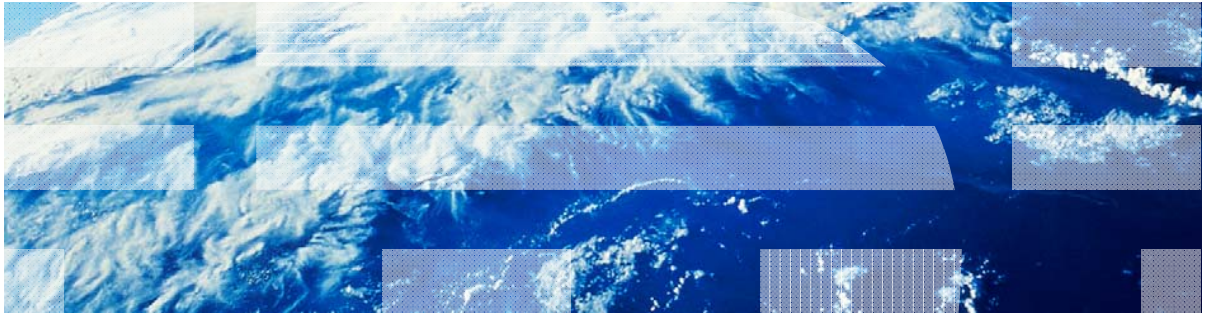


IBM Worklight V6.0.0 Getting Started

Android – Using native pages in hybrid applications



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Agenda

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

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.

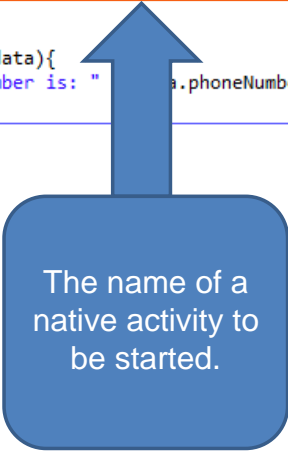
Agenda

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

Web portion of the code (1 of 4)

- 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: " + data.phoneNumber);  
}
```



The name of a
native activity to
be started.

Web portion of the code (2 of 4)

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

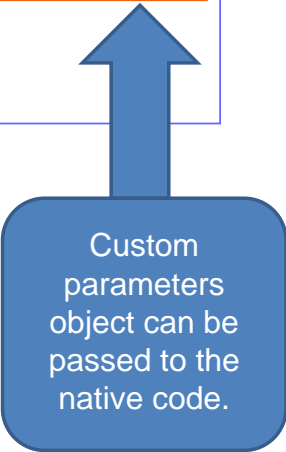
```
function openNativePage ()  
{  
    var params = {nameParam : $('#nameInput').val()};  
    WL.NativePage.show('com.AndroidShowNativePage.HelloNative', backFromNativePage, params);  
}  
  
function backFromNativePage(data){  
    alert("Received phone number is: " + data.phoneNumber);  
}
```

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

Web portion of the code (3 of 4)

- 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: " + data.phoneNumber);  
}
```

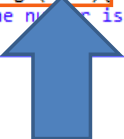


Custom
parameters
object can be
passed to the
native code.

Web portion of the code (4 of 4)

- 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: " + data.phoneNumber);  
}
```



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

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 {
```

Retrieve Parameters

- Upon invocation of the activity, custom data parameters that are passed from the web view can be retrieved by 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");  
}
```

Returning control to the web view

- When the native page needs to switch back to the web view, it calls 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);  
}
```

Agenda

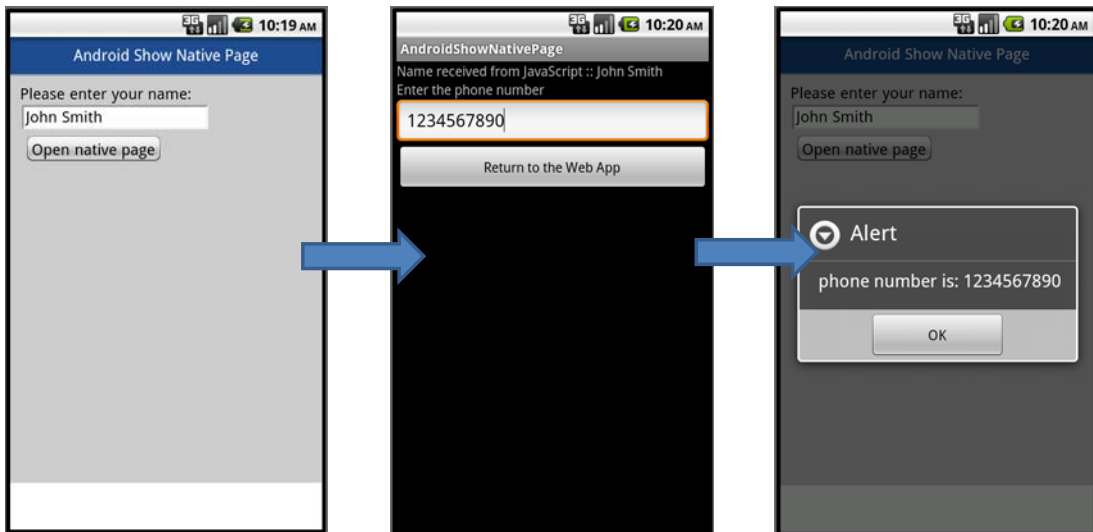
- Combining native and web pages
- How does it work?
- Exercise

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.

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>



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, and 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, and 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.

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, and 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, and 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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