


# Testing using UFT Pro (LeanFT) and NUnit in C#

## Overview

In this tutorial, we will create a NUnit Test Case in C#, using [UFT Pro \(LeanFT\)](#) for browser automation.

 Learn more



[UFT Pro \(LeanFT\)](#) is an advanced functional test automation solution that was designed specifically for continuous integration and continuous testing. It provides tools and capabilities that easily and efficiently create robust test automation in the developer IDE and integrate it seamlessly into the CI process. LeanFT enables automating applications in a wide range of technologies, including web, mobile and desktop.

## Description

The following automated test uses LeanFT library in order to navigate through a website and validate the price shown for a product versus the one presented when it was added to the shopping cart.

### LeanFtTest.cs

```
using System;
using NUnit.Framework;
using HP.LFT.SDK;
using HP.LFT.SDK.Web;
using HP.LFT.Verifications;

namespace LeanFT_Demo
{
    [TestFixture]
    public class LeanFtTest : UnitTestClassBase
    {
        [TestFixtureSetUp]
        public void TestFixtureSetUp()
        {
            // Setup once per fixture
        }

        [SetUp]
        public void SetUp()
        {
            // Before each test
        }

        [Test]
        public void TotalPriceTest()
        {
            //Launch Chrome and navigate to the online store application
            IBrowser browser = BrowserFactory.Launch(BrowserType.Chrome);
            browser.Navigate("http://www.advantageonlineshopping.com");
        }
    }
}
```

```

//Click the "Tablets" category
ILink tabletsLink = browser.Describe<ILink>(new LinkDescription { Id = @"TabletsImg" });
tabletsLink.DisplayName = "Tablets";
tabletsLink.Click();

//Click a specific tablet
IImage tabletElitePad = browser.Describe<IImage>(new ImageDescription
{
    Src = @"http://www.advantageonlineshopping.com/catalog/fetchImage?image_id=3100",
    ClassName = @"imgProduct"
});
tabletElitePad.DisplayName = "Tablet ElitePad";
tabletElitePad.Click();

//Add it to the cart
browser.Describe<IButton>(new ButtonDescription { Name = @"ADD TO CART" }).Click();

//Store its price
String tabletPrice = browser.Describe<IWebElement>(new WebElementDescription { ClassName = @"roboto-
medium cart-total ng-binding"}).InnerText;

//Check out
browser.Describe<IButton>(new ButtonDescription { ClassName = @"roboto-medium ng-binding"}).
Click();

//Verify that the total price presented in the purchase summary page, is exactly the price of the
selected tablet
String totalPrice = browser.Describe<IWebElement>(new WebElementDescription {
    ClassName = @"roboto-medium totalValue ng-binding",
    InnerText = As.RegExp(@"\$.*")
}).InnerText;

Verify.AreEqual(tabletPrice, totalPrice, "Verify total price");
}

[TearDown]
public void TearDown()
{
    // Clean up after each test
}

[TestFixtureTearDown]
public void TestFixtureTearDown()
{
    // Clean up once per fixture
}
}
}

```

After successfully running the Test Case and generating the NUnit XML report (e.g., [results.xml](#)), it can be imported to Xray via the REST API or the **Import Execution Results** action within the Test Execution.

**Description**

Execution for successful use case.

**Tests**

+ Add

**Overall Execution Status**

1 PASS

TOTAL TESTS: 1

**FILTERS**

Test Set	Assignee	Status	Component	Search
All	All			Contains text <span>✕ Clear</span>

Show 100 entries Columns

Key	Summary	Test Type	#Req	#Def	Test Sets	Assignee	Status
1	CALC-1291 TotalPriceTest	Generic	0	0		Administrator	PASS

JUnit's Test Case is mapped to a Generic Test in Jira, and the **Generic Test Definition** field contains the name of the namespace, class, and the method name that implements the Test case.

The Execution Details of the Generic Test contains information about the context, which in this case corresponds to "TestCase" followed by the name of the namespace, class, and the method name that implements the Test case.

Execution Status PASS

Started On: 02/Nov/17 4:20 PM Finished On: 02/Nov/17 4:20 PM

Assignee: Administrator Versions: -  
Executed By: Administrator Revision: -  
Tests environments: -

Comment Preview Comment

Execution Defects (0) Create Defect Create Sub-Task Add Defects

Execution Evidences (0) Add Evidences

Execution Details

Test Description

Test Issue Links (2)

Test Details

Test Type: Generic  
Definition: LeanFT\_Demo.LeanFTTest.TotalPriceTest

Results

Context	Error Message	Duration	Status
TestCase LeanFT_Demo.LeanFTTest.TotalPriceTest	-	12 sec	PASS

If the Test fails, for example, due to a missing web element (e.g., [results.xml](#)), then you will see the overall Test Run being marked as FAIL as well as the detailed information on the exception that was raised during the execution of the automated test.

Execution Status

FAIL

Assignee: Administrator

Executed By: Administrator

Tests environments: -

Started On: 02/Nov/17 4:18 PM

Finished On: 02/Nov/17 4:18 PM

Versions: -

Revision: -

Comment

Preview Comment

Execution Defects (0)

Create Defect

Create Sub-Task

Add Defects

Execution Evidences (0)

Add Evidences

Execution Details

Test Description

Test Issue Links (2)

Test Details	
Test Type:	Generic
Definition:	LeanFT_Demo.LeanFTTest.TotalPriceTest

Results			
Context	Error Message	Duration	Status
TestCase LeanFT_Demo.LeanFTTest.TotalPriceTest	HP.LFT.SDK.ReplayObjectNotFoundException : Cannot identify the object "Web.IButton". Verify that this object's properties match an object currently displayed in your application. at HP.LFT.SDK.Core.ClassModel.TestObjectExecuterBase.HandleReplayError(Int32 errorCode, IDictionary`2 data) at HP.LFT.SDK.Core.Communication.CommunicationClient.HandleError(Action`2 onError, Int32 status, IDictionary`2 data) at HP.LFT.SDK.Core.Communication.CommunicationClient.Send(String messageType, IDictionary`2 data, Action`2 onError)	34 sec	FAIL

Note that if you're using LeanFT's "Verify" method, that verification won't raise an exception by itself. The Test will appear as passed (if it didn't fail until then) even if the verification itself failed.

The "Verify" class' method returns a Boolean value reflecting the verification result. If it is "false", it is possible to manually throw an exception to make the test status reflect the actual verification result.

# References

- <https://software.microfocus.com/ja-jp/software/leanft>