Video Demo:

<https://www.youtube.com/watch?v=coiUBPeMFOk&feature=youtu.be>

Imports System.IO

Module StudentTestScoresModule

Const intMAX\_SUBSCRIPT\_STUDENT As Integer = 6

Const intMAX\_SUBSCRIPT\_STUDENT\_SCORES As Integer = 5

'create structure

Public Structure StudentData

Dim strName As String

Dim dblTestScoresArray() As Double

Dim dblAverage As Double

End Structure

Dim dblTotalStd1 As Double

Dim dblTotalStd2 As Double

Dim dblTotalStd3 As Double

Dim dblTotalStd4 As Double

Dim dblTotalStd5 As Double

Dim dblTotalStd6 As Double

Dim dblScore As Double

Dim StudentsArray(intMAX\_SUBSCRIPT\_STUDENT) As StudentData

Sub StudentNameDataInput()

StudentsArray(0).strName = Form1.txtName1.Text

StudentsArray(1).strName = Form1.txtName2.Text

StudentsArray(2).strName = Form1.txtName3.Text

StudentsArray(3).strName = Form1.txtName4.Text

StudentsArray(4).strName = Form1.txtName5.Text

StudentsArray(5).strName = Form1.txtName6.Text

End Sub

Sub StudentScoreDataInput()

For intIndex = 0 To intMAX\_SUBSCRIPT\_STUDENT

ReDim StudentsArray(intIndex).dblTestScoresArray(4)

Next

'test scores for first student

If Form1.txtS11.Text < 0 Or Form1.txtS11.Text > 100 Then

MessageBox.Show("Please enter positive integers only- Program Closing")

Form1.Close()

Throw New ArgumentException("Exception Occured")

End If

StudentsArray(0).dblTestScoresArray(0) = CDbl(Form1.txtS11.Text)

StudentsArray(1).dblTestScoresArray(1) = CDbl(Form1.txtS12.Text)

StudentsArray(2).dblTestScoresArray(2) = CDbl(Form1.txtS13.Text)

StudentsArray(3).dblTestScoresArray(3) = CDbl(Form1.txtS14.Text)

StudentsArray(4).dblTestScoresArray(4) = CDbl(Form1.txtS15.Text)

For Each i As StudentData In StudentsArray

For Each S as Double in i.dblTestScoresArray

dblTotalStd1 += s

Next

Next

Dim dblAverage As Double = dblTotalStd1/intMAX\_SUBSCRIPT\_STUDENT\_SCORES

Form1.lblAvg1.Text = (dblAverage.ToString)

End Sub

Sub StudentScoreDataInput2()

For intIndex = 0 To intMAX\_SUBSCRIPT\_STUDENT

ReDim StudentsArray(intIndex).dblTestScoresArray(4)

Next

If Form1.txtS21.Text < 0 Or Form1.txtS21.Text > 100 Then

MessageBox.Show("Please enter positive integers only- Program Closing")

Form1.Close()

End If

StudentsArray(0).dblTestScoresArray(0) = CDbl(Form1.txtS21.Text)

StudentsArray(1).dblTestScoresArray(1) = CDbl(Form1.txtS22.Text)

StudentsArray(2).dblTestScoresArray(2) = CDbl(Form1.txtS23.Text)

StudentsArray(3).dblTestScoresArray(3) = CDbl(Form1.txtS24.Text)

StudentsArray(4).dblTestScoresArray(4) = CDbl(Form1.txtS25.Text)

For Each i As StudentData In StudentsArray

For Each S as Double in i.dblTestScoresArray

dblTotalStd2 += s

Next

Next

Dim dblAverage2 As Double = dblTotalStd2/intMAX\_SUBSCRIPT\_STUDENT\_SCORES

Form1.lblAvg2.Text = (dblAverage2.ToString)

End Sub

Sub StudentScoreDataInput3()

For intIndex = 0 To intMAX\_SUBSCRIPT\_STUDENT

ReDim StudentsArray(intIndex).dblTestScoresArray(4)

Next

If Form1.txtS31.Text < 0 Or Form1.txtS31.Text > 100 Then

MessageBox.Show("Please enter positive integers only- Program Closing")

Form1.Close()

End If

StudentsArray(0).dblTestScoresArray(0) = CDbl(Form1.txtS31.Text)

StudentsArray(1).dblTestScoresArray(1) = CDbl(Form1.txtS32.Text)

StudentsArray(2).dblTestScoresArray(2) = CDbl(Form1.txtS33.Text)

StudentsArray(3).dblTestScoresArray(3) = CDbl(Form1.txtS34.Text)

StudentsArray(4).dblTestScoresArray(4) = CDbl(Form1.txtS35.Text)

For Each i As StudentData In StudentsArray

For Each S as Double in i.dblTestScoresArray

dblTotalStd3 += s

Next

Next

Dim dblAverage3 As Double = dblTotalStd3/intMAX\_SUBSCRIPT\_STUDENT\_SCORES

Form1.lblAvg3.Text = (dblAverage3.ToString)

End Sub

Sub StudentScoreDataInput4()

For intIndex = 0 To intMAX\_SUBSCRIPT\_STUDENT

ReDim StudentsArray(intIndex).dblTestScoresArray(4)

Next

If Form1.txtS41.Text < 0 Or Form1.txtS41.Text > 100 Then

MessageBox.Show("Please enter positive integers only- Program Closing")

Form1.Close()

End If

StudentsArray(0).dblTestScoresArray(0) = CDbl(Form1.txtS41.Text)

StudentsArray(1).dblTestScoresArray(1) = CDbl(Form1.txtS42.Text)

StudentsArray(2).dblTestScoresArray(2) = CDbl(Form1.txtS43.Text)

StudentsArray(3).dblTestScoresArray(3) = CDbl(Form1.txtS44.Text)

StudentsArray(4).dblTestScoresArray(4) = CDbl(Form1.txtS45.Text)

For Each i As StudentData In StudentsArray

For Each S as Double in i.dblTestScoresArray

dblTotalStd4 += s

Next

Next

Dim dblAverage4 As Double = dblTotalStd4/intMAX\_SUBSCRIPT\_STUDENT\_SCORES

Form1.lblAvg4.Text = (dblAverage4.ToString)

End Sub

Sub StudentScoreDataInput5()

For intIndex = 0 To intMAX\_SUBSCRIPT\_STUDENT

ReDim StudentsArray(intIndex).dblTestScoresArray(4)

Next

If Form1.txtS51.Text < 0 Or Form1.txtS51.Text > 100 Then

MessageBox.Show("Please enter positive integers only- Program Closing")

Form1.Close()

End If

StudentsArray(0).dblTestScoresArray(0) = CDbl(Form1.txtS51.Text)

StudentsArray(1).dblTestScoresArray(1) = CDbl(Form1.txtS52.Text)

StudentsArray(2).dblTestScoresArray(2) = CDbl(Form1.txtS53.Text)

StudentsArray(3).dblTestScoresArray(3) = CDbl(Form1.txtS54.Text)

StudentsArray(4).dblTestScoresArray(4) = CDbl(Form1.txtS55.Text)

For Each i As StudentData In StudentsArray

For Each S as Double in i.dblTestScoresArray

dblTotalStd5 += s

Next

Next

Dim dblAverage5 As Double = dblTotalStd5/intMAX\_SUBSCRIPT\_STUDENT\_SCORES

Form1.lblAvg5.Text = (dblAverage5.ToString)

End Sub

Sub StudentScoreDataInput6()

For intIndex = 0 To intMAX\_SUBSCRIPT\_STUDENT

ReDim StudentsArray(intIndex).dblTestScoresArray(4)

Next

If Form1.txtS61.Text < 0 Or Form1.txtS61.Text > 100 Then

MessageBox.Show("Please enter positive integers only- Program Closing")

Form1.Close()

End If

StudentsArray(0).dblTestScoresArray(0) = CDbl(Form1.txtS61.Text)

StudentsArray(1).dblTestScoresArray(1) = CDbl(Form1.txtS62.Text)

StudentsArray(2).dblTestScoresArray(2) = CDbl(Form1.txtS63.Text)

StudentsArray(3).dblTestScoresArray(3) = CDbl(Form1.txtS64.Text)

StudentsArray(4).dblTestScoresArray(4) = CDbl(Form1.txtS65.Text)

For Each i As StudentData In StudentsArray

For Each S as Double in i.dblTestScoresArray

dblTotalStd6 += s

Next

Next

Dim dblAverage6 As Double = dblTotalStd6/intMAX\_SUBSCRIPT\_STUDENT\_SCORES

Form1.lblAvg6.Text = (dblAverage6.ToString)

End Sub

Sub CalculateAverage()

End Sub

End Module

Public Class Form1

Private Sub btnCalculate\_Click(sender As Object, e As EventArgs) Handles btnCalculateAverage.Click

StudentScoreDataInput()

StudentScoreDataInput2()

StudentScoreDataInput3()

StudentScoreDataInput4()

StudentScoreDataInput5()

StudentScoreDataInput6()

End Sub

Private Sub Form1\_Load(sender As Object, e As EventArgs) Handles MyBase.Load

End Sub

Private Sub SaveData\_Click(sender As Object, e As EventArgs) Handles SaveData.Click

Dim strFile As String = "Testscores.txt"

Dim fileExists As Boolean = File.Exists(strFile)

Using sw As New StreamWriter(File.Open(strFile, FileMode.OpenOrCreate))

sw.WriteLine(Me.txtName1.Text)

sw.WriteLine(Me.txtS11.Text)

sw.WriteLine(Me.txtS12.Text)

sw.WriteLine(Me.txtS13.Text)

sw.WriteLine(Me.txtS14.Text)

sw.WriteLine(Me.txtS15.Text)

sw.WriteLine(Me.lblAvg1.Text)

sw.WriteLine(Me.txtName2.Text)

sw.WriteLine(Me.txtS21.Text)

sw.WriteLine(Me.txtS22.Text)

sw.WriteLine(Me.txtS23.Text)

sw.WriteLine(Me.txtS24.Text)

sw.WriteLine(Me.txtS25.Text)

sw.WriteLine(Me.lblAvg2.Text)

sw.WriteLine(Me.txtName3.Text)

sw.WriteLine(Me.txtS31.Text)

sw.WriteLine(Me.txtS32.Text)

sw.WriteLine(Me.txtS33.Text)

sw.WriteLine(Me.txtS34.Text)

sw.WriteLine(Me.txtS35.Text)

sw.WriteLine(Me.lblAvg3.Text)

sw.WriteLine(Me.txtName4.Text)

sw.WriteLine(Me.txtS41.Text)

sw.WriteLine(Me.txtS42.Text)

sw.WriteLine(Me.txtS43.Text)

sw.WriteLine(Me.txtS44.Text)

sw.WriteLine(Me.txtS45.Text)

sw.WriteLine(Me.lblAvg4.Text)

sw.WriteLine(Me.txtName5.Text)

sw.WriteLine(Me.txtS51.Text)

sw.WriteLine(Me.txtS52.Text)

sw.WriteLine(Me.txtS53.Text)

sw.WriteLine(Me.txtS54.Text)

sw.WriteLine(Me.txtS55.Text)

sw.WriteLine(Me.lblAvg5.Text)

sw.WriteLine(Me.txtName6.Text)

sw.WriteLine(Me.txtS61.Text)

sw.WriteLine(Me.txtS62.Text)

sw.WriteLine(Me.txtS63.Text)

sw.WriteLine(Me.txtS64.Text)

sw.WriteLine(Me.txtS65.Text)

sw.WriteLine(Me.lblAvg6.Text)

MessageBox.Show("All Data is Written")

End Using

End Sub

Private Sub btnLoad\_Click(sender As Object, e As EventArgs) Handles btnLoad.Click

Dim strFile As String = "Testscores.txt"

Dim fileExists As Boolean = File.Exists(strFile)

Using sw As New StreamReader(File.Open(strFile, FileMode.Open))

txtName1.Text = sw.ReadLine()

txtS11.Text = sw.ReadLine()

txtS12.Text = sw.ReadLine()

txtS13.Text = sw.ReadLine()

txtS14.Text = sw.ReadLine()

txtS15.Text = sw.ReadLine()

lblAvg1.Text = sw.ReadLine()

txtName2.Text = sw.ReadLine()

txtS21.Text = sw.ReadLine()

txtS22.Text = sw.ReadLine()

txtS23.Text = sw.ReadLine()

txtS24.Text = sw.ReadLine()

txtS25.Text = sw.ReadLine()

lblAvg2.Text = sw.ReadLine()

txtName3.Text = sw.ReadLine()

txtS31.Text = sw.ReadLine()

txtS32.Text = sw.ReadLine()

txtS33.Text = sw.ReadLine()

txtS34.Text = sw.ReadLine()

txtS35.Text = sw.ReadLine()

lblAvg3.Text = sw.ReadLine()

txtName4.Text = sw.ReadLine()

txtS41.Text = sw.ReadLine()

txtS42.Text = sw.ReadLine()

txtS43.Text = sw.ReadLine()

txtS44.Text = sw.ReadLine()

txtS45.Text = sw.ReadLine()

lblAvg4.Text = sw.ReadLine()

txtName5.Text = sw.ReadLine()

txtS51.Text = sw.ReadLine()

txtS52.Text = sw.ReadLine()

txtS53.Text = sw.ReadLine()

txtS54.Text = sw.ReadLine()

txtS55.Text = sw.ReadLine()

lblAvg5.Text = sw.ReadLine()

txtName6.Text = sw.ReadLine()

txtS61.Text = sw.ReadLine()

txtS62.Text = sw.ReadLine()

txtS63.Text = sw.ReadLine()

txtS64.Text = sw.ReadLine()

txtS65.Text = sw.ReadLine()

lblAvg6.Text = sw.ReadLine()

End Using

End Sub

End Class