Swinburne University of Technology

COS20007 Object Oriented Programming

Case Study Iteration 1 - Identifiable Object

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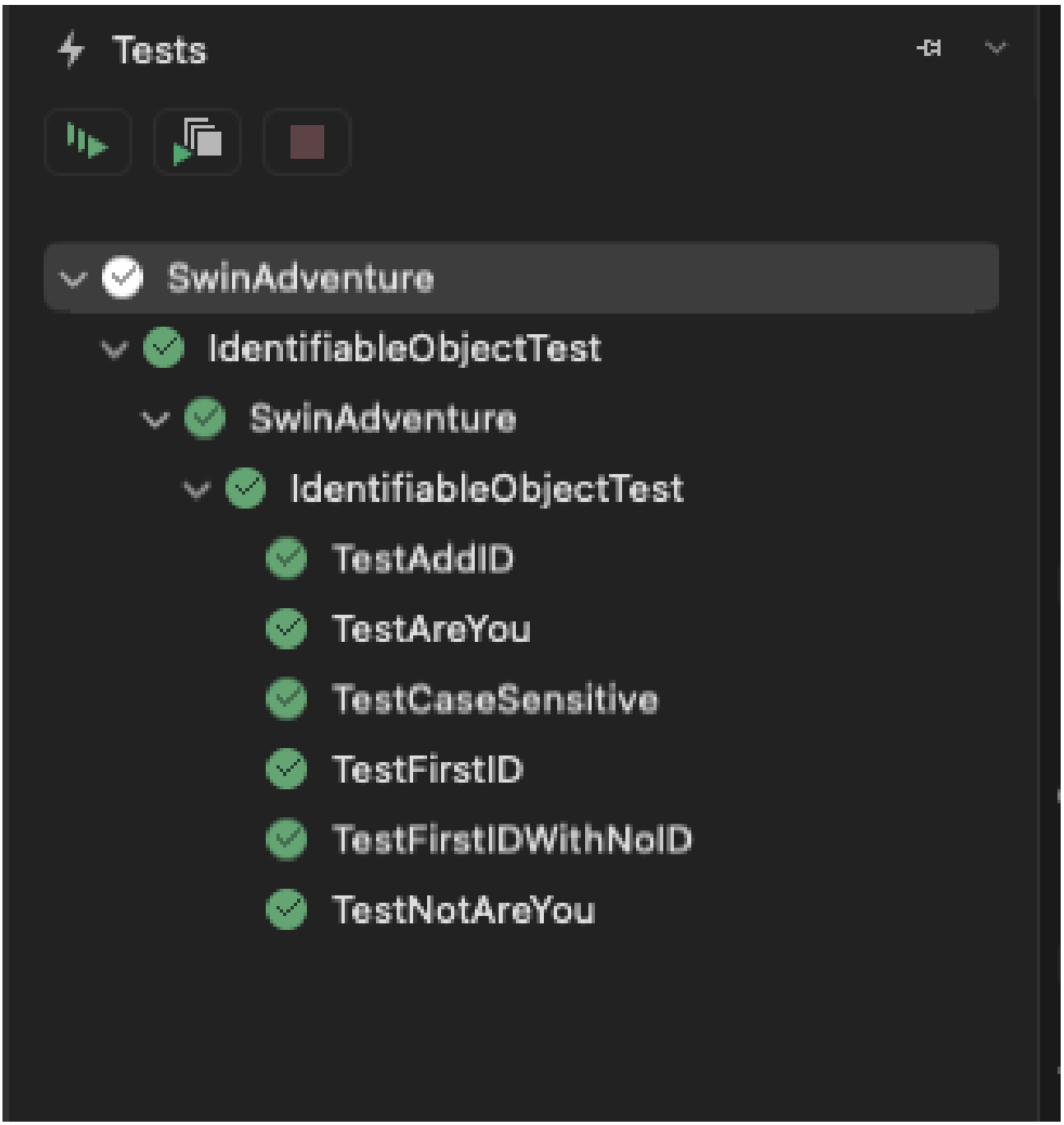
```
using System;

namespace SwinAdventure
{
    public class IdentifiableObject
    {
        private List<string> _identifiers;

        public IdentifiableObject(string[] idents)
        {
            _identifiers = new List<string>();
            foreach(string s in idents)
            {
                _identifiers.Add(s.ToLower());
            }
        }

        public bool AreYou(string id)
        {
            return _identifiers.Contains(id.ToLower());
        }

        public string FirstId
        {
            get
            {
                return _identifiers.Count == 0 ? "" : _identifiers.First();
            }
        }

        public List<string> AllIdentifiers
        {
            get
            {
                return _identifiers;
            }
        }

        public void AddIdentifiers(string id)
        {
            _identifiers.Add(id.ToLower());
        }
    }
}

```

```
/*
Using.cs - Importer

global using NUnit.Framework;
global using System;
global using System.Collections.Generic;
global using System.Linq;

 */

namespace SwinAdventure
{
    public class IdentifiableObjectTest
    {
        private IdentifiableObject _testIdentifiableObject;
        private string _testStr;
        private string _notInIdentifiableObject;
        private string _caseSensitive;
        private string _firstIdentifier;
        private string _notFirstIdentifier;
        private string _addIdentifier;
        private string[] _testStrArray;

        private IdentifiableObject _testIdentifiableObjectEmpty;
        private string _testStrEmpty;
        private string _firstIdentifierEmpty;
        private string[] _testStrArrayEmpty;

        [SetUp]
        public void Setup()
        {
            _testStr = "Simon";
            _notInIdentifiableObject = "Haha";
            _caseSensitive = "oNaNa";
            _firstIdentifier = "onana";
            _notFirstIdentifier = "Mason";
            _addIdentifier = "Rashford";
            _testStrArray = new string[] {"Onana", "Mount", "Ramnus", "Amrabat" };
            _testIdentifiableObject = new IdentifiableObject(_testStrArray);
            _testIdentifiableObject.AddIdentifiers(_testStr);

            _testStrEmpty = "";
            _firstIdentifierEmpty = _testStrEmpty;
            _testStrArrayEmpty = new string[] { };
            _testIdentifiableObjectEmpty = new
↪   IdentifiableObject(_testStrArrayEmpty);
            _testIdentifiableObjectEmpty.AddIdentifiers(_testStrEmpty);
        }

        [Test]
        public void TestAreYou()
        {
            Assert.IsTrue(_testIdentifiableObject.AreYou(_testStr));
```

```
53          }
54
55          [Test]
56          public void TestNotAreYou()
57          {
58              Assert.IsFalse(_testIdentifiableObject.AreYou(_notInIdentifiableObject));
59          }
60
61          [Test]
62          public void TestCaseSensitive()
63          {
64              Assert.IsTrue(_testIdentifiableObject.AreYou(_caseSensitive));
65          }
66
67          [Test]
68          public void TestFirstID()
69          {
70              Assert.AreEqual(_firstIdentifier, _testIdentifiableObject.FirstId);
71              Assert.AreNotEqual(_notFirstIdentifier, _testIdentifiableObject.FirstId);
72          }
73
74          [Test]
75          public void TestFirstIDWithNoID()
76          {
77              Assert.AreEqual(_firstIdentifierEmpty,
    ↪ _testIdentifiableObjectEmpty.FirstId);
78          }
79
80          [Test]
81          public void TestAddID()
82          {
83              _testIdentifiableObject.AddIdentifiers(_addIdentifier);
84              Assert.IsTrue(_testIdentifiableObject.AreYou(_addIdentifier.ToUpper()));
85          }
86      }
87  }
88
89
```


Tests
SwinAdventure
IdentifiableObjectTest
SwinAdventure
IdentifiableObjectTest
TestAddID
TestAreYou
TestCaseSensitive
TestFirstID
TestFirstIDWithNoID
TestNotAreYou