

NUnit - Unit testing in C#

Curriculum

1. Unit testing introduction
 - a. What unit test mean and importance
 - b. Unit test coverages: code, branch and statement
 - c. Unit testing in Java
2. Nunit introduction
 - a. What is Nunit
 - b. Installing and configuring Nuint in Visual Studio
 - c. Running Nunit
3. A complete Nunit Test in C#(step by step)
 - a. Create your C# project in Visual Studio
 - b. Add Nunit Dll to your Project
 - c. Find Nunit Assembly and check it
 - d. Add a package to your project and give meaningful name like "testCalculator"
 - e. Add a test class in your test package and "using Nunit.Framework;"
 - f. Annotate methods appropriately
 - i. [TestFixtureSetUp]
 - ii. [Setup]
 - iii. [Test]
 - iv. [TearDown]
 - v. [TestFixtureTearDown]
 - g. Build and Run the test
 - h. Read the report
4. Assertions
 - a. Equality Assertions
 - b. Identity Assertions
 - c. Comparison Assertions
 - d. Type Assertions
 - e. Condition Assertions
 - f. Utility Assertions
 - g. String Assertions
5. Attributes/ Annotations
 - a. TesFixture
 - b. Test
 - c. Setup
 - d. TearDown
 - e. TestFixtureSetUp
 - f. TestFixtureTearDown
 - g. ExpectedException
 - h. Platform
 - i. Category
 - j. Explicit
 - k. Suite
 - l. Ignore
6. Assumptions
7. Constraints

- a. Alphabetic list of constraint
 - b. Constraint by category
- 8. TestCaseData
 - a. Explicit(string)
 - b. Ignore(string)
 - c. Returns
 - d. SetCategory(string)
 - e. SetDescription(string)
 - f. SetName(string)
 - g. SetProperty(string, string)
- 9. TestFixtureData
- 10. TestContext
 - a. Current context: Out, Error, Progress
 - b. Test Parameters: Count, Name, this, Exists, Get
 - c. Properties of current context
 - i. ID
 - ii. Name
 - iii. FullName
 - iv. MethodName
 - v. Properties
 - d. Others: Result, Test Directory, WorkDirectory
- 11. Assertion Helper
- 12. ListMapper
- 13. Running Tests
 - a. Using Visual Studio
 - b. NUnit GUI
 - c. Console runner
 - d. Console Command Line
 - e. NUnit Test Project
 - f. NUnit runner