

Answer on Question #42798, Programming, C#

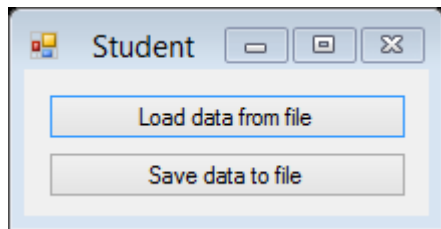
Problem:

Write an application that retrieves a student name and three scores per line from a text file. Process the values by calculating the average of the scores per student. Write the name and average to a different text file. Test your application with a minimum of eight records in the original file. Open and Save FileDialog. Visual Studio Express 2012 Desktop.

Answer:

I created a Windows Form Application on Visual Studio Express 2012 Desktop.

There we have only one form with two buttons: one for load data from file (OpenFileDialog) and other to save data to text file (SaveFileDialog).



When we load data from input file they must be in next format:

```
Bodeychuck|5|4|3
Rotar|3|4|4
Tsalin|4,5|3|4
Slobodyan|5|5|5
Shevaha|2|3|4
Yashan|5|6,7|5
Yurchushun|4|5|3
Yuzva|3|3|23,1
```

else we would have a message: "Not correct data in input file". If all good we can write result to file.

For our example we will have:

```
Bodeychuck|4,000
Rotar|3,667
Tsalin|3,833
Slobodyan|5,000
Shevaha|3,000
Yashan|5,567
Yurchushun|4,000
Yuzva|9,700
```

Code on c#:

```
using System;
using System.Collections.Generic;
using System.IO;
using System.Linq;
using System.Windows.Forms;

namespace Student {
    public partial class Form1 : Form {

        //Class for Student as object
        private class Student {
            public string Name { get; set; }
            public double FirstBal { get; set; }
            public double SecondBal { get; set; }
            public double ThirdBal { get; set; }
        }

        private List<Student> studentList;

        public Form1() {
            InitializeComponent();
        }

        // Parse data to objects
        private bool ParseData(string str) {
            bool isGood = true;
            try {
                studentList = new List<Student>();
                var items = str.Split('\n');
                if (items != null && items.Any()) {
                    for (int i = 0; i < items.Length; i++) {
                        Student st = new Student();
                        var stSplit = items[i].Split('|', '\r');
                        st.Name = stSplit[0];
                        st.FirstBal = double.Parse(stSplit[1]);
                        st.SecondBal = double.Parse(stSplit[2]);
                        st.ThirdBal = double.Parse(stSplit[3]);
                        studentList.Add(st);
                    }
                }
            } catch {
                isGood = false;
            } finally {
                if (!isGood) { studentList = null; }
            }
            return isGood;
        }
    }
}
```

```

// Load data from file to inputData
private void button1_Click(object sender, EventArgs e) {
    if (openFileDialog1.ShowDialog() == DialogResult.OK) {
        System.IO.StreamReader sr = new
            System.IO.StreamReader(openFileDialog1.FileName);
        var inputData = sr.ReadToEnd();
        if (!ParseData(inputTextData))
            MessageBox.Show("Not correct data in input file");
        sr.Close();
    }
}

//Save data to file
private void button2_Click(object sender, EventArgs e) {
    saveFileDialog1.Filter = "txt files (*.txt) | *.txt | All files (*.*) | *.*";
    saveFileDialog1.FilterIndex = 2;
    saveFileDialog1.RestoreDirectory = true;
    if (saveFileDialog1.ShowDialog() == DialogResult.OK) {
        StreamWriter writer = new StreamWriter(saveFileDialog1.OpenFile());
        if (studentList != null && studentList.Any()) {
            string str;
            foreach (var item in studentList) {
                str = item.Name + '|' + ((item.FirstBal + item.SecondBal +
item.ThirdBal) / 3.0).ToString("N3");
                writer.WriteLine(str);
            }
        }
        writer.Close();
        writer.Dispose();
    }
}
}
}

```