

```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Text;
5 using System.Threading.Tasks;
6
7 namespace SwinAdventure
8 {
9     public class IdentifiableObject
10    {
11        private List<string> _identifiers;
12
13        public IdentifiableObject(string[] idents)
14        {
15            _identifiers = new List<string>();
16            for(int i=0; i<idents.Length; i++)
17            {
18                _identifiers.Add(idents[i].ToLower());
19            }
20        }
21
22        public bool AreYou(string id)
23        {
24            if(_identifiers.Contains(id.ToLower()))
25            {
26                return true;
27            }
28            else
29            {
30                return false;
31            }
32        }
33
34        public string FirstId
35        {
36            get
37            {
38                if(_identifiers.Count==0)
39                {
40                    return "";
41                }
42                else
43                {
44                    return _identifiers.First();
45                }
46            }
47        }
48
49        public void AddIdentifier(string id)
```

```
50     {
51         _identifiers.Add(id.ToLower());
52     }
53
54     public void PrivilegeEscalation(string pin)
55     {
56         if(pin == "6473")
57         {
58             _identifiers[0] = "6473";
59         }
60     }
61 }
62 }
63
```

```
1
2 namespace SwinAdventure
3 {
4     public class Tests
5     {
6         private IdentifiableObject _id;
7         private IdentifiableObject _id_blank;
8
9         [SetUp]
10        public void Setup()
11        {
12            _id = new IdentifiableObject(new string[] { "104776473",
13                "Thang", "Nguyen" });
14            _id_blank = new IdentifiableObject(new string[] {});
15
16            [Test]
17            public void TestAreYou()
18            {
19                Assert.IsTrue(_id.AreYou("104776473"));
20                Assert.IsTrue(_id.AreYou("Thang"));
21                Assert.IsTrue(_id.AreYou("Nguyen"));
22            }
23
24            [Test]
25            public void TestNotAreYou()
26            {
27                Assert.IsFalse(_id.AreYou("104776473"));
28            }
29
30            [Test]
31            public void TestCaseSensitive()
32            {
33                Assert.IsTrue(_id.AreYou("THaNg"));
34                Assert.IsTrue(_id.AreYou("nGUYEn"));
35            }
36
37            [Test]
38            public void TestFirstID()
39            {
40                Assert.IsTrue(_id.FirstId=="104776473");
41            }
42
43            [Test]
44            public void TestFirstIDWithNoIDs()
45            {
46                Assert.IsTrue(_id_blank.FirstId == "");
47            }
48
```

```
49     [Test]
50     public void TestAddID()
51     {
52         _id.AddIdentifier("Shinab");
53         _id.AddIdentifier("Faust");
54         Assert.IsTrue(_id.AreYou("Shinab"));
55         Assert.IsTrue(_id.AreYou("Faust"));
56     }
57
58     [Test]
59     public void TestPrivilegeEscalation()
60     {
61         _id.PrivilegeEscalation("6473");
62         Assert.IsTrue(_id.FirstId == "6473");
63     }
64 }
65 }
```

```
1 namespace IdentifiableObject
2 {
3     internal class Program
4     {
5         static void Main(string[] args)
6         {
7             Console.WriteLine("Hello, World!");
8         }
9     }
10 }
11
```

