < 20 Or txtOnOrder.Text < 20 Then
        txtFlag.Text = "Need to Order"
    Else
        txtFlag.Text = "No Order Needed"
    End If
End Sub

Sub Read()
    Dim wkItemNo As Integer, wkItemName As String
    Dim wkOnHand As Integer, wkOnOrder As Integer
    Input(1, wkItemNo)
    If wkItemNo = 99999 Then
        MsgBox("EOF reached")
        btnRead.Visible = "False"
    Else
        txtItemNo.Text = wkItemNo
        Input(1, wkItemName)
        txtItemName.Text = wkItemName
        txtOnHand.Text = wkOnHand
        Input(1, wkOnOrder)
        txtOnOrder.Text = wkOnOrder
    End If
End Sub

Private Sub frmInvenRead_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    FileOpen(1, "Inven.txt", OpenMode.Input)
End Sub

Private Sub btnRead_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnRead.Click
    Read()
End Sub
End Class
            
```
- Design View:** Shows a form with a 'Read' button. A 'Need to Order' dialog box is displayed over the form, with a red text label. A smaller 'EOF reached' dialog box is also shown.
- Solution Explorer:** Shows the project structure: 'My Project' containing 'AssemblyInfo.vb' and 'frmInvenRead.vb'.
- Taskbar:** Shows the system tray with the time 1:08 PM and date 2/10/2015.

The screenshot shows the Visual Studio 2012 IDE with a VB.NET application running. The application window, titled 'Inventory', contains the following fields and controls:

- Item Number:
- Item Name:
- On Hand:
- On Order:
- Need to Order: Need to Order
- Buttons: Calculate, Clear, End

The code in the background includes the following relevant sections:

```

Private Sub btnCalc_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnCalc.Click
    If txtOnHand.Text < 20 Or txtOnOrder.Text < 20 Then
        txtMsg.Text = "Need to Order"
    Else
        txtMsg.Text = "No Order Needed"
    End If
End Sub

Sub Read()
    Dim wkItemNo As Integer, wkItemName As String
    Dim wkOnHand As Integer, wkOnOrder As Integer
    Input(1, wkItemNo)
    If wkItemNo = 99999 Then
        MsgBox("EOF reached")
        btnRead.Visible = "False"
    Else
        txtItemNo.Text = wkItemNo
        Input(1, wkItemName)
        txtItemName.Text = wkItemName
        Input(1, wkOnHand)
        txtOnHand.Text = wkOnHand
        Input(1, wkOnOrder)
        txtOnOrder.Text = wkOnOrder
    End If
End Sub

Private Sub frmInvenRead_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    FileOpen(1, "Inven.txt", OpenMode.Input)
End Sub

Private Sub btnRead_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnRead.Click
    Read()
End Sub
    
```

A pink dashed arrow points from the line `btnRead.Visible = "False"` in the `Read()` sub to the 'Need to Order' text in the application window. A blue annotation next to the arrow reads: "The btnRead is no longer visible."

Programs for CIS17 - Programming: Logic, Design and Implementation

Visual Basic (2010)	<ul style="list-style-type: none">firstSp12.zip - introduction to using VB2010FirstMath.zip - calculationsbasicMath.zip - calculationsloopswhile120.zip - introduction to loopsworkareas.zip - introduction to variablesuserInput.zip - introduction to user inputdeptArray.zip - introduction to arraysNextVB.zip - two programs in this zipVBF11CIS120.zip - multiple programsprojWriteText.zip - creating a filereadProj.zip - reading a file
JavaScript	<ul style="list-style-type: none">hello.htmlmultiply.htmlmultiplyans.htmladdnum.htmladdnumcoer.htmlmathans.htmlifwithf.htmlMAorRI.htmlprob2.htmlwhileloop.htmldotoop.htmlifwithloop.htmlfinaltotal.htmlLoop comparison:Math facts while loopMath facts nested while loopMath facts do...while loopMath facts nested do...while loopMath facts for loopMath facts nested for loop

Next we will look at these programs.

Another example of writing a file.
A little later version of VB.

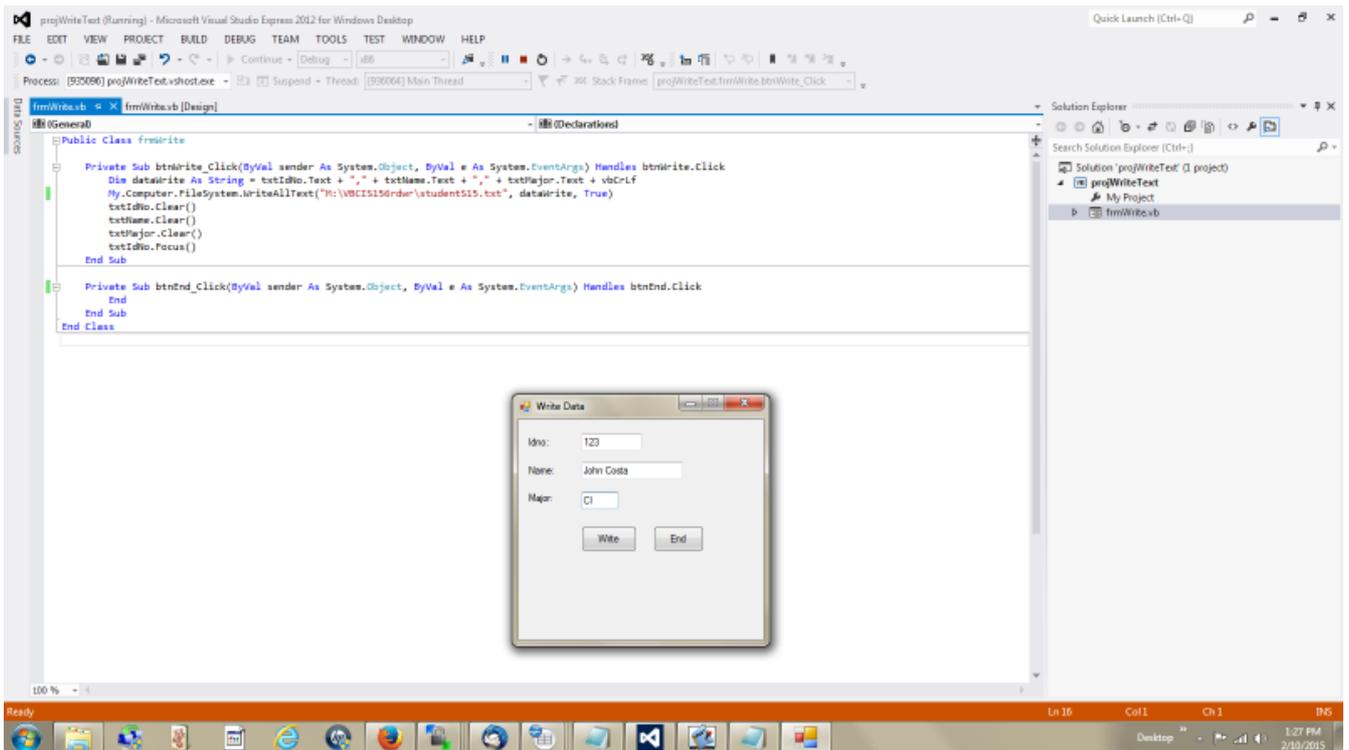
I am giving it an address for the text file I create.
Notice the dataWrite which will write a field concatenating with a comma divider.

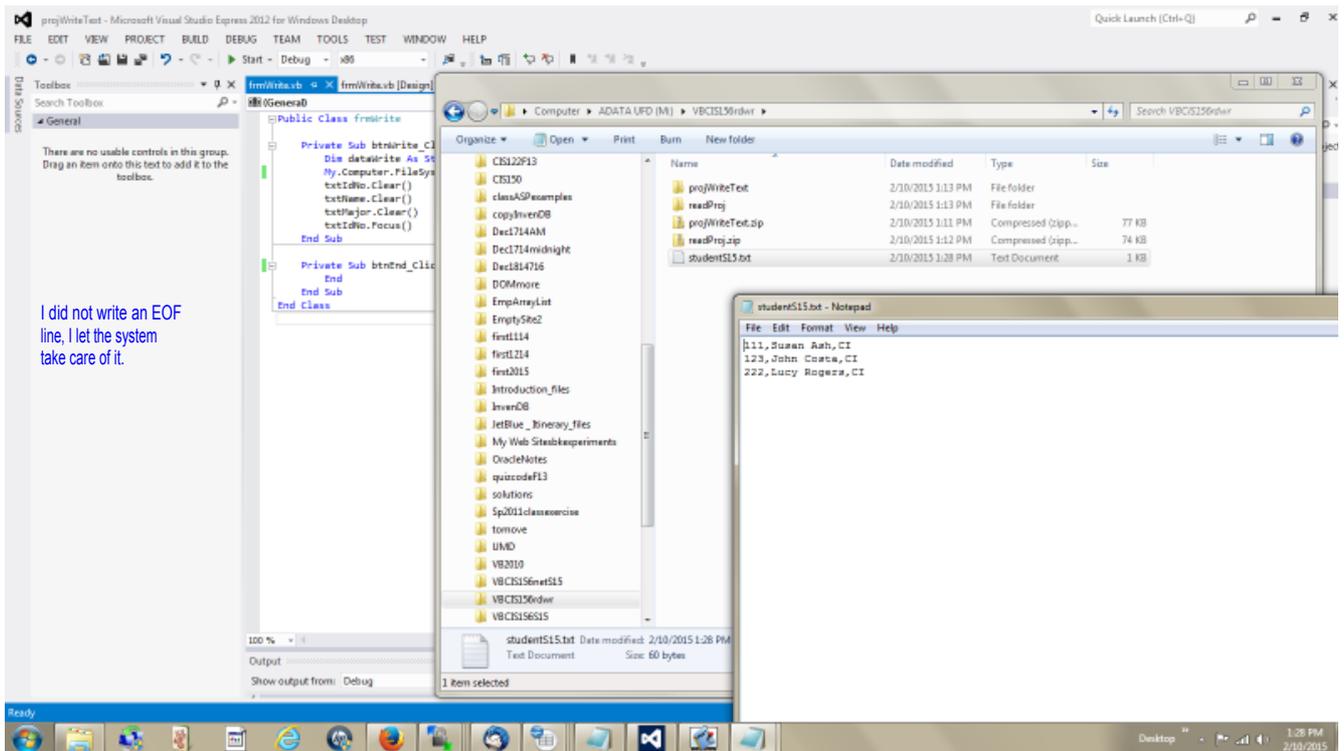
```
Public Class frmwrite
    Private Sub btnWrite_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnWrite.Click
        Dim dataWrite As String = txtIDno.Text + "," + txtName.Text + "," + txtMajor.Text + vbCrLf
        My.Computer.FileSystem.WriteAllText("M:\VB\CS15\order\student515.txt", dataWrite, True)
        txtIDno.Clear()
        txtName.Clear()
        txtMajor.Clear()
        txtIDno.Focus()
    End Sub

    Private Sub btnEnd_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnEnd.Click
        End
    End Sub
End Class
```

The screenshot displays the Visual Studio IDE with the following components:

- Code Editor:** Shows the code for `Public Class frmWrite`. The `btnWrite_Click` method is highlighted with a pink dashed arrow. The code concatenates `txtIdno.Text`, `txtName.Text`, and `txtMajor.Text` into a string `dataWrite` and calls `My.Computer.FileSystem.WriteAllText`. It also includes `txtIdno.Clear()`, `txtName.Clear()`, `txtMajor.Clear()`, and `txtIdno.Focus()`.
- Write Data Dialog:** A modal dialog box with three text boxes: `Idno:` (containing "111"), `Name:` (containing "Susan Ash"), and `Major:` (containing "CI"). It has `Write` and `End` buttons.
- Annotations:** A pink dashed arrow points from the `txtIdno.Focus()` line in the code to the `Idno` text box in the dialog. Another pink dashed arrow points from the `dataWrite` variable in the code to the `Write Data` dialog box.
- Text Box:** A blue text box explains: "When I click Write the line will be written using the information put together in dataWrite. The the text boxes will be cleared and the focus set."





readProj (Running) - Microsoft Visual Studio Express 2012 for Windows Desktop

FILE EDIT VIEW PROJECT BUILD DEBUG TEAM TOOLS TEST WINDOW HELP

Process: [941176] readProj\vsHost.exe Thread: [930064] Main Thread

frmRead.vb [Design]

```

Public Class frmRead
    Dim MyReader As New Microsoft.VisualBasic.FileIO.TextFieldParser("M:\VBC15156\dr\student515.txt")

    Private Sub btnRead_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnRead.Click
        Dim currentRow As String()
        If Not MyReader.EndOfData Then
            currentRow = MyReader.ReadFields()
            txtIDno.Text = currentRow(0)
            txtName.Text = currentRow(1)
            txtMajor.Text = currentRow(2)
        Else
            Label1.Text = "End of file reached!"
        End If
    End Sub

    Private Sub frmRead_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
        MyReader.TextFieldType = FileIO.FieldType.Delimited
        MyReader.SetDelimiters(",")
    End Sub
End Class
    
```

I set up current row to hold the contents and it has three fields with an index of 0, 1, 2 which access the data and store it in the text boxes.

I pushed read.

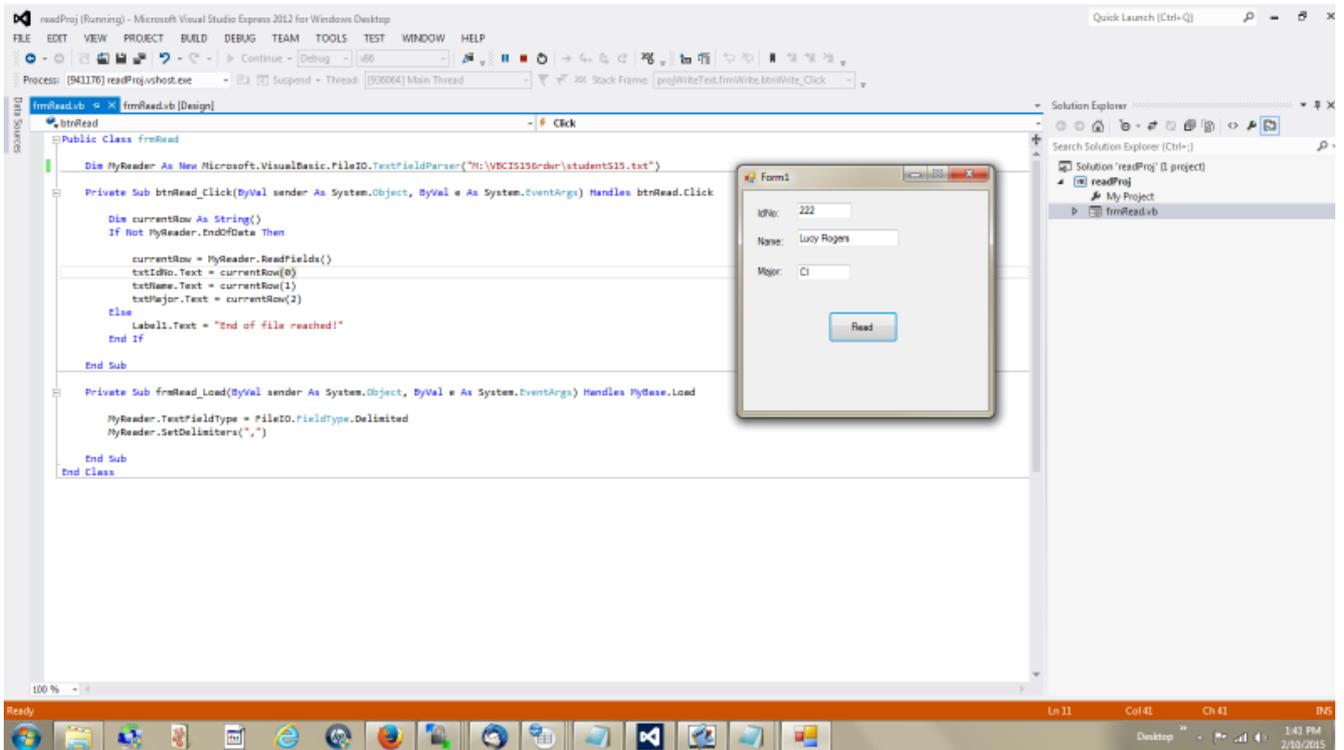
MyReader has been dimmed to find the file and to use the comma that I set up as the delimiter or separator in the frmRead_Load.

Form1

IDNo: 111
 Name: Susan Ash
 Major: CI
 Read

Ln 11 Col 41 Ch 41

```
Public Class frmRead
    Dim MyReader As New Microsoft.VisualBasic.FileIO.TextFieldParser("I:\VCIS15\order\student515.txt")
    Private Sub btnRead_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnRead.Click
        Dim currentRow As String()
        If Not MyReader.EndOfData Then
            currentRow = MyReader.ReadFields()
            txtIdNo.Text = currentRow(0)
            txtName.Text = currentRow(1)
            txtMajor.Text = currentRow(2)
        Else
            Label1.Text = "End of file reached!"
        End If
    End Sub
    Private Sub frmRead_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
        MyReader.TextFieldType = FileIO.FieldType.Delimited
        MyReader.SetDelimiters(",")
    End Sub
End Class
```



readProj (Running) - Microsoft Visual Studio Express 2012 for Windows Desktop

FILE EDIT VIEW PROJECT BUILD DEBUG TEAM TOOLS TEST WINDOW HELP

Process: [941176] readProj.vshost.exe - [Suspend] - Thread: [000004] Main Thread - Stack Frame: [proj\WriteText.frm\Write.btn\Write_Click]

frmRead.vb [Design] - Click

```
Public Class frmRead
    Dim MyReader As New Microsoft.VisualBasic.FileIO.TextFieldParser("Y:\VBC1515\order\student515.txt")
    Private Sub btnRead_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnRead.Click
        Dim currentRow As String()
        If Not MyReader.EndOfData Then
            currentRow = MyReader.ReadFields()
            txtIDNo.Text = currentRow(0)
            txtName.Text = currentRow(1)
            txtMajor.Text = currentRow(2)
        Else
            Label1.Text = "End of file reached!"
            End If
        End Sub
    Private Sub frmRead_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
        MyReader.TextFieldType = FileIO.FieldType.Delimited
        MyReader.SetDelimiters(",")
    End Sub
End Class
```

Form1

IDNo: 222
Name: Lucy Rogers
Major: CI
Read
End of file reached!

After this record, I clicked Read again and got EOF.

End of file reached!

100%

Ready | Ln 31 | Col 41 | Ch 41 | IMS | Desktop | 1:41 PM | 2/10/2015