



視窗程式設計

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題目:

請依照上課內容設計一個WPF視窗程式，讓顧客可以點飲料。

- 首先確認使用者要【內用】或【外帶】(使用GroupBox, RadioButton)
- 飲料品項價格如下(大杯與中杯)，每種品項均可點不同杯數，使用GroupBox, CheckBox, Slider與Label等控制項。
 - 咖啡 60 50
 - 紅茶 30 20
 - 綠茶 25 20
- 訂購滿200元以上者9折，300元以上者85折，500元以上者8折。將顧客所點的品項內容包含內用外帶呈現於TextBlock，並顯示此次訂購的總價與折價金額。對於訂單內容，請依照不同的折扣，自行設計不同的格式顯示方式(粗體，斜體，字體顏色或背景顏色等)。

執行結果:

The application window is titled 'MainWindow'. It features a light blue header bar with standard Windows controls. The main content area is divided into three sections:

- 內用/外帶 (In-store/Takeaway):** A light blue box containing two radio buttons. In the first screenshot, '內用' (In-store) is selected. In the second, '外帶' (Takeaway) is selected.
- 飲料品項 (Beverage Items):** A light red box containing a list of beverages with checkboxes and sliders to select quantities.

| 品項 (Item) | 單價 (Unit Price) | 數量 (Quantity) |
|-----------------------------|-----------------|---------------|
| ☑ 咖啡大杯60 (Coffee Large 60) | 60 | 2 |
| ☐ 咖啡中杯50 (Coffee Medium 50) | 50 | 0 |
| ☐ 紅茶大杯30 (Tea Large 30) | 30 | 0 |
| ☑ 紅茶中杯20 (Tea Medium 20) | 20 | 3 |
| ☑ 綠茶大杯25 (Tea Large 25) | 25 | 5 |
| ☐ 綠茶中杯20 (Tea Medium 20) | 20 | 0 |
- 確定訂購 (Confirm Order):** A green button.
- Order Summary:** A yellow box displaying the order details and total.

您所訂購的飲品內用訂單如下:
訂購品項1: 咖啡 大杯, 單價60元 X 2, 小計120元
訂購品項2: 紅茶 中杯, 單價20元 X 3, 小計60元
訂購品項3: 綠茶 大杯, 單價25元 X 5, 小計125元
總共: 305元
打折後金額: 259元

```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Runtime.InteropServices;
5 using System.Text;
6 using System.Threading.Tasks;
7 using System.Windows;
8 using System.Windows.Controls;
9 using System.Windows.Controls.Primitives;
10 using System.Windows.Data;
11 using System.Windows.Documents;
12 using System.Windows.Input;
13 using System.Windows.Media;
14 using System.Windows.Media.Imaging;
15 using System.Windows.Navigation;
16 using System.Windows.Shapes;
17
18 namespace hw5
19 {
20     /// <summary>
21     /// Interaction logic for MainWindow.xaml
22     /// </summary>
23
24     public partial class MainWindow : Window
25     {
26         List<Drink> drinks = new List<Drink>();
27         List<OrderItem> order = new List<OrderItem>();
28         string takeout;
29         public MainWindow()
30         {
31             InitializeComponent();
32
33             AddNewDrink(drinks);
34
35             DisplayDrinks(drinks);
36         }
37
38         private void DisplayDrinks(List<Drink> drinks)
39         {
40             foreach (Drink d in drinks)
41             {
42                 StackPanel sp = new StackPanel();
43                 CheckBox cb = new CheckBox();
44                 Slider sl = new Slider();
45                 Label lb = new Label();
46                 sp.Orientation = Orientation.Horizontal;
47                 cb.Content = d.Name + d.Size + d.Price;
48                 cb.Margin = new Thickness(5);
49                 cb.Width = 150;
50                 cb.Height = 25;
51                 sl.Value = 0;
52                 sl.Width = 100;
53                 sl.Minimum = 0;
```

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54         sl.Maximum = 10;
55         sl.TickPlacement = TickPlacement.TopLeft;
56         sl.TickFrequency = 1;
57         sl.IsSnapToTickEnabled = true;
58         lb.Width = 50;
59         Binding myBinding = new Binding("Value");
60         myBinding.Source = sl;
61         lb.SetBinding(ContentProperty, myBinding);
62         sp.Children.Add(cb);
63         sp.Children.Add(sl);
64         sp.Children.Add(lb);
65         stackpanel_DrinkMenu.Children.Add(sp);
66     }
67 }
68
69 private void AddNewDrink(List<Drink> myDrink)
70 {
71     myDrink.Add(new Drink() { Name = "咖啡", Size = "大杯", Price = 60 });
72     myDrink.Add(new Drink() { Name = "咖啡", Size = "中杯", Price = 50 });
73     myDrink.Add(new Drink() { Name = "紅茶", Size = "大杯", Price = 30 });
74     myDrink.Add(new Drink() { Name = "紅茶", Size = "中杯", Price = 20 });
75     myDrink.Add(new Drink() { Name = "綠茶", Size = "大杯", Price = 25 });
76     myDrink.Add(new Drink() { Name = "綠茶", Size = "中杯", Price = 20 });
77 }
78 private void RadioButton_Checked(object sender, RoutedEventArgs e)
79 {
80     RadioButton rb = sender as RadioButton;
81     if(rb.IsChecked == true)
82     {
83         takeout = rb.Content.ToString();
84     }
85 }
86
87 private void orderButton_click(object sender, RoutedEventArgs e)
88 {
89     displayTextBlock.Text = "";
90     PlaceOrder(order);
91     DisplayOrderDetail(order);
92 }
93 private void DisplayOrderDetail(List<OrderItem> myOrder)
94 {
95     int total = 0;
96     int sum = 0;
97     displayTextBlock.Text = $"您所訂購的飲品{takeout}訂單如下: \n";
98     int i = 1;
99     foreach (OrderItem item in myOrder)
100     {
101         total += item.SubTotal;
102         Drink drinkItem = drinks[item.Index];
103         sum = sum + item.SubTotal;
104         displayTextBlock.Text += $"訂購品項{i} : { drinkItem.Name}
            { drinkItem.Size} , 單價{ drinkItem.Price}元 X { item.Quantity} , 小
            計{ item.SubTotal}元 \n";

```

```
105         i++;
106     }
107     displayTextBlock.Text += $"總共: {sum}元 \n";
108     int sell = 0;
109     if (sum >= 500)
110     {
111         sell = (int)(sum * 0.8);
112         displayTextBlock.Text += $"打折後金額: {sell}元\n";
113     }
114     else if (sum >= 300)
115     {
116         sell = (int)(sum * 0.85);
117         displayTextBlock.Text += $"打折後金額: {sell}元\n";
118     }
119     else if (sum >= 200)
120     {
121         sell = (int)(sum * 0.9);
122         displayTextBlock.Text += $"打折後金額: {sell}元\n";
123     }
124 }
125 private void PlaceOrder(List<OrderItem> myOrder)
126 {
127     myOrder.Clear();
128     for (int i = 0; i < stackpanel_DrinkMenu.Children.Count; i++)
129     {
130         StackPanel sp = stackpanel_DrinkMenu.Children[i] as StackPanel;
131         CheckBox cb = sp.Children[0] as CheckBox;
132         Slider sl = sp.Children[1] as Slider;
133         int quantity = Convert.ToInt32(sl.Value);
134         if (cb.IsChecked == true && quantity != 0)
135         {
136             int price = drinks[i].Price;
137             int subtotal = price * quantity;
138             myOrder.Add(new OrderItem(){ Index = i, Quantity = quantity, SubTotal = subtotal});
139         }
140     }
141 }
142
143 }
144 }
145
```

```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Text;
5 using System.Threading.Tasks;
6
7 namespace hw5
8 {
9     internal class Drink
10    {
11        public String Name { get; set; }
12        public String Size { get; set; }
13        public int Price { get; set; }
14    }
15 }
16
```

```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Text;
5 using System.Threading.Tasks;
6
7 namespace hw5
8 {
9     internal class OrderItem
10    {
11        public int Index { get; set; }
12        public int Quantity { get; set; }
13        public int SubTotal { get; set; }
14    }
15 }
16
```