Swinburne University of Technology

COS20007 Object Oriented Programming

Case Study Iteration 1 - Identifiable Object

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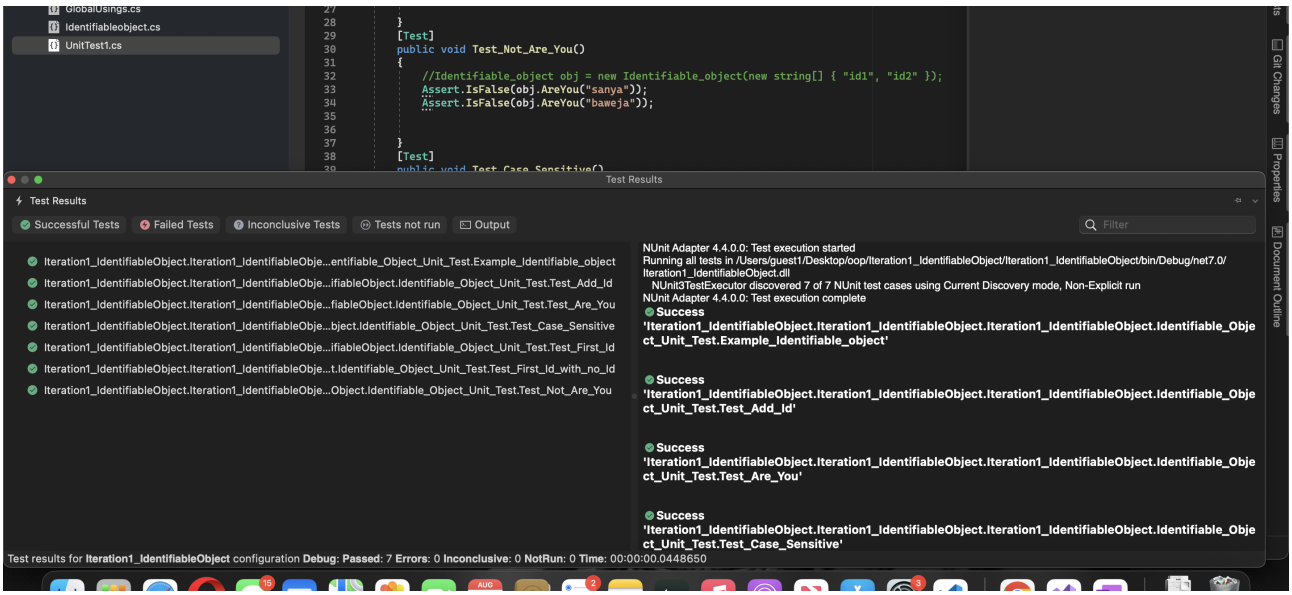
```
using System;
namespace Iteration1_IdentifiableObject
{
    public class Identifiable_object
    {



        private List<string> _identifiers = new List<string>(); //in initialising a new list


        public Identifiable_object(string[] idents)  //this is the constructor taking in a single argument
        {
            //Console.WriteLine("Constructor");
            //         Console.ReadLine();
            foreach (string ide in idents)
            {
                Addidentifier(ide);
            }
                //_identifiers.AddRange(idents);


        }
        public bool AreYou(string id)  //method taking in string parameter
        {
            foreach (string identify in _identifiers) // loop looping through each string
            {
                if (identify == id)  //condition to compare the variable identify and id which returns true if they match.
                {
                    return true;
                }
                //else
                //{
    //                return false;
    //            }
            }return false;  // exits the loop

        }


        public string FirstId
        {
            get  //read only property
            {
                if (_identifiers.Count > 0)  //checks if there is atleast 1 identifier and returns the first identifier from list.
                {
                    return _identifiers.First();
                }
```

```
49                  else
50                  {
51                      return ("");  //if there are no identifier returns an empty
    ↪  string.
52                  }
53              }
54
55
56          }
57          public void Addidentifier(string id)
58          {
59              id = id.ToLower();  //converts the id to lowercase for uniformity
60              _identifiers.Add(id);  //adds the id to the list.
61          }
62
63      }
64  }
65
```

```
namespace Iteration1_IdentifiableObject;

[TestFixture()]
public class Identifiable_Object_Unit_Test
{
    Identifiable_object obj;



    [SetUp()]
    public void Constructor_Identifiable_Object_Unit_Test()
    {
        obj = new Identifiable_object(new string[] { "id1", "id2" });
    }
    [Test]
    public void Example_Identifiable_object()
    {

        Assert.Pass();
    }
    [Test]
    public void Test_Are_You()
    {

        Assert.IsTrue(obj.AreYou("id1"));
        Assert.IsTrue(obj.AreYou("id2"));

    }
    [Test]
    public void Test_Not_Are_You()
    {
        //Identifiable_object obj = new Identifiable_object(new string[] { "id1",
↪   "id2" });
        Assert.IsFalse(obj.AreYou("sanya"));
        Assert.IsFalse(obj.AreYou("baweja"));


    }
    [Test]
    public void Test_Case_Sensitive()
    {
        //Identifiable_object obj = new Identifiable_object(new string[] { "id1",
↪   "id2" });
        Assert.IsFalse(obj.AreYou("ID1"));
        Assert.IsFalse(obj.AreYou("ID2"));

    }
    [Test]
    public void Test_First_Id()
    {
        //Identifiable_object obj = new Identifiable_object(new string[] { "id1",
↪   "id2" });
        Assert.IsTrue(obj.FirstId == "id1");
```

```
51
52      }
53      [Test]
54      public void Test_First_Id_with_no_Id()
55      {
56          Identifiable_object obj = new Identifiable_object(new string[] {});
57          Assert.IsTrue(obj.FirstId == "");
58
59      }
60      [Test]
61      public void Test_Add_Id()
62      {
63          //Identifiable_object obj = new Identifiable_object(new string[] {"id1",
    ↪  "id2"});
64          obj.Addidentifier("id3");
65          Assert.IsTrue(obj.AreYou("id1"));
66          Assert.IsTrue(obj.AreYou("id2"));
67          Assert.IsTrue(obj.AreYou("id3"));
68      }
69
70  }
```


GlobalUsings.cs
Identifiableobject.cs
UnitTest1.cs
}
[Test]
public void Test_Not_Are_You()
{
//Identifiable_object obj = new Identifiable_object(new string[] { "id1", "id2" });
Assert.IsFalse(obj.AreYou("sanya"));
Assert.IsFalse(obj.AreYou("baweja"));
}
[Test]
Test Results
Test Results
Successful Tests
Failed Tests
Inconclusive Tests
Tests not run
Output
Filter
Iteration1_IdentifiableObject.Iteration1_IdentifiableObje...entifiable_Object_Unit_Test.Example_Identifiable_object
Iteration1_IdentifiableObject.Iteration1_IdentifiableObje...ifiableObject.Identifiable_Object_Unit_Test.Test_Add_Id
Iteration1_IdentifiableObject.Iteration1_IdentifiableObje...fiableObject.Identifiable_Object_Unit_Test.Test_Are_You
Iteration1_IdentifiableObject.Iteration1_IdentifiableObje...bject.Identifiable_Object_Unit_Test.Test_Case_Sensitive
Iteration1_IdentifiableObject.Iteration1_IdentifiableObje...ifiableObject.Identifiable_Object_Unit_Test.Test_First_Id
Iteration1_IdentifiableObject.Iteration1_IdentifiableObje...t.Identifiable_Object_Unit_Test.Test_First_Id_with_no_Id
Iteration1_IdentifiableObject.Iteration1_IdentifiableObje...Object.Identifiable_Object_Unit_Test.Test_Not_Are_You
NUnit Adapter 4.4.0.0: Test execution started
Running all tests in /Users/guest1/Desktop/oop/Iteration1_IdentifiableObject/Iteration1_IdentifiableObject/bin/Debug/net7.0/Iteration1_IdentifiableObject.dll
NUnit3TestExecutor discovered 7 of 7 NUnit test cases using Current Discovery mode, Non-Explicit run
NUnit Adapter 4.4.0.0: Test execution complete
Success
'Iteration1_IdentifiableObject.Iteration1_IdentifiableObject.Iteration1_IdentifiableObject.Identifiable_Object_Unit_Test.Example_Identifiable_object'
Success
'Iteration1_IdentifiableObject.Iteration1_IdentifiableObject.Iteration1_IdentifiableObject.Identifiable_Object_Unit_Test.Test_Add_Id'
Success
'Iteration1_IdentifiableObject.Iteration1_IdentifiableObject.Iteration1_IdentifiableObject.Identifiable_Object_Unit_Test.Test_Are_You'
Success
'Iteration1_IdentifiableObject.Iteration1_IdentifiableObject.Iteration1_IdentifiableObject.Identifiable_Object_Unit_Test.Test_Case_Sensitive'
Test results for Iteration1_IdentifiableObject configuration Debug: Passed: 7 Errors: 0 Inconclusive: 0 NotRun: 0 Time: 00:00:00.0448650
Git Changes
Properties
Document Outline