Swinburne University of Technology

COS20007 Object Oriented Programming

Case Study - Iteration 5 - Tying it Together

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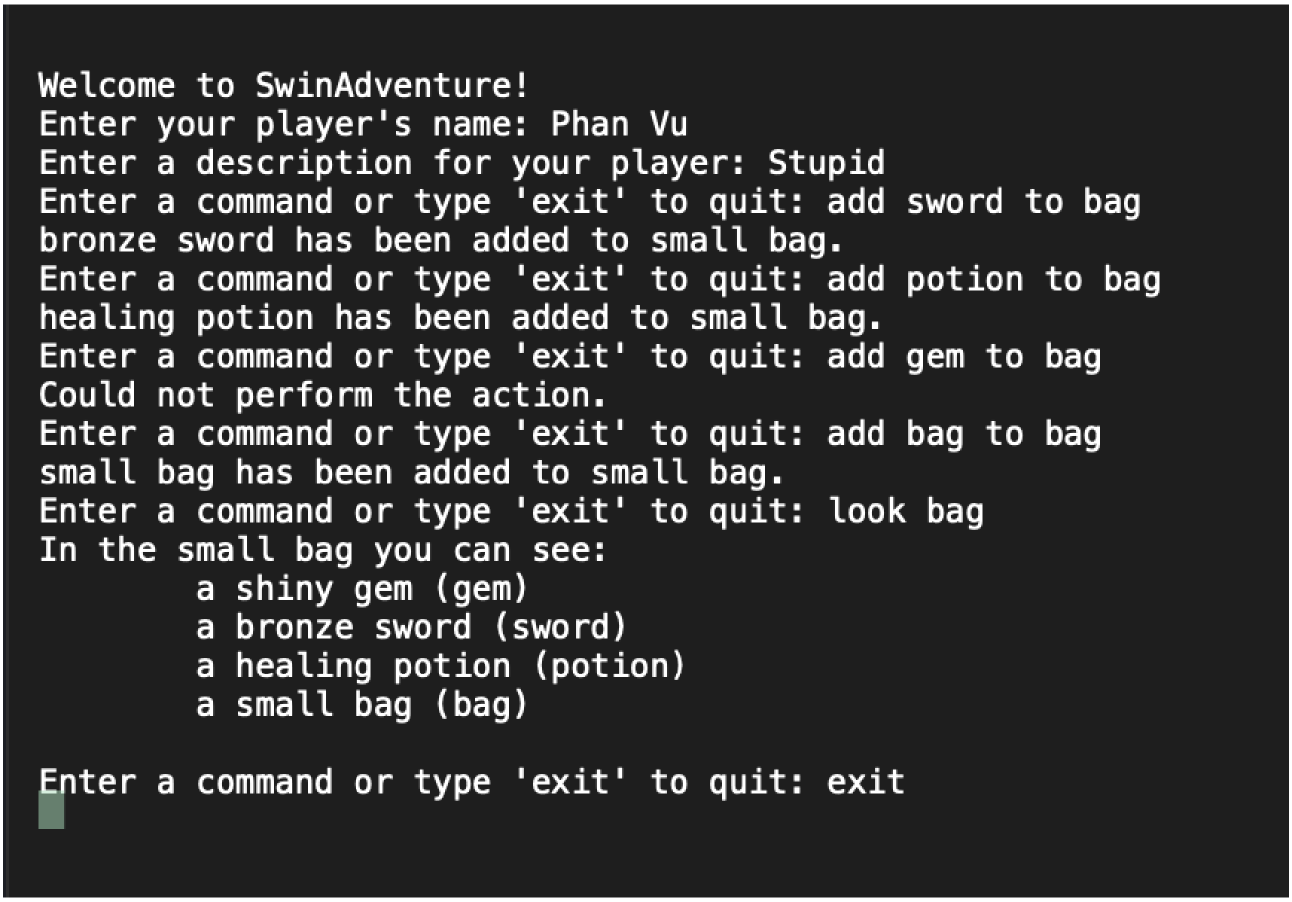
```
using System;
using System.Collections.Generic;
using System.Linq;

namespace SwinAdventure
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Welcome to SwinAdventure!");

            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);

            Item sword = new Item(new string[] { "sword" }, "bronze sword", "This is a mighty fine sword.");
            Item potion = new Item(new string[] { "potion" }, "healing potion", "A magical potion that heals wounds.");
            Item gem = new Item(new string[] { "gem" }, "shiny gem", "A beautiful gemstone.");
            Bag bag = new Bag(new string[] { "bag" }, "small bag", "A small bag.");
            player.Inventory.Put(bag);
            player.Inventory.Put(sword);
            player.Inventory.Put(potion);
            bag.Inventory.Put(gem);

            string input;
            do
            {
                Console.Write("Enter a command or type 'exit' to quit: ");
                input = Console.ReadLine();

                if (input.Equals("exit", StringComparison.OrdinalIgnoreCase))
                    break;

                string[] commandParts = input.Split(' ');
                if (commandParts.Length >= 3 && commandParts[0].Equals("add", StringComparison.OrdinalIgnoreCase) && commandParts[2].Equals("to", StringComparison.OrdinalIgnoreCase))
                {
                    string itemName = commandParts[1];
                    string containerName = commandParts[3];

                    GameObject item = player.Locate(itemName);
                    GameObject container = player.Locate(containerName);

                    if (item != null && container is IHaveInventory)
                    {
                        IHaveInventory containerWithInventory = container as IHaveInventory;
                        containerWithInventory.Inventory.Put(item);
                        Console.WriteLine($"{item.Name} has been added to {container.Name}.");
                    }
                    else
                    {
                        Console.WriteLine("Could not perform the action.");
                    }
                }
                else if (commandParts.Length >= 2 && commandParts[0].Equals("look", StringComparison.OrdinalIgnoreCase))
                {
                    string target = commandParts[1];
                    string result = player.Locate(target)?.FullDescription ?? "I can't find that.";
                    Console.WriteLine(result);
                }
                else
                {
                    Console.WriteLine("I don't understand that command.");
                }
            } while (true);
        }
    }
}
```



```
Welcome to SwinAdventure!
Enter your player's name: Phan Vu
Enter a description for your player: Stupid
Enter a command or type 'exit' to quit: add sword to bag
bronze sword has been added to small bag.
Enter a command or type 'exit' to quit: add potion to bag
healing potion has been added to small bag.
Enter a command or type 'exit' to quit: add gem to bag
Could not perform the action.
Enter a command or type 'exit' to quit: add bag to bag
small bag has been added to small bag.
Enter a command or type 'exit' to quit: look bag
In the small bag you can see:
        a shiny gem (gem)
        a bronze sword (sword)
        a healing potion (potion)
        a small bag (bag)

Enter a command or type 'exit' to quit: exit
```