

```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Text;
5 using System.Threading.Tasks;
6
7 namespace IdentifiableObject
8 {
9     public class Bag:Item
10    {
11        private Inventory _inventory;
12
13        public Bag(string[] ids, string name, string desc): base(ids, name, ↗
            desc)
14        {
15            _inventory = new Inventory();
16        }
17
18        public GameObject Locate(string id)
19        {
20            if(AreYou(id)==true)
21            {
22                return this;
23            }
24            else
25            {
26                return _inventory.Fetch(id);
27            }
28            return null;
29        }
30
31        public string FullDescription
32        {
33            get
34            {
35                return $"In the {this.Name} you can see:\n ↗
                    {_inventory.ItemList}";
36            }
37        }
38
39        public Inventory Inventory
40        {
41            get
42            {
43                return _inventory;
44            }
45        }
46    }
47 }
```

```
1 namespace IdentifiableObject
2 {
3     public class Tests
4     {
5         private Bag _b1;
6         private Bag _b2;
7         private Item _shield;
8         private Item _shovel;
9
10        [SetUp]
11        public void Setup()
12        {
13            _b1 = new Bag(new string[] { "104776473" }, "Thang's bag",
14                           "student");
15            _b2 = new Bag(new string[] { "1" }, "bag 2", "this is a bag");
16            _shield = new Item(new string[] { "shield" }, "a shield",
17                               "Shield level 1");
18            _shovel = new Item(new string[] { "shovel" }, "a shovel",
19                               "Shovel level 2");
20        }
21
22        [Test]
23        public void TestBagLocatesItems()
24        {
25            _b1.Inventory.Put(_shield);
26            Assert.AreEqual(_b1.Locate("shield"), _shield);
27        }
28
29        [Test]
30        public void TestBagLocatesItself()
31        {
32            Assert.AreEqual(_b1.Locate("104776473"), _b1);
33        }
34
35        [Test]
36        public void TestBagLocateNothing()
37        {
38            Assert.AreEqual(_b1.Locate("pizza"), null);
39        }
40
41        [Test]
42        public void TestBagFullDescription()
43        {
44            _b1.Inventory.Put(_shield);
45            _b1.Inventory.Put(_shovel);
46            Assert.AreEqual(_b1.FullDescription, "In the Thang's bag you
47                           can see:\na shield (shield)\na shovel (shovel)\n");
48        }
49    }
50 }
```

```

46     [Test]
47     public void TestBagInBag()
48     {
49         _b1.Inventory.Put(_b2);
50         _b2.Inventory.Put(_shield);
51         Assert.AreEqual(_b1.Locate(_b2.FirstId), _b2);
52         Assert.AreEqual(_b1.Locate(_shovel.FirstId), null);
53     }
54
55     [Test]
56     public void TestBagInBag_PrivilegedItem()
57     {
58         _b1.Inventory.Put(_b2);
59         _b2.PrivilegeEscalation("2024");
60         Assert.AreEqual(_b1.Locate("2024"), null);
61     }
62 }
63 }

```

## Test Explorer

27 11 0 16

Ready

0 Warnings 0 Errors

Test	Duration	Traits	Run	Debug
BagUnitTest (6)	90 ms			
IdentifiableObject (6)	90 ms			
Tests (6)	90 ms			
TestBagFullDescription	90 ms			
TestBagInBag	< 1 ms			
TestBagInBag_PrivilegedItem	< 1 ms			
TestBagLocateNothing	< 1 ms			
TestBagLocatesItems	< 1 ms			
TestBagLocatesItself	< 1 ms			
IdentifiableObjectUnitTest (7)				
InventoryUnitTest (5)	6 ms			
ItemUnitTest (4)				
PlayerUnitTest (5)				

## Group Summary

BagUnitTest

Tests in group: 6

Total Duration: 90 ms

## Outcomes

6 Passed