# Swinburne University of Technology

## COS20007 OBJECT ORIENTED PROGRAMMING

### Identifiable Object Test - Itaration-1

IdentifiableObject Class

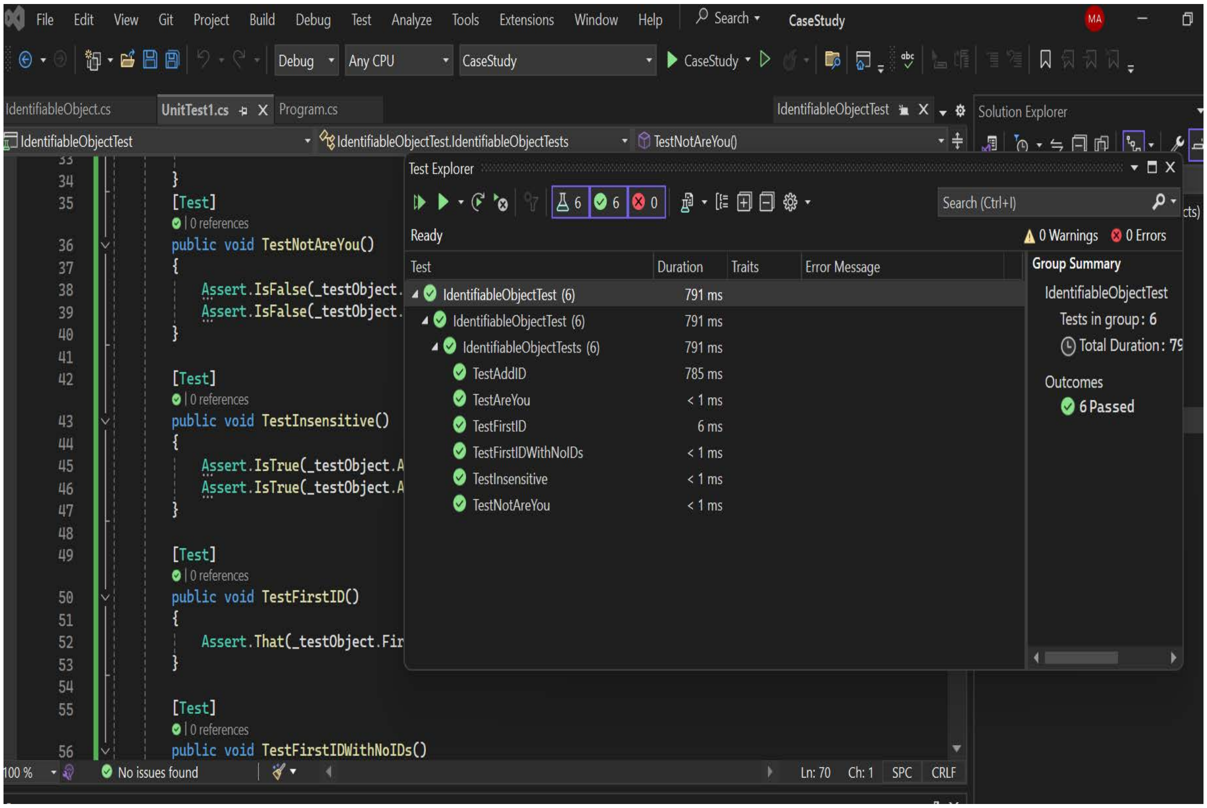
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

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

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

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

        public string FirstID
        {
            get
            {
                if (_identifiers.Count == 0)
                {
                    return "";
                }
                else
                {
                    return _identifiers.First();
                }
            }
        }

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

Identifiable Object Test

UnitTest1

```
using CaseStudy;

namespace IdentifiableObjectTest
{
    [TestFixture]
    public class IdentifiableObjectTests
    {
        private IdentifiableObject _testObject;

        private string[] _testArray;

        private IdentifiableObject _emptyObject;

        private string[] _emptyArray;

        [SetUp]
        public void Setup()
        {

            _testArray = new string[] { "fred", "bob" };
            _testObject = new IdentifiableObject(_testArray);


            _emptyArray = new string[] { };
            _emptyObject = new IdentifiableObject(_emptyArray);
        }

        [Test]
        public void TestAreYou()
        {
            Assert.IsTrue(_testObject.AreYou("fred"));
            Assert.IsTrue(_testObject.AreYou("bob"));
        }
        [Test]
        public void TestNotAreYou()
        {
            Assert.IsFalse(_testObject.AreYou("wilma"));
            Assert.IsFalse(_testObject.AreYou("boby"));
        }

        [Test]
        public void TestInsensitive()
        {
            Assert.IsTrue(_testObject.AreYou("FRED"));
            Assert.IsTrue(_testObject.AreYou("bOB"));
        }

        [Test]
        public void TestFirstID()
        {
            Assert.That(_testObject.FirstID, Is.EqualTo("fred"));
        }

        [Test]
        public void TestFirstIDWithNoIDs()
        {
            Assert.That(_emptyObject.FirstID, Is.EqualTo(""));
        }

        [Test]
        public void TestAddID()
        {
            _testObject.AddIdentifier("wilma");
            Assert.IsTrue(_testObject.AreYou("fred"));
            Assert.IsTrue(_testObject.AreYou("bob"));
            Assert.IsTrue(_testObject.AreYou("wilma"));
        }
    }

}
```

Screenshoot of Test Passing



```
        }
        [Test]
        | 0 references
        public void TestNotAreYou()
        {
            Assert.IsFalse(_testObject.
            Assert.IsFalse(_testObject.
        }

        [Test]
        | 0 references
        public void TestInsensitive()
        {
            Assert.IsTrue(_testObject.A
            Assert.IsTrue(_testObject.A
        }

        [Test]
        | 0 references
        public void TestFirstID()
        {
            Assert.That(_testObject.Fir
        }

        [Test]
        | 0 references
        public void TestFirstIDWithNoIDs()
```

Test Explorer: 6 tests, 6 passed, 0 failed

Ready — 0 Warnings, 0 Errors

| Test | Duration | Traits | Error Message |
|---|---|---|---|
| IdentifiableObjectTest (6) | 791 ms | | |
| IdentifiableObjectTest (6) | 791 ms | | |
| IdentifiableObjectTests (6) | 791 ms | | |
| TestAddID | 785 ms | | |
| TestAreYou | < 1 ms | | |
| TestFirstID | 6 ms | | |
| TestFirstIDWithNoIDs | < 1 ms | | |
| TestInsensitive | < 1 ms | | |
| TestNotAreYou | < 1 ms | | |

Group Summary

IdentifiableObjectTest

Tests in group: 6

Total Duration: 79

Outcomes

6 Passed