

From C#: Use VisualAPL Script and VisualAPL Lightweight Array Engine(LAE)

This example illustrates that VisualAPL source code in a VisualAPL Cielo Explorer script can be used directly in a C# or other .Net language project.

The VisualAPL script format is a non-proprietary Unicode text file. The methodology illustrated here is an alternative to compiling VisualAPL source code into a .Net assembly.

In this C# project the VisualAPL script is included in the C# project as an 'embedded resource' file. Alternately, the VisualAPL script could be located on disk or on a web server. The VisualAPL script defining two VisualAPL functions, 'add' and 'minus':

```
function add(a,b){
    return a+b;
}
function minus(a,b){
    return a-b;
}
```

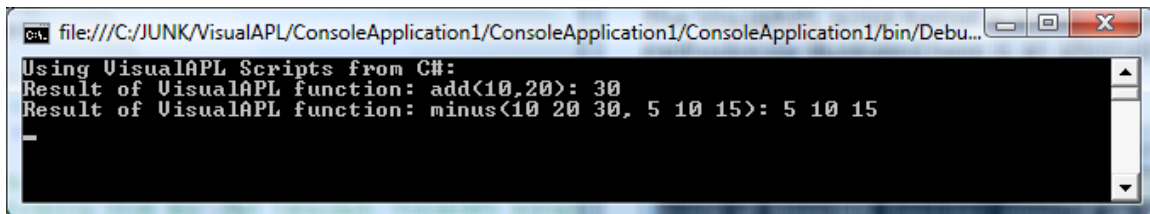
Note that the .Net standard function signature is used. The traditional APL function signature could also be used with left and right arguments.

To see how C# calls the VisualAPL functions, view the 'Program.cs' file in Visual Studio 2008 or Notepad. Here is an excerpt from the C# program:

```
res = aplEngine.Evaluate("add(10,20)");
//^Use the VisualAPL function 'add' on scalar arguments and return the value to this C# project

aplEngine.SetVariable("d", new int[] { 10, 20, 30 });
aplEngine.SetVariable("e", new int[] { 5, 10, 15 });
//^Define two VisualAPL arrays
res = aplEngine.Evaluate("minus(d,e)");
//^Use the VisualAPL function 'minus' on array arguments and return the result to this C# project
```

When this C# 'console' project is run, the output illustrates the result of using VisualAPL functions defined in a VisualAPL Cielo Explorer script:



```
file:///C:/JUNK/VisualAPL/ConsoleApplication1/ConsoleApplication1/ConsoleApplication1/bin/Debu...
Using VisualAPL Scripts from C#:
Result of VisualAPL function: add<10,20>: 30
Result of VisualAPL function: minus<10 20 30, 5 10 15>: 5 10 15
```

Note that to build and compile this C# project, the programmer must have installed Visual Studio 2008 and VisualAPL on their workstation so that the project references are properly established.

When this C# project is built in 'release' format, the necessary VisualAPL .Net assemblies for the VisualAPL LAE will be included for distribution to end users on a royalty-free basis.