

SWINBURNE UNIVERSITY OF TECHNOLOGY

COS20007 OBJECT ORIENTED PROGRAMMING

Case Study Iteration 1 - Identifiable Object

PDF generated at 11:43 on Sunday 17th September, 2023

```
1  using System;
2  using System.Collections;
3  using System.Collections.Generic;
4  using System.Linq;
5
6  namespace SwinAdventure
7  {
8      public class IdentifiableObject
9      {
10         private List<string> _identifiers;
11
12         public IdentifiableObject(string[] ids)
13         {
14             _identifiers = new List<string>();
15             foreach (string ident in ids)
16             {
17                 _identifiers.Add(ident.ToLower());
18             }
19         }
20
21         public bool AreYou(string id)
22         {
23             return _identifiers.Contains(id.ToLower());
24         }
25
26         public string FirstID
27         {
28             get
29             {
30                 if (_identifiers.Count == 0)
31                 {
32                     return "";
33                 }
34                 else
35                 {
36                     return _identifiers.First();
37                 }
38             }
39         }
40
41         public void AddIdentifier(string id)
42         {
43             _identifiers.Add(id.ToLower());
44         }
45     }
46 }
```

```
1  using System;
2  using System.Collections;
3  using System.Collections.Generic;
4  using System.Linq;
5  using NUnit.Framework;
6
7  namespace SwinAdventure
8  {
9      [TestFixture]
10     public class IdentifiableObjectTest
11     {
12         private IdentifiableObject _testObject;
13
14         private IdentifiableObject _testObject_emp;
15
16         [SetUp]
17         public void Setup()
18         {
19             _testObject = new IdentifiableObject(new string[] { "fred", "mark"
↵ });
20             _testObject_emp = new IdentifiableObject(new string[] { });
21         }
22
23         [Test]
24         public void TestAreYou()
25         {
26             Assert.That(_testObject.AreYou("fred"), Is.True);
27         }
28
29         [Test]
30         public void TestNotAreYou()
31         {
32             Assert.That(_testObject.AreYou("wilma"), Is.False);
33         }
34
35         [Test]
36         public void Insensitive()
37         {
38             Assert.That(_testObject.AreYou("FRED"), Is.True);
39         }
40
41         [Test]
42         public void TestFirstId()
43         {
44             Assert.That(_testObject.FirstID, Is.EqualTo("fred"));
45             Assert.That(_testObject.FirstID, Is.Not.EqualTo("bob"));
46         }
47
48         [Test]
49         public void TestFirstIdWithNoId()
50         {
51             Assert.That(_testObject_emp.FirstID, Is.EqualTo(""));
52         }
53     }
```

```
53
54     [Test]
55     public void TestAddID()
56     {
57         _testObject_emp.AddIdentifier("wilma");
58         Assert.That(_testObject_emp.AreYou("WILMA"), Is.True);
59     }
60 }
61
62 }
63
```

