Swinburne University of Technology

COS20007 Object Oriented Programming

Case Study - Iteration 8 - Command Processor

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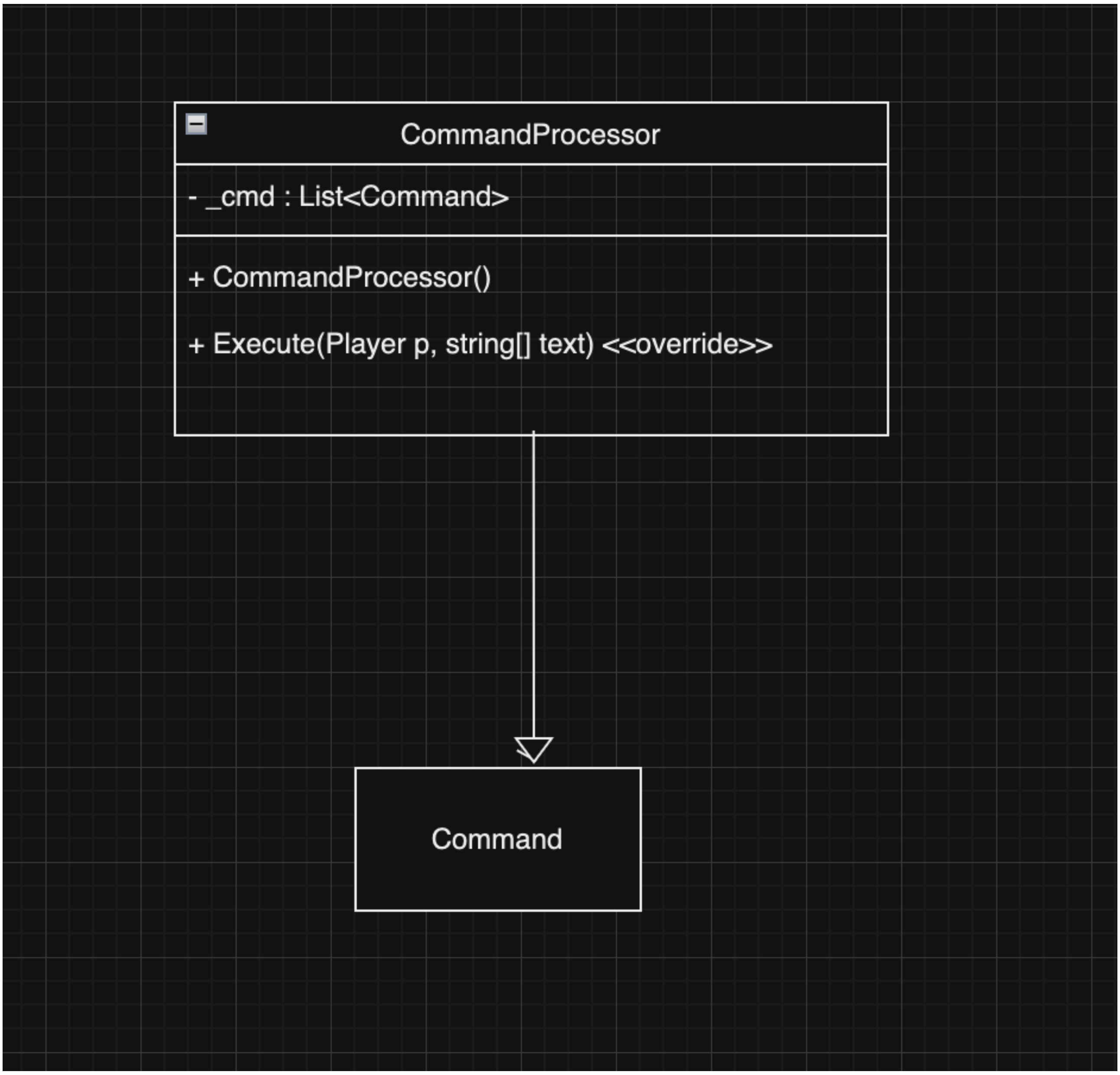
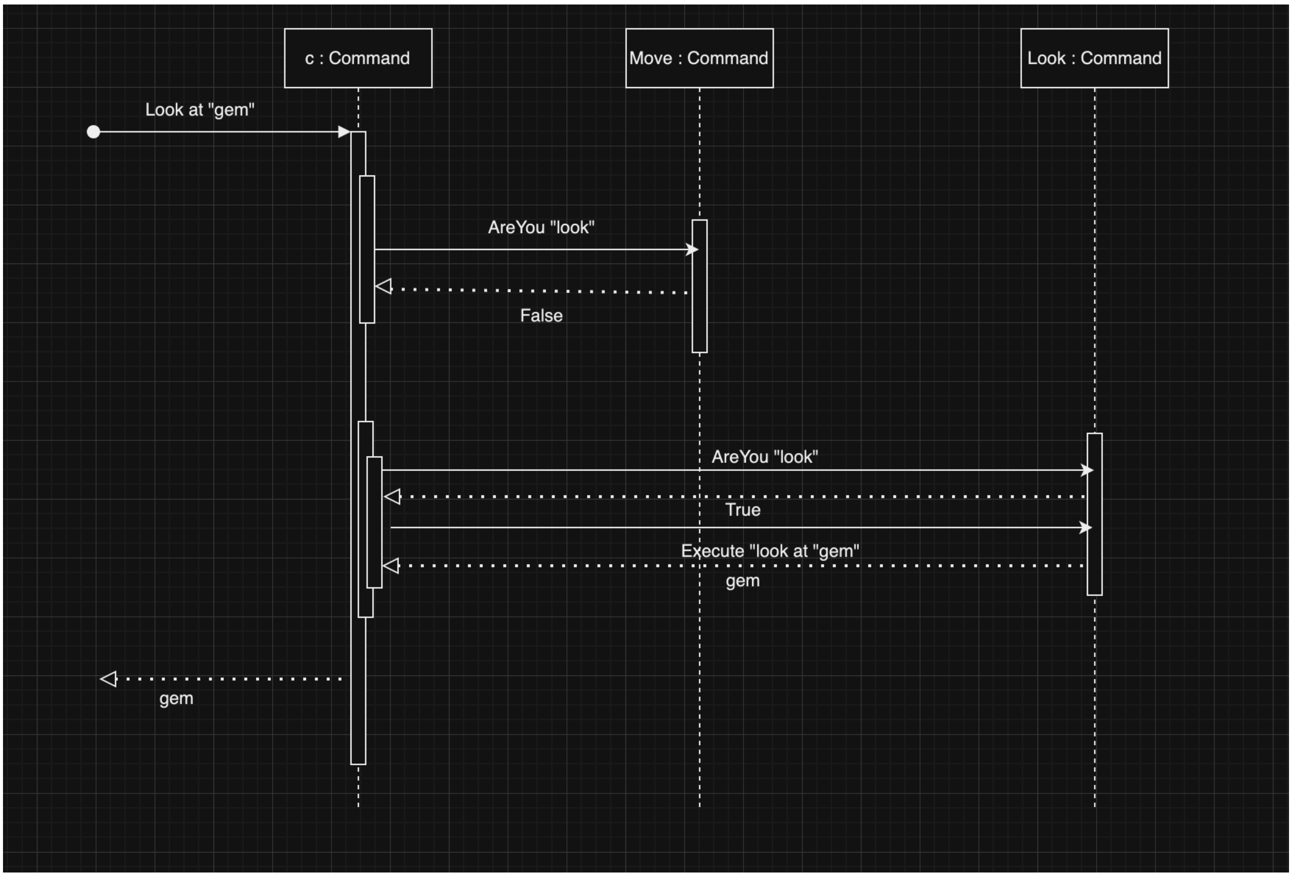
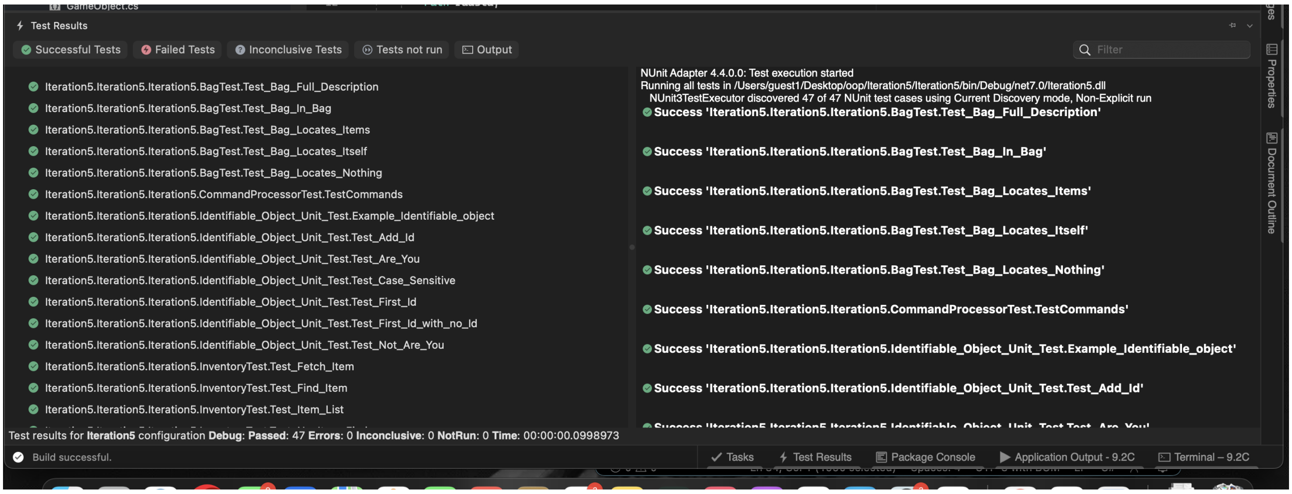
```
using System;
using System.Numerics;

namespace Iteration6
{
    class Program
    {
        public static void Main(string[] args)
        {
            Console.WriteLine("What is your name : ");
            string name = Console.ReadLine();

            Console.WriteLine("Enter the description of your player: ");
            string description = Console.ReadLine();

            Player p = new Player(name, description);

            Location l = new Location("Hallway", "This is a long well lit hallway");
            Location l2 = new Location("India", "This is my beautiful country");

            Item gem = new Item(new string[] { "gem" }, "gem", "A bright Kohinoor gem");
            Item sword = new Item(new string[] { "sword" }, "sword", "Maharana Pratap's sword");

            Bag b = new Bag(new string[] { "bag" }, "bag", "That is a Louis Vuitton bag");
            Bag b2 = new Bag(new string[] { "bag2" }, "bag2", "That is a costly Versache bag");

            Item money = new Item(new string[] { "money" }, "money", "20,00,00,000 Rupees");

            Path india = new Path(new string[] { "north", "n" }, "north", "kold", l);
            Path hall = new Path(new string[] { "south", "s" }, "south", "kold", l2);

            CommandProcessor c = new CommandProcessor();

            p.Inv.Put(gem);
            p.Inv.Put(sword);

            p.Inv.Put(b);
            p.Inv.Put(b2);

            l.Inv.Put(gem);

            b2.Inv.Put(money);

            l.Inv.Put(sword);

            l.AddPathInList(hall);

            l2.AddPathInList(india);
            p.Loc = l;

            bool exit = false;



            while (!exit)
            {
                Console.WriteLine("\nType your command:");
                string command = Console.ReadLine().ToLower();
                if (command == "exit")
                {
                    exit = true;
                }
                else
                {
                    Console.WriteLine(c.Execute(p, command.Split()));
                }
            }
        }

    }
}
```

```
namespace Iteration6
{
    public class CommandProcessor : Command
    {

        List<Command> _cmd = new List<Command>()
        { new LookCommand(), new Move() };
        public CommandProcessor() : base(new string[] { "execute" })
        {

        }

        public override string Execute(Player p, string[] text)
        {
            foreach (Command cmd in _cmd)
            {
                if (cmd.AreYou(text[0]))
                {
                    return cmd.Execute(p, text);
                }
            }
            return "What is that command! ";
        }
    }
}
```

```
using Iteration5;
namespace Iteration5
{
    [TestFixture()]
    public class CommandProcessorTest
    {
        CommandProcessor cmd;
        Location l1;
        Location l2;
        Player p;
        Item pizza;
        Path raasta;


        [SetUp()]
        public void Setup()
        {
            cmd = new CommandProcessor();
            l1 = new Location("jungle", "a big");
            l2 = new Location("Highway", "the modern");
            p = new Player("Doraemon", "the blue cat");
            pizza = new Item(new string[] { "pizza" }, "pizza", "Margharita cheese pizza");
            raasta = new Path(new string[] { "southeast" }, "southeast", "moving southeast", l2);

            p.Inv.Put(pizza);
            p.Loc = l1;
            l1.AddPathInList(raasta);
        }
        [Test()]
        public void TestCommands()
        {
            Assert.AreEqual(cmd.Execute(p, new string[] { "look"}), l1.FullDescription);
            Assert.AreEqual(cmd.Execute(p, new string[] { "look", "at", "pizza" }), pizza.FullDescription);

            cmd.Execute(p, new string[] { "move", "southeast" });
            Assert.AreEqual(p.Loc, l2);

        }

    }
}
```


CommandProcessor
- _cmd : List<Command>
+ CommandProcessor()
+ Execute(Player p, string[] text) <<override>>
Command


c : Command
Move : Command
Look : Command
Look at "gem"
AreYou "look"
False
AreYou "look"
True
Execute "look at "gem"
gem
gem

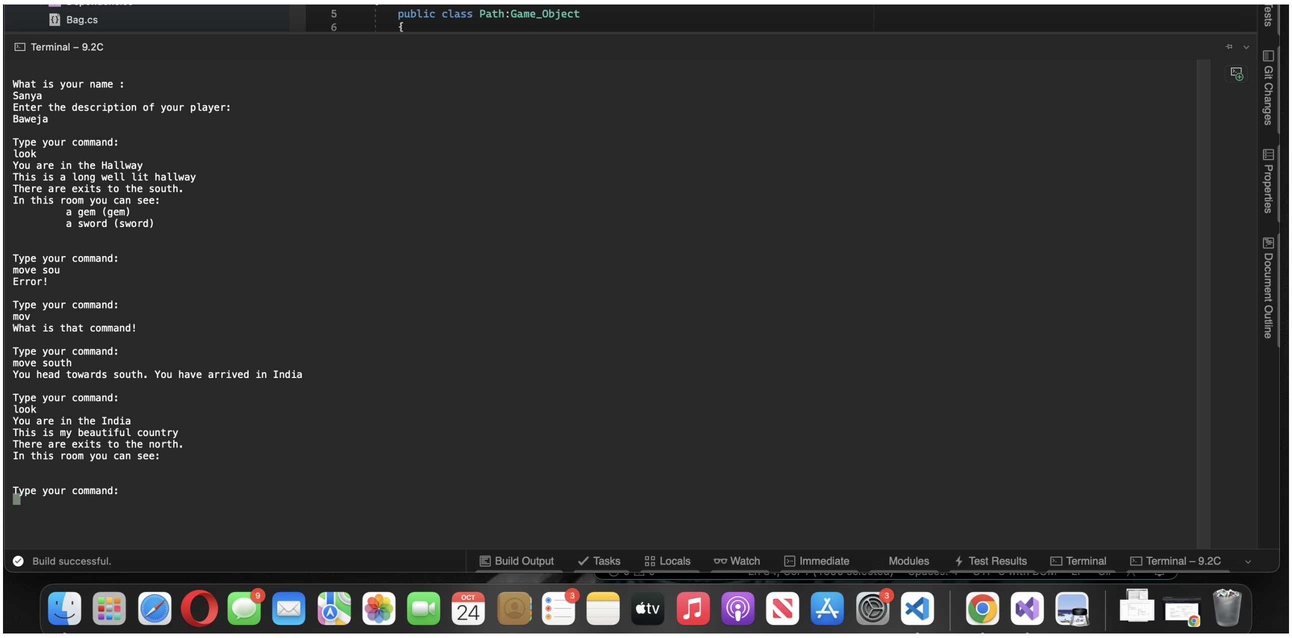


```
Iteration5.Iteration5.Iteration5.BagTest.Test_Bag_Full_Description
Iteration5.Iteration5.Iteration5.BagTest.Test_Bag_In_Bag
Iteration5.Iteration5.Iteration5.BagTest.Test_Bag_Locates_Items
Iteration5.Iteration5.Iteration5.BagTest.Test_Bag_Locates_Itself
Iteration5.Iteration5.Iteration5.BagTest.Test_Bag_Locates_Nothing
Iteration5.Iteration5.Iteration5.CommandProcessorTest.TestCommands
Iteration5.Iteration5.Iteration5.Identifiable_Object_Unit_Test.Example_Identifiable_object
Iteration5.Iteration5.Iteration5.Identifiable_Object_Unit_Test.Test_Add_Id
Iteration5.Iteration5.Iteration5.Identifiable_Object_Unit_Test.Test_Are_You
Iteration5.Iteration5.Iteration5.Identifiable_Object_Unit_Test.Test_Case_Sensitive
Iteration5.Iteration5.Iteration5.Identifiable_Object_Unit_Test.Test_First_Id
Iteration5.Iteration5.Iteration5.Identifiable_Object_Unit_Test.Test_First_Id_with_no_Id
Iteration5.Iteration5.Iteration5.Identifiable_Object_Unit_Test.Test_Not_Are_You
Iteration5.Iteration5.Iteration5.InventoryTest.Test_Fetch_Item
Iteration5.Iteration5.Iteration5.InventoryTest.Test_Find_Item
Iteration5.Iteration5.Iteration5.InventoryTest.Test_Item_List
```

```
NUnit Adapter 4.4.0.0: Test execution started
Running all tests in /Users/guest1/Desktop/oop/Iteration5/Iteration5/bin/Debug/net7.0/Iteration5.dll
  NUnit3TestExecutor discovered 47 of 47 NUnit test cases using Current Discovery mode, Non-Explicit run
Success 'Iteration5.Iteration5.Iteration5.BagTest.Test_Bag_Full_Description'

Success 'Iteration5.Iteration5.Iteration5.BagTest.Test_Bag_In_Bag'

Success 'Iteration5.Iteration5.Iteration5.BagTest.Test_Bag_Locates_Items'

Success 'Iteration5.Iteration5.Iteration5.BagTest.Test_Bag_Locates_Itself'

Success 'Iteration5.Iteration5.Iteration5.BagTest.Test_Bag_Locates_Nothing'

Success 'Iteration5.Iteration5.Iteration5.CommandProcessorTest.TestCommands'

Success 'Iteration5.Iteration5.Iteration5.Identifiable_Object_Unit_Test.Example_Identifiable_object'

Success 'Iteration5.Iteration5.Iteration5.Identifiable_Object_Unit_Test.Test_Add_Id'

Success 'Iteration5.Iteration5.Iteration5.Identifiable_Object_Unit_Test.Test_Are_You'
```

Test results for **Iteration5** configuration **Debug**: **Passed**: 47 **Errors**: 0 **Inconclusive**: 0 **NotRun**: 0 **Time**: 00:00:00.0998973

Build successful.



```
public class Path:Game_Object
{
```

```
What is your name :
Sanya
Enter the description of your player:
Baweja

Type your command:
look
You are in the Hallway
This is a long well lit hallway
There are exits to the south.
In this room you can see:
         a gem (gem)
         a sword (sword)


Type your command:
move sou
Error!

Type your command:
mov
What is that command!

Type your command:
move south
You head towards south. You have arrived in India

Type your command:
look
You are in the India
This is my beautiful country
There are exits to the north.
In this room you can see:


Type your command:
```