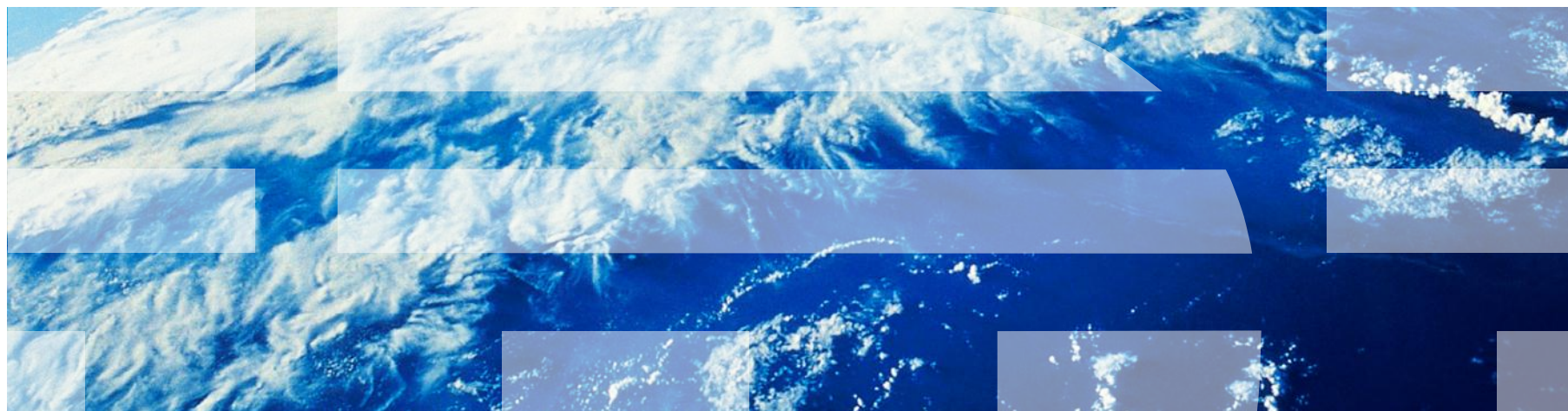# IBM Worklight Foundation V6.2.0
Getting Started

Working with UI frameworks

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- See http://www.ibm.com/ibm/us/en/

Agenda

- Working with UI frameworks

- Using jQuery in a Worklight application

- Working with jQuery Mobile

- Working with Dojo Mobile

- Working with Sencha Touch

Working with UI frameworks

- Designing and implementing the UI of your application is an important part of the development process.

- Writing your own CSS style for each component from scratch gives you a high level of customization, but requires a large amount of resources.

- Sometimes it is better to use the existing JavaScript™ UI frameworks.

- This module describes the development of Worklight® applications by using three JavaScript UI frameworks:
  - jQuery Mobile
 - Dojo Mobile
  - Sencha Touch

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Using jQuery in a Worklight application

- jQuery is a fast and concise JavaScript framework that simplifies HTML document flow, event handling, animating, and Ajax interactions for rapid web development.

- The Worklight client-side framework uses the jQuery library for internal functionality. By default, the $ character is assigned to the internal jQuery in the main HTML file of the application.

```
<script>window.$ = window.jQuery = WLJQ;</script>
```

- If your application does not require jQuery, or if you want to use a different version of jQuery, you can remove this line.

- For more information about jQuery, see http://jquery.com/.

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Working with jQuery Mobile

- jQuery Mobile is a touch-optimized web framework for smartphones and tablets.

- jQuery Mobile requires jQuery to run.

- You can download the required components at http://jquerymobile.com/download/ or use the sample project that you can find at the end of this module as a reference.

- The required jQuery Mobile components are in the .js and .css files. More style images can optionally be added.

Working with jQuery Mobile

- When you create a new application, click **Configure JavaScript Libraries**. The **JavaScript Libraries** wizard opens.

- Use either the compressed jQuery Mobile .zip file or extract it.

- Select the files that you need to include in your project. You must include at minimum the images folder and the jquery-mobile-*.css and jquery-mobile-*.js files.

- When you create the application, a jqueryMobile folder is added that contains these files.

- The main HTML file of the application is created with references to the .css and .js files.
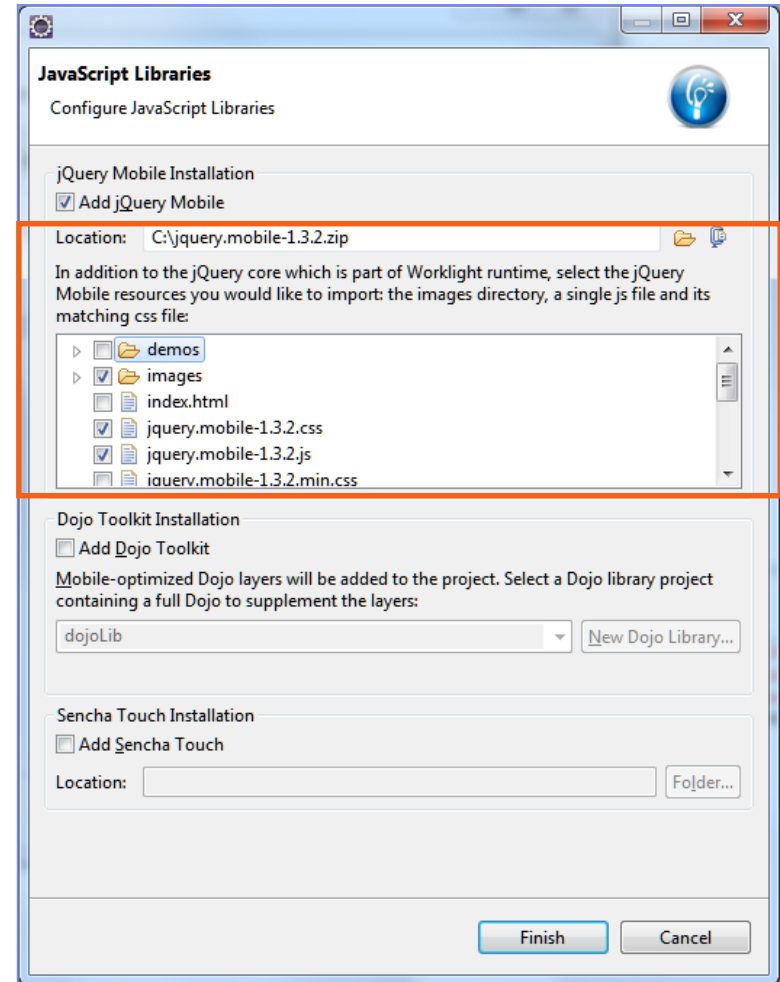
Working with jQuery Mobile

- The basic structure of a screen in a jQuery Mobile application is as follows:

```
<div data-role="page">
    <div data-role="header"> ... </div>
    <div data-role="content"> ... </div>
    <div data-role="footer"> ... </div>
</div>
```

- The header and footer elements are optional

- The page is rendered by a jQuery Mobile at run time

- All the required styles are automatically applied

- You can create your own styles and themes by using the ThemeRoller tool at http://jquerymobile.com/themeroller/

Working with jQuery Mobile
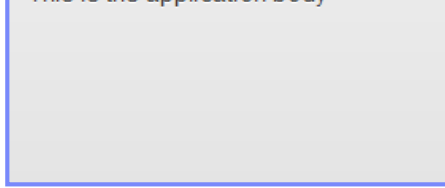
- A WYSIWYG editor is provided for jQuery Mobile widgets for developer convenience.

Working with jQuery Mobile

- By using jQuery Mobile, you can create mobile application screens with a few lines of code

```
<div data-role="page">

    <div data-role="header">

        <h2>My Application</h2>

    </div>

    <div data-role="content"> This is the application body
  </div>

</div>
```


- For more information, see http://jquerymobile.com/demos.

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Working with Dojo Mobile

- You can use Dojo Mobile to rapidly develop mobile web applications on iPhone, iPod Touch, iPad, Android, and BlackBerry touch devices, with the appearance of the native device.

- Dojo Mobile is part of the Dojo Toolkit, which is developed and maintained by the Dojo Foundation.

  – For more information about the Dojo Toolkit, see the Dojo Toolkit website at http://dojotoolkit.org/documentation/.

- Worklight Studio includes a Dojo Toolkit package and tools that you can use to develop your mobile web applications.

- Use the sample project that you can find at the end of this module as a reference.

Working with Dojo Mobile

- When you create a new application, click **Configure JavaScript Libraries**. The **JavaScript Libraries** wizard opens.

- Select the **Add Dojo Toolkit** check box.

- Your project is initialized with mobile-optimized layers and resources.

- A new Dojo Library project is created that has a full Dojo Toolkit to supplement the mobile layers.

JavaScript Libraries
Configure JavaScript Libraries

jQuery Mobile Installation
☐ Add jQuery Mobile
Location:

In addition to the jQuery core which is part of Worklight runtime, select the jQuery Mobile resources you would like to import: the images directory, a single js file and its matching css file:

Dojo Toolkit Installation
☑ Add Dojo Toolkit
Mobile-optimized Dojo layers will be added to the project. Select a Dojo library project containing a full Dojo to supplement the layers:

dojoLib   ▼   New Dojo Library...
ⓘ A Dojo library project will be created.

Sencha Touch Installation
☐ Add Sencha Touch
Location: Folder...

Finish   Cancel

Deployment configuration with Ant

- Worklight Studio automatically uses the `build-dojo.xml` file to specify which parts of the Dojo Toolkit package, such as compressed layers and resources, must be deployed with your application.

- By default, all of the resources from the `www` folder are deployed.

- **Note:** The `build-dojo.xml` file stores the configuration that must be deployed to run a basic Dojo Mobile application. You can modify this build file to add other layers to deploy with your application.

```
myDojoApp
   common
   legal
   application-descriptor.xml
   build-dojo.properties
   build-dojo.xml
   build-settings.xml
```
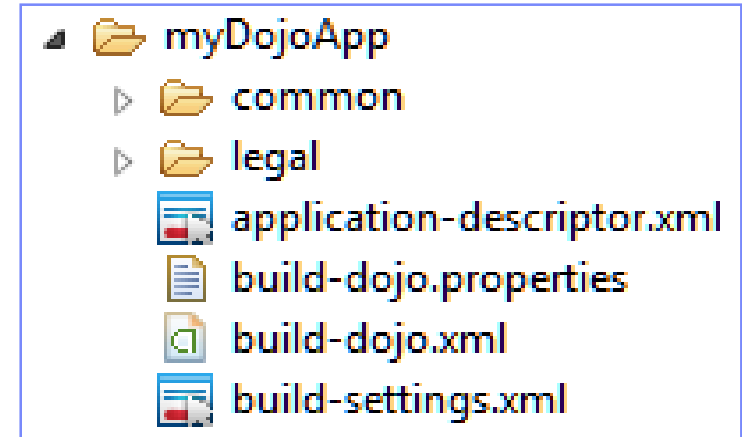
Create custom layers

- To create custom layers, you can use the full Dojo Toolkit that is part of the Dojo Library project.

- Update the `build-dojo.properties` file to indicate where to pick up the Dojo Toolkit files from.

  - Update the `dojo.workspaceRoot` property value to pick up the files from another directory in your project, or from another project in your workspace: `dojo.workspaceRoot=/myProject/dojo`

  - Use the `dojo.root` property instead if the directory is not in your workspace: `dojo.root=C\:/dojo`

Using a predefined Dojo Mobile HTML template

- You can create mobile web pages with a predefined Dojo Mobile HTML template.

- Using this template prepares the web page to use Dojo Mobile.

Web Page

Select a name, location, and template for a new web page.

File Name:	index
Folder:	/myProject/apps/myDojoApp/common

Browse...

Template:

Preview:

- 📂 Basic Templates
  - ‹› Dojo Mobile HTML
  - ‹› HTML
- 📂 My Templates

Dojo Mobile HTML

Template Details: Basic page template "Dojo Mobile HTML"

☑ Link page to template

Options...

Finish   Cancel
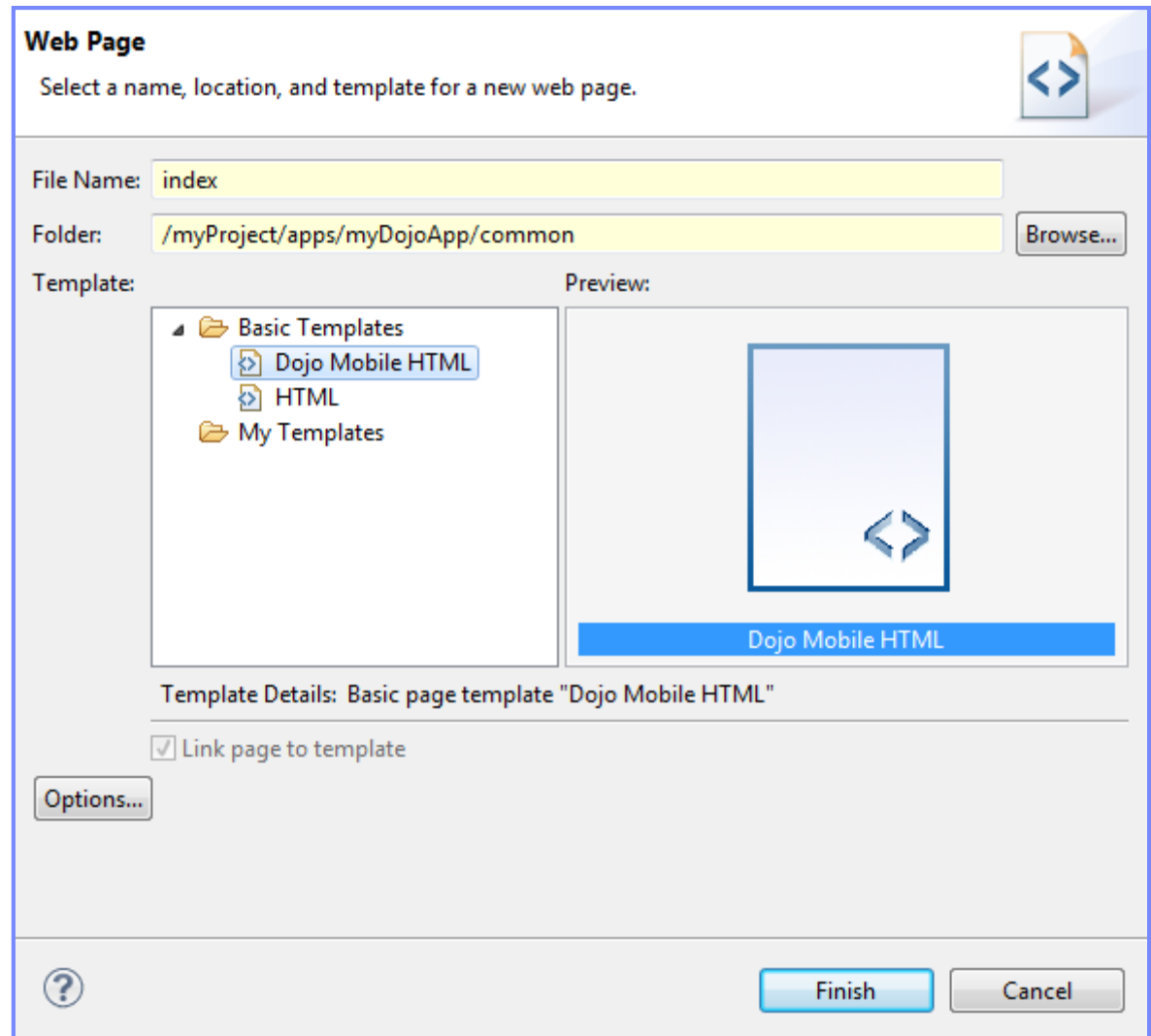
Using Dojo Library resources

- The Dojo Library provides resources that supplement mobile development.

- The Dojo Library Requests console logs which resources were used that are not deployed in your application.
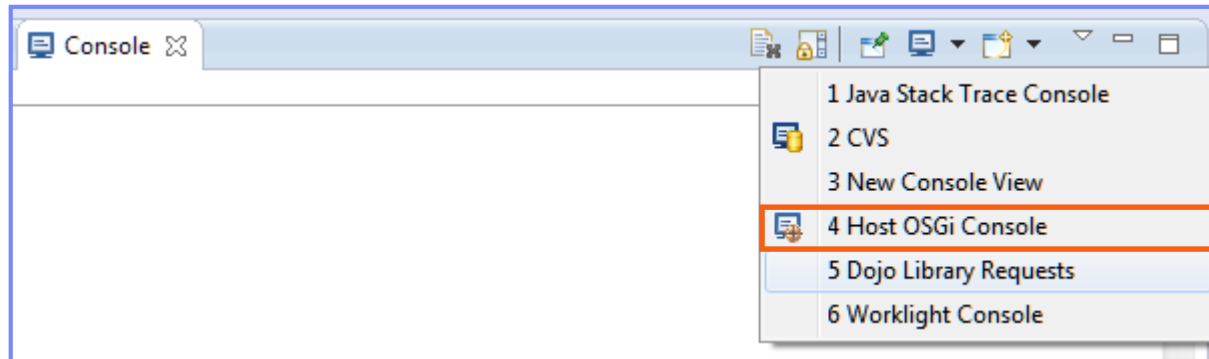
Deploying to a device

- When the development is done, you must have the used resources in your application (either copied loosely or as layers) to run properly.

- To configure the application to use local resources only, toggle the **Provide Library Resources** action in the console and redeploy.
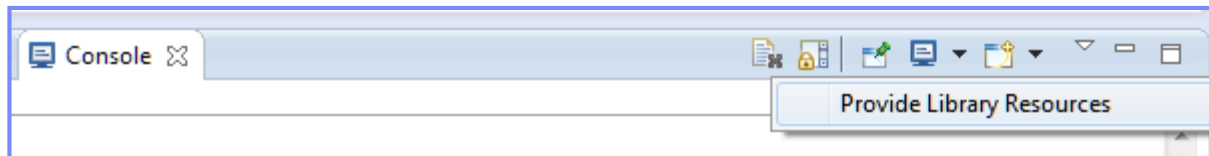
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Working with Sencha Touch

- With Sencha Touch, developers can build mobile web apps on iPhone, Android, and BlackBerry touch devices, with the appearance of the native device.

- Sencha Touch is developed and maintained by Sencha Inc.

- To download the Sencha Touch package, go to http://www.sencha.com/products/touch/.

- Although the Sencha Touch package consists of many files, you need only two of them to begin development: sencha-touch.js and sencha-touch.css

- Use the sample project that you can find at the end of this module as a reference.

Working with Sencha Touch

mySenchaApp
- common
  - css
    - main.css
    - sencha-touch.css
  - images
  - js
    - initOptions.js
    - main.js
    - messages.js
    - sencha-touch.js
  - index.html
- legal
- application-descriptor.xml
- build-settings.xml

```html
<link rel="stylesheet" href="css/sencha-touch.css">
<script src="js/sencha-touch.js"></script>
```

- `</head>`
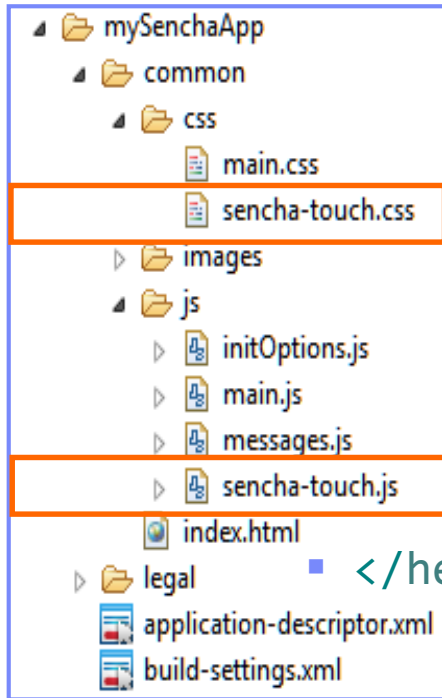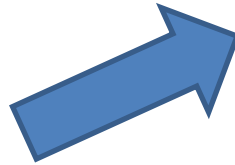
Working with Sencha Touch

- When you are working with the Sencha Touch framework, you build your application UI by using JavaScript.

```javascript
new Ext.Application({
    launch: function() {
        new Ext.Panel({
            fullscreen: true,
            dockedItems: [{
                xtype: 'toolbar',
                title: 'Sencha Touch App'
            }],
            layout: fit,
            styleHtmlContent: true,
            html: '<h2>This is a simple Sencha Touch App'
        });
    }
});
```

Sencha Touch App

This is a simple
Sencha Touch App

- For more information about Sencha Touch resources and learning center, see http://www.sencha.com/learn/touch/.

Notices

Support and comments

- For the entire IBM Worklight Foundation documentation set, training material and online forums where you can post questions, see the IBM website at:
  - http://www.ibm.com/mobile-docs
- **Support**
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    - http://www.ibm.com/software/passportadvantage
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  - Thank you for your support.
  - Submit your comments in the IBM Worklight Developer Edition support community at:
    - https://www.ibm.com/developerworks/mobile/worklight/connect.html
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    - Phone No.
    - Email address

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