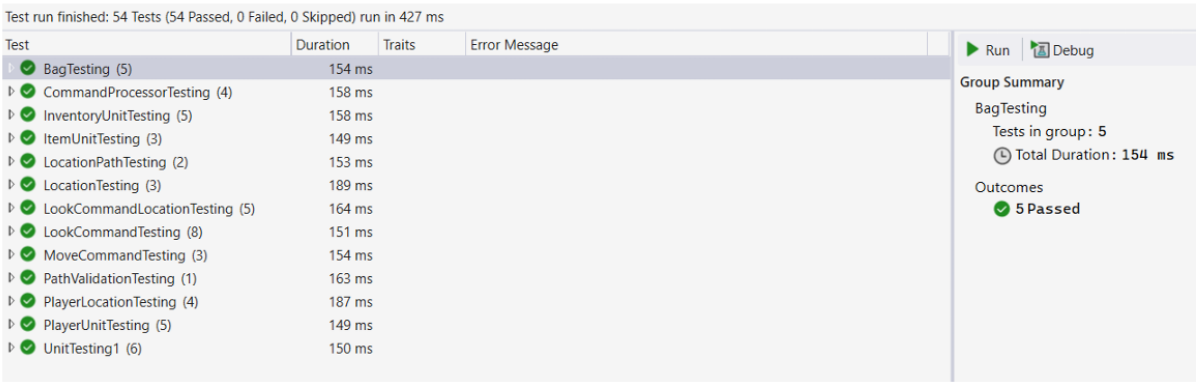
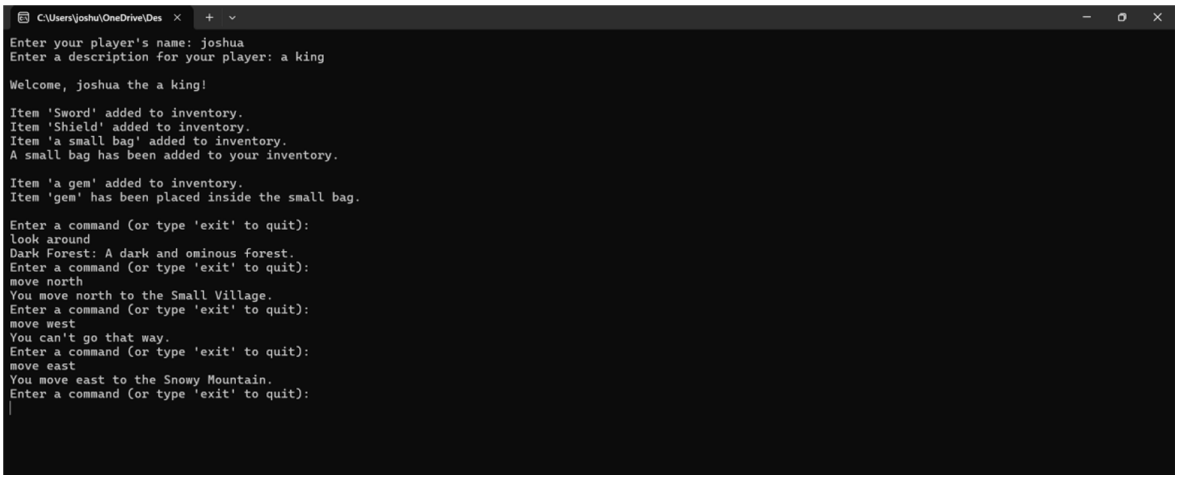
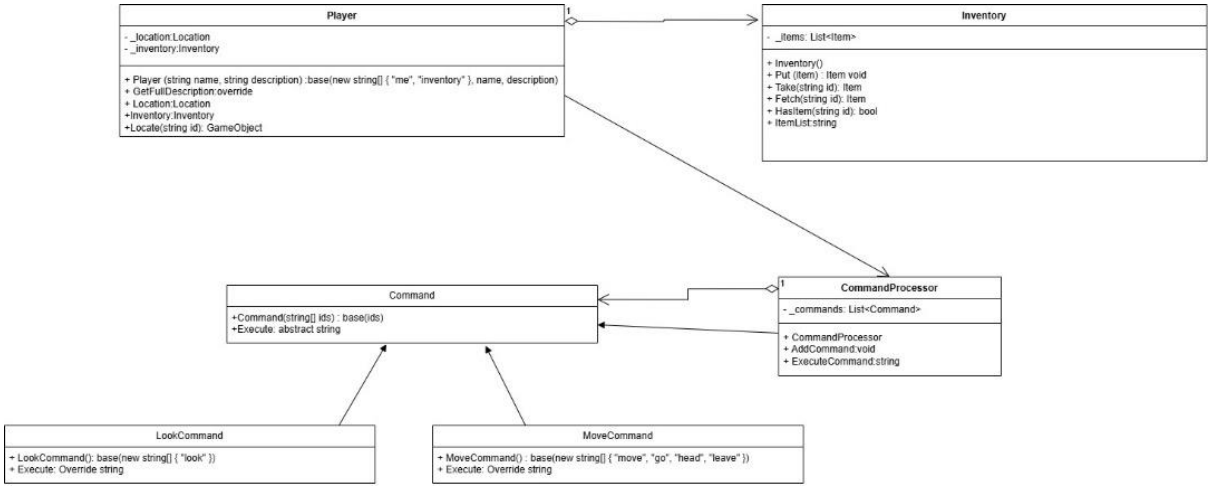
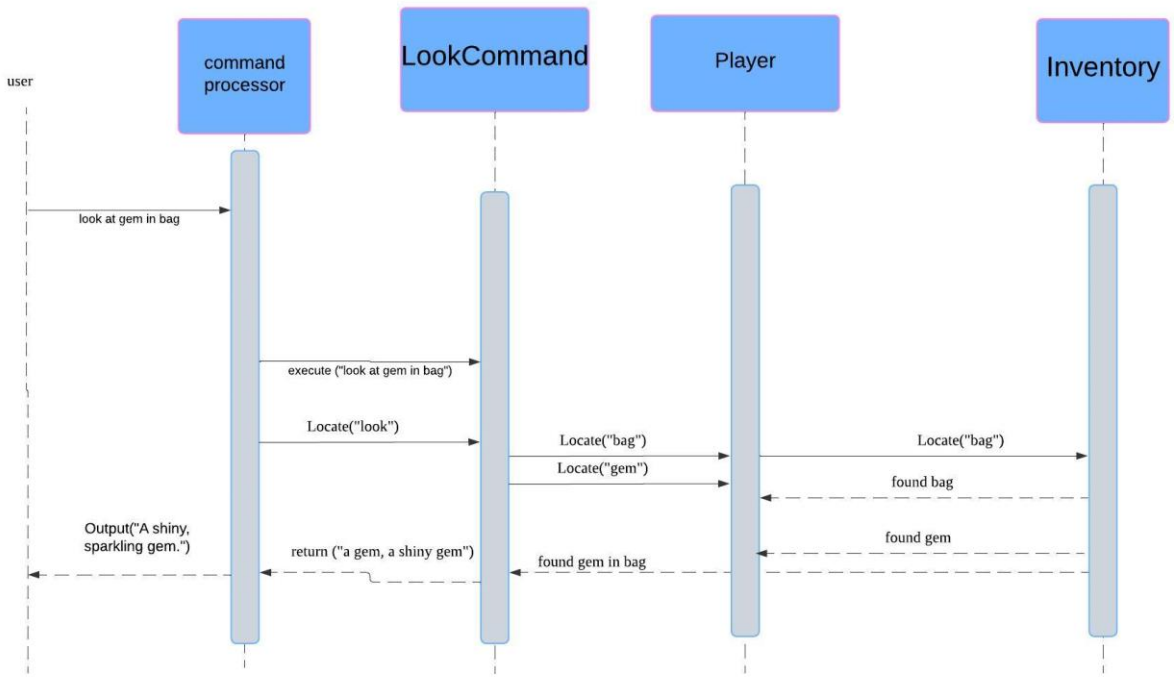
10.1 Correction









Program.cs:

```
using System;
using SwinAdventure;
class Program
{
static void Main(string[] args)
{
// Display available commands at the start
DisplayHelp();
// Step 1: Get the player's name and description from the user.
Console.Write("Enter your player's name: ");
string playerName = Console.ReadLine();
        Console.Write("Enter a description for your player: ");
        string playerDescription = Console.ReadLine();
```

```
Player player = new Player(playerName, playerDescription);
Console.WriteLine($"\nWelcome {playerName}, {playerDescription}!\n");

// Step 2: Setup locations and paths
Location home = new Location(new string[] { "home" }, "Home", "Your cozy home.");
Location forest = new Location(new string[] { "forest" }, "Forest", "A dark, dense forest.");
Location mountain = new Location(new string[] { "mountain" }, "Mountain", "A tall, imposing mountain.");

home.AddPath(new SwinAdventure.Path(SwinAdventure.Path.Direction.North, forest));
forest.AddPath(new SwinAdventure.Path(SwinAdventure.Path.Direction.South, home));
forest.AddPath(new SwinAdventure.Path(SwinAdventure.Path.Direction.East, mountain));
mountain.AddPath(new SwinAdventure.Path(SwinAdventure.Path.Direction.West, forest));

player.Location = home;
Console.WriteLine("You are currently at your home.\n");

// Step 3: Setup player inventory with items
Item sword = new Item(new string[] { "sword" }, "a sword", "A sharp, shining sword.");
Item shield = new Item(new string[] { "shield" }, "a shield", "A sturdy wooden shield.");
player.Inventory.Put(sword);
player.Inventory.Put(shield);

Bag smallBag = new Bag(new string[] { "bag", "small bag" }, "a small bag", "A small leather bag.");
player.Inventory.Put(smallBag);

Item gem = new Item(new string[] { "gem" }, "a gem", "A shiny, valuable gem.");
smallBag.Inventory.Put(gem);

// Step 4: Initialize the CommandProcessor and add commands
```

```
        CommandProcessor commandProcessor = new CommandProcessor();
        commandProcessor.AddCommand(new MoveCommand());

        // Step 5: Main game loop
        while (true)
        {
            Console.WriteLine($"\nYou are in {player.Location.Name}. Enter a command (or type 'exit' to
quit):");
            string command = Console.ReadLine();

            if (command.ToLower() == "exit")
            {
                break;
            }
            else if (command.ToLower() == "help")
            {
                DisplayHelp();
                continue;
            }

            string[] commandWords = command.Split(' ');

            string result = commandProcessor.ExecuteCommand(player, commandWords);
            Console.WriteLine(result);
        }

        Console.WriteLine("Goodbye!");
    }

    // Method to display all available commands
    static void DisplayHelp()
```

```
    {
        Console.WriteLine("\nAvailable Commands:");
        Console.WriteLine("  look - Examine your current surroundings.");
        Console.WriteLine("  inventory - Check the items you have.");
        Console.WriteLine("  move [direction] - Move in a specified direction (e.g., 'move north').");
        Console.WriteLine("  go [direction] - Another way to move in a direction (e.g., 'go east').");
        Console.WriteLine("  head [direction] - Another way to move in a direction (e.g., 'head west').");
        Console.WriteLine("  leave [direction] - Another way to move in a direction (e.g., 'leave
south').");
        Console.WriteLine("  help - Display this list of commands.");
        Console.WriteLine("  exit - Quit the game.");
        Console.WriteLine();
    }
}
```

Commandprocessor.cs:

```
using System.Collections.Generic;

namespace SwinAdventure
{
    public class CommandProcessor
    {
        private List<Command> _commands;

        public CommandProcessor()
        {
            _commands = new List<Command>
            {
                new MoveCommand(),
                new LookCommand(),
```

```
        };
    }
    public void AddCommand(Command command)
    {
        _commands.Add(command);
    }


    public string ExecuteCommand(Player player, string[] text)
    {
        if (text.Length == 0)
            return "No command provided.";

        string commandId = text[0].ToLower();

        foreach (Command command in _commands)
        {
            if (command.AreYou(commandId))
            {
                return command.Execute(player, text);
            }
        }

        return $"I don't know how to {commandId}.";
    }
  }
}
```

Commandprocessor testing:

```
using NUnit.Framework;
```

```
using System.Numerics;
using SwinAdventure;

namespace SwinAdventure.Tests
{
    [TestFixture]
    public class CommandProcessorTests
    {
        private CommandProcessor _commandProcessor;
        private Player _player;
        private Location _startLocation;

        [SetUp]
        public void Setup()
        {
            _startLocation = new Location(new string[] { "start" }, "Starting Location", "The start of your adventure.");
            _player = new Player("Adventurer", "A brave explorer");
            _player.Location = _startLocation;
            _commandProcessor = new CommandProcessor();
        }

        [Test]
        public void TestExecuteMoveCommand()
        {
            _startLocation.AddPath(new Path(Path.Direction.North, new Location(new string[] { "north" }, "North Location", "You are north.")));
            string result = _commandProcessor.ExecuteCommand(_player, new string[] { "move", "north" });
            Assert.AreEqual("You move north to the North Location.", result);
        }
```

```
        [Test]
        public void TestUnknownCommand()
        {
            string result = _commandProcessor.ExecuteCommand(_player, new string[] { "fly", "upward" });
            Assert.AreEqual("I don't know how to fly.", result);
        }

        [Test]
        public void TestIncompleteCommand()
        {
            string result = _commandProcessor.ExecuteCommand(_player, new string[] { "move" });
            Assert.AreEqual("Where do you want to go?", result);
        }

        [Test]
        public void TestExecuteLookCommand()
        {
            _player.Inventory.Put(new Item(new string[] { "gem" }, "a shiny gem", "It's a very shiny gem."));
            string result = _commandProcessor.ExecuteCommand(_player, new string[] { "look", "at", "gem" });
            Assert.AreEqual("a shiny gem: It's a very shiny gem.", result);
        }
    }
}
```