C++ DLL and Unit Tests in Visual Studio

Goals:

1. Learn to create libraries in C++ that can be reused in other projects.
2. Learn to create automated unit test programs using the framework provided in Visual Studio.
3. Learn to create multiple projects in 1 Visual Studio Solution.

Walkthrough: Creating and Using a Dynamic Link Library in C++

Complete the tutorial found at the following url.


After you complete the dll walkthrough successfully use your project for the unit testing portion of this assignment.

Writing Unit tests for C++ with the Microsoft Unit Testing Framework

Build a unit test for the math functions you built for the previous dll project. Simply add a test project to the solution you already have. Use the knowledge you learn from reading the tutorial found at the following url.


NOTES:

- You do not have complete the tutorial above. Instead build similar test cases for the Math Function DLL you created in the previous project.
  - Include at least 3 tests for each of the 4 method in your dll. Most of these tests will use the Assert::AreEqual method.
- Be sure to test the exception handling found in the divide method. Use the Assert::ExpectException method.
- To run the tests in Visual Studio simply use the “Test” menu item at the top. The instructions at the URL provided are a little confusing on this.

After you complete the tests successfully zip and submit your .cpp and .h files on Easel.

Rubric:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Points</th>
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<tbody>
<tr>
<td>Dll project created successfully with all required methods and a main function that calls the methods.</td>
<td>15</td>
</tr>
<tr>
<td>At least 3 tests for each of the 4 methods are included. Exception tested as instructed.</td>
<td>25</td>
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<tr>
<td>Zip of Visual studio solution submitted to easel so that the completion of the DLL and tests can be verified.</td>
<td>5</td>
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