Swinburne University of Technology

COS20007 Object Oriented Programming

2.4P - Case Study Iteration 1 - Identifiable Object

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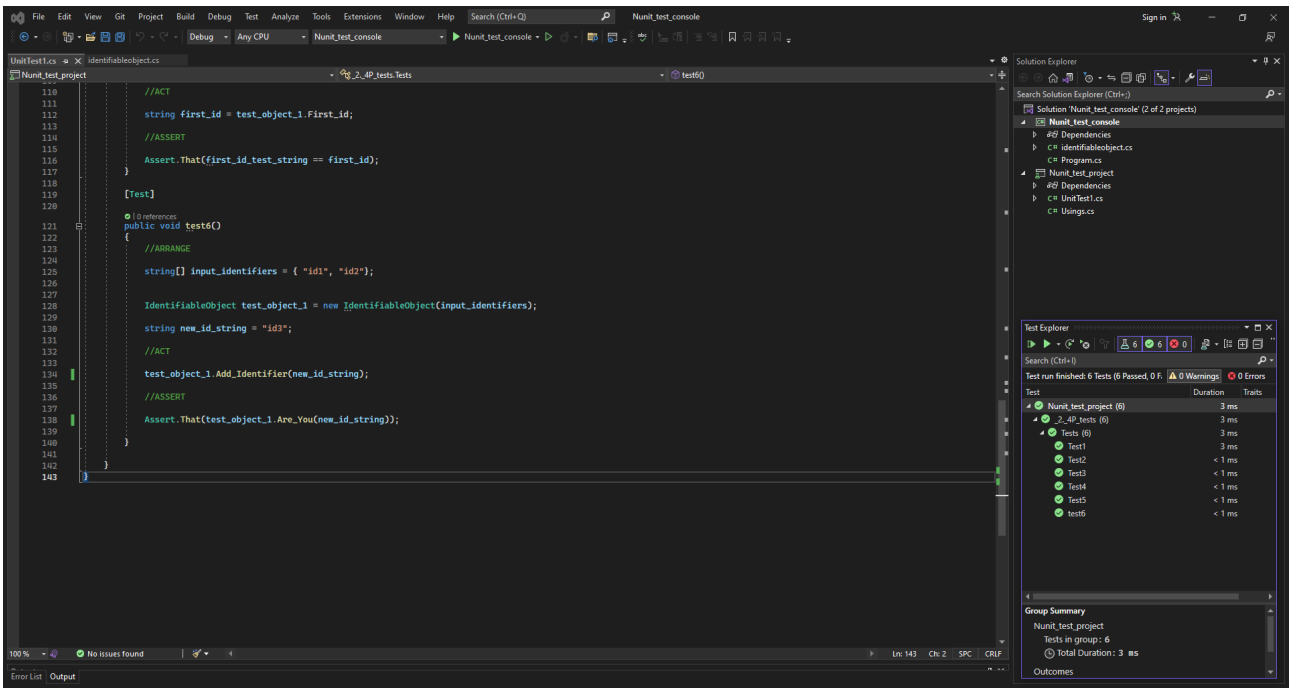
```
using System;

namespace SwinAdventure
{

    public class IdentifiableObject
    {
        private List<string> _identifiers;


        public IdentifiableObject(string[] identifiers_array)
        {

            _identifiers = new List<string>(identifiers_array);


        }
        public void Add_Identifier(string new_identifier)
        {

            _identifiers.Add(new_identifier.ToLower());
        }

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

        public string First_id
        {

            get
            {

                if (_identifiers.Count == 0)
                {
                    return "";
                }
                else
                {
                    return _identifiers[0];
                }
            }
        }

        public bool Are_You(string possible_id)
        {
            bool _are_You = false;

            foreach (string identifier in _identifiers)
            {
                if (identifier != null) {

                    if (possible_id.ToLower() == identifier.ToLower())
                    {
                        _are_You = true;
```

```
54                      }
55                  }
56              }
57
58              return _are_You;
59          }
60      }
61  }
```

```
using SwinAdventure;
using NUnit.Framework;

namespace _2._4P_tests
{
    public class Tests
    {

        [SetUp]

        public void Setup() { }

        [Test]
        public void Test1()
        {

            //ARRANGE
            string[] input_identifiers = { "id1", "id2", "id3" };


            IdentifiableObject test_object_1 = new
↪   IdentifiableObject(input_identifiers);

            string are_you_test_input = "id2";

            //ACT

            bool are_you_return = test_object_1.Are_You(are_you_test_input);

            //ASSERT

            Assert.That(are_you_return);

        }

        [Test]

        public void Test2()
        {
            //ARRANGE
            string[] input_identifiers = { "id1", "id2", "id3" };


            IdentifiableObject test_object_1 = new
↪   IdentifiableObject(input_identifiers);

            string are_you_test_input = "id7";

            //ACT

            bool are_you_return = test_object_1.Are_You(are_you_test_input);

            //ASSERT
```

```
52
53              Assert.That(!are_you_return);
54          }
55
56          [Test]
57
58          public void Test3()
59          {
60              //ARRANGE
61              string[] input_identifiers = { "id1", "id2", "id3" };
62
63              IdentifiableObject test_object_1 = new
    ↪ IdentifiableObject(input_identifiers);
64
65              string are_you_test_input = "ID1";
66
67              //ACT
68
69              bool are_you_return = test_object_1.Are_You(are_you_test_input);
70
71              //ASSERT
72
73              Assert.That(are_you_return);
74          }
75
76          [Test]
77
78          public void Test4()
79          {
80              //ARRANGE
81
82              string[] input_identifiers = { "id1", "id2", "id3" };
83
84              IdentifiableObject test_object_1 = new
    ↪ IdentifiableObject(input_identifiers);
85
86              string first_id_test_string = "id1";
87
88              //ACT
89
90              string first_id = test_object_1.First_id;
91
92              //ASSERT
93
94              Assert.That(first_id_test_string == first_id);
95          }
96
97          [Test]
98
99          public void Test5()
100         {
101             //ARRANGE
102
```

```
103             string[] input_identifiers = {};
104 
105 
106             IdentifiableObject test_object_1 = new
    ↪  IdentifiableObject(input_identifiers);
107 
108             string first_id_test_string = "";
109 
110             //ACT
111 
112             string first_id = test_object_1.First_id;
113 
114             //ASSERT
115 
116             Assert.That(first_id_test_string == first_id);
117         }
118 
119         [Test]
120 
121         public void test6()
122         {
123             //ARRANGE
124 
125             string[] input_identifiers = { "id1", "id2"};
126 
127 
128             IdentifiableObject test_object_1 = new
    ↪  IdentifiableObject(input_identifiers);
129 
130             string new_id_string = "id3";
131 
132             //ACT
133 
134             test_object_1.Add_Identifier(new_id_string);
135 
136             //ASSERT
137 
138             Assert.That(test_object_1.Are_You(new_id_string));
139 
140         }
141 
142     }
143 }
```


//ACT
string first_id = test_object_1.First_id;
//ASSERT
Assert.That(first_id_test_string == first_id);
[Test]
public void test6()
//ARRANGE
string[] input_identifiers = { "id1", "id2"};
IdentifiableObject test_object_1 = new IdentifiableObject(input_identifiers);
string new_id_string = "id3";
//ACT
test_object_1.Add_Identifier(new_id_string);
//ASSERT
Assert.That(test_object_1.Are_You(new_id_string));
Solution Explorer
Nunit_test_console
Program.cs
Nunit_test_project
UnitTest1.cs
Usings.cs
Test Explorer
Test run finished: 6 Tests (6 Passed, 0 F
Nunit_test_project (6)
Tests (6)
Test1
Test2
Test3
Test4
Test5
test6
Group Summary
Tests in group: 6
Total Duration: 3 ms
No issues found