

```
1 using System;
2 using System.Collections.Generic;
3 using System.IO;
4 using System.Data;
5 using System.Text;
6
7 /*
8  * Title:    Lists
9  * Author:   Paul McKillop
10 * Date:    March 2020
11 * Purpose: Create lists and structures for manipulation in other classes
12 */
13
14 namespace SignatureGeneratorV
15 {
16     public class Lists
17     {
18         /// <summary>
19         /// All character data
20         /// </summary>
21         /// <returns></returns>
22         public static List<Character> Characters()
23         {
24             string path = (@"E:\ascii.txt");
25
26             List<Character> characters = new List<Character>();
27
28             DataTable characterData = new DataTable();
29
30             characterData = UtilityCharacterDb.GetCharacterData(path);
31
32             foreach (DataRow row in characterData.Rows)
33             {
34                 var currentCharacter = new Character
35                 {
36                     Code = row.Field<string>(0),
37                     Score = row.Field<string>(1)
38                 };
39
40                 characters.Add(currentCharacter);
41             }
42             //-- Return the list of codes
43             return characters;
44         }
45
46         #region ValidCharacters as Characters
47         /// <summary>
48         /// ValidCharacters as list<Character></Character>
49         /// </summary>
50         /// <returns></returns>
51         public static List<Character> ValidCharacters()
52         {
53             string path = (@"E:\ascii.txt");
54
55             List<Character> characters = new List<Character>();
56
```

```
57         DataTable characterData = new DataTable();
58
59         characterData = UtilityCharacterDb.GetCharacterData(path);
60
61         foreach (DataRow row in characterData.Rows)
62         {
63             var currentCharacter = new Character
64             {
65                 Code = row.Field<string>(0),
66                 Score = row.Field<string>(1)
67             };
68
69             if (currentCharacter.Score != "9")
70             {
71                 characters.Add(currentCharacter);
72             }
73         }
74         //-- Return the list of codes
75         return characters;
76     }
77 #endregion
78
79 #region ValidCharacterCodes (Codes only)
80 /// <summary>
81 /// Valid codes as List<string></string>
82 /// </summary>
83 /// <returns></returns>
84 public static List<string> ValidCharacterCodes()
85 {
86     string path = (@"E:\ascii.txt");
87
88
89
90     List<string> codes = new List<string>();
91     //-- Implement using statement to provide memory management
92     using (StreamReader reader = new StreamReader(path))
93     {
94         //-- Loop through all and harvest first column into the list
95         while (true)
96         {
97             //-- read line
98             string line = reader.ReadLine();
99             //-- Drop if no line data
100             if (line == null)
101             {
102                 break;
103             }
104
105             //-- split fields with comma separator
106             string[] fields = line.Split(',');
107
108             //-- Initialise a Character object to hold data
109             //-- Could use a simple string but demo of OOP process
110             Character character = new Character();
111
112             if (fields[1] != "9")
```

```
113         {
114             //-- Read code field
115             character.Code = fields[0];
116             //-- Add the code to the list
117             codes.Add(character.Code);
118         }
119     }
120 }
121
122     //-- Return the list of codes
123     return codes;
124 }
125 #endregion
126
127     /// <summary>
128     /// Just Character codes
129     /// </summary>
130     /// <returns></returns>
131     public static List<string> CharacterCodes()
132     {
133         string path = (@"E:\ascii.txt");
134
135
136         List<string> codes = new List<string>();
137         //-- Implement using statement to provide memory management
138         using (StreamReader reader = new StreamReader(path))
139         {
140             //-- Loop through all and harvest first column into the list
141             while (true)
142             {
143                 //-- read line
144                 string line = reader.ReadLine();
145                 //-- Drop if no line data
146                 if (line == null)
147                 {
148                     break;
149                 }
150
151                 //-- split fields with comma separator
152                 string[] fields = line.Split(',');
153
154                 //-- Initialise a Character object to hold data
155                 //-- Could use a simple string but demo of OOP process
156                 Character character = new Character();
157                 //-- Read code field
158                 character.Code = fields[0];
159                 //-- Add the code to the list
160                 codes.Add(character.Code);
161             }
162         }
163
164         //-- Return the list of codes
165         return codes;
166     }
167
168 }
```

```
169     #region String is found in list
170
171     /// <summary>
172     /// Check if a string is already in a list
173     /// </summary>
174     /// <param name="listToSearch"></param>
175     /// <param name="stringToFind"></param>
176     /// <returns>Boolean</returns>
177     public static bool StringFound(List<string> listToSearch, string stringToFind)
178     {
179         //-- tracker variable
180         bool stringFound = false;
181         //-- Loop through all
182         foreach (string value in listToSearch)
183         {
184             if (value == stringToFind)
185             {
186                 stringFound = true;
187                 return stringFound;
188             }
189         }
190
191         //-- return true or false: in list, or not
192         return stringFound;
193     }
194
195     #endregion
196 }
197 }
198
```