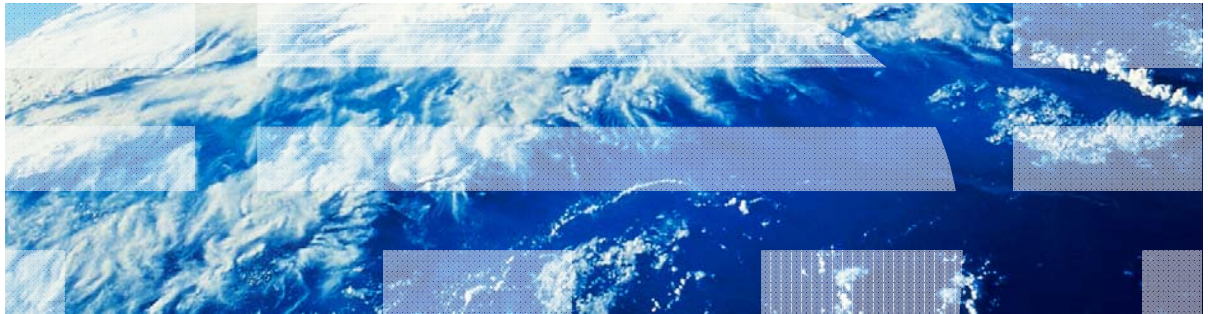


IBM Worklight V6.0.0 Getting Started

Learning Worklight client side API



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Before You Start

- This training module assumes that you have previous experience and knowledge of web development technologies such as HTML, CSS, JavaScript™ and DOM events and manipulations.
- To learn those technologies, you can visit <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 IBM Worklight® client side API.

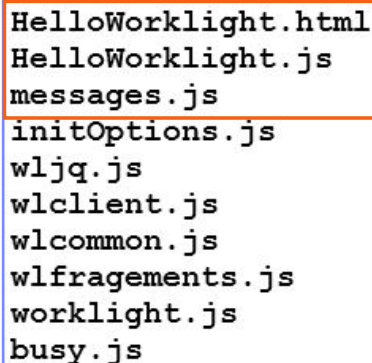
Agenda

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

Worklight application components

The application sources

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



```
HelloWorklight.html
HelloWorklight.js
messages.js
initOptions.js
wljq.js
wlclient.js
wlcommon.js
wlfrgements.js
worklight.js
busy.js
```

Worklight application components

Worklight® initialization

Used to define application
initialization options

*For more information about initialization
options, see the IBM Worklight Info Center*

```
HelloWorklight.html  
HelloWorklight.js  
messages.js  
initOptions.js  
wljq.js  
wlclient.js  
wlcommon.js  
wlfrgements.js  
worklight.js  
busy.js
```




Worklight application components

jQuery JavaScript Framework

IBM Worklight includes an encapsulated jQuery, which can be added to the developer project with a single line of code:

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

```
HelloWorklight.html  
HelloWorklight.js  
messages.js  
initOptions.js  
wljq.js  
wlclient.js  
wlcommon.js  
wlfrgements.js  
worklight.js  
busy.js
```



Worklight application components

Worklight Client JavaScript API

- Worklight Client API uses **WL** namespace
- This namespace provides bridging to native mobile platform APIs, dynamic HTML load, and other elements

```
HelloWorklight.html  
HelloWorklight.js  
messages.js  
initOptions.js  
wljq.js  
wlclient.js  
wlcommon.js  
wlfrgements.js  
worklight.js  
busy.js
```



Agenda

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

The WL Namespace

- To use Worklight API, a WL namespace is used
 - `WL.Client`, `WL.Utls`, ...
- Exposes the API objects, methods, and constants (usually enums)
- Automatically added to the app main HTML file
 - `wlcommon.js`
 - `wlclient.js`
 - `worklight.js`
- WL Namespace is automatically available on application initialization

Agenda

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

WL.Client (1 of 9)

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

WL.Client.init (options)

options are:

- onSuccess
- onFailure
- connectOnStartup
- busyOptions

WL.Client.reloadApp()

WL.Client (2 of 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 of 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 of 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 of 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 of 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 of 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 of 9)

- With WL.Client, you can

WL.Logger.debug

- Initialize a client

— Trigger

— Obtain g

— Retrieve

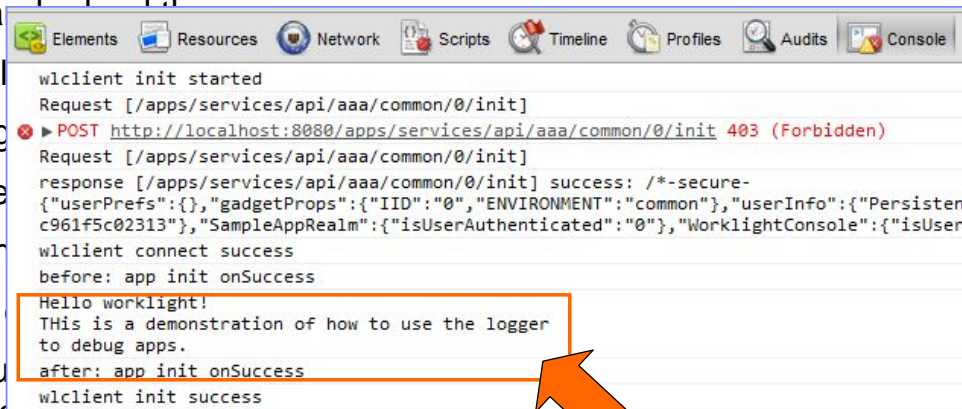
— Store an

— Specify

— Store cu

special database tables

— Write debug lines to a logger window



The screenshot shows the IBM Worklight Console interface. The 'Console' tab is selected, displaying a log of events. The log includes the following entries:

```

wlclient init started
Request [/apps/services/api/aaa/common/0/init]
POST http://localhost:8080/apps/services/api/aaa/common/0/init 403 (Forbidden)
Request [/apps/services/api/aaa/common/0/init]
response [/apps/services/api/aaa/common/0/init] success: /*-secure-
{"userPrefs": {}, "gadgetProps": {"IID": "0", "ENVIRONMENT": "common"}, "userInfo": {"Persistence": "c961f5c02313", "SampleAppRealm": {"isUserAuthenticated": "0"}, "WorklightConsole": {"isUserAuthenticated": "0"}}, "worklightVersion": "1.0.0"}
wlclient connect success
before: app init onSuccess
Hello worklight!
This is a demonstration of how to use the logger
to debug apps.
after: app init onSuccess
wlclient init success
  
```

An orange box highlights the debug message: "Hello worklight! This is a demonstration of how to use the logger to debug apps. after: app init onSuccess". An orange arrow points to this box.

WL.Client (9 of 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 full documentation, see the [IBM Worklight Info Center](#)

Agenda

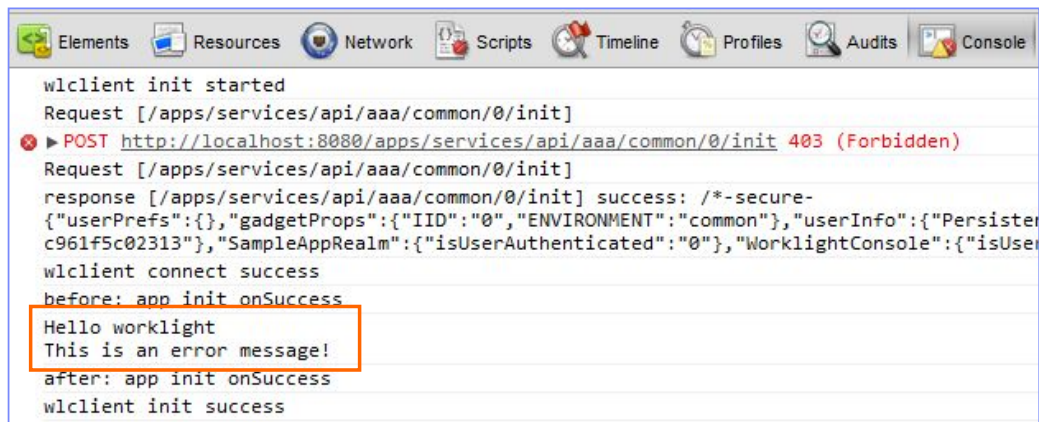
- Worklight application components
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WL.Logger

- Helps troubleshoot errors in environments without debugging tools.
- Outputs to an environment console, such as Xcode console, Adobe AIR, and Android Logcat, when one exists.

WL.Logger

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



```
wlclient init started
Request [/apps/services/api/aaa/common/0/init]
✖ POST http://localhost:8080/apps/services/api/aaa/common/0/init 403 (Forbidden)
Request [/apps/services/api/aaa/common/0/init]
response [/apps/services/api/aaa/common/0/init] success: /*-secure-
{"userPrefs":{}, "gadgetProps":{"IID":"0", "ENVIRONMENT":"common"}, "userInfo":{"Persiste
c961f5c02313"}, "SampleAppRealm":{"isUserAuthenticated":"0"}, "WorklightConsole":{"isUser
wlclient connect success
before: app init onSuccess
Hello worklight
This is an error message!
after: app init onSuccess
wlclient init success
```

Agenda

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- Exercise

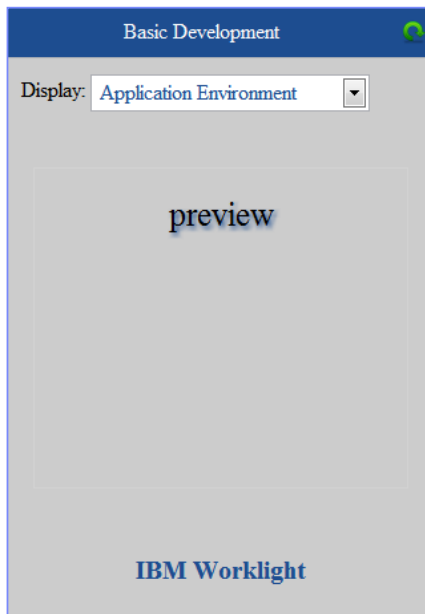
Exercise

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 an URL

Exercise

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



Check yourself questions

- Worklight client-side framework comes with an embedded JavaScript library. Which one?
 - jQuery
 - Prototype
 - Dojo
 - MooTools
- What is the **messages.js** file 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

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