Tombstoning helper for Windows Phone 7

This article explains how to use TombstoneHelper, a small library which makes it easy to persist page data during navigation.

Introduction

Windows Phone 7 does not in general allow the execution of background apps. Instead an app that is navigated away from (but not closed) is first moved into a "dormant" state, where no processing occurs, and may later be "tombstoned" (removed from phone memory). Apps are given the opportunity to save their page state when navigated from, and also to restore it when recovered from tombstoning (see the Windows Phone Execution Model for more information).

TombstoneHelper is a small helper which handles most of the work of saving/restoring the app state when tombstoning occurs in Windows Phone 7. `TombstoneHelper` saves the contents, checked state and scroll positions of `TextBoxes`, `PasswordBoxes`, `CheckBoxes`, `RadioButtons`, `Sliders`, `ListBox` and `ScrollViewers` *that you have named* (using the `Name` attribute).

This article provides an overview of how the helper is used (more can be found in the official documentation), along with an overview of using it with a base page class.

Setup

1. Download the **TombstoneHelper.dll** from CodePlex
2. Add a reference to it in your project

Usage

Using `TombstoneHelper` is simple. All you have to do is add a using statement and override your page's `OnNavigatingFrom()` and `OnNavigatingTo()` methods:

```
using TombstoneHelper;

protected override void OnNavigatingFrom(NavigatingCancelEventArgs e)
{
    base.OnNavigatingFrom(e);
    // Save the state
    this.SaveState(e);
}

protected override void OnNavigatedTo(NavigationEventArgs e)
{
    base.OnNavigatedTo(e);
    // Restore the saved state
    this.RestoreState();
}
```

For greater efficiency you can also specify just those components that the page uses. For example:

```
this.SaveState(typeof(TextBox), typeof(PasswordBox), typeof(CheckBox));
```

The API can also be extended to support other UI component types: this is also covered in the API documentation.

Using a base class

I usually create a base class that handles all the saving and then derive all my application pages from that:

Base-class: Handles the save and restore.

```
namespace Foo.Pages
{
    public class FooPageBase : AutoTombstonePage
    {
        public FooPageBase()
        {
        }

        protected override void OnNavigatingFrom(NavigatingCancelEventArgs e)
        {
            base.OnNavigatingFrom(e);
            this.SaveState(e);
        }

        protected override void OnNavigatedTo(NavigationEventArgs e)
        {
            base.OnNavigatedTo(e);
            this.RestoreState();
        }
    }
}
```


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Page's codebehind: Inherit the base-class

```
namespace Foo.Pages
{
    public partial class ListsPage : FooPageBase
    {
        public ListsPage()
        {
            InitializeComponent();
        }
    }
}
```

Page's XAML:

```
<local:FooPageBase x:Class="Foo.Pages.ListsPage"
                  xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation"
                  xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"
                  xmlns:phone="clr-namespace:Microsoft.Phone.Controls;assembly=Microsoft.Phone"
                  xmlns:shell="clr-namespace:Microsoft.Phone.Shell;assembly=Microsoft.Phone"
                  xmlns:local="clr-namespace:Foo.Pages"
                  xmlns:d="http://schemas.microsoft.com/expression/blend/2008"
                  xmlns:mc="http://schemas.openxmlformats.org/markup-compatibility/2006"
                  mc:Ignorable="d"
                  d:DesignWidth="480"
                  d:DesignHeight="696"
                  FontFamily="{StaticResource PhoneFontFamilyNormal}"
                  FontSize="{StaticResource PhoneFontSizeNormal}"
                  Foreground="{StaticResource PhoneForegroundBrush}"
                  SupportedOrientations="Portrait"
                  Orientation="Portrait"
                  shell:SystemTray.IsVisible="True"
                  DataContext="{Binding ListPage, Source={StaticResource Locator}}">
```


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