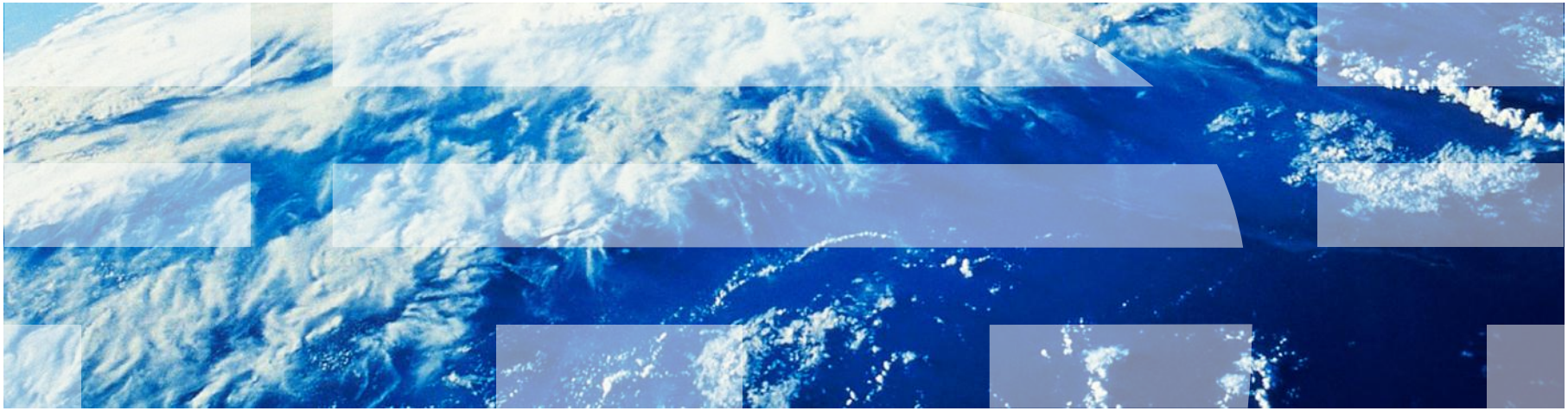
IBM Worklight Foundation V6.2.0 Getting Started

Common UI controls



20 June 2014

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Agenda

- Common controls
  - What is a common control?
  - Busy indicator
  - Simple dialog
  - Tab bar
  - Options menu
  - Splash screen
- Sample

What is a common control?

- Some controls are common to most environments, such as modal pop-up windows, loading screens, and tab bars.

- With IBM Worklight® Foundation, you can use a JavaScript™ API to invoke these controls regardless of the environment. This API automatically renders these controls in a native way for each mobile platform.

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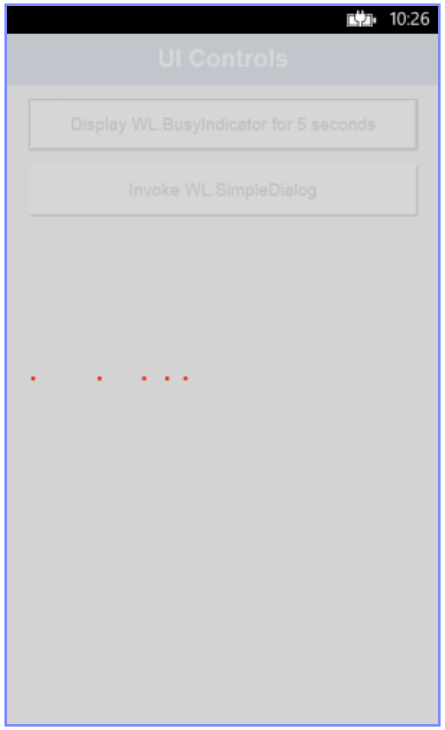
WL.BusyIndicator

- `WL.BusyIndicator` implements a common API to display a modal activity indicator.
- It uses native implementation on the following platforms: Android, iOS, BlackBerry 10, and Windows Phone 8.



WL.BusyIndicator – continued

- It must be initialized before use.

```
busyIndicator = new WL.BusyIndicator( null, {text : 'Loading...'});
```

- The parent element ID for `WL.BusyIndicator` is ignored in iOS, Android, Windows Phone, and BlackBerry environments.
- Available options are:
  - *text* – set the modal text.
  - *color* – set the text color.
  - *fullScreen* – should modal message be displayed full screen (iOS only).
  - For more information about the options, see the Worklight user documentation.

WL.BusyIndicator – continued

- `WL.BusyIndicator` provides the following API:
  - Initialization.

```
busyIndicator = new WL.BusyIndicator( null, {text : 'Loading...'});
```

  - void `myBusyIndicator.show()` – displays busy indicator.
  - void `myBusyIndicator.hide()` – hides busy indicator.
  - boolean `myBusyIndicator.isVisible()` – returns whether the busy indicator is visible.

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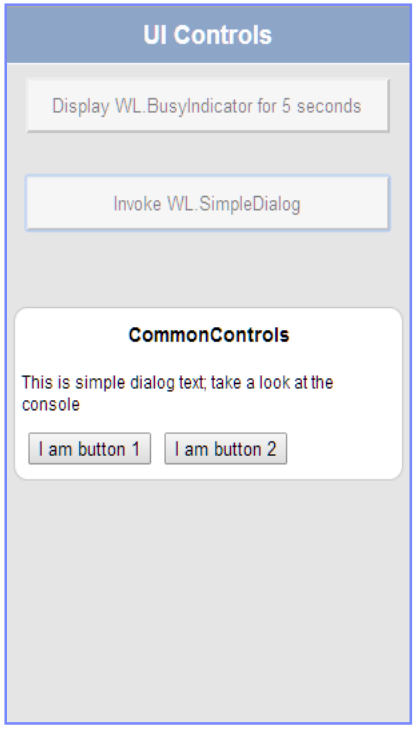
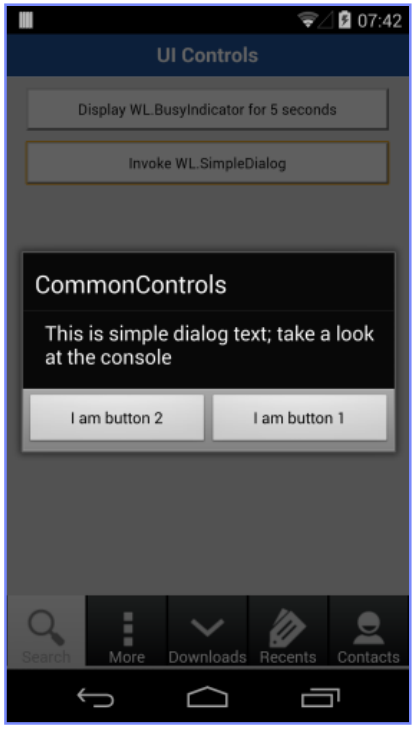
WL.SimpleDialog

- The `WL.SimpleDialog` implements a common API for showing a modal dialog window with buttons.
- Uses native implementation on the following platforms: Android, iOS, Windows Phone 8, and BlackBerry 10.
- Adobe Air, BlackBerry 6/7, Desktop webpage, and Mobile Web use a JS-based implementation.





WL.SimpleDialog – continued

- The invocation syntax is:

```
WL.SimpleDialog.show(title, text, buttons, options);
```

- Parameters are `title`, `text`, and `buttons` as an array of button objects.
- The dialog is closed when any of the buttons is pressed.

WL.SimpleDialog – continued

- Each button object has two properties:
  - *text* – the text that displayed on the button.
  - *handler* – the function to invoke if the button is pressed.

```
var dialogTitle = "CommonControls";
var dialogText = "This is simple dialog text; take a look at the console";

WL.SimpleDialog.show(dialogTitle, dialogText, [
    {
        text : 'I am button 1',
        handler : simpleDialogButton1Click
    }, {
        text : 'I am button 2',
        handler : simpleDialogButton2Click
    }
]);
```

WL.SimpleDialog – continued

The following limitations exist:

- When you use `WL.SimpleDialog` in **Windows Phone 8**, you can use at most four buttons in each instance of `WL.SimpleDialog`.
- When you use `WL.SimpleDialog` in **Android**, you can use at most three buttons in each instance of `WL.SimpleDialog`.

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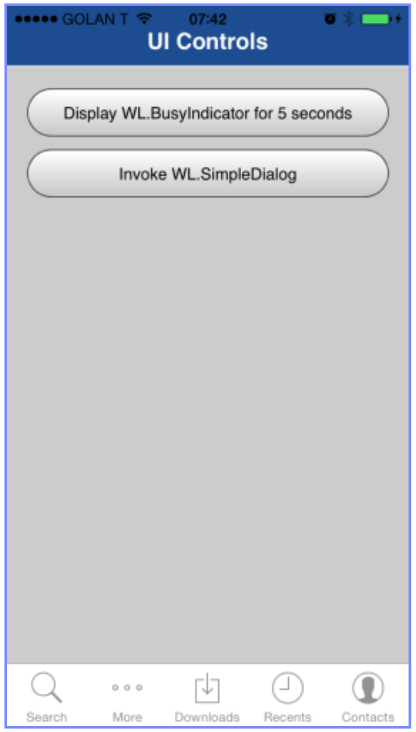
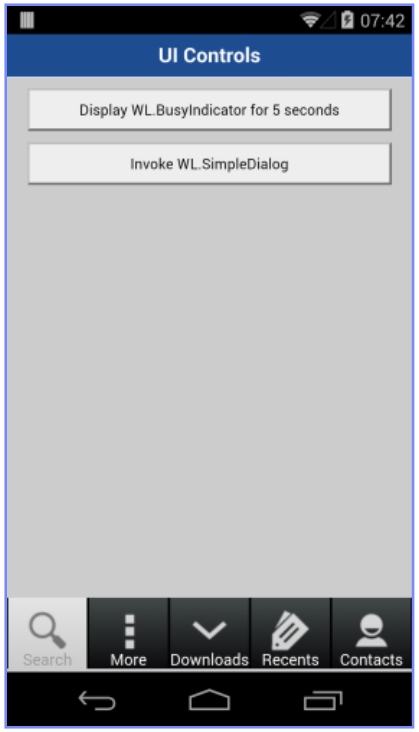
WL.TabBar

- Supported environments: Android and iOS.
- Application navigation with a tab bar component.



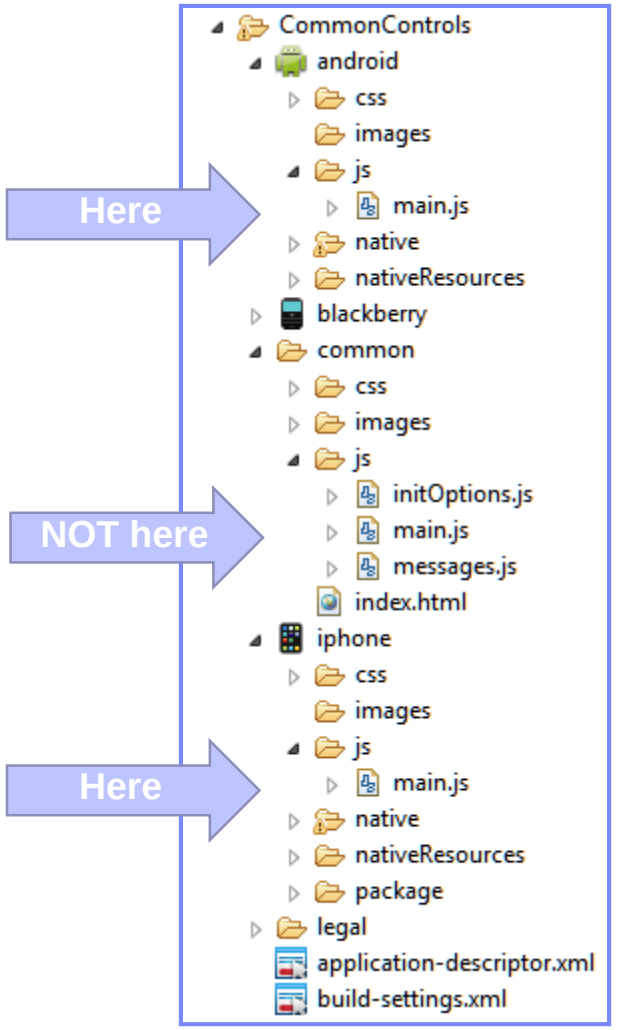


WL.TabBar – continued

- The iOS implementation uses a native component, but Android uses an HTML-generated tab bar.
- The syntax is similar, though with some minor differences.
- `WL.TabBar` must be initialized before it can be used.

```
WL.TabBar.init();
```

- Initialize `WL.TabBar` in the designated JavaScript file.



WL.TabBar – continued

- Use the following syntax to add a tab bar item:

```
WL.TabBar.addItem(id, callback, title, options);
```

  - `itemID` – Internal reference for this tab.
  - `callback` – JavaScript function to run when a tab item is pressed.
  - `title` – The text to display on the tab bar item.
  - `options` – Varies between iOS and Android, see next slide.

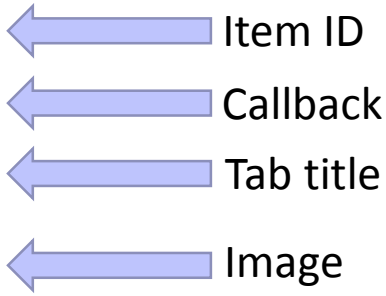
WL.TabBar – continued

- **iOS options**
  - **badge** – string to display on the badge of the item.
  - **image** – file name of an image to use or native iOS button identifier:
    - `tabButton:More`
    - `tabButton:Favorites`
    - `tabButton:Featured`
    - `tabButton:TopRated`
    - `tabButton:Recents`
    - `tabButton:Contacts`
    - `tabButton:History`
    - `tabButton:Bookmarks`
    - `tabButton:Search`
    - `tabButton:Downloads`
    - `tabButton:MostRecent`
    - `tabButton:MostViewed`
- **Android options**
  - **image** – file name of an image to use for an unselected state.
  - **imageSelected** – file name of an image to use for a selected state.

WL.TabBar – continued

- iOS `WL.TabBar.addItem` example:

```
WL.TabBar.addItem("item1",
    function(){ alert("item 1 pressed"); },
    "Item 1",{
        image: "tabButton:Search",
        //image: "images/tabImage.png",}
);
```

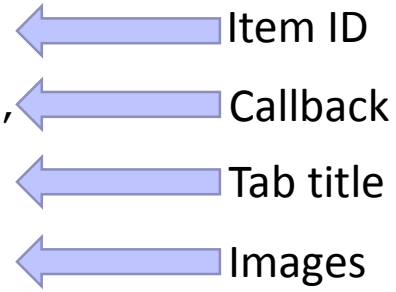


- When you specify an image file, two paths can be used:
  - Using an internal image that is provided by the OS.
  - Specifying a path to the folder in which the image resides.

WL.TabBar – continued

- Android `WL.TabBar.addItem` example:
- When you specify an image file, you need to specify the path to the folder in which the image resides.
- For more information about `WL.TabBar`, see the Worklight user documentation.

```
WL.TabBar.addItem("item1",
    function(){ alert("item 1 pressed"); },
    "Item 1",{
    image: "images/tabImage.png",}
);
```



WL.TabBar – continued

- `WL.TabBar` API
  - `WL.TabBar.init()`
  - `WL.TabBar.addItem` (returns WL.TabBarItem)
  - `WL.TabBar.removeAllItems` (iOS only)
  - `WL.TabBar.setParentDivId` (Android only)
  - `WL.TabBar.setVisible(true/false)`
  - `WL.TabBar.setSelectedItem(itemID)`
  - `WL.TabBar.setEnabled (true/false)`
  - `WL.TabBarItem.setEnabled(true/false)`
  - `WL.TabBarItem.updateBadge(string)` (iOS only)

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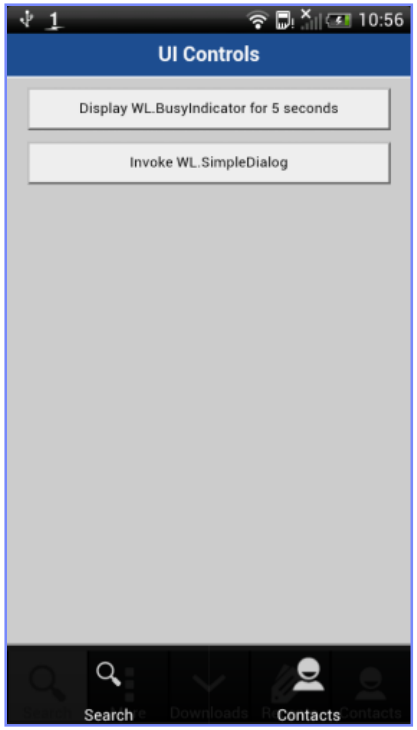
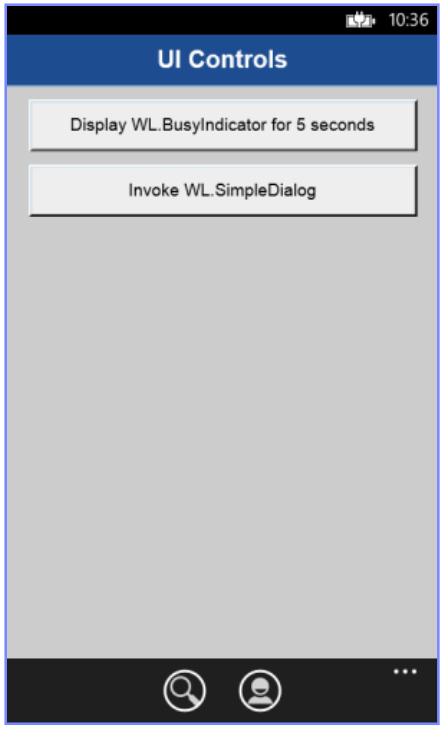
WL.OptionsMenu

- Supported environments: Android 2.x, Windows 8, and Windows Phone 8.
- Can display a menu of options.
- In Windows Phone 8 this also functions as a tab bar.
- **Note:** In Android, OptionsMenu is visible up to API Level 15, as well as depending on device OS version. For more information, see the Worklight user documentation.



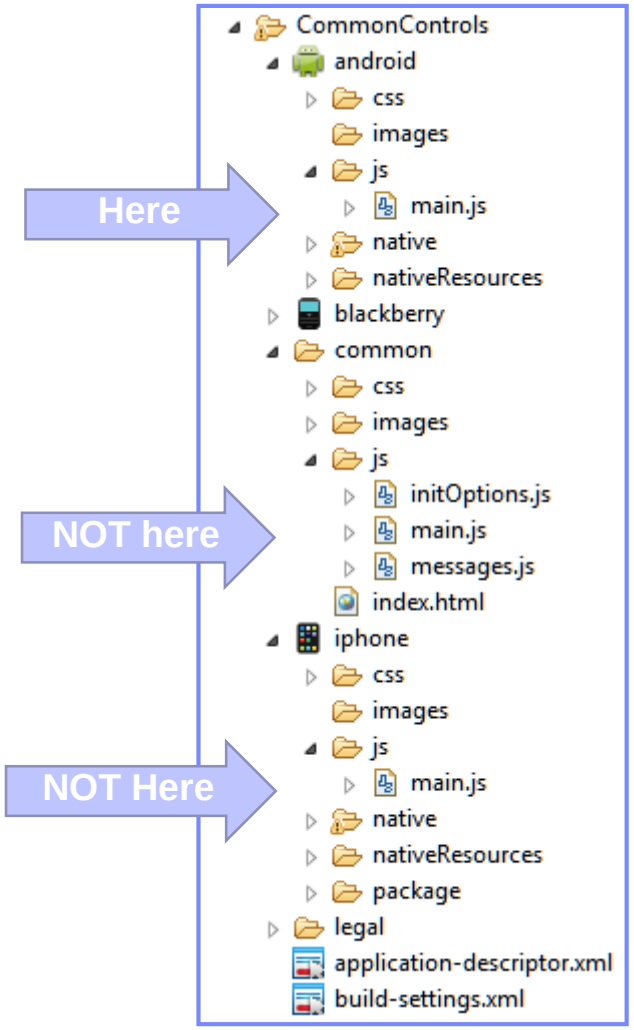


WL.OptionsMenu – continued

- `WL.OptionsMenu` must be initialized before use:

  ```
  WL.OptionsMenu.init();
  ```

- Initialize `WL.OptionsMenu` in the designated JavaScript file.
- The syntax is similar to that of `WL.TabBar` with some minor changes.



WL.OptionsMenu – continued

- Use the following syntax to add an option of a menu:

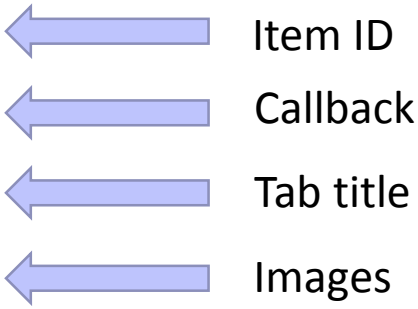
```
WL.OptionsMenu.addItem(id, callbackFunction, title, options);
```

  - `itemID` – Internal reference for this menu option
  - `callback` – JavaScript function to run when the menu option is pressed.
  - `title` – The text of the menu item.
  - `options` – An options object with the following properties:
    - `image` – A path to a designated image, relative to resource root directory.
    - `enabled` – Boolean stating if the item is enabled or disabled.

WL.OptionsMenu – continued

- `WL.OptionsMenu.addItem` example:

```
WL.OptionsMenu.addItem("item2",
    function(){ alert("item 2 pressed");},
    "Contacts", {
    image: "contacts.png"}
);
```



- Paths to image files must not be given; instead, place the files at the following locations:
  - **Android**: `nativeResouces\drawable-*`
  - **Windows 8:** `Resources\applicationBar`
  - **Windows Phone 8:** `nativeResources\applicationBar`
- For more information about `WL.OptionsMenu`, see the Worklight user documentation.

WL.OptionsMenu – continued

- `WL.OptionsMenu` API
  - `WL.OptionsMenu.init()`
  - `WL.OptionsMenu.addItem` (return reference to a new options item)
  - `WL.OptionsMenu.getItem(itemID)`
  - `WL.OptionsMenu.getItem(itemID).setEnabled (true / false)`
  - `WL.OptionsMenu.setVisible (true / false)`
  - `WL.OptionsMenu.setEnabled (true / false)`
  - `WL.OptionsMenu.removeItem (itemID)`
  - `WL.OptionsMenu.removeItems ()`

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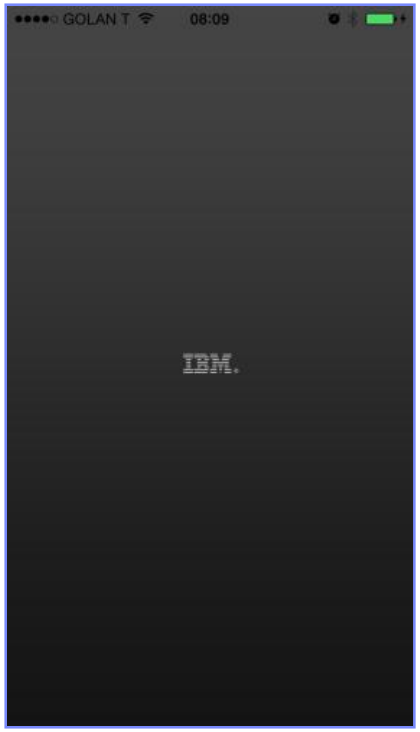
Splash screen

- Supported environments: Android and iOS.
- Control when to show and hide the splash screen.
- Create a customized experience.



Splash screen – continued

Default behavior

- The Worklight framework provides a default splash screen loading behavior.
  - The splash screen is shown once the application launches
    - This is done in `android\native\src\com\app-name\`*`app-name.java`* and `iphone-or-ipad\native\Classes\`*`app-name.m`*
  - The splash screen is then hidden once the Worklight framework finishes initializing.
- The following slides explain how to extend the default behavior or create a new one altogether.
- For more information, see the Worklight user documentation topic: "**Managing the splash screen with JavaScript APIs**".

Splash screen – continued

Showing and hiding the splash screen

- As mentioned, you can handle when the splash screen to be hidden by using Worklight framework. To do so:
  1. Uncomment the `autoHideSplash` option the `initOptions.js` file.
  2. Use the following API method in at the point in the JavaScript code where you want the splash screen to be hidden. For example:

```
function wlCommonInit() {
    WL.App.hideSplashScreen();
}
```

- If an application requires extra processing time while it launches, the splash screen duration can, for example, be extended by implementing custom JavaScript code that does so.
- Example reasons:
  - Waiting for data from a backend.
  - Loading of more frameworks.
- The next slide shows one possible way for implementing the hiding of the splash screen.

Splash screen – continued

Showing and hiding the splash screen

```
function wlCommonInit(){
    // Custom app logic...
    customLogicCallback();
}

function customLogicCallback() {
    WL.App.hideSplashScreen();
}
```

Splash screen – continued

Showing and hiding the splash screen

- Similarly, the splash screen can be manually displayed again by using the JavaScript API method:

```
WL.App.showSplashScreen();
```

- Example reason:
  - A requirement to force a reload of the application.

```
function wlCommonInit() {
    WL.App.hideSplashscreen();
    // Custom app logic…
    reloadApplication();
}
function reloadApplication() {
    WL.App.showSplashScreen();
    // More custom app code…
    WL.Client.reloadApp();
}
```

Splash screen – continued

Creating a customized experience

- By default, the splash screen that is used in a Worklight application is a static image.
- To use a different image, replace the following with another image:
  - Android: `native\res\drawable\splash.9.png`
  - iOS: `native\Resources\Default-*.png`
- For more information, see Android's 9-Patch documentation as well as the Apple Human Interface Guidelines.

- The splash screen can also be more than a static image.
- A developer can implement custom code that will, for example:
  - Extend the time the splash screen is displayed.
  - Display an animated "loading…" screen.
  - Display a short video clip.
- For more information about creating a custom splash screen, see the Worklight user documentation.

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Sample

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

Quiz

Test your knowledge. Answers are in the following slide.

- What is a common control?
  - A common control is a user interface element that is common to most environments.
  - A common control is a way to specify how groups of elements are controlled.
  - A common control is an emulation of a device's native controls by using various technologies.
  - A common control is a native interface element that cannot be controlled by a web means such as JavaScript.
- Which mobile environments use native implementation of a busy indicator?
  - iOS, Android, BlackBerry.
  - iOS, Android, Windows Phone 8.
  - Windows Phone 8, BlackBerry, iOS.
  - iOS, Android, BlackBerry, Windows Phone.
- Which mobile environments support TabBar control?
  - Android, BlackBerry, Windows Phone 8.
  - Android, iOS, Windows Phone 8.
  - iOS, Android, BlackBerry.
  - iOS, Android.

Quiz - answers

- What is a common control?
  - A common control is a user interface element that is common to most environments.
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  - iOS, Android, Windows Phone 8.
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- Which mobile environments support TabBar control?
  - Android, BlackBerry, Windows Phone 8.
  - Android, iOS, Windows Phone 8.
  - iOS, Android, BlackBerry.
  - iOS, Android.

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