

 Text file containing data separated by commas



Imports System.IO

Public Class Form1

 'set up a 2D array of 5 rows and 4 columns. This is a global variable as it is

 'to be referred to everywhere

 Dim strMarks(4, 3) As String

 'set number of students in the class

 Dim numStudents As Integer = 5

 'set constants for commonly used array items so it's more readable

 Const StudentName = 0, Project = 1, Test = 2, Exam = 3

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

 'opens the selected file

 Dim openFile As StreamReader = File.OpenText("marks.txt")

 'strStudent is each record, stored as a seperate line in marks.txt

 'StrSplit(3) is a 1D array, which is made up of 4 elements. These are

 'Student Name, Project Mark, Pracitical Test and Exam.

 Dim strStudent, StrSplit(3) As String

 'intCount is a counter that will be used again and again

 Dim intCount As Integer

 Do While openFile.Peek <> -1

 'there are 5 students in the the file.

 For intCount = 0 To (numStudents - 1)

 strStudent = openFile.ReadLine()

 'Each element of StrSplit is gotten from whatever is read, seperated

 'by a comma

 StrSplit = strStudent.Split(",")

 'Filling out the 2D array

 strMarks(intCount, 0) = StrSplit(0)

 strMarks(intCount, 1) = StrSplit(1)

 strMarks(intCount, 2) = StrSplit(2)

 strMarks(intCount, 3) = StrSplit(3)

 Next intCount

 Loop

 openFile.Close()

 '------------------------------------------------------------------------------------

 'work out the average marks for each assessment task

 For intCount = 0 To (numStudents - 1)

 lblProjectMark.Text = Val(lblProjectMark.Text) + Val(strMarks(intCount, Project))

 lblTestMark.Text = Val(lblTestMark.Text) + Val(strMarks(intCount, Test))

 lblExamMark.Text = Val(lblExamMark.Text) + Val(strMarks(intCount, Exam))

 Next intCount

 'the final result is divided by 5 to find the averages

 lblProjectMark.Text = lblProjectMark.Text / numStudents

 lblTestMark.Text = lblTestMark.Text / numStudents

 lblExamMark.Text = lblExamMark.Text / numStudents

 '------------------------------------------------------------------------------------

 'work out the highest and lowest marks, and who achieved them

 Dim max As Integer = 0

 Dim min As Integer = 100

 Dim maxPerson As String

 Dim minPerson As String

 For intCount = 0 To (numStudents - 1)

 If strMarks(intCount, Exam) < min Then

 min = Val(strMarks(intCount, Exam))

 minPerson = strMarks(intCount, StudentName)

 End If

 If strMarks(intCount, Exam) > max Then

 max = Val(strMarks(intCount, Exam))

 maxPerson = strMarks(intCount, StudentName)

 End If

 Next intCount

 lblHighestExam.Text = max & " by " & maxPerson

 lblLowestExam.Text = min & " by " & minPerson

 End Sub

 Private Sub Button1\_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button1.Click

 'declaring a counter

 Dim intCount As Integer

 Dim averageScore As Integer

 Dim grade As String

 'this first adds up the scores for each tasks and divide by 3

 For intCount = 0 To (numStudents - 1)

 averageScore = (Val(strMarks(intCount, Project)) + Val(strMarks(intCount, Test)) + \_

 Val(strMarks(intCount, Exam))) / 3

 'this allocates a grade for each student depending on the average grade.

 Select Case averageScore

 Case 0 To 30 : grade = "UG"

 Case 31 To 45 : grade = "E"

 Case 46 To 50 : grade = "D"

 Case 51 To 60 : grade = "C"

 Case 61 To 79 : grade = "B"

 Case 80 To 90 : grade = "A"

 Case 91 To 100 : grade = "A+"

 End Select

 'adds the student, their average score and the corresponding grade to the listbox

 lstStudents.Items.Add(strMarks(intCount, StudentName) & ":" & averageScore & "%" & ", " & grade)

 Next intCount

 End Sub

 Private Sub Button2\_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button2.Click

 'intCount is a counter that will be used again and again

 Dim intCount As Integer

 For intCount = 0 To (numStudents - 1)

 'checks whether a student will get an achievement award according to the criteria

 If strMarks(intCount, Test) > 75 And \_

 (strMarks(intCount, Project) >= 80 Or strMarks(intCount, Exam) >= 80) Then

 lstAward.Items.Add(strMarks(intCount, StudentName))

 End If

 Next

 End Sub

End Class