# NUnit Test Documentation

## Test Code

using NUnit.Framework;  
using System;  
using CalcLibrary;  
  
namespace CalcLibrary.Tests  
{  
 [TestFixture]  
 public class CalculatorTests  
 {  
 private SimpleCalculator \_calculator;  
  
 [SetUp]  
 public void Setup()  
 {  
 \_calculator = new SimpleCalculator();  
 }  
  
 [TearDown]  
 public void Cleanup()  
 {  
 \_calculator.AllClear();  
 }  
  
 [Test]  
 public void Addition\_TwoNumbers\_ReturnsCorrectSum()  
 {  
 double result = \_calculator.Addition(5, 7);  
 Assert.That(result, Is.EqualTo(12));  
 Assert.That(\_calculator.GetResult, Is.EqualTo(12));  
 }  
  
 [Test]  
 public void Subtraction\_TwoNumbers\_ReturnsCorrectDifference()  
 {  
 double result = \_calculator.Subtraction(10, 4);  
 Assert.That(result, Is.EqualTo(6));  
 Assert.That(\_calculator.GetResult, Is.EqualTo(6));  
 }  
  
 [Test]  
 public void Multiplication\_TwoNumbers\_ReturnsCorrectProduct()  
 {  
 double result = \_calculator.Multiplication(3, 4);  
 Assert.That(result, Is.EqualTo(12));  
 Assert.That(\_calculator.GetResult, Is.EqualTo(12));  
 }  
  
 [Test]  
 public void Division\_TwoNumbers\_ReturnsCorrectQuotient()  
 {  
 double result = \_calculator.Division(8, 2);  
 Assert.That(result, Is.EqualTo(4));  
 Assert.That(\_calculator.GetResult, Is.EqualTo(4));  
 }  
  
 [Test]  
 public void Division\_ByZero\_ThrowsArgumentException()  
 {  
 var ex = Assert.Throws<ArgumentException>(() => \_calculator.Division(5, 0));  
 Assert.That(ex.Message, Is.EqualTo("Second Parameter Can't be Zero"));  
 }  
  
 [Test]  
 public void AllClear\_ResetsResultToZero()  
 {  
 \_calculator.Addition(10, 5); // Sets result to 15  
 \_calculator.AllClear();  
 Assert.That(\_calculator.GetResult, Is.EqualTo(0));  
 }  
 }  
}

## Test Output

