

```
1 using System;
2 using System.Drawing;
3 using System.Collections.Generic;
4 using System.Linq;
5
6 namespace A4Group_17P1
7 {
8     class Program
9     {
10         // Kwangjin Baek <Kbaek7943@conestogac.on.ca> Keith Muema <Kmuema1971@conestogac.on.ca> Jacob Wall <Jwall18052@conestogac.on.ca>
11
12         /* This application allows users to input brand (1 ~ 3) and size (1 ~ 4),
13            and edit, delete */
14         static void Main(string[] args)
15         {
16             // arrays: brand, size, menu
17             string[] brandjin = new string[3], brandInput = new string[12];
18             string[] size = new string[4] { "Small(1)", "Medium(2)", "Large(3)",
19             "XLarge(4)" };
20             string[] menu = {"A. Add new T-shirt details (Brand name & Size).",
21             "B. Edit existing T-shirt details (Brand name & Size)",
22             "C. Display all T-shirt information.", "D. Delete T-shirt
23             information",
24             "E. Exit the program"};
25             // sentinels: main menu, sub menu
26             string brandInputTemporary = "", brandSizeCombined = "", end = "";
27             bool goOn = true, stayA = true, stayB = true, stayC = true, stayD =
28             true;
29             int sizeInput = 0, whileCheck = 0;
30
31             for (int i = 0; i < brandjin.Length; i++)
32             {
33                 Console.WriteLine("Enter brand: ");
34                 brandjin[i] = Console.ReadLine();
35             }
36
37             // Main menu
38             while (goOn)
39             {
40                 try
41                 {
42                     stayA = true;
43                     stayB = true;
44                     stayC = true;
45                     stayD = true;
46
47                     Console.WriteLine("\n***** Menu
48                     *****");
49                     for (int i = 0; i < menu.Length; i++)
50                     {
51                         Console.WriteLine(menu[i]);
52                     }
53                 }
54             }
55         }
56     }
57 }
```

```
47     }
48     Console.WriteLine("\nPlease choose an option: ");
49     string choice = Console.ReadLine();
50
51     // Option 'A': brand and size input
52     if (choice == "A" || choice == "a")
53     {
54         /* Option A part: Users can enter item information */
55         while (stayA)
56         {
57             // asks brand name
58             Console.WriteLine("Enter brand name ({0} {1} {2}): ",
brandjin[0], brandjin[1], brandjin[2]);
59             brandInputTemporary = Console.ReadLine();
60             if (brandInputTemporary != brandjin[0] &&
brandInputTemporary != brandjin[1] && brandInputTemporary !=
brandjin[2])
61             {
62                 throw new ArgumentException("We only have three
brands. Enter again.");
63             }
64
65             // asks size (1 ~ 4)
66             Console.WriteLine("Enter size (1 ~ 4): ");
67             sizeInput = int.Parse(Console.ReadLine());
68             if (sizeInput < 1 || sizeInput > 4)
69             {
70                 throw new ArgumentException("Size out of range!
Enter again.");
71             }
72             brandSizeCombined = brandInputTemporary + "-" +
sizeInput.ToString();
73
74             // Checks if the item entered already exists in the
box. Keeps going until item box is full or user enters 'done'
75             bool itemCheck = false;
76             if (whileCheck < 12)
77             {
78                 for (int i = 0; i < brandInput.Length; i++)
79                 {
80                     if (brandInput[i] == brandSizeCombined)
81                     {
82                         Console.WriteLine("Error T-Shirt record
already exists");
83                         itemCheck = false;
84                         break;
85                     }
86
87                     else
88                     {
89                         itemCheck = true;
```

```
90         }
91     }
92
93     if (itemCheck == true)
94     {
95         brandInput[whileCheck] = brandSizeCombined;
96         Console.WriteLine("Item has stored");
97         whileCheck += 1;
98     }
99 }
100
101 else
102 {
103     Console.WriteLine("Item box is full");
104 }
105
106 Console.Write("Do you want to keep going? (Enter
'Done' to stop): ");
107 end = Console.ReadLine();
108 if (end == "DONE" || end == "done" || end == "Done")
109 {
110     stayA = false;
111 }
112 }
113 }
114
115 // Option 'B': edit the data
116 else if (choice == "B" || choice == "b")
117 {
118     while (stayB)
119     {
120         // Shows item entered in option 'A'
121         Console.WriteLine("\n***** Items
*****");
122         for (int i = 0; i < brandInput.Length; i++)
123         {
124             Console.WriteLine(brandInput[i]);
125         }
126         Console.WriteLine
("*****");
127
128         // Asks what item to change
129         Console.Write("Enter the \"brand-size\" you wish to
edit: ");
130         brandInputTemporary = Console.ReadLine();
131
132         // Checks the index of the entered item
133         int indexCheckB = Array.IndexOf(brandInput,
brandInputTemporary);
134
135         // Throws an error if the item doesn't exist
136         if (indexCheckB == -1)
```

```
137         {
138             throw new ArgumentException("Brand record not found for that entry.");
139         }
140
141         // Asks new information
142         else
143         {
144             Console.WriteLine("\nbrand information found\nPlease enter updated information");
145             Console.Write("Enter brand name ({0} {1} {2}): ", brandjin[0], brandjin[1], brandjin[2]);
146             brandInputTemporary = Console.ReadLine();
147             if (brandInputTemporary != brandjin[0] && brandInputTemporary != brandjin[1] && brandInputTemporary != brandjin[2])
148             {
149                 throw new ArgumentException("We only have three brands. Enter again.");
150             }
151
152             Console.Write("Enter size (1 ~ 4): ");
153             sizeInput = int.Parse(Console.ReadLine());
154             if (sizeInput < 1 || sizeInput > 4)
155             {
156                 throw new ArgumentException("Size out of range! Enter again.");
157             }
158             brandSizeCombined = brandInputTemporary + "-" + sizeInput.ToString();
159
160             brandInput[indexCheckB] = brandSizeCombined;
161             Console.WriteLine("The item updated");
162             Console.WriteLine(brandInput[indexCheckB]);
163         }
164
165         Console.Write("Do you want to go back to the main menu (Press 'Enter')");
166         string check = Console.ReadLine();
167         if (check == "")
168         {
169             stayB = false;
170         }
171     }
172 }
173
174 // Option 'C': shows the item list
175 else if (choice == "C" || choice == "c")
176 {
177     while (stayC)
178     {
179         Console.WriteLine("\n***** Items
```

```

180         *****");
181         for (int i = 0; i < brandInput.Length; i++)
182         {
183             Console.WriteLine(brandInput[i]);
184         }
185         Console.WriteLine
186         (*****");
187
188         Console.Write("Do you want to go back to the main
189 menu (Press 'Enter'): ");
190         string check = Console.ReadLine();
191         if (check == "")
192         {
193             stayC = false;
194         }
195     }
196
197     // Option 'D': allows the user to delete items (chosen item -
198     // > None)
199     else if (choice == "D" || choice == "d")
200     {
201         while (stayD)
202         {
203             Console.WriteLine("\n***** Items
204             *****");
205             for (int i = 0; i < brandInput.Length; i++)
206             {
207                 Console.WriteLine(brandInput[i]);
208             }
209             Console.WriteLine
210             (*****");
211
212             Console.Write("Enter the \"brand-size\" you wish to
213 delete: ");
214             brandInputTemporary = Console.ReadLine();
215
216             int indexCheckD = Array.IndexOf(brandInput,
217 brandInputTemporary);
218
219             if (indexCheckD == -1)
220             {
221                 throw new ArgumentException("Brand record not
222 found for that entry.");
223             }
224
225             else
226             {
227                 Console.Write("brand information found\n!!Are you
228 sure you want to delete Y/N: ");
229                 string deleteConfirm = Console.ReadLine();
230
231

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```
222         if (deleteConfirm == "y" || deleteConfirm == "Y")
223         {
224             brandInput[indexCheckD] = "NONE";
225             foreach (var i in brandInput)
226             {
227                 Console.WriteLine(i);
228                 whileCheck = indexCheckD;
229             }
230         }
231     }
232     stayD = false;
233 }
234 }
235
236 // Option 'E': ends the application
237 else if (choice == "E" || choice == "e")
238 {
239     goOn = false;
240     Console.WriteLine("\nHave a great day");
241 }
242
243 else
244 {
245     throw new ArgumentException("Out of option range (A ~ E)");
246 }
247 }
248
249 catch (ArgumentNullException e)
250 {
251     Console.WriteLine(e);
252 }
253
254 catch (ArgumentOutOfRangeException e)
255 {
256     Console.WriteLine(e);
257 }
258
259 catch (IndexOutOfRangeException e)
260 {
261     Console.WriteLine(e);
262 }
263
264 catch (Exception e)
265 {
266     Console.WriteLine(e.Message);
267 }
268 }
269 }
270 }
271 }
272
```