TDD Approach

1. Test Driven development or TDD is software development process where application is developed using repeatedly testing the software against all test cases.   
   The simple concept is to write and correct the failed tests before writing new code. This avoids duplication of code as we write the unit test cases.
2. The red, green, refactor approach for TDD, helps developers classify their focus into three phases:

Red — think about what you want to develop.

Green — think about how to make your tests pass.

Refactor — think about how to improve your existing implementation.  
  
In the solution provided the red, Green and Refactor method has been used as described below.

1. On first instance, we setup a Xunit code project in Visual Studio and then start writing with a test case that initial fails with just assert statement.   
   -> This makes sure that the test framework is working as expected.
2. We then move with writing a test case with functionality called by a class method which would obviously fail. This is “RED” approach of TDD  
   Create a project library and reference this in unit test case project.   
   We then create a class and the method which return dummy value. Having done this our code will pass which defines the “GREEN” approach.
3. In the next step we remove (skip in our case) the dummy fixture and test case defined in (a) and (b) respectively. This is the “REFACTOR” approach.
4. We would then implement another 3-test case to implement breaking functionality to asset for

- “Buzz”for multiples of 3,

- “Fizz”for multiples of 5   
- “BuzzFizz”for multiples of 15  
With the Red, Green and refactor in mind we would again reiterate the approach to complete the testing functionality.

1. Finally, we would make sure that the functionality is implemented correctly and all the test cases pass.
2. We need to also make sure that any changes to implemented code of business logic should not break any of the test cases.
3. Write the final execution code to see if everything works fine.