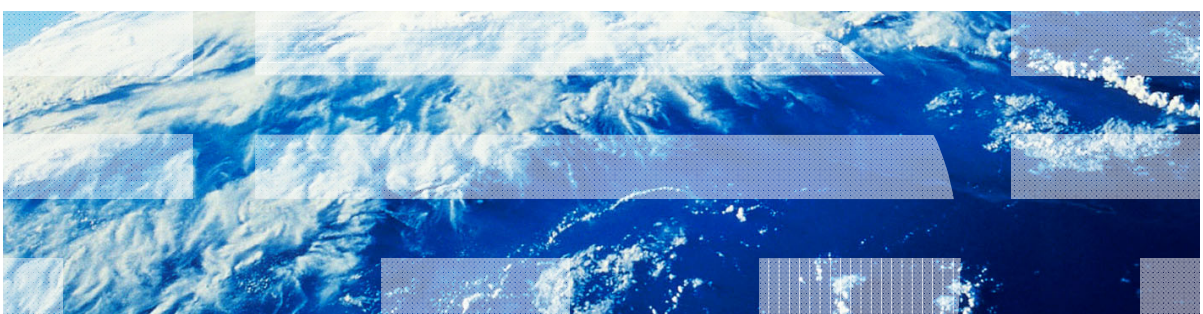
IBM Worklight V5.0.5
Getting Started

Module 9.1 – Android Development: Combining Native and Web Pages



18 January 2013

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Agenda

- Combining native and web pages
- How does it work?
- Exercise

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Combining native and web pages

- This module is a continuation of module 7.6 – Combining native and web pages.
- It explains how to combine native and web pages on an Android device.

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Web portion of the code

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

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

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

The name of a native activity to be started.

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}

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

A callback function to be invoked when the native activity is finished.

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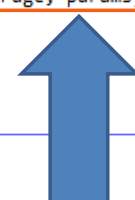

Custom parameters object can be passed to the native code.

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

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Writing a native page

- An Android page must be implemented as an Android activity.
- Either implement an activity or extend an existing activity.
- Like any other activity, you must declare this activity in the AndroidManifest.xml file.

```
<activity android:name=".HelloNative"></activity>
```

- Use the same package and class names as in the WL.NativePage API call.

```
public class HelloNative extends Activity {
```


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Retrieve Parameters

- Upon invocation of the activity, custom data parameters passed from the web view can be retrieved using an intent.

JavaScript code

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

Native code

```
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);

    String name = getIntent().getStringExtra("nameParam");
```


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Returning control to the web view

- When the native page needs to switch back to the web view, it should call the **finish()** function for the activity.
- You can pass data back to the web view by creating an Intent object.

Native code

```
String phoneNumber = editText.getText().toString();
Intent phoneNumberInfo = new Intent();
phoneNumberInfo.putExtra("phoneNumber", phoneNumber);
setResult(RESULT_OK, phoneNumberInfo);
finish();
```

JavaScript code

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

- Create an application that behaves as follows:
  - Opens a web page that contains a button.
  - When the button is clicked, a native page is displayed with text received from the web page.
  - The native page also contains a button.
  - When the native button is clicked, the native page is closed and the web page is displayed.
  - An alert with text received from the native page is displayed.

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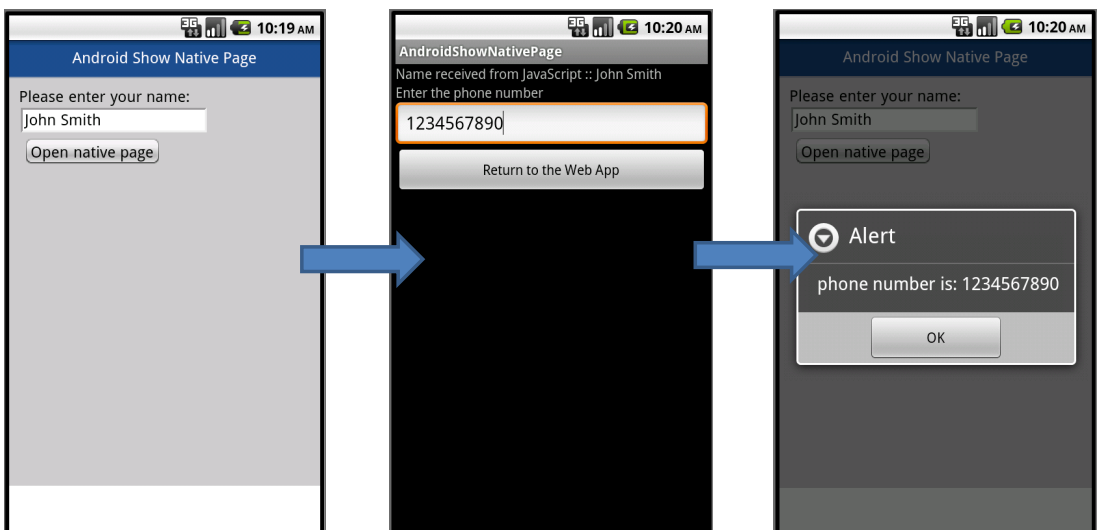
Exercise solution

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



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Check yourself questions

- What are the steps of creating a native page?
  - Create a new Java™ class, extend the activity.
  - Create a new Java class, extend the activity, add an activity declaration to the AndroidManifest.xml.
  - Create a new Java class, extend the native page.
  - Create a new Java class, extend the native page, add a native page declaration to the AndroidManifest.xml.
- Is it possible to transfer data between web and native page?
  - Web to native – no, native to web – no.
  - Web to native – yes, native to web – no.
  - Web to native – no, native to web – yes.
  - Web to native – yes, native to web – yes.

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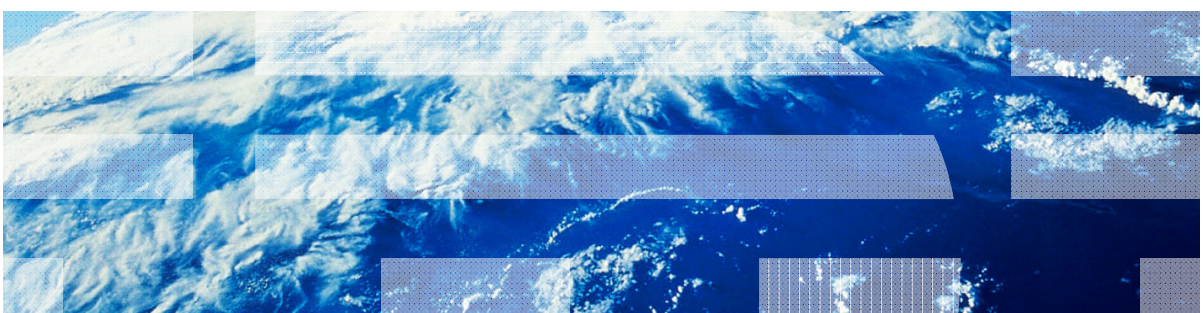

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