

五專資工三甲

視窗程式設計

SB060024

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題目

請依照上課範例，完成一個精簡版的 WPF 記事本應用程式，你的程式要具備以下功能：

- 開新檔案
- 開啟舊檔
- 儲存檔案成為 **rtf** 與 **html** 格式(新增功能)
- 改變字型與字體大小
- 改變字體外觀(粗體、斜體、底線)
- 變換字體顏色與背景顏色(新增功能)
- 清除全部內容

請將你的程式碼與程式執行畫面，輸出並彙整成一個 **pdf** 檔案來繳交，**pdf** 檔名請以學號+作業編號方式命名，列如第一個作業檔名為 **A123456789ex1.pdf**。請注意作業繳交要求、日期與格式。

```
1 <Window x:Class="wordCopy.MainWindow"
2     xmlns="http://schemas.microsoft.com/winfx/2006/xaml/
    presentation"
3     xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"
4     xmlns:d="http://schemas.microsoft.com/expression/blend/2008"
5     xmlns:mc="http://schemas.openxmlformats.org/markup-
    compatibility/2006"
6     xmlns:local="clr-namespace:wordCopy"
7     mc:Ignorable="d"
8     Title="2023小作家" Height="450" Width="800">
9     <Grid>
10        <Button x:Name="openButton" Content="開啟新文件"
            HorizontalAlignment="Left" Margin="109,89,0,0"
            VerticalAlignment="Top" Height="66" Width="135" FontSize="20"
            Click="openButton_Click"/>
11    </Grid>
12 </Window>
13
```

```
1 using System.Windows;
2
3 namespace wordCopy
4 {
5     /// <summary>
6     /// Interaction logic for MainWindow.xaml
7     /// </summary>
8     public partial class MainWindow : Window
9     {
10         public MainWindow()
11         {
12             InitializeComponent();
13         }
14
15         private void openButton_Click(object sender, RoutedEventArgs e)
16         {
17             MyDocumentViewer myDocumentViewer = new MyDocumentViewer();
18             myDocumentViewer.Show();
19         }
20     }
21 }
22
```

```

1 <Window x:Class="wordCopy.MyDocumentViewer"
2     xmlns="http://schemas.microsoft.com/winfx/2006/xaml/
    presentation"
3     xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"
4     xmlns:d="http://schemas.microsoft.com/expression/blend/2008"
5     xmlns:mc="http://schemas.openxmlformats.org/markup-
    compatibility/2006"
6     xmlns:xctk="http://schemas.xceed.com/wpf/xaml/toolkit"
7     mc:Ignorable="d"
8     Title="MyDocumentViewer" Height="450" Width="800">
9     <Window.CommandBindings>
10         <CommandBinding Command="ApplicationCommands.New"
            Executed="NewCommand_Executed" />
11         <CommandBinding Command="ApplicationCommands.Open"
            Executed="OpenCommand_Executed" />
12         <CommandBinding Command="ApplicationCommands.Save"
            Executed="SaveCommand_Executed" />
13     </Window.CommandBindings>
14     <DockPanel>
15         <ToolBarTray Height="40" VerticalAlignment="Top"
            HorizontalAlignment="Left" DockPanel.Dock="Top"
            Background=#FFE3ECF6">
16             <ToolBar x:Name="ApplicationToolBar" Height="40"
                Width="200">
17                 <Button x:Name="newButton"
                    Command="ApplicationCommands.New" Width="35"
                    Height="35">
18                     <Image Width="35" Height="35" Source="/file-
                        regular.png" />
19                 </Button>
20                 <Button x:Name="openButton"
                    Command="ApplicationCommands.Open" Width="35"
                    Height="35">
21                     <Image Width="35" Height="35" Source="/folder-open-
                        regular.png" />
22                 </Button>
23                 <Button x:Name="saveButton"
                    Command="ApplicationCommands.Save" Width="35"
                    Height="35">
24                     <Image Width="35" Height="35" Source="/save-
                        icon.jpg" />
25                 </Button>
26                 <Button x:Name="clearButton" Width="35" Height="35"
                    Click="clearButton_Click">
27                     <Image Width="35" Height="35" Source="/trash-can-
                        solid.png" />
28                 </Button>
29             </ToolBar>
30             <ToolBar x:Name="editingToolBar" Width="500">
31                 <ToggleButton x:Name="boldButton"
                    Command="EditingCommands.ToggleBold" Height="35"
                    Width="35">
                    <Image Width="25" Height="25" Source="/bold-

```

```

solid.png" />
33     </ToggleButton>
34     <ToggleButton x:Name="italicButton"
        Command="EditingCommands.ToggleItalic" Height="35"
        Width="35">
35         <Image Width="35" Height="35" Source="/italic-
            solid.png" HorizontalAlignment="Center"
            VerticalAlignment="Center" />
36     </ToggleButton>
37     <ToggleButton x:Name="underlineButton"
        Command="EditingCommands.ToggleUnderline" Height="35"
        Width="35">
38         <Image Width="35" Height="35" Source="/underline-
            solid.png" HorizontalAlignment="Center"
            VerticalAlignment="Center" />
39     </ToggleButton>
40     <xctk:ColorPicker x:Name="fontColorPicker" Width="100"
        Height="35" VerticalAlignment="Center"
        HorizontalAlignment="Left"
        SelectedColorChanged="fontColorPicker_SelectedColorCha
        nged" />
41     <ComboBox x:Name="fontFamilyComboBox" Height="35"
        Width="100" VerticalContentAlignment="Center"
        HorizontalContentAlignment="Left"
        Background=#FFD2FFBE"
        SelectionChanged="fontFamilyComboBox_SelectionChanged"
        />
42     <ComboBox x:Name="fontSizeComboBox" Height="35"
        Width="50" VerticalContentAlignment="Center"
        HorizontalContentAlignment="Left"
        Background=#FFB1D1FF"
        SelectionChanged="fontSizeComboBox_SelectionChanged" />
43     <xctk:ColorPicker x:Name="backgroundPicker" Width="60"
        Height="35" VerticalAlignment="Center"
        HorizontalAlignment="Left"
        SelectedColorChanged="backgroundPicker_SelectedColorCh
        anged" />
44     </ToolBar>
45     </ToolBarTray>
46     <RichTextBox x:Name="rtbEditor" Background=#FFF7F6ED"
        SelectionChanged="rtbEditor_SelectionChanged">
47         <FlowDocument />
48     </RichTextBox>
49 </DockPanel>
</Window>

```

```

1 using Microsoft.Win32;
2 using System;
3 using System.Collections.Generic;
4 using System.IO;
5 using System.Windows;
6 using System.Windows.Documents;
7 using System.Windows.Input;
8 using System.Windows.Media;
9
10 namespace wordCopy
11 {
12     /// <summary>
13     /// MyDocumentViewer.xaml 的互動邏輯
14     /// </summary>
15     public partial class MyDocumentViewer : Window
16     {
17         Color fontColor = Colors.Red;
18
19         public MyDocumentViewer()
20         {
21             InitializeComponent();
22             fontColorPicker.SelectedColor = fontColor;
23             // 修改這一行
24             foreach (FontFamily fontFamily in Fonts.SystemFontFamilies)
25             {
26                 fontFamilyComboBox.Items.Add(fontFamily.Source);
27             }
28             fontFamilyComboBox.SelectedIndex = 2;
29
30             fontSizeComboBox.ItemsSource = new List<Double>() { 8, 9,
31                 10, 12, 20, 24, 32, 40, 50, 60, 80, 90 };
32             fontSizeComboBox.SelectedIndex = 3;
33         }
34
35         private void NewCommand_Executed(object sender,
36             ExecutedRoutedEventArgs e)
37         {
38             // 在這裡實現「新建」的操作，例如打開一個新文件、清空文檔等
39             MyDocumentViewer myDocumentViewer = new MyDocumentViewer();
40             myDocumentViewer.Show();
41         }
42
43         private void OpenCommand_Executed(object sender,
44             ExecutedRoutedEventArgs e)
45         {
46             OpenFileDialog fileDialog = new OpenFileDialog();
47             fileDialog.Filter = "Rich Text Format檔案|*.rtf|Hyper Text
48                 Markup Language|.html|所有檔案|*.*";
49             if (fileDialog.ShowDialog() == true)
50             {
51                 TextRange range = new TextRange
52                     (rtbEditor.Document.ContentStart,
53                     rtbEditor.Document.ContentEnd);
54             }
55         }
56     }
57 }

```

```
48         if(range.Text == "" )
49         {
50             MessageBox.Show("檔案無內容");
51         }
52         using (FileStream fileStream = new FileStream
53             (fileDialog.FileName, FileMode.Open))
54         {
55             range.Load(fileStream, DataFormats.Rtf);
56         }
57     }
58
59     private void SaveCommand_Executed(object sender,
60         ExecutedRoutedEventArgs e)
61     {
62         SaveFileDialog fileDialog = new SaveFileDialog();
63         fileDialog.Filter = "Rich Text Format檔案|*.rtf|Hyper Text
64             Markup Language|.html|所有檔案|*.*";
65         if(fileDialog.ShowDialog() == true)
66         {
67             TextRange range = new TextRange
68                 (rtbEditor.Document.ContentStart,
69                 rtbEditor.Document.ContentEnd);
70             using (FileStream fileStream = new FileStream
71                 (fileDialog.FileName, FileMode.Create))
72             {
73                 range.Save(fileStream, DataFormats.Rtf);
74             }
75         }
76     }
77
78     private void rtbEditor_SelectionChanged(object sender,
79         RoutedEventArgs e)
80     {
81         //判斷選中的文字是否為粗體，並同步更新boldButton的狀態
82         object property = rtbEditor.Selection.GetProperty(
83             TextElement.FontWeightProperty);
84         boldButton.IsChecked = (property is FontWeight &&
85             (FontWeight)property == FontWeights.Bold);
86
87         //判斷選中的文字是否為斜體，並同步更新italicButton的狀態
88         property = rtbEditor.Selection.GetProperty(
89             TextElement.FontStyleProperty);
90         italicButton.IsChecked = (property is FontStyle &&
91             (FontStyle)property == FontStyles.Italic);
92
93         //判斷選中的文字是否有底線，並同步更新underlineButton的狀態
94         property = rtbEditor.Selection.GetProperty(
95             Inline.TextDecorationsProperty);
96         underlineButton.IsChecked = (property !=
97             DependencyProperty.UnsetValue && property ==
98             TextDecorations.Underline);
99     }
```



```
87      // 判斷選中的文字的字體，同步更新font
88      property = rtbEditor.Selection.GetPropertyValue
      (TextElement.FontFamilyProperty);
89      fontFamilyComboBox.SelectedItem = property;
90      // 判斷選中的文字的字體大小
91      property = rtbEditor.Selection.GetPropertyValue
      (TextElement.ForegroundProperty) as SolidColorBrush;
92      fontSizeComboBox.SelectedItem = property;
93
94
95
96      SolidColorBrush? foregroundPropety =
      rtbEditor.Selection.GetPropertyValue
      (TextElement.ForegroundProperty) as SolidColorBrush;
97
98      if(foregroundPropety != null)
99      {
100          fontColorPicker.SelectedColor =
          foregroundPropety.Color;
101      }
102
103  }
104
105  private void fontColorPicker_SelectedColorChanged(object
      sender, RoutedPropertyChangedEventArgs<Color?> e)
106  {
107      fontColor = (Color)e.NewValue;
108      SolidColorBrush fontBrush = new SolidColorBrush(fontColor);
109      rtbEditor.Selection.ApplyPropertyValue
      (TextElement.ForegroundProperty, fontBrush);
110  }
111  private void fontFamilyComboBox_SelectionChanged(object sender,
      System.Windows.Controls.SelectionChangedEventArgs e)
112  {
113      if(fontFamilyComboBox.SelectedItem != null)
114      {
115          rtbEditor.Selection.ApplyPropertyValue
          (TextElement.FontFamilyProperty,
          fontFamilyComboBox.SelectedItem);
116      }
117  }
118
119  private void fontSizeComboBox_SelectionChanged(object sender,
      System.Windows.Controls.SelectionChangedEventArgs e)
120  {
121      if (fontSizeComboBox.SelectedItem != null)
122      {
123          rtbEditor.Selection.ApplyPropertyValue
          (TextElement.FontSizeProperty,
          fontSizeComboBox.SelectedItem);
124      }
125  }
126
```

```
127     private void clearButton_Click(object sender, RoutedEventArgs ↗
128         e)
129     {
130         rtbEditor.Document.Blocks.Clear();
131     }
132     private void backgroundPicker_SelectedColorChanged(object ↗
133         sender, RoutedPropertyChangedEventArgs<Color?> e)
134     {
135         if (e.NewValue.HasValue)
136         {
137             Color backgroundColor = e.NewValue.Value;
138             SolidColorBrush backgroundBrush = new SolidColorBrush ↗
139                 (backgroundColor);
140             rtbEditor.Background = backgroundBrush;
141         }
142     }
143 }
```

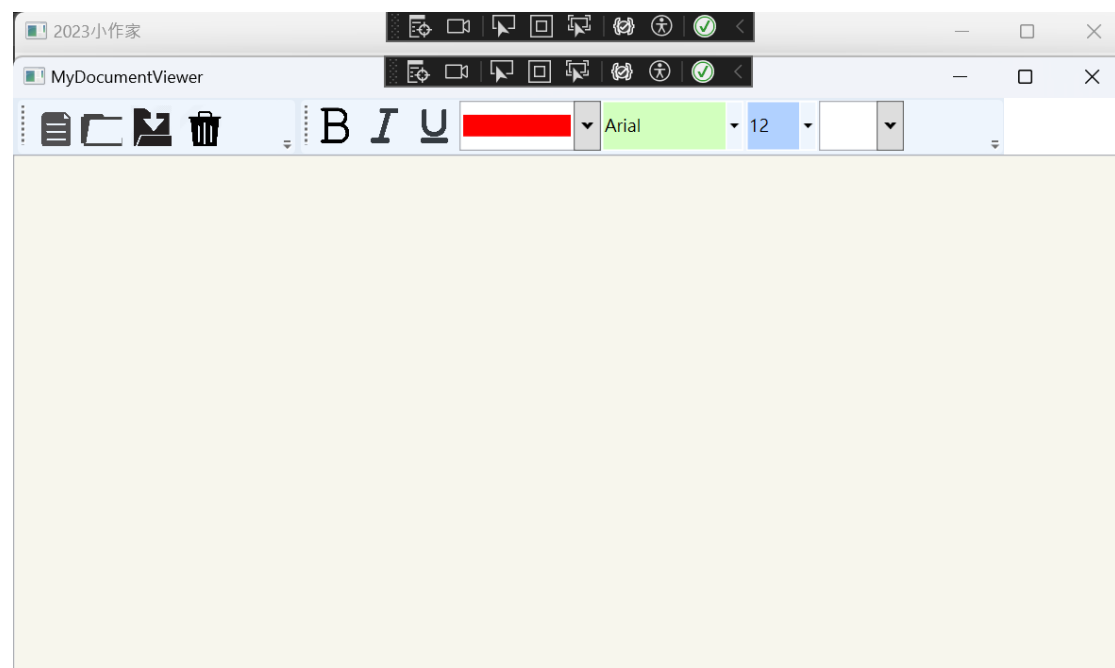
輸出結果：

(1)開啟文件頁面

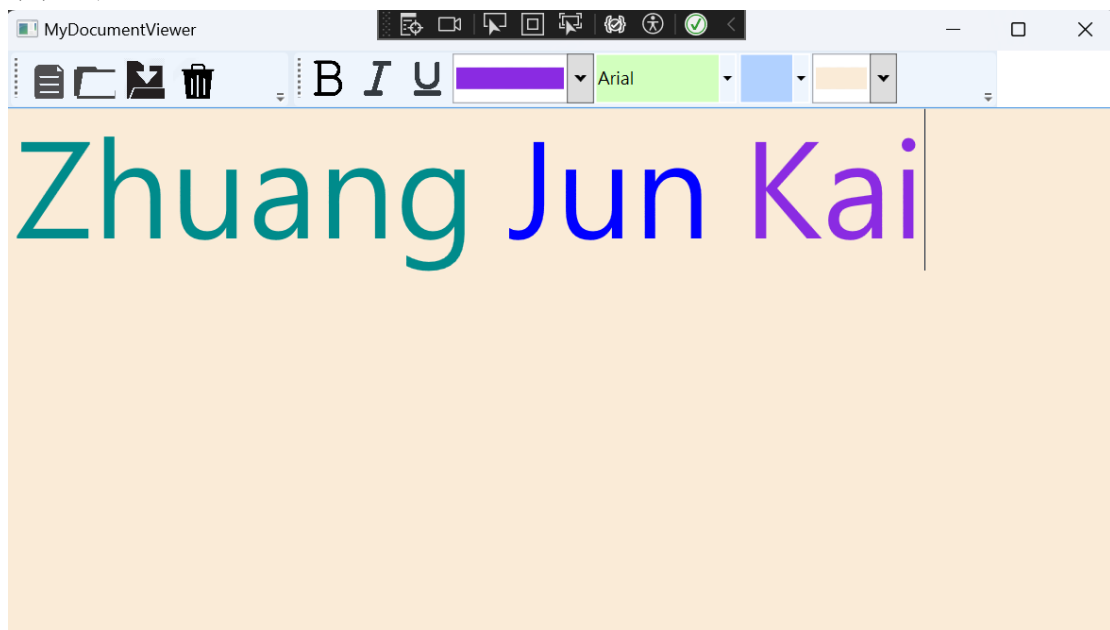


開啟新文件

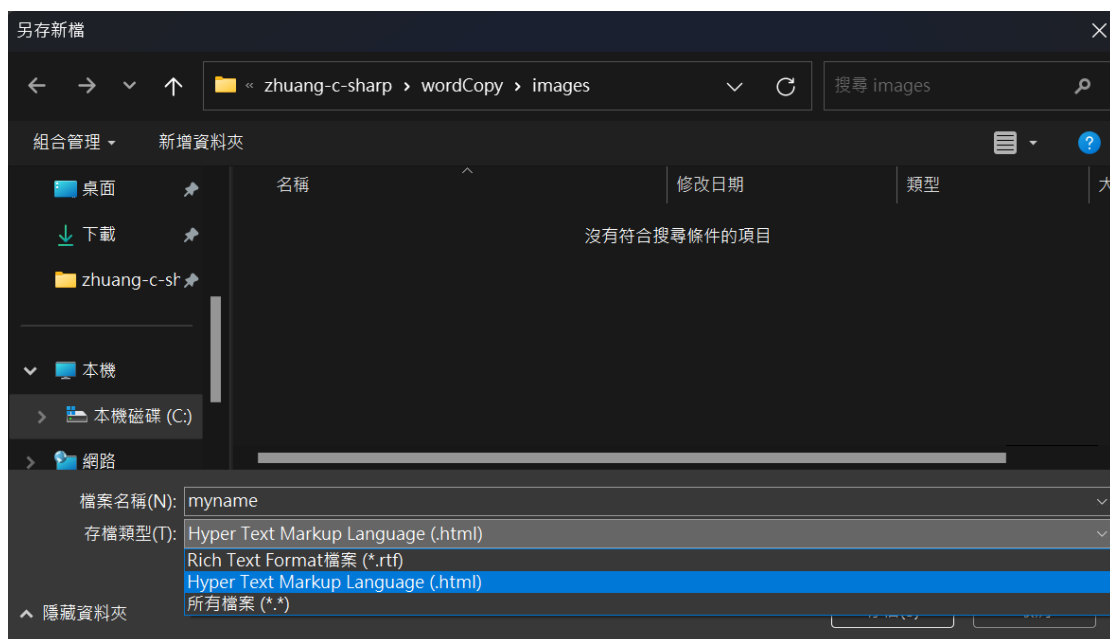
(2) 工作區



(3) 測試



(4) 存檔 filter



(5) 開檔案

