```
 1  using System;
 2  using System.ComponentModel.Design; // Not strictly necessary, but kept
      from original.
 3
 4  namespace SwinAdventure
 5  {
 6      internal class Program
 7      {
 8          static void Main(string[] args)
 9          {
10              // Print sentences to the console window
11              Console.WriteLine("WELCOME TO THE SWINADVENTURE GAME!");
12              Console.WriteLine("--------------------------------");
13              // Enter player name and player description
14              Console.Write("Dear Warrior, please enter your name: ");
15              string playername = Console.ReadLine();
16              Console.Write("Please enter your description: ");
17              string playerdescription = Console.ReadLine();
18              Player player = new Player(playername, playerdescription);
19              // Set up initial items
20              Item axe = new Item(new string[] { "sword" }, "a sharp
                  sword", "+20 ATK points");
21              Item shield = new Item(new string[] { "shield" }, "a bronze
                  shield", "+5 DEF points ");
22              Bag backpack = new Bag(new string[] { "backpack" }, "A heavy
                  backpack", "Contains crucial items");
23              // Put items into the player's inventory
24              player.Inventory.Put(axe);
25              player.Inventory.Put(shield);
26              player.Inventory.Put(backpack);
27              // Create items and put them into the backpack
28              Item gun = new Item(new string[] { "gun" }, "An AK-47 gun",
                  "+15 ATK points");
29              backpack.Inventory.Put(gun);
30              Item shovel = new Item(new string[] { "shovel" }, "An useful
                  shovel", "+10 ATK points");
31              backpack.Inventory.Put(shovel);
32              Item map = new Item(new string[] { "map" }, "A detailed map",
                  "Used for showing directions");
33              backpack.Inventory.Put(map);
34              Item book = new Item(new string[] { "book" }, "A thick book",
                  "Contains knowledge of human");
35              backpack.Inventory.Put(book);
36              //Paths, Directions, and Locations
37              Location university = new Location("An old university", "A
                  mystery university");
38              Location library = new Location("State Library", "An old and
                  unforgettable library");
39              Location mainhall = new Location("School Mainhall", "A large
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                mainhall of a university");
40              Location principalroom = new Location("Principal Room", "The
                pricipal room");
41              Location pavement = new Location("A pavement", "Outside of
                the university");
42              Location street = new Location("A street", "The Alizabeth
                street");
43
44              Paths pavementtoMainHall = new Paths(new string[] { "
                forward", "north" }, "forward path", "The way to the Main
                Hall of the University", mainhall);
45              Paths mainhalltopavement = new Paths(new string[]
                { "backward", "south" }, "backward path", "The way back to
                the pavement", pavement);
46              Paths mainhalltolibrary = new Paths(new string[] { "north" },
                "north path", "The way to the Library of the University",
                library);
47              Paths mainhalltoprincipalroom = new Paths(new string[]
                { "east" }, "east path", "The way to the Principal Room of
                the University", principalroom);
48              Paths pavementtostreet = new Paths(new string[] { "backward",
                "south" }, "backward street", "The way to the Elizaberth
                Street", street);
49              Paths streettopavement = new Paths(new string[] { "forward",
                "north" }, "forward path", "The way back to the pavement",
                pavement);
50              Paths librarytomainhall = new Paths(new string[] { "
                backward", "south" }, "backward path", "The way back to the
                MainHall", mainhall);
51              Paths principalroomtomainhall = new Paths(new string[]
                { "backward", "north" }, "Return Main Hall path", "The way
                back from Principal Room to Main Hall", mainhall);
52
53              pavement.AddPath(pavementtoMainHall);
54              pavement.AddPath(pavementtostreet);
55              mainhall.AddPath(mainhalltopavement);
56              mainhall.AddPath(mainhalltolibrary);
57              mainhall.AddPath(mainhalltoprincipalroom);
58              library.AddPath(librarytomainhall);
59              street.AddPath(streettopavement);
60              principalroom.AddPath(principalroomtomainhall);
61
62              //Create some items and put them in rooms
63              Item diary = new Item(new string[] { "diary" }, "A principal'
                s diary", "Thw diary which takes important event.");
64              principalroom.Inventory.Put(diary);
65              Item handledlamp = new Item(new string[] { "handledlamp" }, "
                A useful handledlamp", "The handledlamp is full of energy
                and can be used in anytime");
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66              library.Inventory.Put(handledlamp);
67
68              //Set default location to the player
69              player.Location = pavement;
70
71              // Set up command handler - NOW USING CommandProcessor!
72              // THIS IS THE KEY CHANGE: Instantiate CommandProcessor
73              CommandProcessor processor = new CommandProcessor();
74
75              // Print the player name and full description
76              Console.Write($"\nHello, {player.Name}!\n
                  {player.FullDescription}");
77              Console.Write("-------------------------------------");
78              Console.Write($"\n{player.Location.FullDescription}");
79              Console.Write("-------------------------------------");
80              Console.Write(player.Location.PathList);
81              Console.WriteLine("-------------------------------------");
82
83              //Main loop
84              while (true)
85              {
86                  Console.Write("Enter your command: ");
87                  string commandline = Console.ReadLine();
88
89                  if (string.IsNullOrEmpty(commandline))
90                  {
91                      Console.WriteLine("Please enter the command again.");
92                  }
93                  else if (commandline.ToLower() == "exit")
94                  {
95                      Console.WriteLine("Thank you for spending time to
                          play SwinAdventure game. See you next time!");
96                      break;
97                  }
98                  else
99                  {
100                     string[] commandsentence = commandline.ToLower().Split
                          (' ', StringSplitOptions.RemoveEmptyEntries);
101                     // THIS IS THE KEY CHANGE: Call
                          CommandProcessor.Execute
102                     string result = processor.Execute(player,
                          commandsentence);
103                     Console.WriteLine(result);
104                 }
105             }
106         }
107     }
108 }
```