How to Obtain Local Variable Information when an Exception Occurs in a function in a Cielo Explorer Script

In the current version of VisualAPL for Visual Studio 2008, the debugging features of Visual Studio 2008, such as program stops, are not automatically available for functions (methods) in a Cielo Explorer script. A future version of the Cielo Explorer may provide this feature as an enhancement.

Of course, the full debugging features of Visual Studio 2008 are available when programming a VisualAPL class library or console project in the main Visual Studio 2008 programming window.

Similarly error messages which occur due to the execution of a VisualAPL program line in the Cielo Explorer session are immediately displayed in the Cielo Explorer windows.

By incorporating the "try {…} catch{…} finally{…}" control statements into a function or method which has a returned result in the Cielo Explorer script, errors can be localized and values of variables local to the function may be examined in the Cielo Explorer calling environment.

Including try/catch/finally control statements in a function is generally a good idea, so that the function can properly respond to potential error conditions when it is placed into product use in a .Net-based application system.

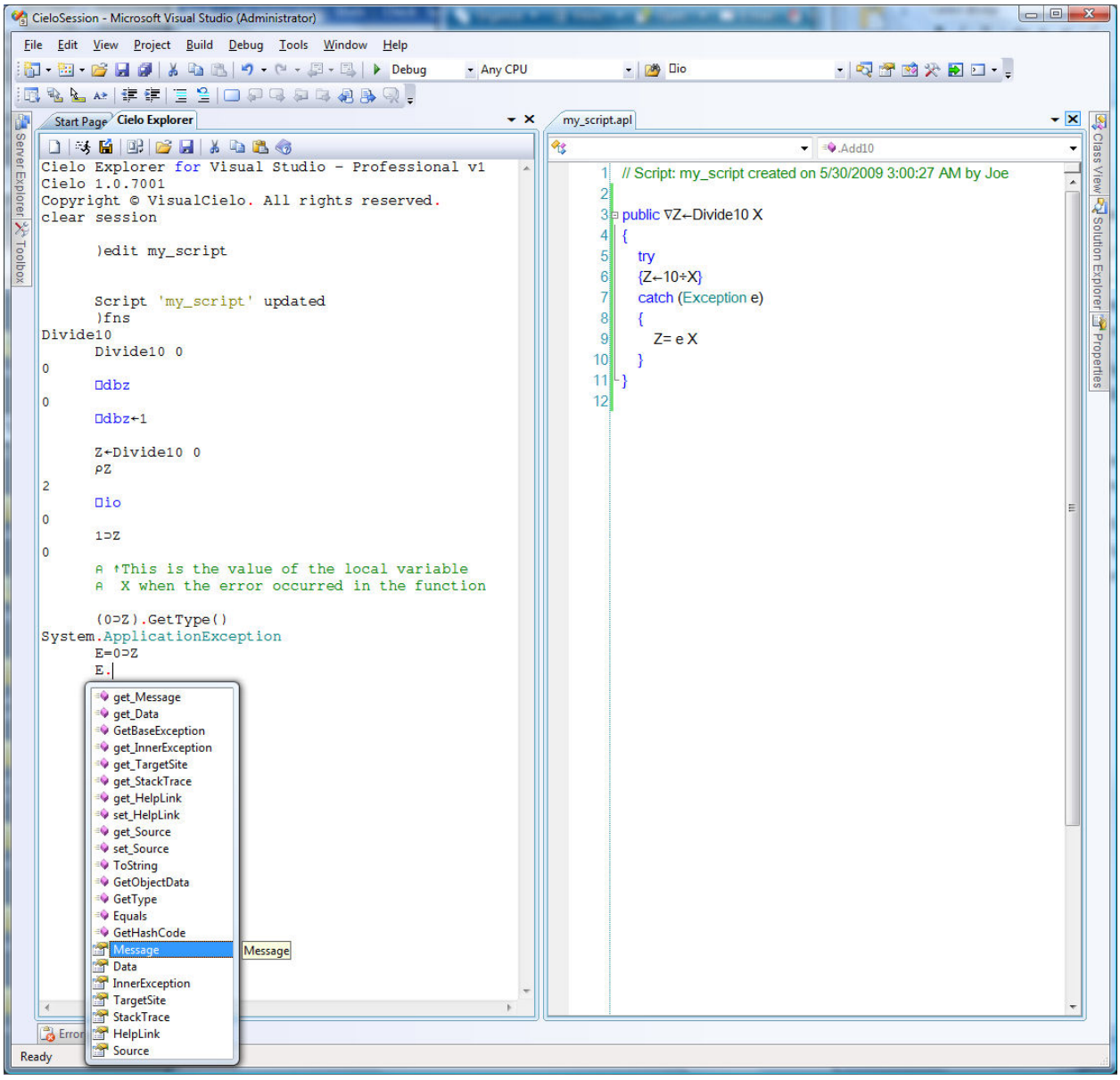
The "my_script" Cielo Explorer script contains the "Divide10" function and the try/catch control statements have been included in the function in case an error occurs.

In this example the □dbz (divide by zero) system property has been set to 1 in the Cielo Explorer session, so that a division by zero, which will be attempted when the argument to the "Divide10" function is 0, will be caught by the catch statement.

The catch statement has been configured to create the Exception object "e" and then pass the result of function as the nested array containing the Exception object as the 1st element and the value of the argument as the 2nd element. Note that for a more complicated function, any of the local variables defined in the function can be passed out as part of the function result when an error occurs.

When the “Divide10 0” statement is executed in the Cielo Explorer session, the divide by zero error is trapped by the catch statement in the “Divide10” function and the specially configured result of the function is returned to the Cielo Explorer session. The local variable X value from within the “Divide10” function is now available to the Cielo Explorer session.

The exception object is also available to the Cielo Explorer session and the methods and properties of this object are investigated using Intellisense.



Finally the exception object's Message property is displayed in the Cielo Explorer session. Note that if desired, nested try/catch/finally control statements can be added to a function in a Cielo script to provide finer control of error messages and local variable information that is to be returned to the Cielo Explorer session.