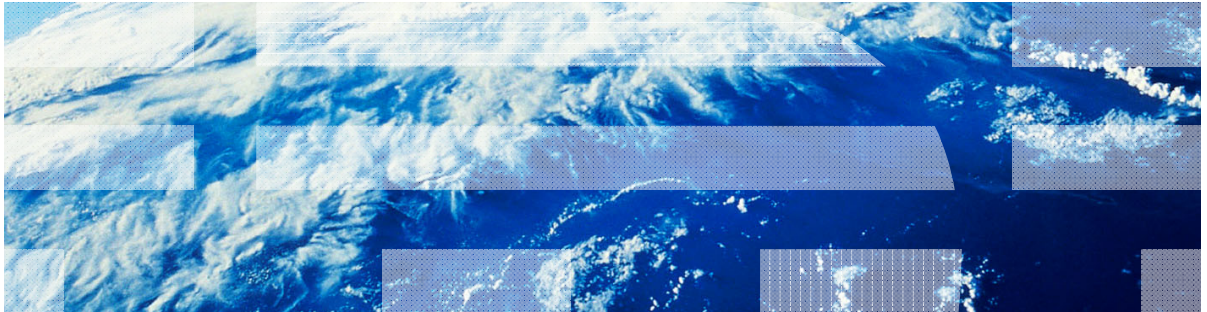


IBM Worklight V5.0.5 Getting Started

Module 4 – Worklight Client API – Basics



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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 prototype.js, jQuery, and object-oriented JavaScript libraries is an advantage

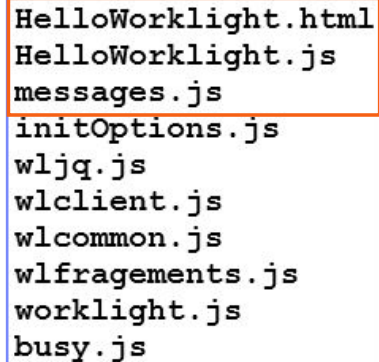
Agenda

- 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
wlfragements.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  
wlfragements.js  
worklight.js  
busy.js
```




Worklight application components

jQuery JavaScript Framework

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  
wlfragements.js  
worklight.js  
busy.js
```



Worklight application components

Worklight Client JavaScript API

- Worklight Client API uses **WL** namespace
- Provides bridging to native mobile platform APIs, dynamic HTML load, and so on

```
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.Utils`, ...
- 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

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

WL.Client.init (options)

- onSuccess
- onFailure
- connectOnStartup
- busyOptions

WL.Client.reloadApp()

WL.Client

- 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

- 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.Environment.FACEBOOK  
...
```

WL.Client

- 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

- 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

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

- With WL.Client, you can perform the following tasks:
 - Initialize and reload the app
 - Trigger login and logout
 - Obtain general app information
 - Retrieve and update data from the database
 - Store and retrieve user preferences
 - 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

- With WL.Client, you can

WL.Logger.debug

– Initialize and reload the app

– Trigger

– Obtain g

– Retrieve

– Store an

– Specify

– Store cu

special database tables

– Write debug lines to a logger window

The screenshot shows a web browser's developer console with the following content:

```

Elements Resources Network Scripts Timeline Profiles Audits Console
wlcilent 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": {"Persisten
c961f5c02313"}, "SampleAppRealm": {"isUserAuthenticated": "0"}, "WorklightConsole": {"isUser
wlcilent 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
wlcilent 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

- 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

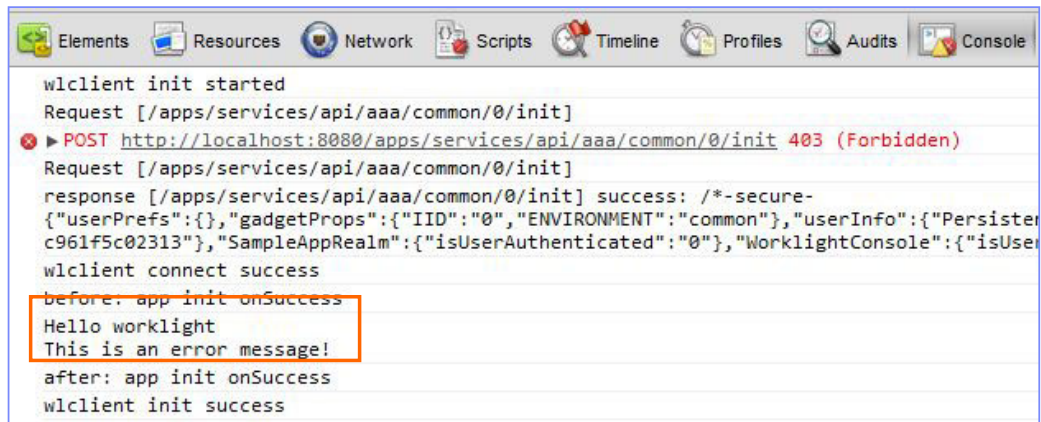
- Worklight application components
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WL.Logger

- 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":{"isUse
wlclient connect success
before: app init onSuccess
Hello worklight
This is an error message!
after: app init onSuccess
wlclient init success
```

Agenda

- Worklight application components
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- **Exercise**

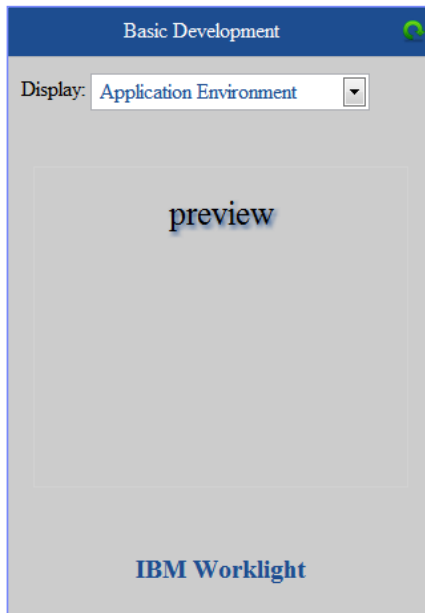
Exercise

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 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

Check yourself questions

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