

SWINBURNE UNIVERSITY OF TECHNOLOGY

COS20007 OBJECT ORIENTED PROGRAMMING

Case Study - Iteration 3 - Bags

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```
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Text;
5  using System.Threading.Tasks;
6
7  namespace CaseStudy_Iteration3
8  {
9      public class Bag : Item
10     {
11         private Inventory oinventory;
12
13         public Bag(string[] id, string name, string desc) : base(id, name, desc)
14         {
15             oinventory = new Inventory();
16         }
17         public GameObject Locate(string id)
18         {
19             if (AreYou(id) == true)
20             {
21                 return this;
22             }
23             return oinventory.Fetch(id);
24         }
25     }
26     public override string FullDescription
27     {
28         get
29         {
30             return "In the " + Name + " you can see " + oinventory.Itemlist;
31         }
32     }
33     public Inventory Inventory
34     {
35         get { return oinventory; }
36     }
37 }
38 }
```

```
1  using CaseStudy_Iteration3;
2  using NUnit.Framework;
3  using System;
4  using System.Collections.Generic;
5  using System.Linq;
6  using System.Text;
7  using System.Threading.Tasks;
8
9  namespace Iteration3Test
10 {
11     public class BagTest
12     {
13         private Inventory oinventory;
14         private Item oitem, oitem1;
15         private Bag obag1, obag2;
16         [SetUp]
17         public void Setup()
18         {
19             obag1 = new Bag(new string[] { "sultan", "scimitar" }, "armored vehicle",
↵ "This is a strong vehicle");
20             obag2 = new Bag(new string[] { "fv622" }, "military transport vehicles",
↵ "This is a useful vehice");
21             oinventory = new Inventory();
22             oitem = new Item(new string[] { "glock", "eagle" }, "short gun", "This is
↵ a power gun");
23             oitem1 = new Item(new string[] { "su27" }, "military", "This is fast
↵ plane");
24         }
25         [Test]
26         public void BagLocateItem()
27         {
28             obag1.Inventory.Put(oitem);
29             Assert.That(obag1.Locate("glock"), Is.EqualTo(oitem));
30             Assert.IsTrue(obag1.Inventory.HasItem("glock"));
31
32         }
33         [Test]
34         public void TestBagLocateItself()
35         {
36             Assert.That(obag1, Is.EqualTo(obag1.Locate("sultan")));
37         }
38         [Test]
39         public void TestBagLocateNothing()
40         {
41             Assert.That(obag2.Locate("sultan"), Is.EqualTo(null));
42
43         }
44         [Test]
45         public void TestBagFullDescription()
46         {
47             obag1.Inventory.Put(oitem);
48             string text = "In the armored vehicle you can see \tshort gun(glock)\n";
49             StringAssert.Contains(obag1.FullDescription, text);
```

```
50
51     }
52     [Test]
53     public void Baginbag()
54     {
55
56         obag2.Inventory.Put(oitem);
57         obag1.Inventory.Put(oitem1);
58         obag1.Inventory.Put(obag2);
59         Assert.That(obag1.Locate("su27"), Is.EqualTo(oitem1));
60         Assert.That(obag1.Locate("fv622"), Is.EqualTo(obag2));
61         Assert.That(obag1.Locate("glock"), Is.EqualTo(null));
62
63     }
64 }
65 }
```

