

STUDENT ACTIVITY 2.4: UNDERSTAND AND CREATE CLASS LIBRARIES

MTA Course: 10754 Microsoft .NET Fundamentals

Topic: Understand and create class libraries

File name: 10754_Msft.NET_SA_2.4

Lesson Objective

2.4: Understand and create class libraries. *This objective may include but is not limited to:* understanding the logical grouping of classes and the logic behind class libraries (what they are, why they are important)

Resources, software, and additional files needed for this lesson:

- Microsoft® Visual Studio® 2010; students may also use Microsoft Visual C#® 2010 Express or Microsoft Visual Basic® 2010 Express, available free at <http://www.microsoft.com/express/Windows/>.

Directions to the student:

Create a simple class library project with simple methods for adding, subtracting, multiplying, and dividing doubles.

1. Create a class library project in Visual Studio. Name the project **Simple Math Library**.
2. Rename `Class1` to `Arithmetic`.
3. Create methods named `Sum`, `Difference`, `Product`, and `Quotient`. Each should accept two doubles, then return a double with the correct answer (add the two numbers for `Sum`, subtract the numbers for `Difference`, multiply for `Product`, and divide for `Quotient`).
4. Build the solution.

Create a simple application incorporating the dynamic-link library (DLL) file created from the previous instructions.

1. Create a Windows Forms Application project in Visual Studio. Name the project **Simple Math Tester**.
2. Add a `Button` to the form, and create a `Click` event handler for the `Button`.

3. In the event handler, use the methods in the `Arithmetic` class and output the results to the console. If you have time, you can output the results to `Label` controls.
4. Build and run your application; verify that the methods are working correctly.

Verify the results of the project with the instructor.