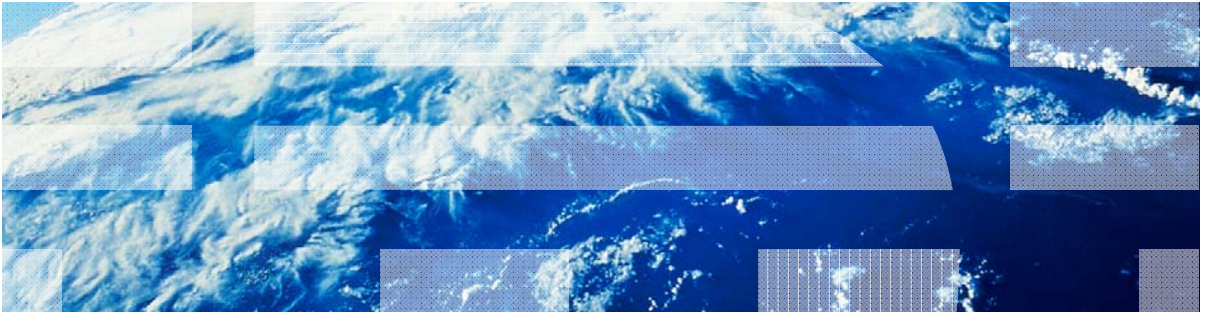


# ***IBM Worklight V6.0.0 Getting Started***

## **Working with UI frameworks**



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## Agenda

- Working with UI frameworks
- Using jQuery in an IBM 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 a vital 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

## Agenda

- Working with UI frameworks
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## Adding jQuery to the 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.
- Worklight client side framework uses jQuery library for internal functionality. By default, the \$ char is assigned to the internal jQuery in the application main HTML file.

```
<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/>
- **Important:** The bundled jQuery version in Worklight 6.0 was upgraded from v1.8.1 to v1.9.1 due to removal of deprecated functionality; Visit <http://www.jquery.com> for the complete changelog.

## Agenda

- Working with UI frameworks
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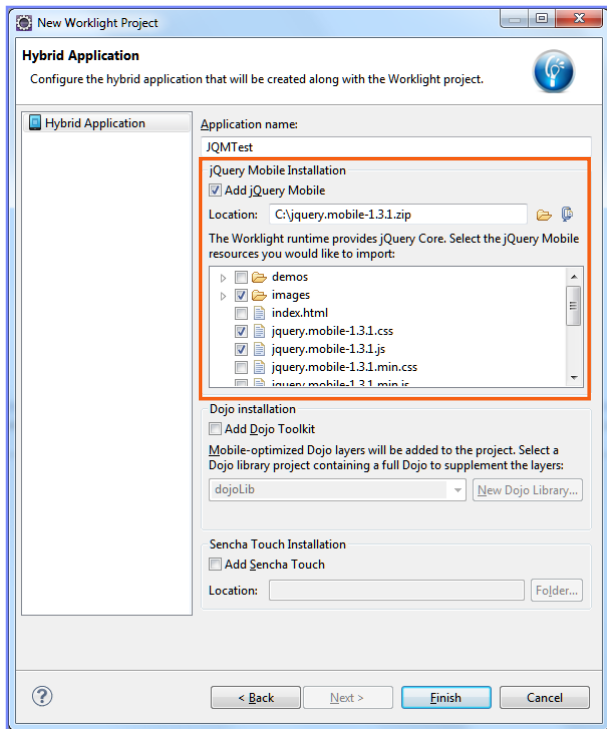
## Working with jQuery Mobile

- 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 is found 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.
- **Important:** The bundled jQuery version in Worklight 6.0 was upgraded from v1.8.1 to v1.9.1 due to removal of deprecated functionality; Visit <http://www.jquery.com> for the complete changelog.
- Take note of this when using **jQuery Mobile** in order to prevent incompatibility issues between the used *jQuery* and *jQuery Mobile* versions.



## Working with jQuery Mobile

- When creating a new application, tick the “Add jQuery Mobile” checkbox.
- Use either the jQuery Mobile .zip file or extract it.
- Tick any of the files you need included in your project. The minimum to have are the images folder, jquery-mobile-\*.css and jquery-mobile-\*.js files.
- Together with creating the application, a jqueryMobile folder will be added, containing these files.
- The application’s main HTML file will be created with references to the .css and .js files.



## Working with jQuery Mobile

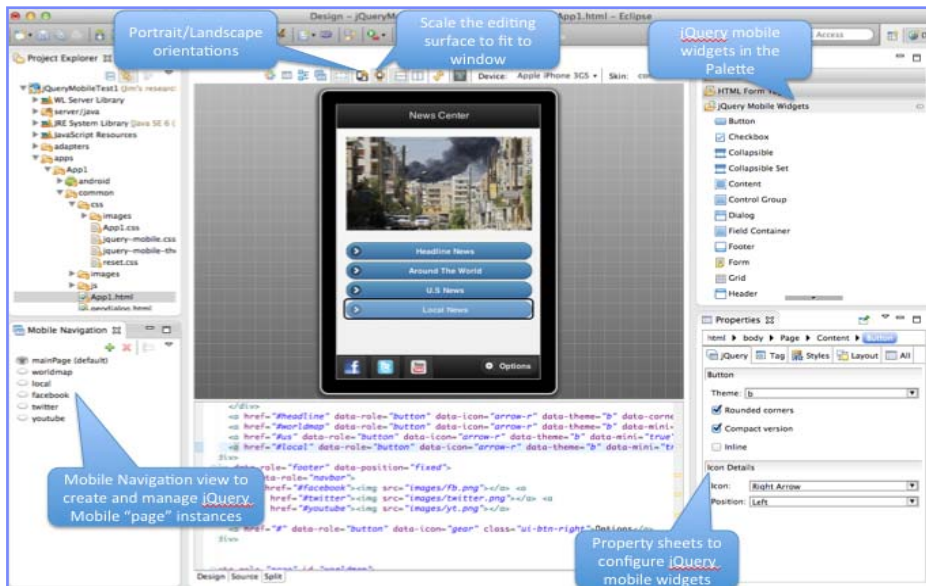
- The basic structure of a screen in a jQuery Mobile application is as follows:

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

- Header and footer elements are optional.
- The page is rendered by a jQuery Mobile at runtime.
- 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

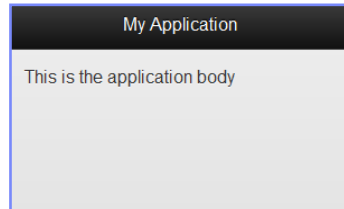
- WYSIWYG editor is provided for jQuery Mobile widgets for developer convenience



## Working with jQuery Mobile

- By using jQuery Mobile, you can create mobile application screens in 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>

## Agenda

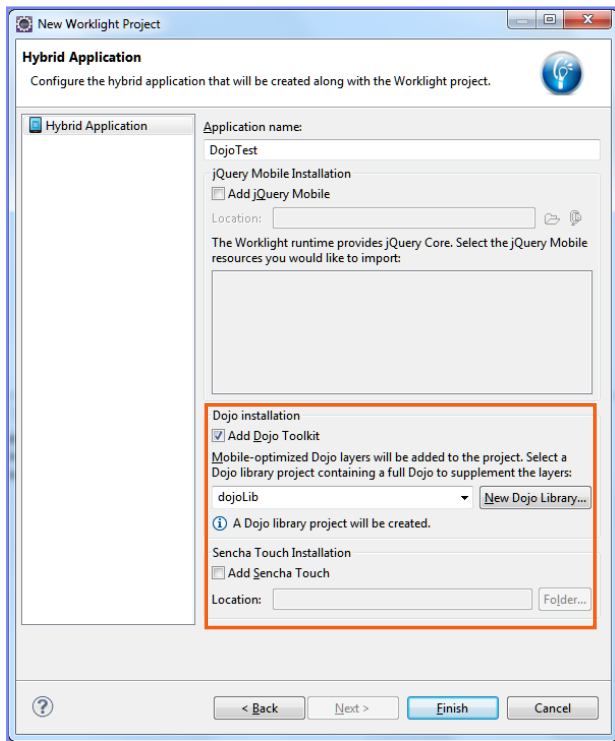
- Working with UI frameworks
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## ***Working with Dojo Mobile***

- 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, go to 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 is found at the end of this module as a reference.

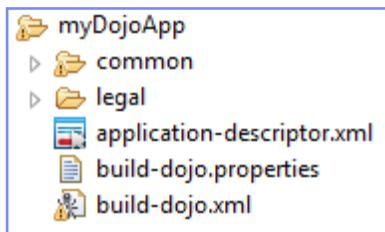
## Working with Dojo Mobile

- When creating a new application, tick the “Add Dojo Toolkit” checkbox.
- Use either the jQuery Mobile .zip file or extract it.
- Your project will be initialized with mobile-optimized layers and resources.
- A new Dojo Library project will be created that has a full Dojo Toolkit to supplement the mobile layers.



## Deployment configuration with Ant

- IBM Worklight Studio automatically uses the `build-dojoxml` 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 will be deployed.
- Note: The `build-dojoxml` 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.





## 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-dojoproperties` 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.

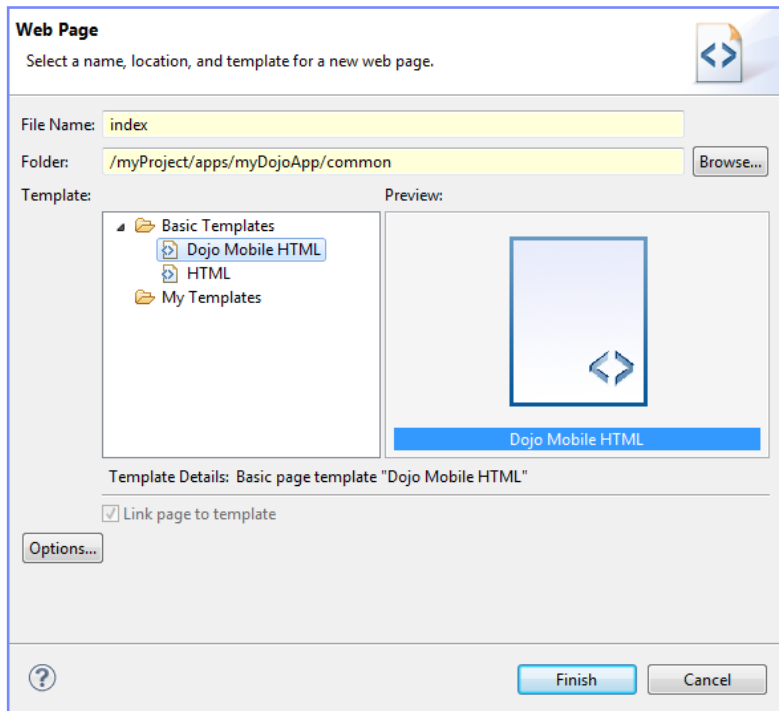
```
dojo.workspaceRoot=/myProject/dojo
```

- Use the `dojo.root` property instead if the directory is not in your workspace.

```
dojo.root=C:/dojo
```

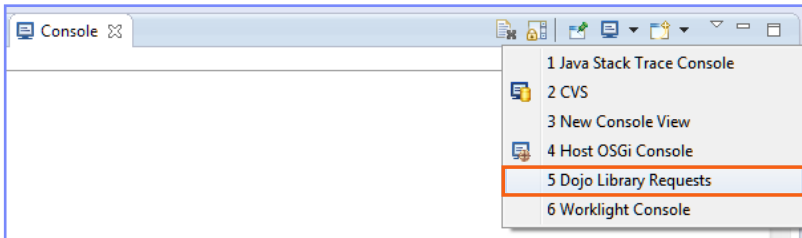
## Using a predefined Dojo Mobile HTML template

- You can create mobile web pages with a predefined Dojo Mobile HTML template.
- Using this template prepares the web page to use Dojo Mobile.



## Using Dojo Library resources

- The Dojo Library provides resources that supplement mobile development.
- The Dojo Library Requests console will log which resources were used that are not deployed in your application.



## Deploying to a device

- When 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.



## Agenda

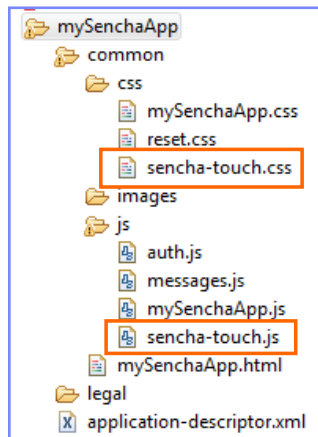
- Working with UI frameworks
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## ***Working with Sencha Touch***

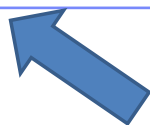
- Sencha Touch allows developers to build mobile web apps that have the appearance of native on iPhone, Android, and BlackBerry touch devices.
- Sencha Touch is developed and maintained by Sencha Inc.
- To download the Sencha Touch package, visit <http://www.sencha.com/products/touch/>
- Although the 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 is found at the end of this module as a reference.

## Working with Sencha Touch

- Add the Sencha Touch components to your application and add the references to the <head> section of the main HTML.



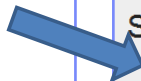
```
<script src="js/sencha-touch.js" type="text/javascript"></script>  
<link href="css/sencha-touch.css" rel="stylesheet" type="text/css" />
```



## Working with Sencha Touch

- When you are working with the Sencha Touch framework, you build your application UI by using 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</h2>'
    });
  }
});
```

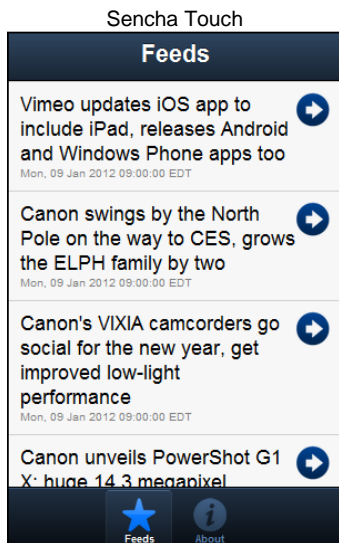
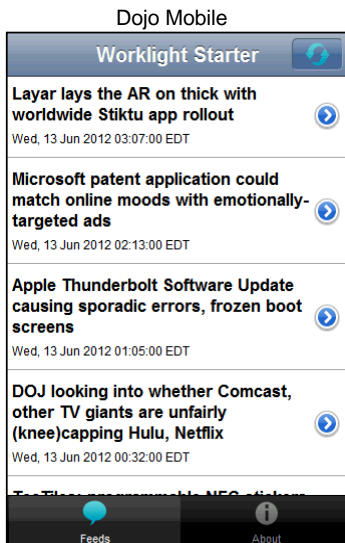
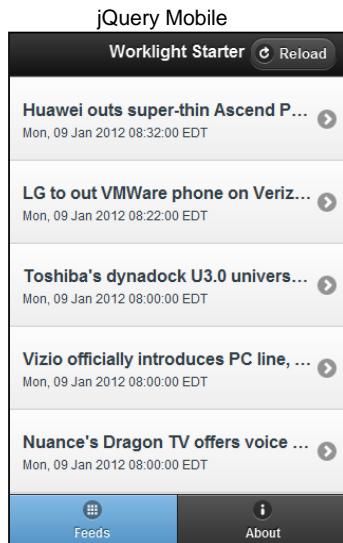


- Visit Sencha Touch resources and learning center at <http://www.sencha.com/learn/touch/>



## Samples

- Download jQuery Mobile, Dojo Mobile and Sencha Touch versions of Worklight Starter from the Getting Started page of the IBM Worklight documentation website at <http://www.ibm.com/mobile-docs>.



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