Swinburne University of Technology

COS20007 Object Oriented Programming

Case Study Iteration 1 - Identifiable Object

PDF generated at 18:03 on Monday 18th September, 2023

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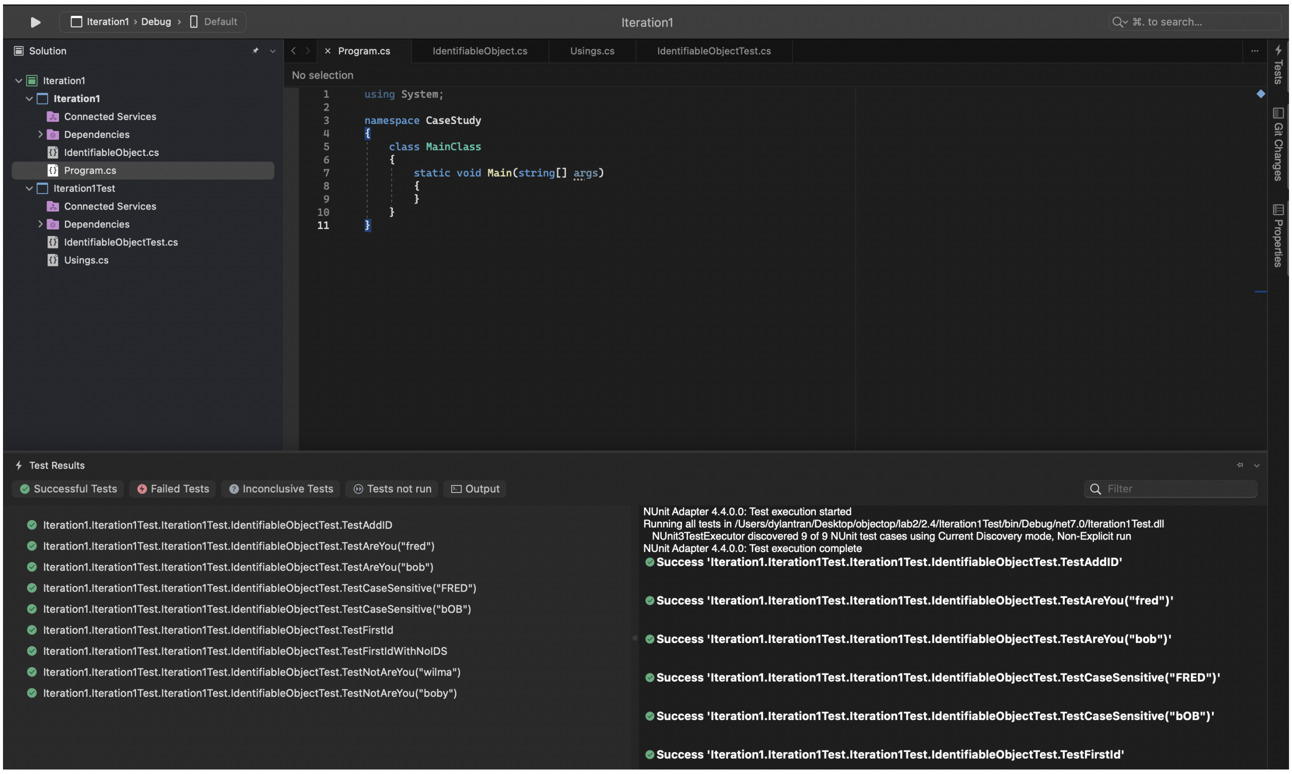
```
using System;

namespace CaseStudy
{
    public class IdentifiableObject
    {
        private List<string> _identifiers = new List<string>();

        //Constructor of Identifiable Object
        public IdentifiableObject(string[] idents)
        {
            foreach (string id in idents)
            {
                _identifiers.Add(id.ToLower());
            }
        }

        //Check if the passed identifier is in the _identifier
        public bool AreYou(string id)
        {
            if (_identifiers.Contains(id.ToLower()))
            {
                return true;
            }
            return false;
        }

        //Return first identifier from _identifiers

        public string FirstID
        {
            get
            {
                return _identifiers.First();
            }
        }

        //Add identifier to _identifiers
        public void AddIdentifier(string id)
        {
            _identifiers.Add(id.ToLower());
        }
    }
}
```

```
using System;
using NUnit.Framework;
using CaseStudy;

namespace CaseSTudyTest
{
    public class IdentifiableObjectTest
    {
        private IdentifiableObject _identifiableObject;
        private IdentifiableObject _identifiableObjectEmty;

        //Set up for test
        [SetUp]
        public void Setup()
        {
            _identifiableObject = new IdentifiableObject(new string[] { "fred", "bob" });
            _identifiableObjectEmty = new IdentifiableObject(new string[] { });
        }

        //Test Are You
        [TestCase("fred")]
        [TestCase("bob")]
        public void TestAreYou(string ident)
        {
            Assert.That(_identifiableObject.AreYou(ident), Is.EqualTo(true), "Test Are You");
        }

        //Test Not Are You
        [TestCase("wilma")]
        [TestCase("boby")]
        public void TestNotAreYou(string ident)
        {
            Assert.That(_identifiableObject.AreYou(ident), Is.EqualTo(false), "Test Not Are You");
        }

        //Test Case Sensitive
        [TestCase("FRED")]
        [TestCase("bOB")]
        public void TestCaseSensitive(string ident)
        {
            Assert.That(_identifiableObject.AreYou(ident), Is.EqualTo(true), "Test Case Sensitive");
        }

        //Test First ID
        [Test]
        public void TestFirstId()
        {
            Assert.That(_identifiableObject.FirstID, Is.EqualTo("fred"), "Test First ID");
        }

        //Test First ID With No IDs
        [Test]
        public void TestFirstIdWithNoIDS()
        {
            Assert.That(_identifiableObjectEmty.FirstID, Is.EqualTo(""), "Test First ID With No IDs");
        }

        //Test Add ID
        [Test]
        public void TestAddID()
        {
            _identifiableObject.AddIdentifier("wilma");
            Assert.That(_identifiableObject.AreYou("wilma"), Is.EqualTo(true), "Test Add ID");
        }
    }
}
```



```
using System;

namespace CaseStudy
{
    class MainClass
    {
        static void Main(string[] args)
        {
        }
    }
}
```

```
Iteration1.Iteration1Test.Iteration1Test.IdentifiableObjectTest.TestAddID
Iteration1.Iteration1Test.Iteration1Test.IdentifiableObjectTest.TestAreYou("fred")
Iteration1.Iteration1Test.Iteration1Test.IdentifiableObjectTest.TestAreYou("bob")
Iteration1.Iteration1Test.Iteration1Test.IdentifiableObjectTest.TestCaseSensitive("FRED")
Iteration1.Iteration1Test.Iteration1Test.IdentifiableObjectTest.TestCaseSensitive("bOB")
Iteration1.Iteration1Test.Iteration1Test.IdentifiableObjectTest.TestFirstId
Iteration1.Iteration1Test.Iteration1Test.IdentifiableObjectTest.TestFirstIdWithNoIDS
Iteration1.Iteration1Test.Iteration1Test.IdentifiableObjectTest.TestNotAreYou("wilma")
Iteration1.Iteration1Test.Iteration1Test.IdentifiableObjectTest.TestNotAreYou("boby")
```

```
NUnit Adapter 4.4.0.0: Test execution started
Running all tests in /Users/dylantran/Desktop/objectop/lab2/2.4/Iteration1Test/bin/Debug/net7.0/Iteration1Test.dll
  NUnit3TestExecutor discovered 9 of 9 NUnit test cases using Current Discovery mode, Non-Explicit run
NUnit Adapter 4.4.0.0: Test execution complete
Success 'Iteration1.Iteration1Test.Iteration1Test.IdentifiableObjectTest.TestAddID'

Success 'Iteration1.Iteration1Test.Iteration1Test.IdentifiableObjectTest.TestAreYou("fred")'

Success 'Iteration1.Iteration1Test.Iteration1Test.IdentifiableObjectTest.TestAreYou("bob")'

Success 'Iteration1.Iteration1Test.Iteration1Test.IdentifiableObjectTest.TestCaseSensitive("FRED")'

Success 'Iteration1.Iteration1Test.Iteration1Test.IdentifiableObjectTest.TestCaseSensitive("bOB")'

Success 'Iteration1.Iteration1Test.Iteration1Test.IdentifiableObjectTest.TestFirstId'
```