# Learning MobileFirst hybrid client-side API

fork and edit tutorial (https://github.ibm.com/MFPSamples/DevCenter/tree/master/tutorials/en/foundation/6.3/client-side-development-basics/learning-mobilefirst-hybrid-client-side-api.html) | report issue (https://github.ibm.com/MFPSamples/DevCenter/issues/new)

## 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)
- **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).

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:

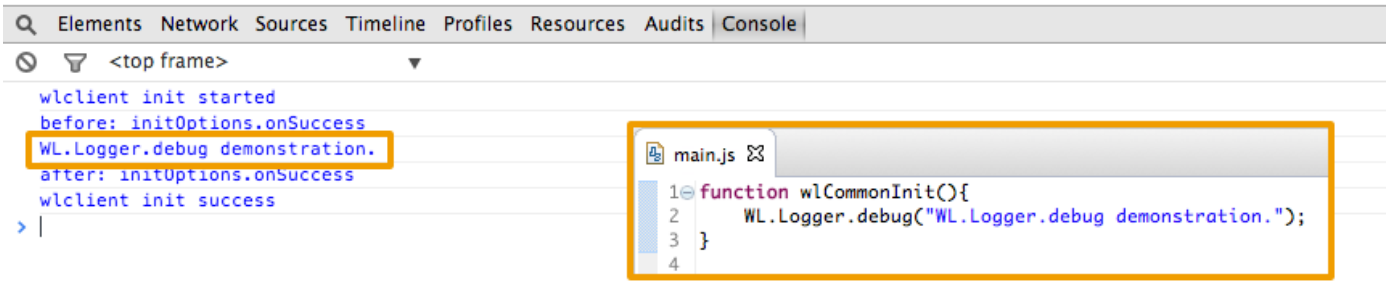
- `WL.Client.logActivity(activityType)`

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.