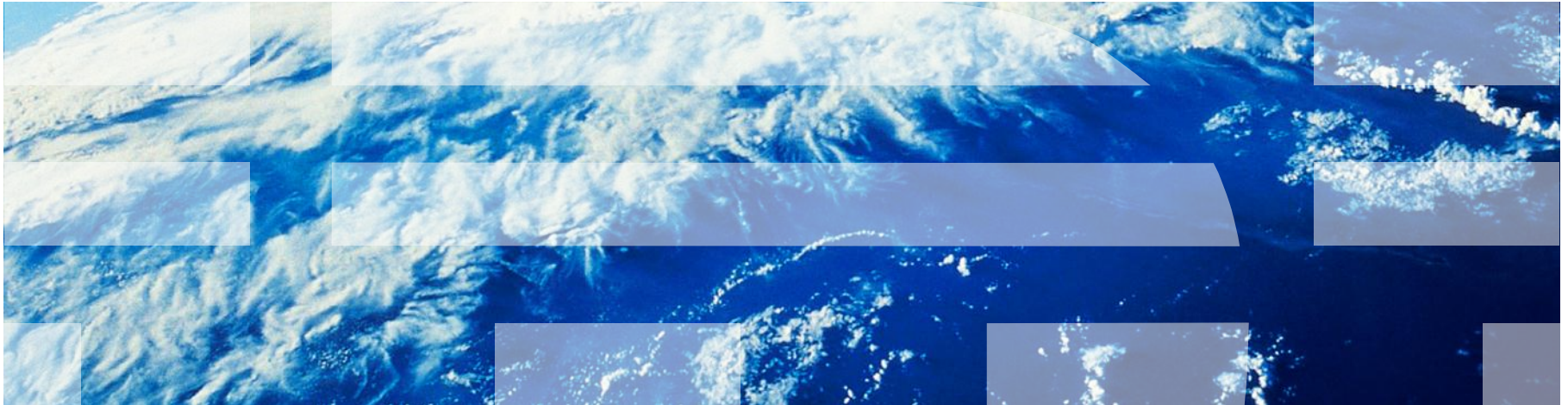


# ***IBM Worklight Foundation V6.2.0 Getting Started***

## **Android – Using native pages in hybrid applications**



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# *Agenda*

- **Overview**
- Connecting to the plugin from the JavaScript code
- Creating a native page
- Returning control to the web view
- Exercise

# Overview

- This module explains how to combine native and web pages in an Android 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.

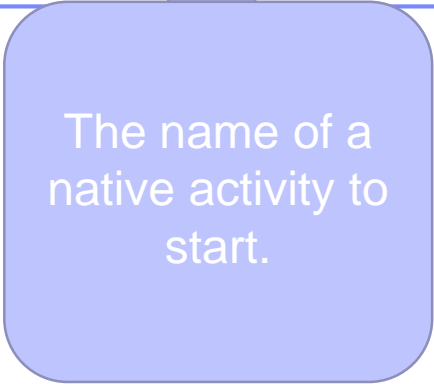
# Agenda

- Overview
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## Connecting to the plugin from the JavaScript code

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

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

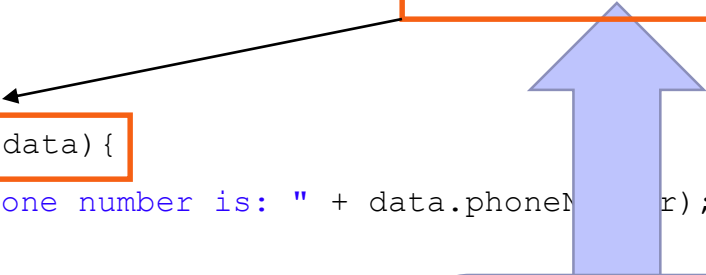


The name of a  
native activity to  
start.

## Connecting to the plugin from the JavaScript code

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

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

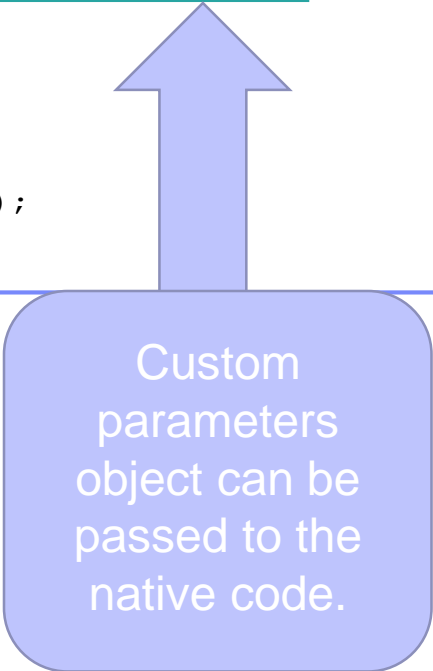


A callback function to invoke when the native activity finishes.

## Connecting to the plugin from the JavaScript code

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

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



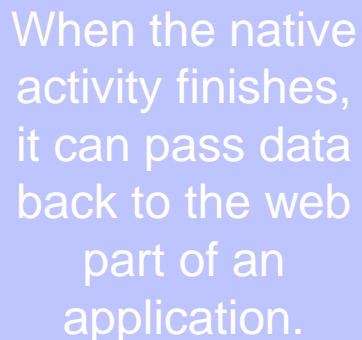
Custom parameters object can be passed to the native code.



## Connecting to the plugin from the JavaScript code

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

```
function openNativePage() {  
    var params = {nameParam : $('#nameInput').val()};  
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}  
  
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 an Android activity.
- Either implement an activity, or extend an existing activity.
- As with 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.

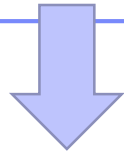
```
public class HelloNative extends Activity {
```

## Creating a native page: retrieving 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(nativePageClassName, backFromNativePage, params);  
}
```



### Native code

```
protected void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
  
    String name = getIntent().getStringExtra("nameParam");
```

# *Agenda*

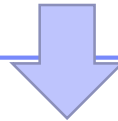
- Overview
- Connecting to the plugin from the JavaScript code
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- **Returning control to the web view**
- Exercise

## 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);  
}
```

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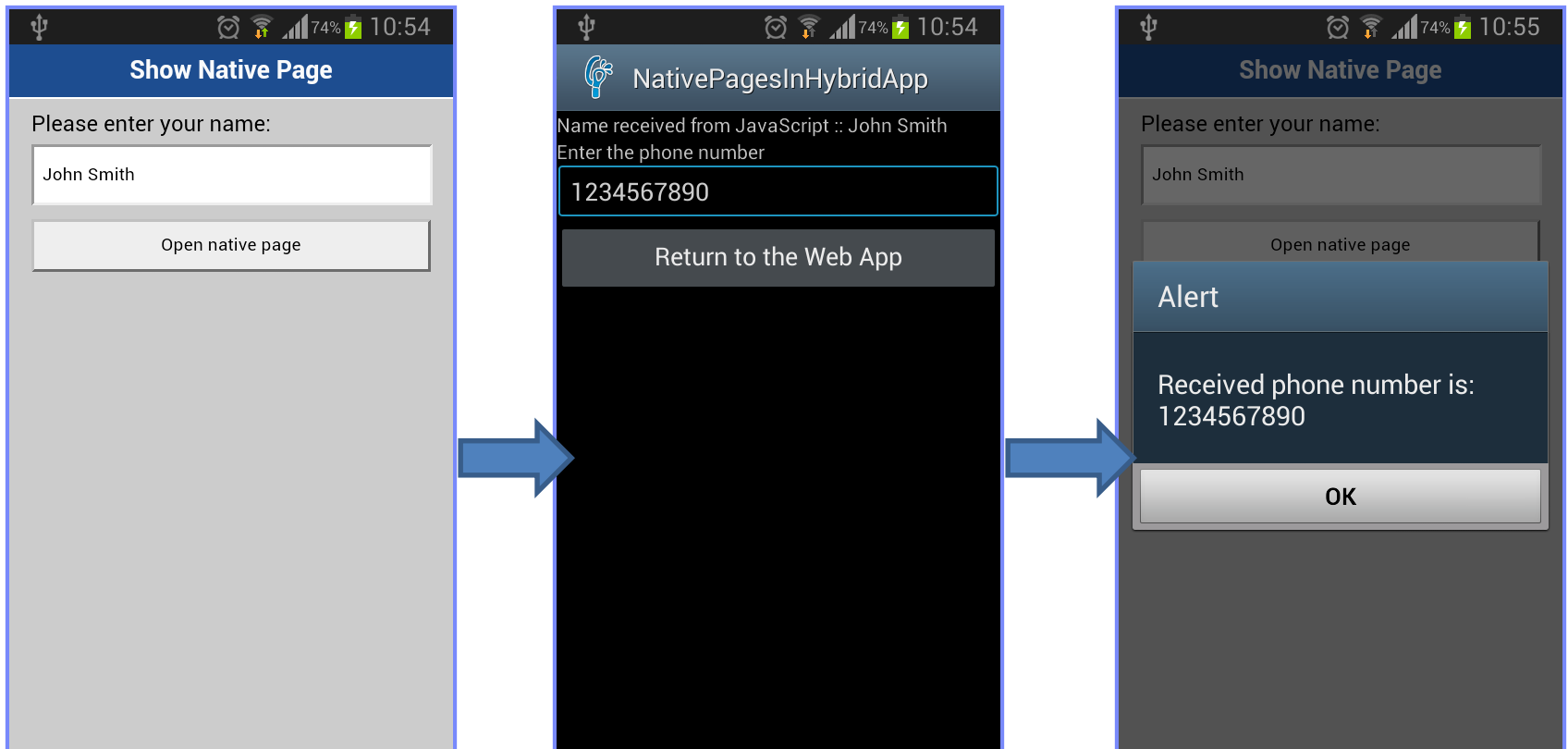
## Exercise

- 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>



# Quiz

*Test your knowledge of the material in this module. Answers are in the following slide.*

- What are the steps to create 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.

## Quiz - answers

- What are the steps to create a native page?
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  - Create a new Java class, extend the native page.
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