

# ***IBM Worklight V6.1.0 Getting Started***

## **Learning Worklight 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 IBM Worklight® client-side API.

# Agenda

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

# *IBM 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
```

# IBM Worklight application components

## IBM Worklight initialization

You use this file to define application initialization options.

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

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

## *IBM 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;
```

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

## ***IBM Worklight application components***

### **IBM Worklight Client JavaScript API**

- The IBM 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

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

## The *WL* Namespace

- You use a *WL* namespace to use an IBM 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.

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## ***WL.Client***

- 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`
- `connectOnStartup`
- `timeout`
- ...

**`WL.Client.reloadApp()`**

## ***WL.Client - continued***

- 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 - continued***

- 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 - continued***

- 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 - continued***

- 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 - continued***

- 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 - continued***

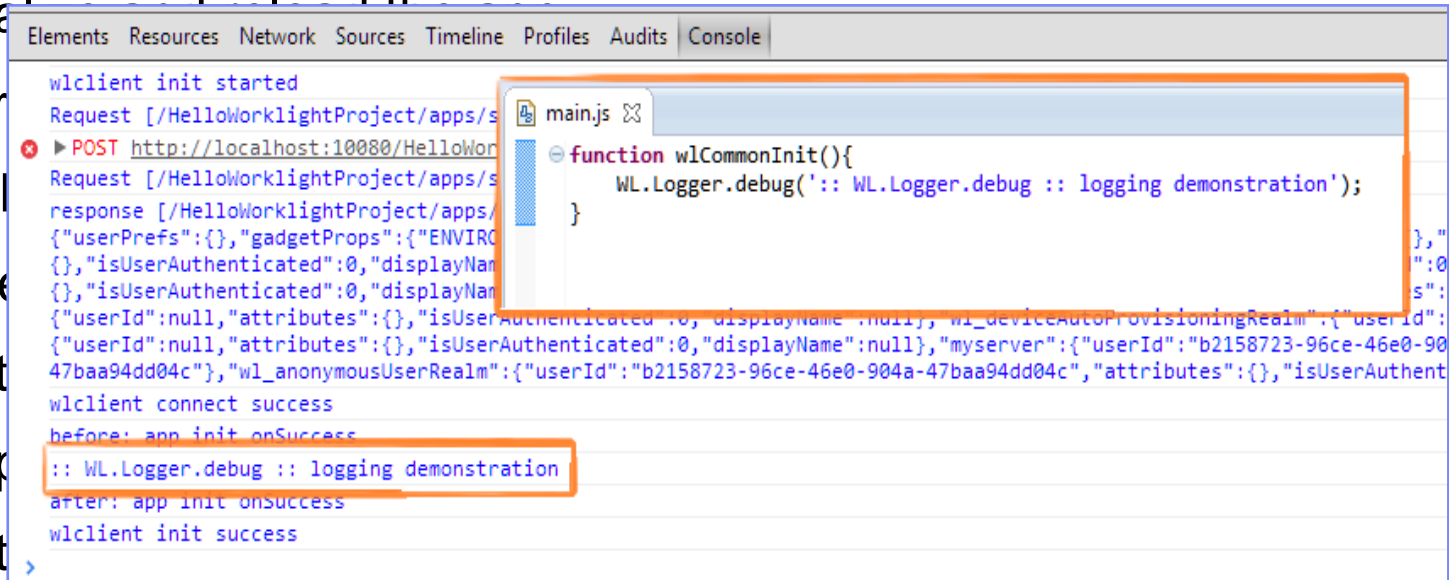
- With `WL.Client`, you can perform the following type of tasks:
  - Initialize and reload the app
  - Trigger login and logout
  - Obtain general app information
  - Retrieve and update data from corporate information systems
  - Store and retrieve user preferences across sessions
  - Specify environment-specific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

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

# WL.Client - continued

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

- Initial...



special database tables

- Write debug lines to a logger window

`WL.Logger.debug`

## ***WL.Client - continued***

- 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 user documentation.**

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## ***WL.Logger***

- `WL.Logger` helps troubleshoot errors in environments without debugging tools.
- `WL.Logger` 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)

```

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
>

```

# *Agenda*

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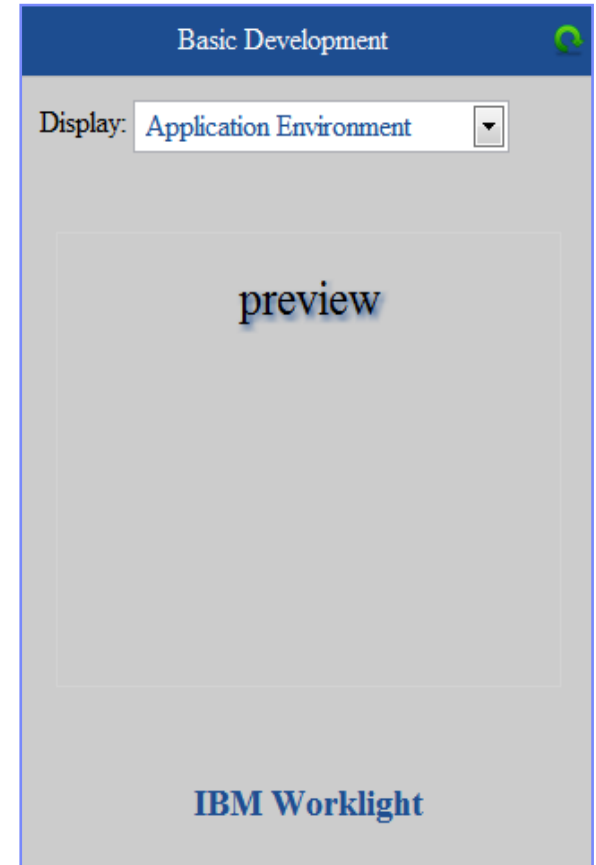
## Exercise

### 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 IBM Worklight API to reload the app.
- Add a select element with two options:
  - Display App environment
  - Display Language
  - When a change occurs, use the IBM 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 Getting Started website** at <http://www.ibm.com/developerworks/mobile/worklight/getting-started.html>



## *Check yourself questions*

- The IBM 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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