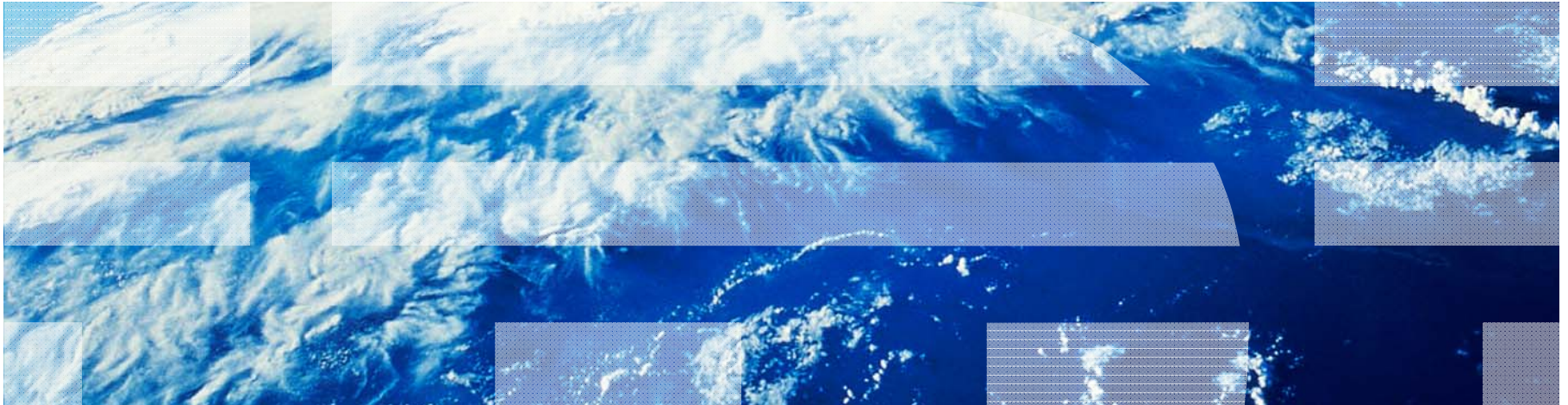


IBM Worklight V6.1.0 Getting Started

Windows Phone 8 – Using native pages in hybrid applications



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Agenda

- Overview
- Web portion of the code
- Creating a native page
- Returning control to the web view
- Exercise

Overview

- This module explains how to combine native and web pages in a Windows Phone 8 application.
- Use the `WL.NativePage.show()` API to open a native page from JavaScript™.
- With this method, you can send data from JavaScript to the open native page, and specify a callback to call after the native page closes.


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Web portion of the code

- Use the `WL.NativePage.show()` API method to start a native page.

```
function openNativePage(){  
    var params = {nameParam : $('#nameInput').val()};  
    WL.NativePage.show("NativePagesInHybridApp.NativePagesInHybridApp.HelloNative", backFromNativePage, params);  
}  
  
function backFromNativePage(data){  
    alert("Received phone number is: " + data.phoneNumber);  
}
```

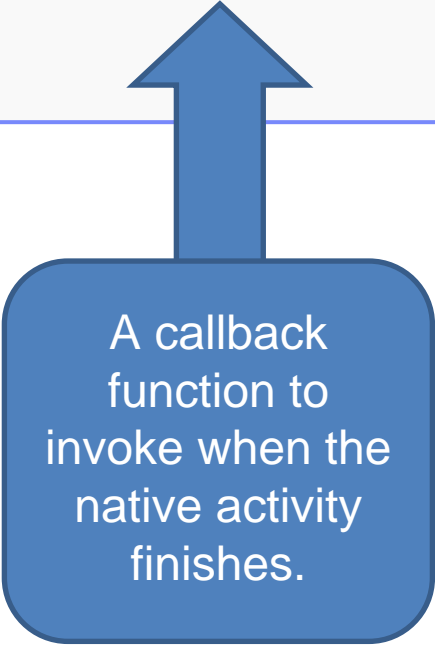


The name of a
native activity to
start.

Web portion of the code – continued

- Use the `WL.NativePage.show()` API method to start a native page.

```
function openNativePage(){  
    var params = {nameParam : $('#nameInput').val()};  
    WL.NativePage.show("NativePagesInHybridApp.NativePagesInHybridApp.HelloNative", backFromNativePage, params);  
}  
  
function backFromNativePage(data){  
    alert("Received phone number is: " + data.phoneNumber);  
}
```

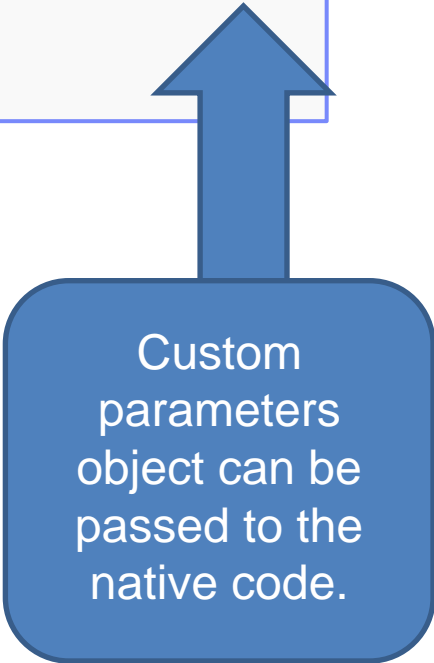


A callback function to invoke when the native activity finishes.

Web portion of the code – continued

- Use the `WL.NativePage.show()` API method to start a native page.

```
function openNativePage(){  
    var params = {nameParam : $('#nameInput').val()};  
    WL.NativePage.show("NativePagesInHybridApp.NativePagesInHybridApp.HelloNative", backFromNativePage, params);  
}  
  
function backFromNativePage(data){  
    alert("Received phone number is: " + data.phoneNumber);  
}
```




Custom parameters object can be passed to the native code.

Web portion of the code – continued

- Use the `WL.NativePage.show()` API method to start a native page.

```
function openNativePage(){
    var params = {nameParam : $('#nameInput').val()};
    WL.NativePage.show("NativePagesInHybridApp.NativePagesInHybridApp.HelloNative", backFromNativePage, params);
}

function backFromNativePage(data){
    alert("Received phone number is: " + data.phoneNumber);
}
```



When the native activity finishes, it can pass data back to the web part of an application.

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Creating a native page: writing a native page

- The page must be implemented as a Windows Phone User Control.
- Either implement a new User Control or extend an existing one.
- Add `using Cordova.Extension.Commands;` to your `.cs` file.
- Use the same package and class names as in the `WL.NativePage` API call.

```
using Cordova.Extension.Commands;
namespace NativePagesInHybridApp
{
    public partial class HelloNative : UserControl
    {
```

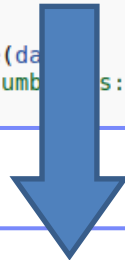
Creating a native page: retrieving parameters

- When the activity is invoked, the custom data parameters that are passed from the web view can be retrieved by using `WLNativePage.Data`.

JavaScript code

```
function openNativePage(){
    var params = {nameParam : $('#nameInput').val()};
    WL.NativePage.Show("NativePagesInHybridApp.NativePagesInHybridApp.HelloNative", backFromNativePage, params);
}

function backFromNativePage(data) {
    alert("Received phone numbers: " + data.phoneNumber);
}
```



Native code

```
public HelloNative()
{
    InitializeComponent();
    if (WLNativePage.Data != null)
    {
        Dictionary<string, string> data = JsonConvert.DeserializeObject<Dictionary<string, string>>(WLNativePage.Data);
        NameReceivedTextBlock.Text = "Hello " + data["nameParam"];
        tb_returnValue.Text = "1234567890";
    }
    DoneButton.Click += new RoutedEventHandler(DoneButton_Click);
}
```

Creating a native page: retrieving parameters – continued

- In this example, the data is sent as a JSON string.
- The external JSON.NET library is used to convert the incoming JSON string to a native dictionary.
- For more information, see <http://json.codeplex.com/>

```
using Newtonsoft.Json;

namespace NativePagesInHybridApp
{
    public partial class HelloNative : UserControl
    {
        public HelloNative()
        {
            InitializeComponent();
            if (WLNativePage.Data != null)
            {
                Dictionary<string, string> data = JsonConvert.DeserializeObject<Dictionary<string, string>>(WLNativePage.Data);
                tb_returnValue.Text = data["nameParam"];
            }
            DoneButton.Click += new RoutedEventHandler(DoneButton_Click);
        }
    }
}
```

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- Exercise

Returning control to the web view

- When the native page needs to switch back to the web view, it calls the `WLNativePage.backFromNative` method.
- You can pass data back to the web view as parameters to the call.

Native code

```
void DoneButton_Click(object sender, RoutedEventArgs e)
{
    Dictionary<string, string> data = new Dictionary<string, string>
    {
        { "phoneNumber", tb_returnValue.Text }
    };

    string json = JsonConvert.SerializeObject(data, Formatting.Indented);
    WLNativePage.backFromNative(this, json);
}
```



JavaScript code

```
function backFromNativePage(data){
    alert("Received phone number is: " + data.phoneNumber);
}
```

Agenda

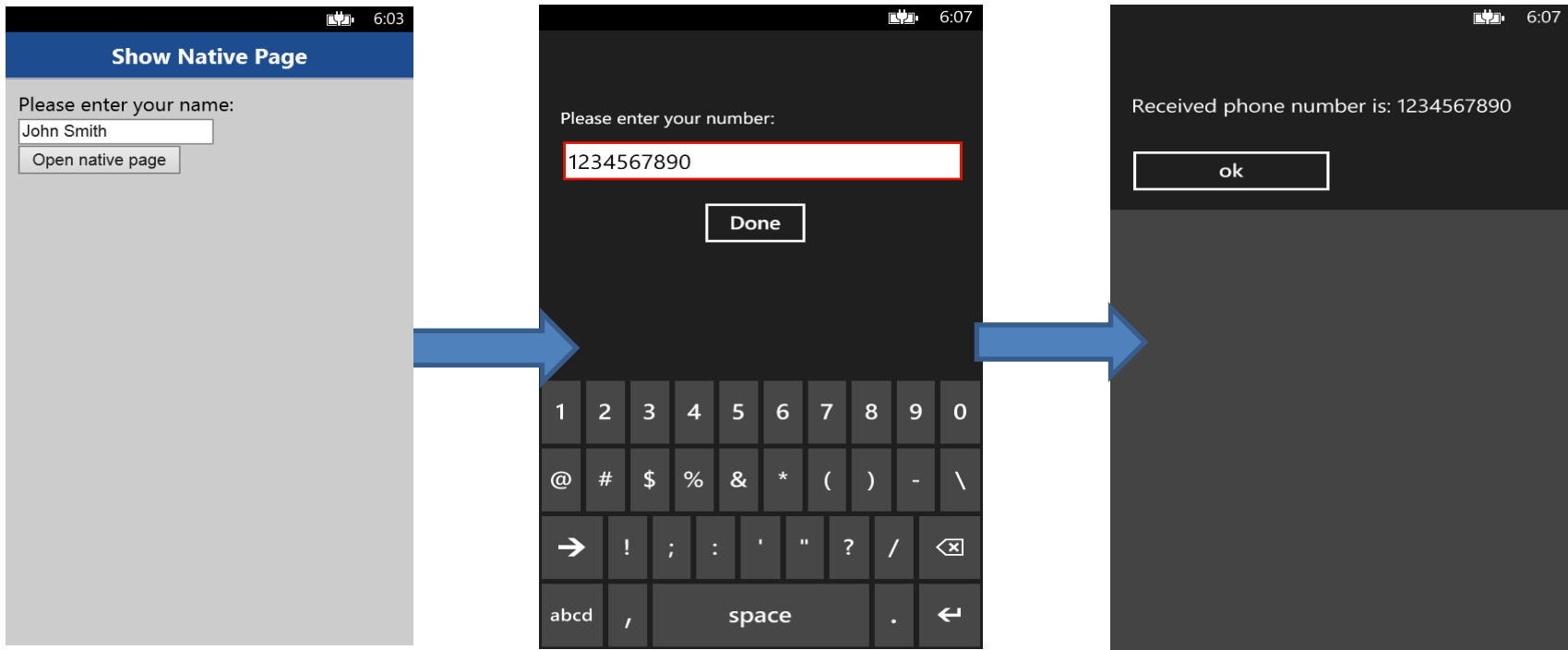
- Combining native and web
- Web portion of the code
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- **Exercise**

Exercise

- Create an application that behaves as follows:
 - A web page that contains a button opens.
 - When you tap the button, a native page is displayed, with text received from the web page.
 - The native page also contains a button.
 - When you tap the native button, the native page closes and the web page is displayed.
 - An alert with text received from the native page is displayed.

Exercise solution

- The sample for this training module can be found on the **Getting Started** page of the IBM Worklight® documentation website at <http://www.ibm.com/mobile-docs>



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