Call MATLAB Function from C# Client

This example shows how to call a user-defined MATLAB® function, `myfunc`, from a C# application.

Create a MATLAB function, `myfunc`, in the folder `c:\temp\example`.

```
function [x,y] = myfunc(a,b,c)
x = a + b;
y = sprintf('Hello %s',c);
```

Create the C# application.

```csharp
using System;
using System.Collections.Generic;
using System.Text;

namespace ConsoleApplication2
{
    class Program
    {
        static void Main(string[] args)
        {
            // Create the MATLAB instance
            MLApp.MLApp matlab = new MLApp.MLApp();

            // Change to the directory where the function is located
            matlab.Execute(@"cd c:\temp\example");

            // Define the output
            object result = null;

            // Call the MATLAB function myfunc
            matlab.Feval("myfunc", 2, out result, 3.14, 42.0, "world");

            // Display result
            object[] res = result as object[];

            Console.WriteLine(res[0]);
            Console.WriteLine(res[1]);
            Console.ReadLine();
        }
    }
}
```

In Microsoft® Visual Studio®, add a reference to your C# project to the MATLAB COM object. From the **Project** menu, select **Add Reference**.

Select the **COM** tab in the Add Reference dialog box.

Select the MATLAB application.