

SWINBURNE UNIVERSITY OF TECHNOLOGY

COS20007 OBJECT ORIENTED PROGRAMMING

Case Study Iteration 1 - Identifiable Object

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

```
1  /*
2  Using.cs - Importer
3
4  global using NUnit.Framework;
5  global using System;
6  global using System.Collections.Generic;
7  global using System.Linq;
8
9  */
10
11 namespace SwinAdventure
12 {
13     [TestFixture]
14     public class IdentifiableObjectTest
15     {
16         private IdentifiableObject _testIdentifiableObject;
17
18         private IdentifiableObject _testIdentifiableObjectEmpty;
19
20
21         [SetUp]
22         public void Setup()
23         {
24             _testIdentifiableObject = new IdentifiableObject(new string[] { "Onana",
↪ "Mount", "Ramnus", "Amrabat" });
25             _testIdentifiableObject.AddIdentifiers("Simon");
26
27             _testIdentifiableObjectEmpty = new IdentifiableObject(new string[] { });
28             _testIdentifiableObjectEmpty.AddIdentifiers("");
29         }
30
31         [Test]
32         public void TestAreYou()
33         {
34             Assert.IsTrue(_testIdentifiableObject.AreYou("Mount"));
35         }
36
37         [Test]
38         public void TestNotAreYou()
39         {
40             Assert.IsFalse(_testIdentifiableObject.AreYou("Minh"));
41         }
42
43         [Test]
44         public void TestCaseSensitive()
45         {
46             Assert.IsTrue(_testIdentifiableObject.AreYou("sImOn"));
47         }
48
49         [Test]
50         public void TestFirstID()
51         {
52             Assert.AreEqual("onana", _testIdentifiableObject.FirstId);
```

```
53         Assert.AreNotEqual("mount", _testIdentifiableObject.FirstId);
54     }
55
56     [Test]
57     public void TestFirstIDWithNoID()
58     {
59         Assert.AreEqual("", _testIdentifiableObjectEmpty.FirstId);
60     }
61
62     [Test]
63     public void TestAddID()
64     {
65         _testIdentifiableObject.AddIdentifiers("Rashford");
66         Assert.IsTrue(_testIdentifiableObject.AreYou("Rashford".ToUpper()));
67     }
68 }
69 }
70
71
```

