

```
9      public class Controller
10     {
11         #region FIELDS
12
13         private bool _usingGame;
14
15         //
16         // declare all objects required for the game
17         // Note - these field objects do not require properties since they
18         //         are not accessed outside of the controller
19         //
20         private ConsoleView _gameConsoleView;
21         private Traveler _gameTraveler;
22         private Universe _gameUniverse;
23
24         #endregion
25
26         #region PROPERTIES
27
28
29         #endregion
30
31         #region CONSTRUCTORS
32
33         public Controller()
34         {
35             InitializeGame();
36
37             //
38             // instantiate a Salesperson object
39             //
40             _gameTraveler = new Traveler();
41
42             //
43             // instantiate a ConsoleView object
44             //
45             _gameConsoleView = new ConsoleView(_gameTraveler, _gameUniverse);
46
47             //
48             // begins running the application UI
49             //
50             ManageGameLoop();
51         }
52
53         #endregion
54
55         #region METHODS
56
57         /// <summary>
58         /// initialize the game
59         /// </summary>
60         private void InitializeGame()
61         {
62             _usingGame = true;
63             _gameUniverse = new Universe();
64             _gameTraveler = new Traveler();
65             _gameConsoleView = new ConsoleView(_gameTraveler, _gameUniverse);
66
67         }
68
69         /// <summary>
70         /// method to manage the application setup and control loop
71         /// </summary>
```

```
72     private void ManageGameLoop()
73     {
74         TravelerAction travelerActionChoice;
75
76         _gameConsoleView.DisplayWelcomeScreen();
77
78         InitializeMission();
79
80         //
81         // game loop
82         //
83         while (_usingGame)
84         {
85
86             //
87             // get a menu choice from the ConsoleView object
88             //
89             travelerActionChoice = _gameConsoleView.
DisplayGetTravelerActionChoice();
90
91             //
92             // choose an action based on the user's menu choice
93             //
94             switch (travelerActionChoice)
95             {
96                 case TravelerAction.None:
97                     break;
98                 case TravelerAction.LookAround:
99                     _gameConsoleView.DisplayLookAround();
100                     break;
101                 case TravelerAction.Travel:
102                     _gameTraveler.SpaceTimeLocationID = _gameConsoleView.
DisplayGetTravelersNewDestination().SpaceTimeLocationID;
103                     break;
104                 case TravelerAction.TravelerInfo:
105                     _gameConsoleView.DisplayTravelerInfo();
106                     break;
107                 case TravelerAction.TravelerInventory:
108                     _gameConsoleView.DisplayTravelerItems();
109                     break;
110                 case TravelerAction.TravelerTreasure:
111                     _gameConsoleView.DisplayTravelerTreasure();
112                     break;
113                 case TravelerAction.ListTARDISDestinations:
114                     _gameConsoleView.DisplayListAllTARDISDestinations();
115                     break;
116                 case TravelerAction.ListItems:
117                     _gameConsoleView.DisplayListAllGameItems();
118                     break;
119                 case TravelerAction.ListTreasures:
120                     _gameConsoleView.DisplayListAllGameTreasures();
121                     break;
122                 case TravelerAction.Exit:
123                     _usingGame = false;
124                     break;
125                 default:
126                     break;
127             }
128         }
129
130         _gameConsoleView.DisplayExitPrompt();
131
132         //
```

```
133         // close the application
134         //
135         Environment.Exit(1);
136     }
137
138     /// <summary>
139     /// initialize the traveler's starting mission parameters
140     /// </summary>
141     private void InitializeMission()
142     {
143         _gameConsoleView.DisplayMissionSetupIntro();
144         _gameTraveler.Name = _gameConsoleView.DisplayGetTravelersName();
145         _gameTraveler.Race = _gameConsoleView.DisplayGetTravelersRace();
146         _gameTraveler.SpaceTimeLocationID = _gameConsoleView.
147             DisplayGetTravelersNewDestination().SpaceTimeLocationID;
148
149         //
150         // add initial items to the traveler's inventory
151         //
152         AddItemToTravelersInventory(3);
153         AddItemToTravelersTreasure(1);
154     }
155
156     /// <summary>
157     /// add a game item to the traveler's inventory
158     /// </summary>
159     /// <param name="itemID">game item ID</param>
160     private void AddItemToTravelersInventory(int itemID)
161     {
162         Item item;
163
164         item = _gameUniverse.GetItemtByID(itemID);
165         item.SpaceTimeLocationID = 0;
166
167         _gameTraveler.TravelersItems.Add(item);
168     }
169
170     /// <summary>
171     /// add a game treasure to the traveler's inventory
172     /// </summary>
173     /// <param name="itemID">game item ID</param>
174     private void AddItemToTravelersTreasure(int itemID)
175     {
176         Treasure item;
177
178         item = _gameUniverse.GetTreasuretByID(itemID);
179         item.SpaceTimeLocationID = 0;
180
181         _gameTraveler.TravelersTreasures.Add(item);
182     }
183     #endregion
184 }
```