

# calculations and spreadsheet as database in C# with ByteScout Spreadsheet SDK

## Tutorial: how to do calculations and spreadsheet as database in C#

Writing of the code to calculations and spreadsheet as database in C# can be done by developers of any level using ByteScout Spreadsheet SDK. ByteScout Spreadsheet SDK helps with calculations and spreadsheet as database in C#. ByteScout Spreadsheet SDK is the library (SDK) that is capable of writing, reading, modifying and calculating Excel and CSV spreadsheets. Most popular formulas can be calculated and recalculated with Excel installed. You may import or export data to and from CSV, XML, JSON as well as to and from databases, arrays.

C# code snippet like this for ByteScout Spreadsheet SDK works best when you need to quickly implement calculations and spreadsheet as database in your C# application. To do calculations and spreadsheet as database in your C# project or application you may simply copy & paste the code and then run your app! Test C# sample code examples whether they respond your needs and requirements for the project.

On our website you may get trial version of ByteScout Spreadsheet SDK for free. Source code samples are included to help you with your C# application.

C# - Form1.Designer.cs

```
namespace SimpleDatabase
{
    partial class Form1
    {
        ///
        /// Required designer variable.
        ///
        private System.ComponentModel.IContainer components = null;

        ///
        /// Clean up any resources being used.
        ///
        /// true if managed resources should be disposed; otherwise, false.
        protected override void Dispose(bool disposing)
        {
            if (disposing && (components != null))
            {
                components.Dispose();
            }
        }
    }
}
```

```

        base.Dispose(disposing);
    }

    #region Windows Form Designer generated code

    ///

    /// Required method for Designer support - do not modify
    /// the contents of this method with the code editor.
    ///

    private void InitializeComponent()
    {
        System.ComponentModel.ComponentResourceManager resources = new
System.ComponentModel.ComponentResourceManager(typeof(Form1));
        this.Label3 = new System.Windows.Forms.Label();
        this.TextBox3 = new System.Windows.Forms.TextBox();
        this.Label4 = new System.Windows.Forms.Label();
        this.Button2 = new System.Windows.Forms.Button();
        this.Button4 = new System.Windows.Forms.Button();
        this.Button1 = new System.Windows.Forms.Button();
        this.Button3 = new System.Windows.Forms.Button();
        this.TextBox4 = new System.Windows.Forms.TextBox();
        this.Label5 = new System.Windows.Forms.Label();
        this.TextBox2 = new System.Windows.Forms.TextBox();
        this.Label2 = new System.Windows.Forms.Label();
        this.GroupBox1 = new System.Windows.Forms.GroupBox();
        this.TextBox1 = new System.Windows.Forms.TextBox();
        this.Label1 = new System.Windows.Forms.Label();
        this.GroupBox1.SuspendLayout();
        this.SuspendLayout();
        //
        // Label3
        //
        this.Label3.AutoSize = true;
        this.Label3.Location = new System.Drawing.Point(6, 94);
        this.Label3.Name = "Label3";
        this.Label3.Size = new System.Drawing.Size(39, 13);
        this.Label3.TabIndex = 12;
        this.Label3.Text = "Label3";
        //
        // TextBox3
        //
        this.TextBox3.Location = new System.Drawing.Point(9, 110);
        this.TextBox3.Name = "TextBox3";
        this.TextBox3.Size = new System.Drawing.Size(135, 20);
        this.TextBox3.TabIndex = 11;
        //
        // Label4
        //
        this.Label4.AutoSize = true;
        this.Label4.Location = new System.Drawing.Point(6, 133);
        this.Label4.Name = "Label4";
        this.Label4.Size = new System.Drawing.Size(39, 13);
        this.Label4.TabIndex = 10;
        this.Label4.Text = "Label4";
        //
        // Button2
        //
        this.Button2.Location = new System.Drawing.Point(184, 45);

```

```

this.Button2.Name = "Button2";
this.Button2.Size = new System.Drawing.Size(100, 23);
this.Button2.TabIndex = 7;
this.Button2.Text = "Save to XLS";
this.Button2.UseVisualStyleBackColor = true;
this.Button2.Click += new System.EventHandler(this.Button2_Click);
//
// Button4
//
this.Button4.Font = new System.Drawing.Font("Microsoft Sans Serif",
8.25F, System.Drawing.FontStyle.Bold, System.Drawing.GraphicsUnit.Point, ((byte)
(204)));
this.Button4.Location = new System.Drawing.Point(9, 175);
this.Button4.Name = "Button4";
this.Button4.Size = new System.Drawing.Size(135, 23);
this.Button4.TabIndex = 14;
this.Button4.Text = "Recalculate";
this.Button4.UseVisualStyleBackColor = true;
this.Button4.Click += new System.EventHandler(this.Button4_Click);
//
// Button1
//
this.Button1.Location = new System.Drawing.Point(184, 16);
this.Button1.Name = "Button1";
this.Button1.Size = new System.Drawing.Size(100, 23);
this.Button1.TabIndex = 6;
this.Button1.Text = "Load from XLS";
this.Button1.UseVisualStyleBackColor = true;
this.Button1.Click += new System.EventHandler(this.Button1_Click);
//
// Button3
//
this.Button3.Location = new System.Drawing.Point(184, 74);
this.Button3.Name = "Button3";
this.Button3.Size = new System.Drawing.Size(100, 23);
this.Button3.TabIndex = 8;
this.Button3.Text = "View in Excel";
this.Button3.UseVisualStyleBackColor = true;
this.Button3.Click += new System.EventHandler(this.Button3_Click);
//
// TextBox4
//
this.TextBox4.Location = new System.Drawing.Point(9, 149);
this.TextBox4.Name = "TextBox4";
this.TextBox4.Size = new System.Drawing.Size(135, 20);
this.TextBox4.TabIndex = 13;
//
// Label5
//
this.Label5.Location = new System.Drawing.Point(9, 240);
this.Label5.Name = "Label5";
this.Label5.Size = new System.Drawing.Size(275, 113);
this.Label5.TabIndex = 9;
this.Label5.Text = resources.GetString("Label5.Text");
//
// TextBox2
//
this.TextBox2.Location = new System.Drawing.Point(9, 71);
this.TextBox2.Name = "TextBox2";
this.TextBox2.Size = new System.Drawing.Size(135, 20);

```

```

this.TextBox2.TabIndex = 9;
//
// Label2
//
this.Label2.AutoSize = true;
this.Label2.Location = new System.Drawing.Point(6, 55);
this.Label2.Name = "Label2";
this.Label2.Size = new System.Drawing.Size(39, 13);
this.Label2.TabIndex = 8;
this.Label2.Text = "Label2";
//
// GroupBox1
//
this.GroupBox1.Controls.Add(this.Button4);
this.GroupBox1.Controls.Add(this.TextBox4);
this.GroupBox1.Controls.Add(this.Label3);
this.GroupBox1.Controls.Add(this.TextBox3);
this.GroupBox1.Controls.Add(this.Label4);
this.GroupBox1.Controls.Add(this.TextBox2);
this.GroupBox1.Controls.Add(this.Label2);
this.GroupBox1.Controls.Add(this.TextBox1);
this.GroupBox1.Controls.Add(this.Label1);
this.GroupBox1.Location = new System.Drawing.Point(12, 10);
this.GroupBox1.Name = "GroupBox1";
this.GroupBox1.Size = new System.Drawing.Size(166, 212);
this.GroupBox1.TabIndex = 5;
this.GroupBox1.TabStop = false;
//
// TextBox1
//
this.TextBox1.Location = new System.Drawing.Point(9, 32);
this.TextBox1.Name = "TextBox1";
this.TextBox1.Size = new System.Drawing.Size(135, 20);
this.TextBox1.TabIndex = 7;
//
// Label1
//
this.Label1.AutoSize = true;
this.Label1.Location = new System.Drawing.Point(6, 16);
this.Label1.Name = "Label1";
this.Label1.Size = new System.Drawing.Size(39, 13);
this.Label1.TabIndex = 6;
this.Label1.Text = "Label1";
//
// Form1
//
this.AutoScaleDimensions = new System.Drawing.SizeF(6F, 13F);
this.AutoScaleMode = System.Windows.Forms.AutoScaleMode.Font;
this.ClientSize = new System.Drawing.Size(292, 362);
this.Controls.Add(this.Button2);
this.Controls.Add(this.Button1);
this.Controls.Add(this.Button3);
this.Controls.Add(this.Label5);
this.Controls.Add(this.GroupBox1);
this.Name = "Form1";
this.Text = "Form1";
this.FormClosing += new
System.Windows.Forms.FormClosingEventHandler(this.Form1_FormClosing);
this.Load += new System.EventHandler(this.Form1_Load);
this.GroupBox1.ResumeLayout(false);

```

```

        this.GroupBox1.PerformLayout();
        this.ResumeLayout(false);

    }

#endregion

    internal System.Windows.Forms.Label Label3;
    internal System.Windows.Forms.TextBox TextBox3;
    internal System.Windows.Forms.Label Label4;
    internal System.Windows.Forms.Button Button2;
    internal System.Windows.Forms.Button Button4;
    internal System.Windows.Forms.Button Button1;
    internal System.Windows.Forms.Button Button3;
    internal System.Windows.Forms.TextBox TextBox4;
    internal System.Windows.Forms.Label Label5;
    internal System.Windows.Forms.TextBox TextBox2;
    internal System.Windows.Forms.Label Label2;
    internal System.Windows.Forms.GroupBox GroupBox1;
    internal System.Windows.Forms.TextBox TextBox1;
    internal System.Windows.Forms.Label Label1;
}
}

```

C# - Form1.cs

```

using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Diagnostics;
using System.Drawing;
using System.Text;
using System.Windows.Forms;

using Bytescout.Spreadsheet;

namespace SimpleDatabase
{
    public partial class Form1 : Form
    {
        Spreadsheet _spreadsheet;

        private void LoadXLS()
        {
            Worksheet worksheet;
            _spreadsheet = new Spreadsheet();
            _spreadsheet.LoadFromFile("Database.xls");
        }
    }
}

```

```

worksheet = _spreadsheet.Workbook.Worksheets[0];
Label1.Text = (string)worksheet.Cell("A1").Value;
TextBox1.Text = worksheet.Cell("A2").Value.ToString();

Label2.Text = (string)worksheet.Cell("B1").Value;
TextBox2.Text = worksheet.Cell("B2").Value.ToString();

Label3.Text = (string)worksheet.Cell("C1").Value;
TextBox3.Text = worksheet.Cell("C2").Formula;

Label4.Text = "Calculated value of C2";
worksheet.Cell("C2").Calculate();
TextBox4.Text = worksheet.Cell("C2").Value.ToString();
}

private void SaveXLS()
{
    Worksheet worksheet;

    worksheet = _spreadsheet.Workbook.Worksheets[0];

    worksheet.Cell("A2").Value = System.Convert.ToInt32(TextBox1.Text);
    worksheet.Cell("B2").Value = System.Convert.ToInt32(TextBox2.Text);
    worksheet.Cell("C2").Formula = TextBox3.Text;

    try
    {
        System.IO.File.Delete("Database.xls");
    }
    catch (Exception ex)
    {
    }

    _spreadsheet.SaveAs("Database.xls");
}

public Form1()
{
    InitializeComponent();
}

private void Form1_FormClosing(object sender, FormClosingEventArgs e)
{
    SaveXLS();

    _spreadsheet.Close();
}

private void ReCalculate()
{
    Worksheet worksheet;

    worksheet = _spreadsheet.Workbook.Worksheets[0];

    worksheet.Cell("A2").Value = System.Convert.ToInt32(TextBox1.Text);
    worksheet.Cell("B2").Value = System.Convert.ToInt32(TextBox2.Text);
    worksheet.Cell("C2").Formula = TextBox3.Text;
    worksheet.Cell("C2").Calculate();
    TextBox4.Text = worksheet.Cell("C2").Value.ToString();
}

```

```

private void Button4_Click(object sender, EventArgs e)
{
    ReCalculate();
}

private void Form1_Load(object sender, EventArgs e)
{
    LoadXLS();
}

private void Button3_Click(object sender, EventArgs e)
{
    // open in default spreadsheets viewer/editor
    SaveXLS();
    try
    {
        Process.Start("Database.xls");
    }
    catch
    {
    }
}

private void Button1_Click(object sender, EventArgs e)
{
    LoadXLS();
    MessageBox.Show("Loaded from Database.xls");
}

private void Button2_Click(object sender, EventArgs e)
{
    SaveXLS();
    MessageBox.Show("Saved into Database.xls");
}
}
}

```

C# - Program.cs

```

using System;
using System.Collections.Generic;
using System.Windows.Forms;

namespace SimpleDatabase
{
    static class Program
    {
        ///

```

```
    /// The main entry point for the application.
    ///

    [STAThread]
    static void Main()
    {
        Application.EnableVisualStyles();
        Application.SetCompatibleTextRenderingDefault(false);
        Application.Run(new Form1());
    }
}
```

---

FOR MORE INFORMATION AND FREE TRIAL:

[Download Free Trial SDK \(on-premise version\)](#)

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