现代操作系统应用开发实验报告

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一．参考资料

上课的课件

https://docs.microsoft.com/zh-cn/windows/uwp/controls-and-patterns/media-playback

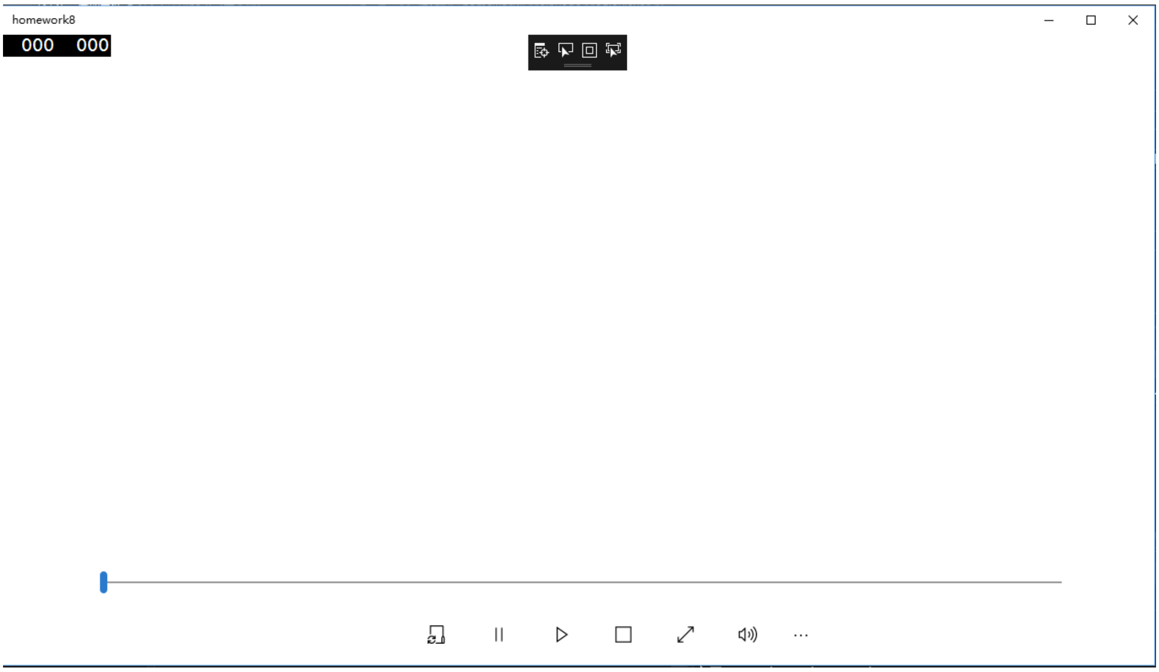
http://www.cnblogs.com/ynbt/archive/2013/01/01/2841400.html

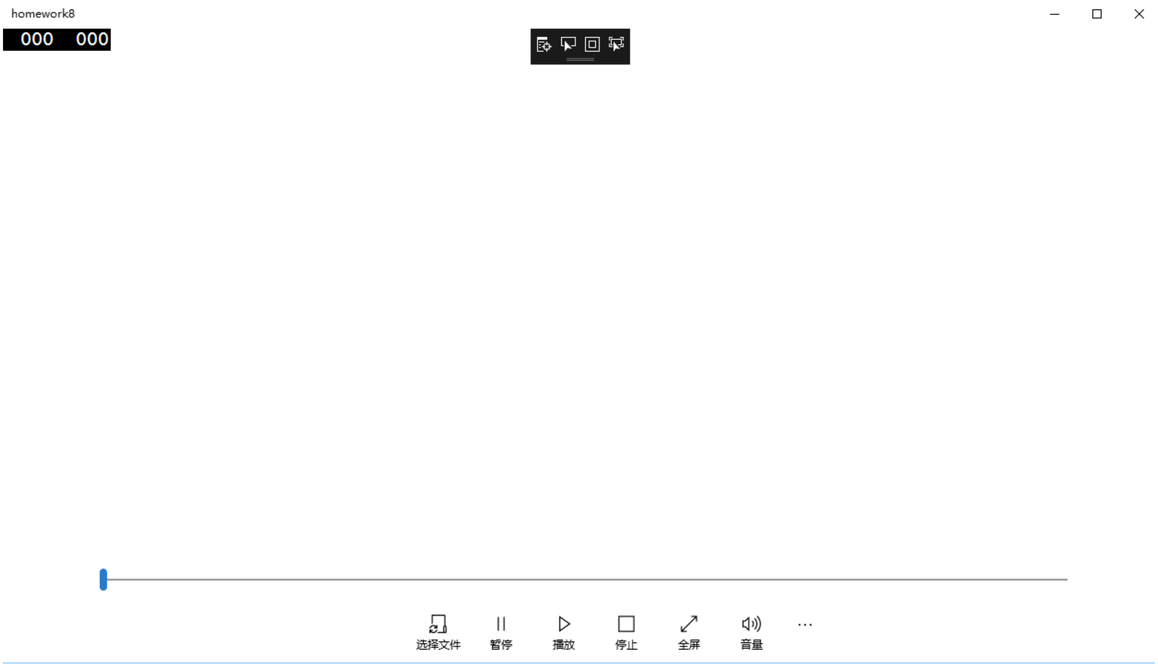
http://www.cnblogs.com/tianma3798/p/5928217.html

二．实验步骤

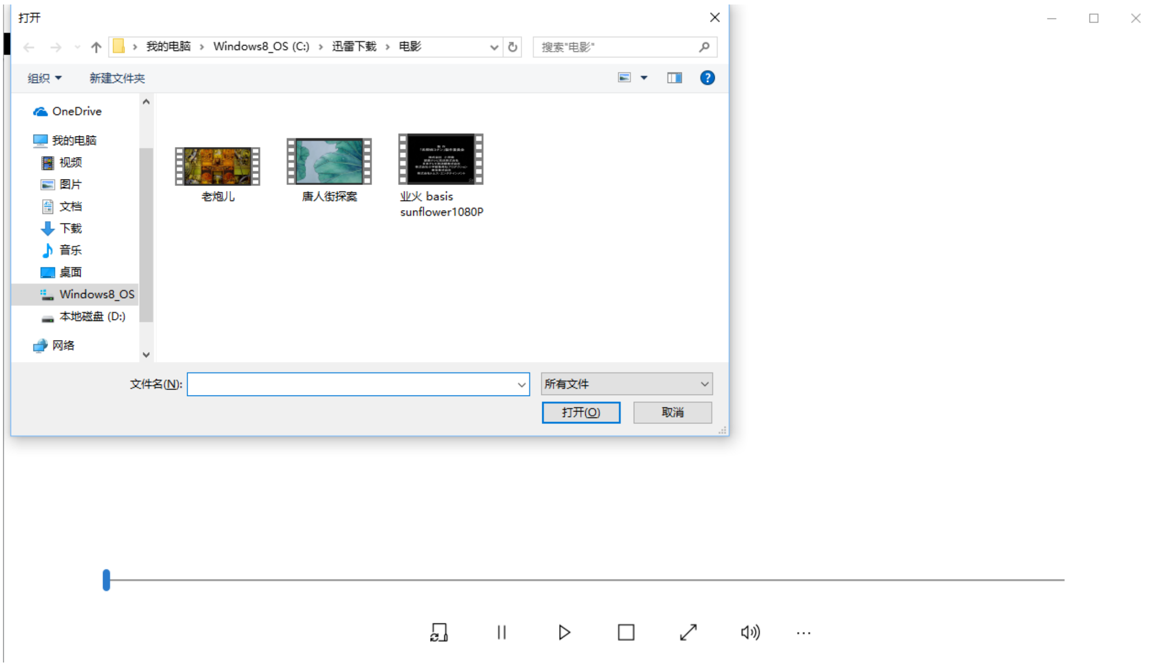
1. **添加 mediaelement 控件**
2. **添加媒体控制按钮**
3. **添加进度条**

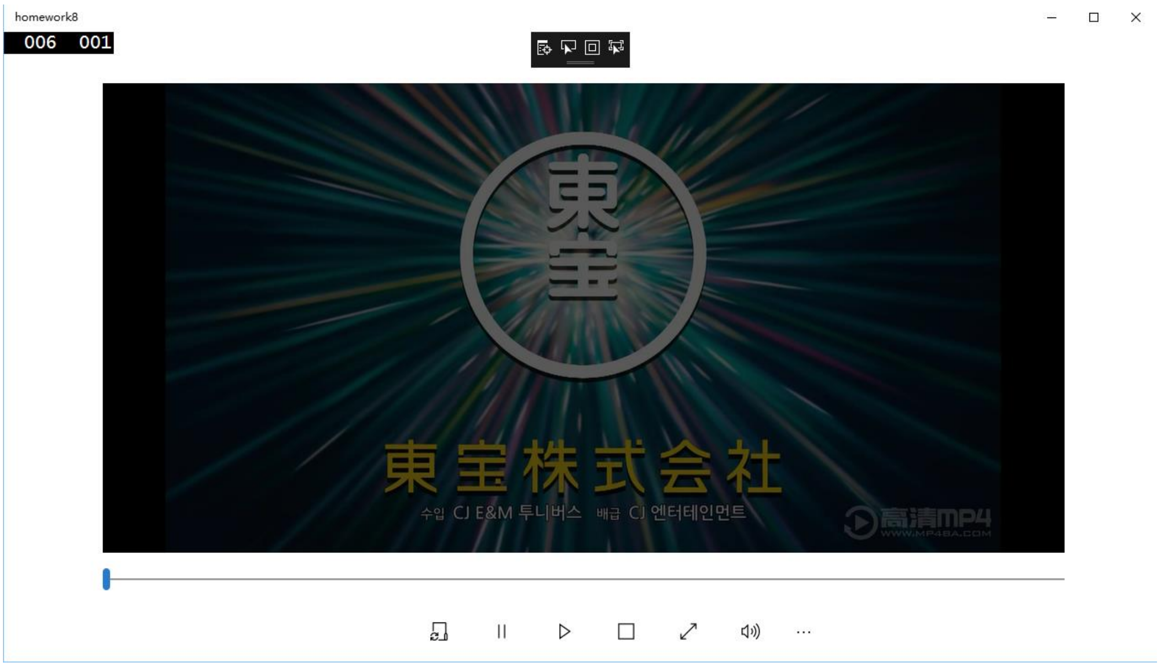
三．实验结果截图



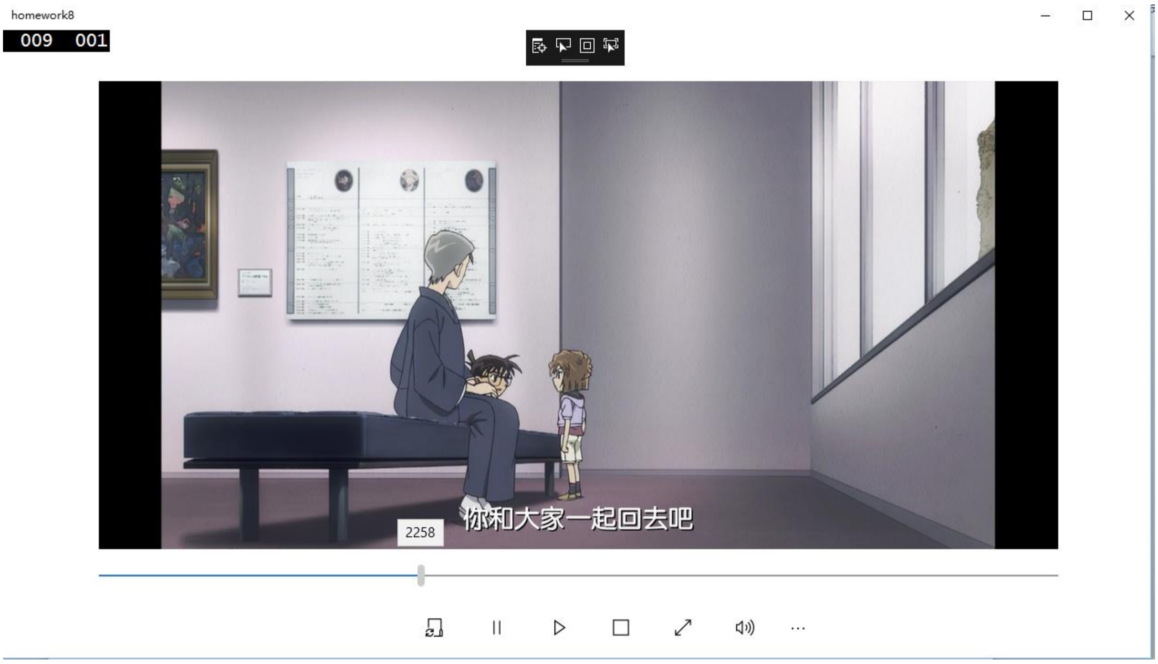


选择本地资源播放

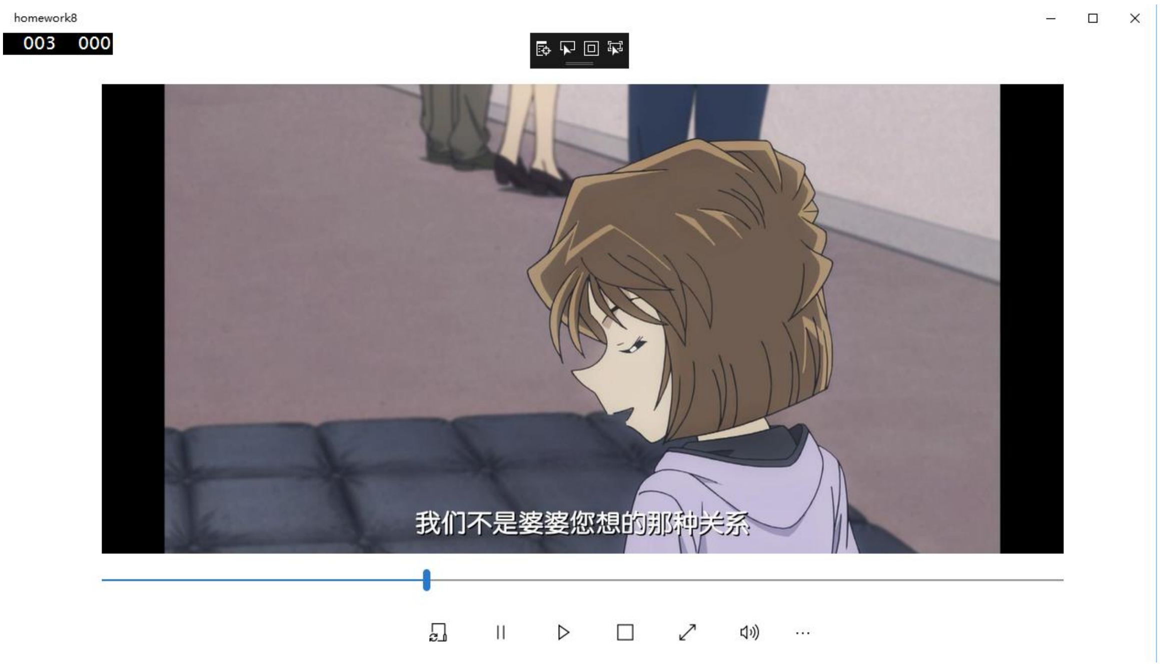

打开
我的电脑 › Windows8_OS (C:) › 迅雷下载 › 电影
搜索"电影"
组织 ▾
新建文件夹
OneDrive
我的电脑
视频
图片
文档
下载
音乐
桌面
Windows8_OS
本地磁盘 (D:)
网络
老炮儿
唐人街探案
业火 basis sunflower1080P
文件名(N):
所有文件
打开(O)
取消


homework8
006 001
東宝
東宝株式会社
수입 CJ E&M 투니버스 배급 CJ 엔터테인먼트
高清MP4
WWW.MP4BA.COM

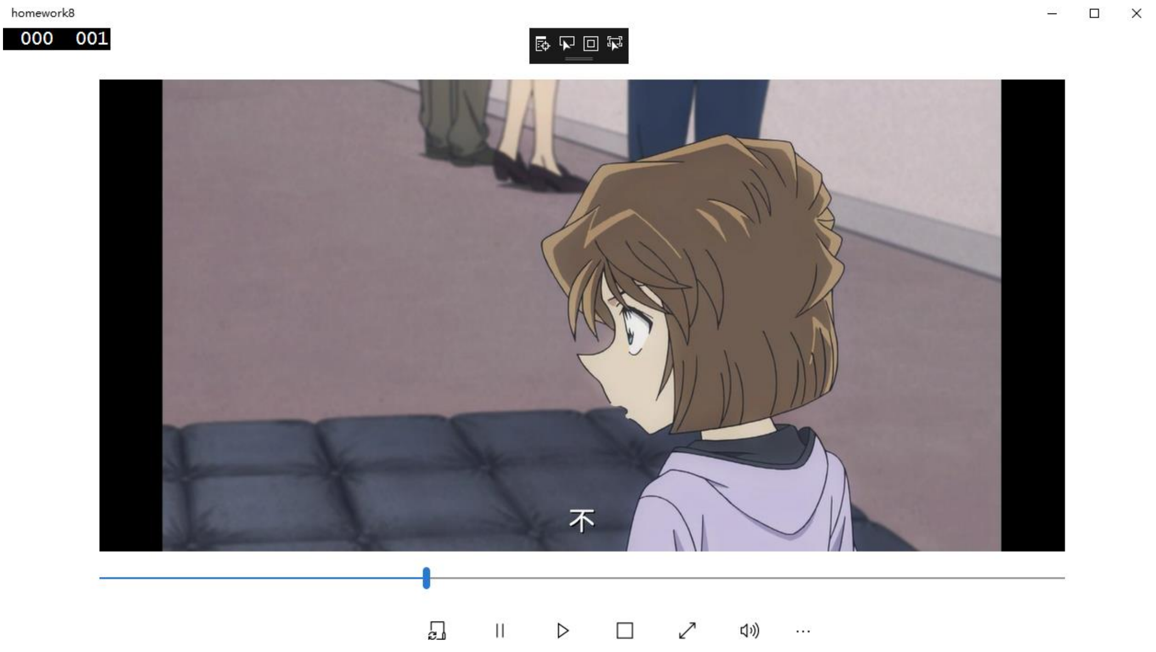
拖动进度条


homework8
009 001
你和大家一起回去吧
2258

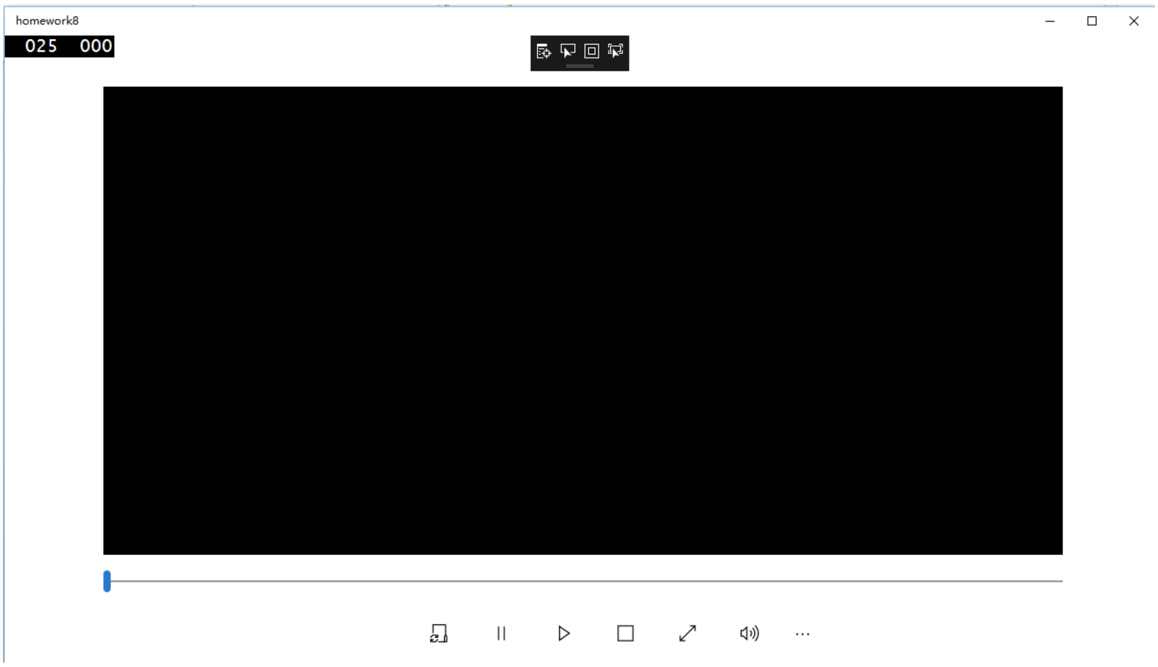
暂停


homework8
003 000
我们不是婆婆您想的那种关系

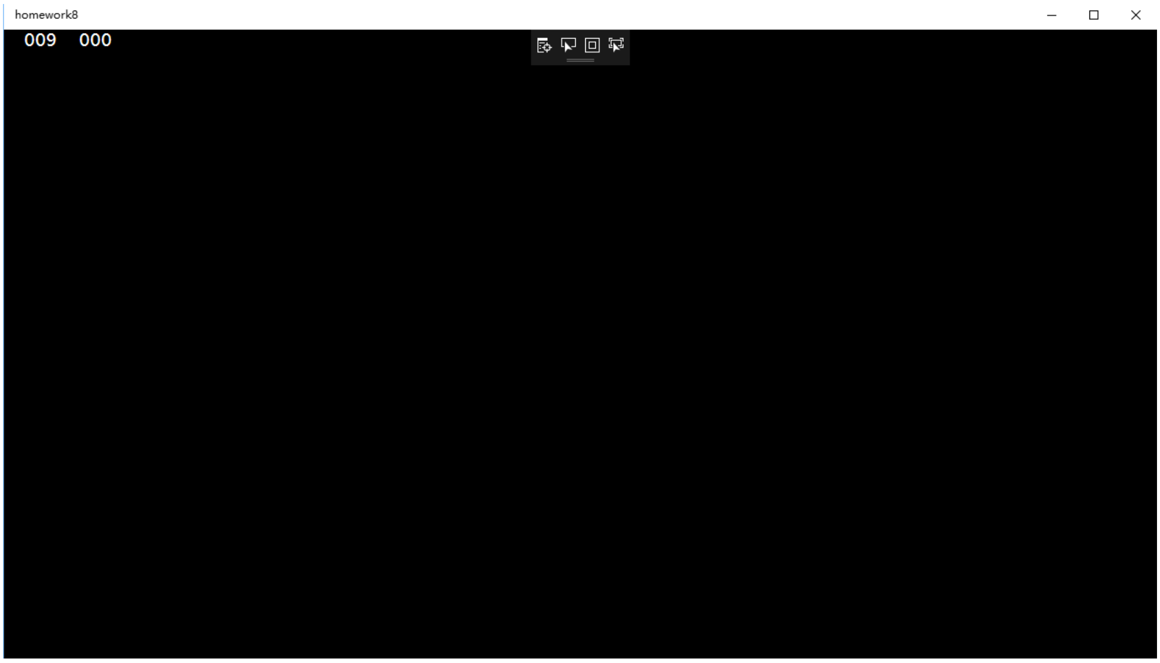
继续播放



停止



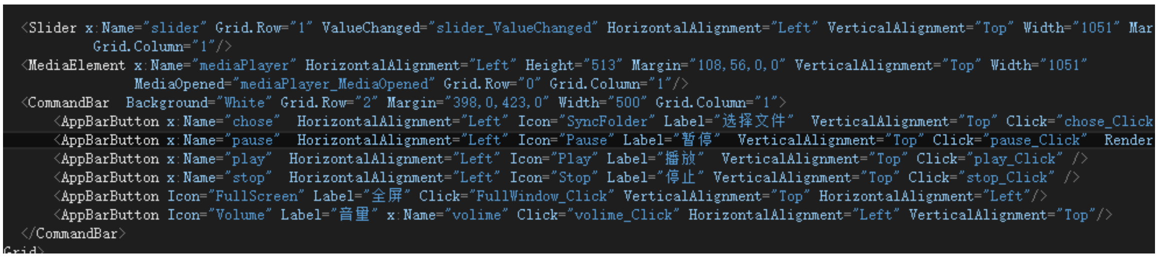
全屏



四．实验过程遇到的问题

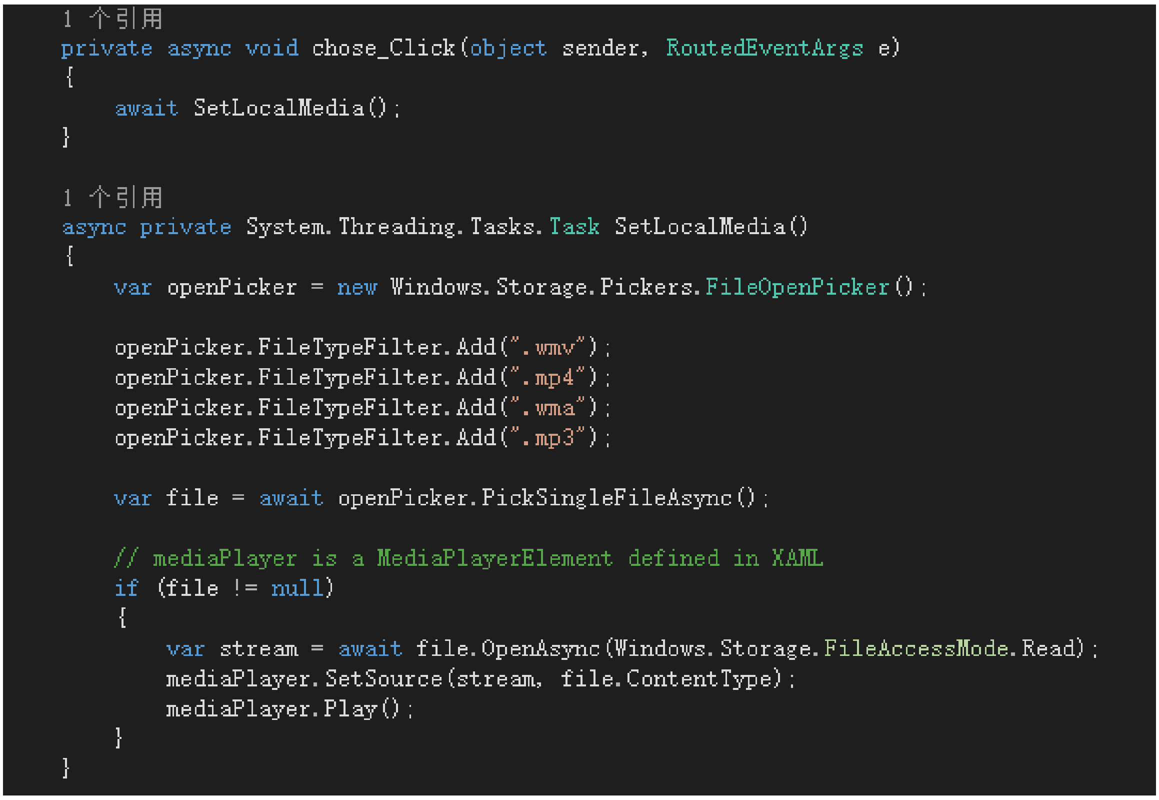
1. 进度条一开始无法同步，采用 medilplayerelement 难以获得当前的 position，于是改用 mediaelement
2. 全屏进入后无法退出。。。。一开始是可以的，因为考虑 UI 简洁把 commandbar 的 page 属性去掉后，就无法退出全屏。。考虑用 ESC 实现退出全屏。

五．思考与总结



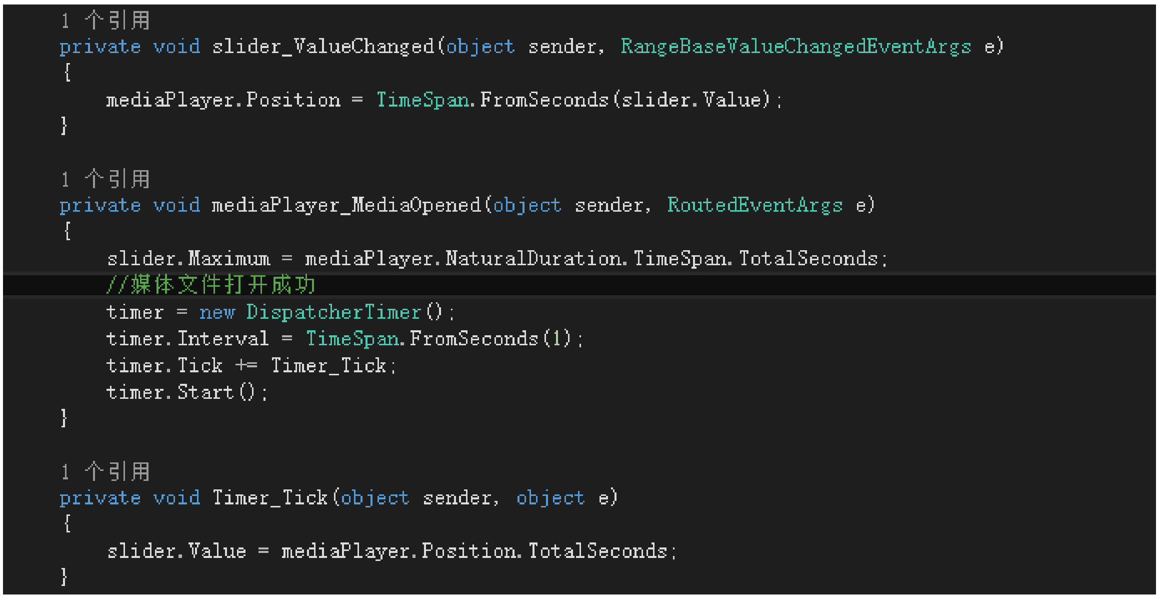
```
<Slider x:Name="slider" Grid.Row="1" ValueChanged="slider_ValueChanged" HorizontalAlignment="Left" VerticalAlignment="Top" Width="1051" Mar
        Grid.Column="1"/>
<MediaElement x:Name="mediaPlayer" HorizontalAlignment="Left" Height="513" Margin="108,56,0,0" VerticalAlignment="Top" Width="1051"
              MediaOpened="mediaPlayer_MediaOpened" Grid.Row="0" Grid.Column="1"/>
<CommandBar  Background="White" Grid.Row="2" Margin="398,0,423,0" Width="500" Grid.Column="1">
    <AppBarButton x:Name="chose"  HorizontalAlignment="Left" Icon="SyncFolder" Label="选择文件"  VerticalAlignment="Top" Click="chose_Click
    <AppBarButton x:Name="pause"  HorizontalAlignment="Left" Icon="Pause" Label="暂停"  VerticalAlignment="Top" Click="pause_Click"  Render
    <AppBarButton x:Name="play"  HorizontalAlignment="Left" Icon="Play" Label="播放"  VerticalAlignment="Top" Click="play_Click" />
    <AppBarButton x:Name="stop"  HorizontalAlignment="Left" Icon="Stop" Label="停止" VerticalAlignment="Top" Click="stop_Click" />
    <AppBarButton Icon="FullScreen" Label="全屏" Click="FullWindow_Click" VerticalAlignment="Top" HorizontalAlignment="Left"/>
    <AppBarButton Icon="Volume" Label="音量" x:Name="volime" Click="volime_Click" HorizontalAlignment="Left" VerticalAlignment="Top"/>
</CommandBar>
Grid>
```

这一次的设计主要是一个播放器控件的逻辑设计和 UI 设计，完成 UI 后完成相应的逻辑即可实现功能。



```
1 个引用
private async void chose_Click(object sender, RoutedEventArgs e)
{
    await SetLocalMedia();
}

1 个引用
async private System.Threading.Tasks.Task SetLocalMedia()
{
    var openPicker = new Windows.Storage.Pickers.FileOpenPicker();

    openPicker.FileTypeFilter.Add(".wmv");
    openPicker.FileTypeFilter.Add(".mp4");
    openPicker.FileTypeFilter.Add(".wma");
    openPicker.FileTypeFilter.Add(".mp3");

    var file = await openPicker.PickSingleFileAsync();

    // mediaPlayer is a MediaPlayerElement defined in XAML
    if (file != null)
    {
        var stream = await file.OpenAsync(Windows.Storage.FileAccessMode.Read);
        mediaPlayer.SetSource(stream, file.ContentType);
        mediaPlayer.Play();
    }
}
```

这里通过 fileopenpicker 实现了播放本地视频，关键是后面把视频转成文件流



```
1 个引用
private void slider_ValueChanged(object sender, RangeBaseValueChangedEventArgs e)
{
    mediaPlayer.Position = TimeSpan.FromSeconds(slider.Value);
}

1 个引用
private void mediaPlayer_MediaOpened(object sender, RoutedEventArgs e)
{
    slider.Maximum = mediaPlayer.NaturalDuration.TimeSpan.TotalSeconds;
    //媒体文件打开成功
    timer = new DispatcherTimer();
    timer.Interval = TimeSpan.FromSeconds(1);
    timer.Tick += Timer_Tick;
    timer.Start();
}

1 个引用
private void Timer_Tick(object sender, object e)
{
    slider.Value = mediaPlayer.Position.TotalSeconds;
}
```

在此处，通过引入一个定时器来随时更改进度条的值，从而实现了进度条随播放进度同步更新！