

ECS Calculator – version 1.3

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1. Introduction

They say that there is no such thing as a free lunch. True, but then this is not a lunch. Rather it is an ActiveX Dynamic Link Library (DLL) that can be used from within Visual Basic (VB) and Visual Basic for Applications (VBA) to provide a popup calculator.

Why are we giving it away? Well, we did consider releasing this as shareware, but soon decided that:

- a) the hassle of registration/protective code was just too much
- b) we could not decide a fair price for such a simple component
- c) we were fed up of other programmers releasing simple components and then charging a license fee for using them

You may freely distribute this DLL to anyone you choose. It is completely royalty free, and can be used for both private and commercial applications without restriction. We would ask one thing, however. If you do use it, take the time to drop us an email and tell us. Our address is

Essjay@airforce1.demon.co.uk

2. Installation

Simply double-click on the SETUP.EXE program that came with this distribution to install the ECS Calculator. The installation program will automatically register the DLL to make it available to use.

3. Distribution

When distributing your application, be sure to include the ECSCalc.dll file that can be found in the WINDOWS/SYSTEM directory. Without this file your application will not be able to run the calculator.

4. Using

In your visual basic project select REFERENCES from the PROJECT menu. Ensure that the ECSCalculator has a check mark placed against it.

To invoke the calculator from within your application, define an instance of the class clsECSCalculator. Set any appropriate properties and then invoke the SHOW method (see below for example code).

Example

This example will invoke the calculator and then place the result in the label lblResult. Construct a form, called Form1, containing a label control called lblResult, and a button called Command1. Place the code in the relevant events.

```
Dim a As New clsECSCalculator

Private Sub Command1_Click()

    a.MyOwner = Me
    a.Show
    lblResult.Caption = a.Result

End Sub
```

5. Properties

The following is a list of all properties and methods, their datatypes, and any arguments required, that the ECSCalculator exposes when used. Those that are mandatory are marked as such.

| MyOwner | Form | Property | MANDATORY |
|---------|------|----------|-----------|
|---------|------|----------|-----------|

This property specifies the parent form for the calculator. It must be set to a valid form before the calculator is called. When the calculator is shown, it will be automatically centred over the parent. Usually the easiest way to set this property is to assign the keyword Me to it, e.g. .MyOwner = Me.

KeyToClose Integer Property

This property allows the programmer to specify which key will be used to close the calculator and return the result. If this property is not set before calling the calculator then the F2 key will be used by default. Standard visual basic keycode constants, e.g. vbKeyF3, etc., can be used when setting this property. At present there is no guarantee that specifying keys in combination with the ALT, CTRL, or SHIFT keys will work correctly.

BEWARE: Setting this property to any of the keyboard shortcuts (described in section 4) will prevent the calculator from closing, and may produce unwanted results:

Result Double Property

This property contains the result of the calculation once the calculator has finished. In addition, if this property is set before calling the calculator it will initially display the value.

Cancelled Boolean Property

This property is used to test whether the calculator was cancelled. This allows the programmer to know whether to process the result contained in the Result property or not.

TRUE = the calculator was cancelled

FALSE = the calculator was not cancelled

ErrorOccurred Boolean Property

This property is used to determine if a valid value is contained in the Result property. In most cases if the user attempts to perform a calculation that would result in an error, e.g. division by zero, the calculator can only return if the cancel key is pressed. This obviously would set the Cancelled property also, but this property has been included to allow for an extra level of checking.

Show Method

This, the only method, displays the calculator.

6. Keyboard Control

The ECSCalculator can also be driven from the keyboard. Each keyboard shortcut maps directly to the Microsoft Calculator that is supplied with the Windows operating system. DO NOT set the KeyToClose property to any of the keyboard shortcuts listed here.

| | |
|----------------|--|
| 0 thru 9 | Numeric entry |
| + | Add |
| - | Minus |
| * | Multiply |
| / | Divide |
| % | Percentage |
| r,R | 1/x |
| @ | square root (sqrt) |
| F9 | +/- |
| Shift + Escape | Maps to the AC button on the calculator |
| Escape | Cancels the calculator. Sets Cancelled property to TRUE |
| F2 | Closes the calculator, and returns the result in the Result property if the KeyToClose property has not been set |

7. Comments, Suggestions, & Technical Support

Any comments or suggestions on any of our products are always welcome. Technical support is currently only offered via email. When submitting a problem please remember to specify your machine configuration, and the exact circumstance under which the problem occurred. Any code that you can include will also be helpful in offering a prompt solution.

Essay Consultancy Services Limited can be reached at Essay@airforce1.demon.co.uk