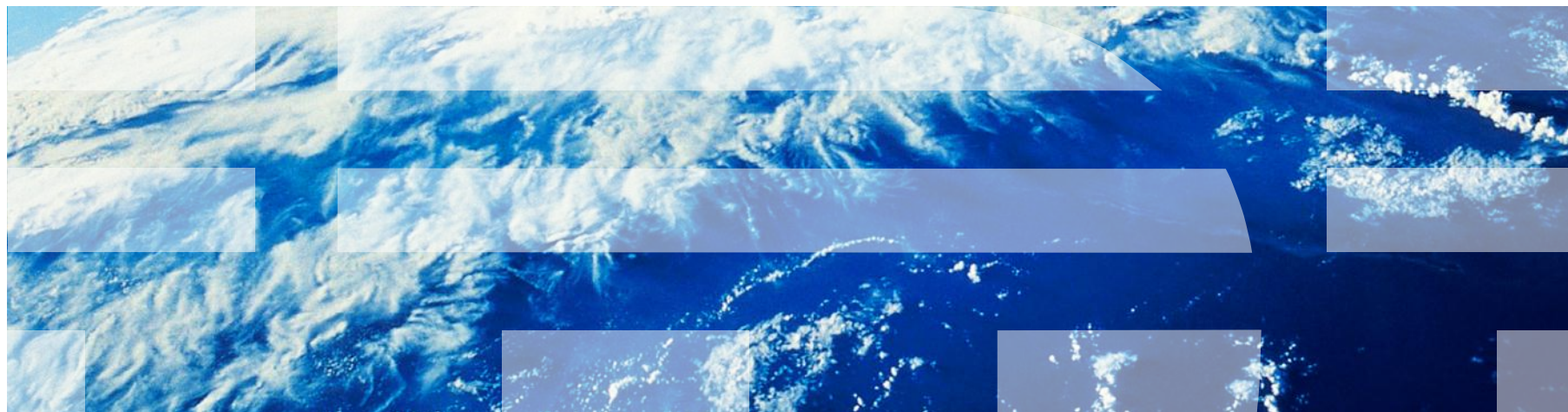


IBM Worklight Foundation V6.2.0 Getting Started

Learning Worklight Hybrid client-side API



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Before You Start

- To complete this training module, you must have previous experience and knowledge of web development technologies such as HTML, CSS, JavaScript™, and DOM events and manipulations.
- To learn those technologies, go to <http://www.w3schools.com/>.
- Although not required, a basic knowledge of jQuery and object-oriented JavaScript libraries is an advantage.
- The purpose of this module is to give you an overview of the Worklight® client-side API.

Agenda

- Worklight application components
- The WL namespace
 - WL.Client
 - WL.Logger
- Exercise

Worklight application components

Application sources

- Main HTML file
- Main JavaScript file
- Messages file for storing application strings, primarily used for translation

```
index.html  
main.js  
messages.js  
initOptions.js  
wljq.js  
worklight.js
```

Worklight application components

IBM Worklight Foundation initialization

Use this file to define application initialization options.

For more information about initialization options, see the IBM Worklight Foundation user documentation.

ibm.biz/knowctr#SSZH4A_6.2.0/wl_welcome.html

```
index.html  
main.js  
messages.js  
initOptions.js  
wljq.js  
worklight.js
```

Worklight application components

jQuery JavaScript Framework

IBM Worklight Foundation includes an encapsulated jQuery, which you can add to the developer project with the following line of code:

```
window.$ = window.jQuery = WLJQ;
```

```
index.html  
main.js  
messages.js  
initOptions.js  
wljq.js  
worklight.js
```

Worklight application components

Worklight Client JavaScript API

- The Worklight client API uses the `WL` namespace.
- This namespace provides bridging to native mobile platform APIs, dynamic HTML load, and other elements.

```
index.html  
main.js  
messages.js  
initOptions.js  
wljq.js  
worklight.js
```


Agenda

- Worklight application components
- **The WL namespace**
- WL.Client
- WL.Logger
- Exercise

The *WL* namespace

- Use a `WL` namespace to use a Worklight API:
 - `WL.Client`, `WL.Utils`, ...
- The `WL` namespace exposes the API objects, methods, and constants (usually enums).
- The `WL` namespace is automatically added to the main HTML file of the app:
 - `worklight.js`
- The `WL` namespace is automatically available on application initialization.

Agenda

- Worklight application components
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WL.Client – 1/9

- With `WL.Client`, you can perform the following type of tasks:
 - Initialize and reload the application

`WL.Client.init(options)`

The options are:

- `onSuccess`
- `onFailure`
- `timeout`
- ...

`WL.Client.reloadApp()`

WL.Client – 2/9

- With `WL.Client`, you can perform the following type of tasks:
 - Initialize and reload the application
 - **Trigger login and logout**

```
WL.Client.login(realm, options)  
WL.Client.logout(realm, options)
```

WL.Client – 3/9

- With `WL.Client`, you can perform the following type of tasks:
 - Initialize and reload the application
 - Trigger login and logout
 - Obtain general app information

```
WL.Client.getEnvironment()  
WL.Environment.ADOBE_AIR  
...
```

WL.Client – 4/9

- With `WL.Client`, you can perform the following type of tasks:
 - Initialize and reload the app
 - Trigger login and logout
 - Obtain general app information
 - Retrieve and update data from corporate information systems

```
WL.Client.invokeProcedure (invocationData, options)
```

WL.Client – 5/9

- With `WL.Client`, you can perform the following type of tasks:
 - Initialize and reload the app
 - Trigger login and logout
 - Obtain general app information
 - Retrieve and update data from corporate information systems
 - **Store and retrieve user preferences across sessions**

```
WL.Client.setUserPref(key, value, options)  
WL.Client.setUserPrefs ({key1:value1, ...}, options)  
WL.Client.getUserPref(key)  
WL.Client.deleteUserPref(key, options)  
WL.Client.hasUserPref(key)
```


WL.Client – 6/9

- With `WL.Client`, you can perform the following type of tasks:
 - Initialize and reload the app
 - Trigger login and logout
 - Obtain general app information
 - Retrieve and update data from corporate information systems
 - Store and retrieve user preferences across sessions
 - Specify environment-specific user interface behavior

```
WL.App.openURL
WL.App.getDeviceLanguage
WL.App.getDeviceLocale
WL.BusyIndicator
WL.TabBar
WL.SimpleDialog
WL.OptionsMenu
...
```

WL.Client – 7/9

- With `WL.Client`, you can perform the following type of tasks:
 - Initialize and reload the app
 - Trigger login and logout
 - Obtain general app information
 - Retrieve and update data from corporate information systems
 - Store and retrieve user preferences across sessions
 - Specify environment-specific user interface behavior
 - Store custom log lines for auditing and reporting purposes in special database tables

```
WL.Client.logActivity (activityType)
```

WL.Client – 8/9

- With `WL.Client`, you can perform the following type of tasks:

- Initial...

```

Elements Resources Network Sources Timeline Profiles Audits Console
wlclient init started
Request [/HelloWorklightProject/apps/s
x POST http://localhost:10080/HelloWor
Request [/HelloWorklightProject/apps/s
response [/HelloWorklightProject/apps/s
{"userPrefs":{},"gadgetProps":{"ENVIRC
{"isUserAuthenticated":0,"displayNam
{"isUserAuthenticated":0,"displayNam
{"userId":null,"attributes":{},"isUserAuthenticated":0,"displayName":"null","myserver":{"userId":"b2158723-96ce-46e0-9047baa94dd04c"},"wl_anonymousUserRealm":{"userId":"b2158723-96ce-46e0-904a-47baa94dd04c"},"attributes":{},"isUserAuthent
wlclient connect success
before: app init onSuccess
:: WL.Logger.debug :: logging demonstration
after: app init onSuccess
wlclient init success
  
```

special database tables

- Write debug lines to a logger window

WL . Logger . debug

WL.Client – 9/9

- With `WL.Client`, you can perform the following type of tasks:
 - Initialize and reload the app
 - Trigger login and logout
 - Obtain general app information
 - Retrieve and update data from corporate information systems
 - Store and retrieve user preferences across sessions
 - Specify environment-specific user interface behavior
 - Store custom log lines for auditing and reporting purposes in special database tables
 - Write debug lines to a logger window
- **For more information, see the IBM Worklight Foundation user documentation.**
ibm.biz/knowctr#SSZH4A_6.2.0/wl_welcome.html

Agenda

- Worklight application components
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WL.Logger

- `WL.Logger` helps you troubleshoot errors in environments without debugging tools.
- `WL.Logger` outputs to an environment console, such as Xcode console, Adobe AIR, and Android LogCat.

WL.Logger

- WL.Logger.debug (message)
- WL.Logger.error (message)

```

Elements Resources Network Sources Timeline Profiles Audits Console
wlclient init started
Request [/HelloWorklightProject/apps/services/api/HelloWorklight/common/init]
* ► POST http://localhost:10080/HelloWorklightProject/apps/services/api/HelloWorklight/common/init 401 (Unauthorized)
Request [/HelloWorklightProject/apps/services/api/HelloWorklight/common/init]
response [/HelloWorklightProject/apps/services/api/HelloWorklight/common/init] success: /*-secure-
{"userPrefs":{}, "gadgetProps":{"ENVIRONMENT":"common"}, "userInfo":{"SubscribeServlet":{"userId":null, "attributes":{}}, "is
{"isUserAuthenticated":0, "displayName":null}, "SampleAppRealm":{"userId":null, "attributes":{}}, "isUserAuthenticated":0, "
{"isUserAuthenticated":0, "displayName":null}, "wl_antiXSRFRealm":{"userId":"ocv21r3sr70n5o9iucoj1trdne", "attributes":{}
{"userId":null, "attributes":{}}, "isUserAuthenticated":0, "displayName":null}, "wl_deviceAutoProvisioningRealm":{"userId":nu
{"userId":null, "attributes":{}}, "isUserAuthenticated":0, "displayName":null}, "myserver":{"userId":"b2158723-96ce-46e0-904a
47baa94dd04c"}, "wl_anonymousUserRealm":{"userId":"b2158723-96ce-46e0-904a-47baa94dd04c", "attributes":{}}, "isUserAuthentic
wlclient connect success
before: app init onSuccess
:: WL.Logger.debug :: logging demonstration
* ► :: WL.Logger.error :: logging demonstration
after: app init onSuccess
wlclient init success
>

```

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 - **Exercise**

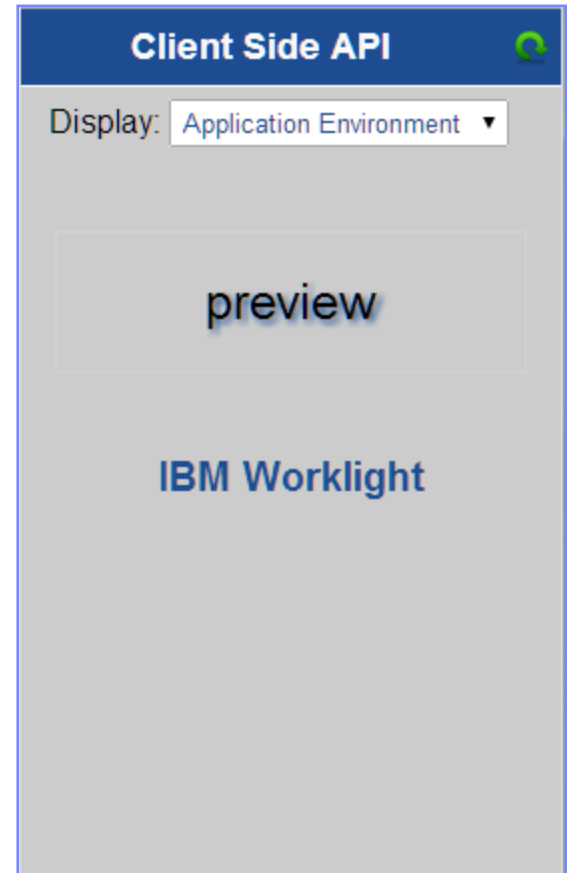
Exercise

Basic API Application Development

- Create a Worklight application.
- Add an image to the header element.
 - Observe for clicks.
 - When clicked:
 - Display the busy indicator for 5 seconds and then use the Worklight API to reload the app.
- Add a select element with two options:
 - Display App environment
 - Display Language
 - When a change occurs, use the Worklight API to display the selected data.
- Add a link to <http://m.ibm.com> at the bottom of the app.
 - When clicked, use the WL API to open a URL.

Exercise

- You can find the sample for this training module in the **IBM Worklight Foundation Getting Started website** at <http://www.ibm.com/developerworks/mobile/worklight/getting-started.html>



Quiz

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

- The Worklight client-side framework comes with an embedded JavaScript library. Which one?
 - jQuery
 - Prototype
 - Dojo
 - MooTools
- What is the **messages.js** used for?
 - This file contains the texts of application prompts
 - This file contains the texts of error messages that the application can show
 - An internal framework file that is used to store system messages for debugging purposes
 - This file contains strings that can be used for application elements
- The following API can be used across all environments to debug the Worklight application
 - console.log
 - console.debug
 - WL.Logger.debug
 - WL.Debugger.log

Quiz

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 - console.debug
 - WL.Logger.debug
 - WL.Debugger.log

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