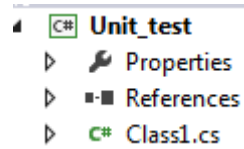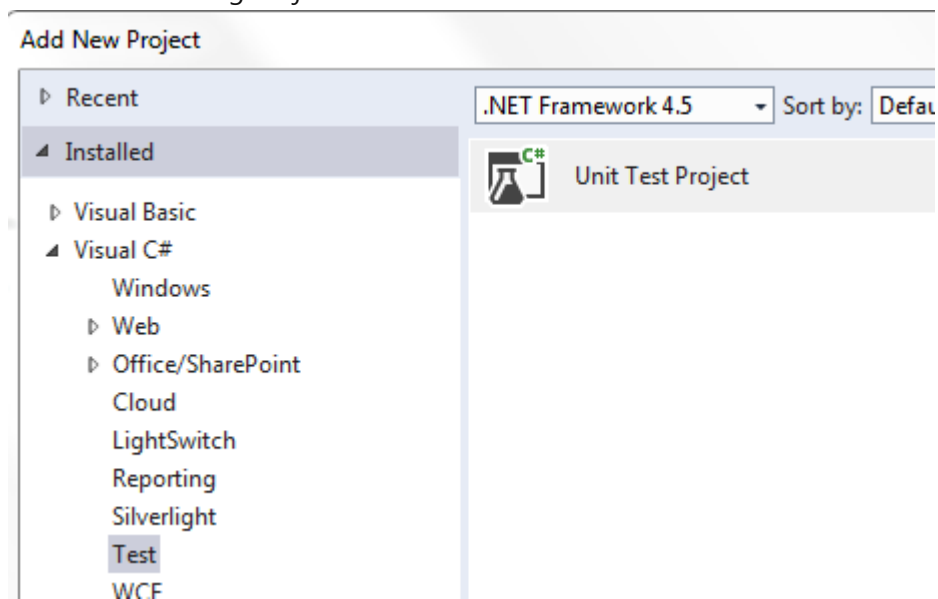Simple Unit Test cases in C#

1. Add a Class Library project
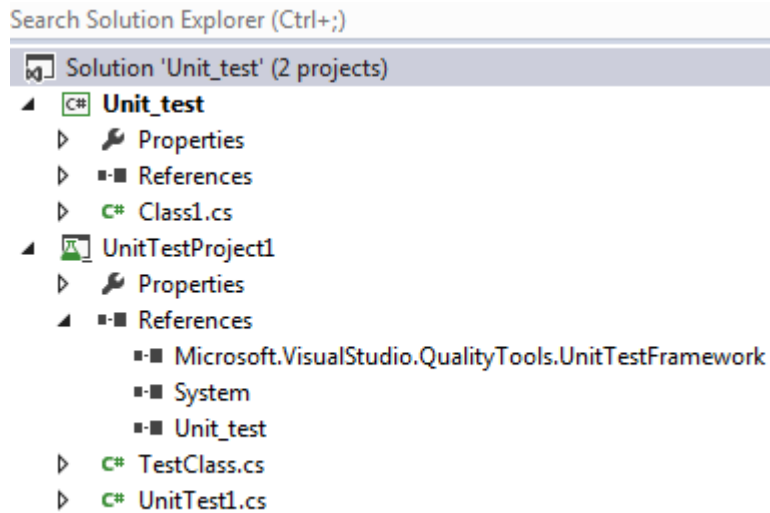


```csharp
namespace Unit_test
{
    public class Class1
    {
        public int Add(int num1, int num2)
        {
            return num1 + num2;
        }
    }
}
```

2. Create Unit Testing Project as Follows

3.

4.

5. Step 3. **Add reference of previous class library** to this newly created project
6. Step 4. Create Test class as follows

```csharp
namespace UnitTestProject1
{
    class TestClass
    {
        [TestMethod]
        public void TestAdd()
        {
            //Arrange
            Class1 maths = new Class1();

            //Act
            int result = maths.Add(6,5);

            //Assert
            Assert.AreEqual<int>(11, result);
        }
    }
}
```

Explanation – As you can see Unit Testing follows simple three steps.

- *Arrange* - Create objects and prepare everything needed to test functionality
- *Act* – Execute and get the output
- *Assert* – Compare final output with expected Output

- Step 5. Build your solution and open test explorer **window from Test > Windows > Test Explorer**
- Step 6. **Right click Test cases and say Run Selected Tests.**

-
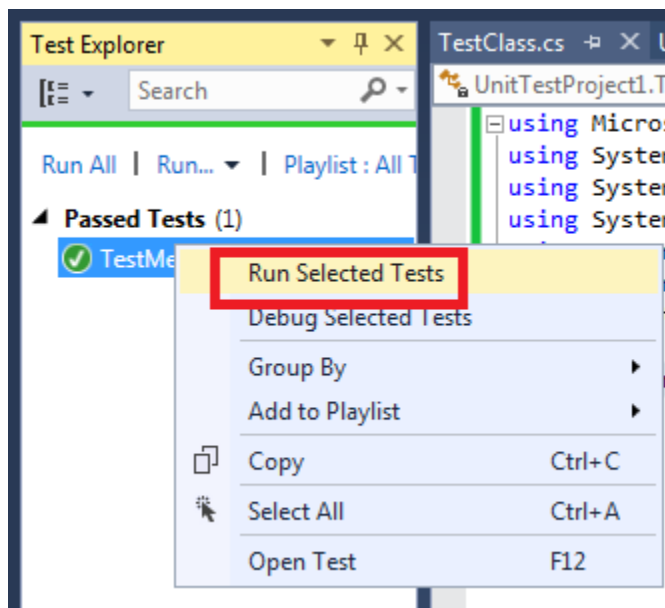
TestMethod1

    Source: UnitTest1.cs line 11

✅ Test Passed - TestMethod1

    Elapsed time: 2 ms