

# Learning MobileFirst hybrid client-side API

## Overview

To complete this tutorial, you must have previous experience with web development technologies such as HTML, CSS, JavaScript and DOM events & manipulations. To learn these technologies, visit <http://www.w3schools.com/> (<http://www.w3schools.com/>).

Although not required, a basic knowledge of jQuery and object-oriented JavaScript libraries is an advantage.

## MobileFirst application components

### Application resources

The following files are essential resources in a MobileFirst application:

- **index.html**: Main HTML file
- **main.js**: Main JavaScript file
- **messages.js**: Messages file for storing application strings, primarily used for translation
- **initOptions.js**: Used for defining application initialization options ([http://www-01.ibm.com/support/knowledgecenter/SSHS8R\\_6.3.0/com.ibm.worklight.apiref.doc/html/refjavascript-client/html/WL.Client.html%23init](http://www-01.ibm.com/support/knowledgecenter/SSHS8R_6.3.0/com.ibm.worklight.apiref.doc/html/refjavascript-client/html/WL.Client.html%23init))
- **wljq.js**: An encapsulated version of jQuery
- **worklight.js**: The MobileFirst client API uses the WL namespace. This namespace provides bridging to native mobile platform APIs and other elements

## The WL namespace

The `WL` namespace is used to invoke MobileFirst APIs: `WL.Client`, `WL.App`, `WL.SimpleDialog`, ...

The `WL` namespace exposes the API objects, methods, and constants (usually enums).

The `WL` namespace is available in the application by having `worklight.js` automatically referenced in `index.html` when the application is generated in MobileFirst Studio.

### WL.Client

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

Additional API methods are available in the IBM MobileFirst user documentation topic for `WL.Client` ([http://www-01.ibm.com/support/knowledgecenter/SSHS8R\\_6.3.0/com.ibm.worklight.apiref.doc/html/refjavascript-client/html/WL.Client.html?cp=SSHS8R\\_6.3.0%2F9-0-0-1-7](http://www-01.ibm.com/support/knowledgecenter/SSHS8R_6.3.0/com.ibm.worklight.apiref.doc/html/refjavascript-client/html/WL.Client.html?cp=SSHS8R_6.3.0%2F9-0-0-1-7)).

Initialize and reload the application:

- `WL.Client.init(onSuccess, onFailure, timeout, ...)`
- `WL.Client.reloadApp()`

Trigger login and logout:

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

Obtain general app information:

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

Retrieve and update data from corporate information systems:

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

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)`

Specify environment-specific user interface behavior:

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

Store custom log lines for auditing and reporting purposes in special database tables:

- `WL.Client.logActivity(activityType)`

Write debug lines to a logger window (for example: Chrome's Dev Tools console):

- `WL.Logger.debug`

## 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, Android LogCat, Chrome Dev Tools and the like.



## Sample application

Click to download

(<http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v630/LearningMobileFirstHybridClientSideAPIProject.zip>)  
the Studio project.