Lab 3 - Load MFP framework and application Bootstrapping

At this point, you have a MobileFirst Cordova application project, with Ionic-built application logic. To enable the basic MobileFirst capabilities we will need to add few pieces of code.

In this lab, you will add this MFP JavaScript code to the Ionic application source and bring up the new application in an emulator.
We are going to use the Mobile Browser Simulator (MBS) , one of the components provided with the MobileFirst. MBS can also be used to preview the application. In contrast to the `cordova emulate` command, the `mfpdev app preview` command does not require a platform emulator (such as Android Virtual Device) - it operates entirely in the browser. The simulator also enables you to leverage browser developer tools such as the debugger, style editor and inspector.

The Mobile Browser Simulator requires a MobileFirst development server to operate.

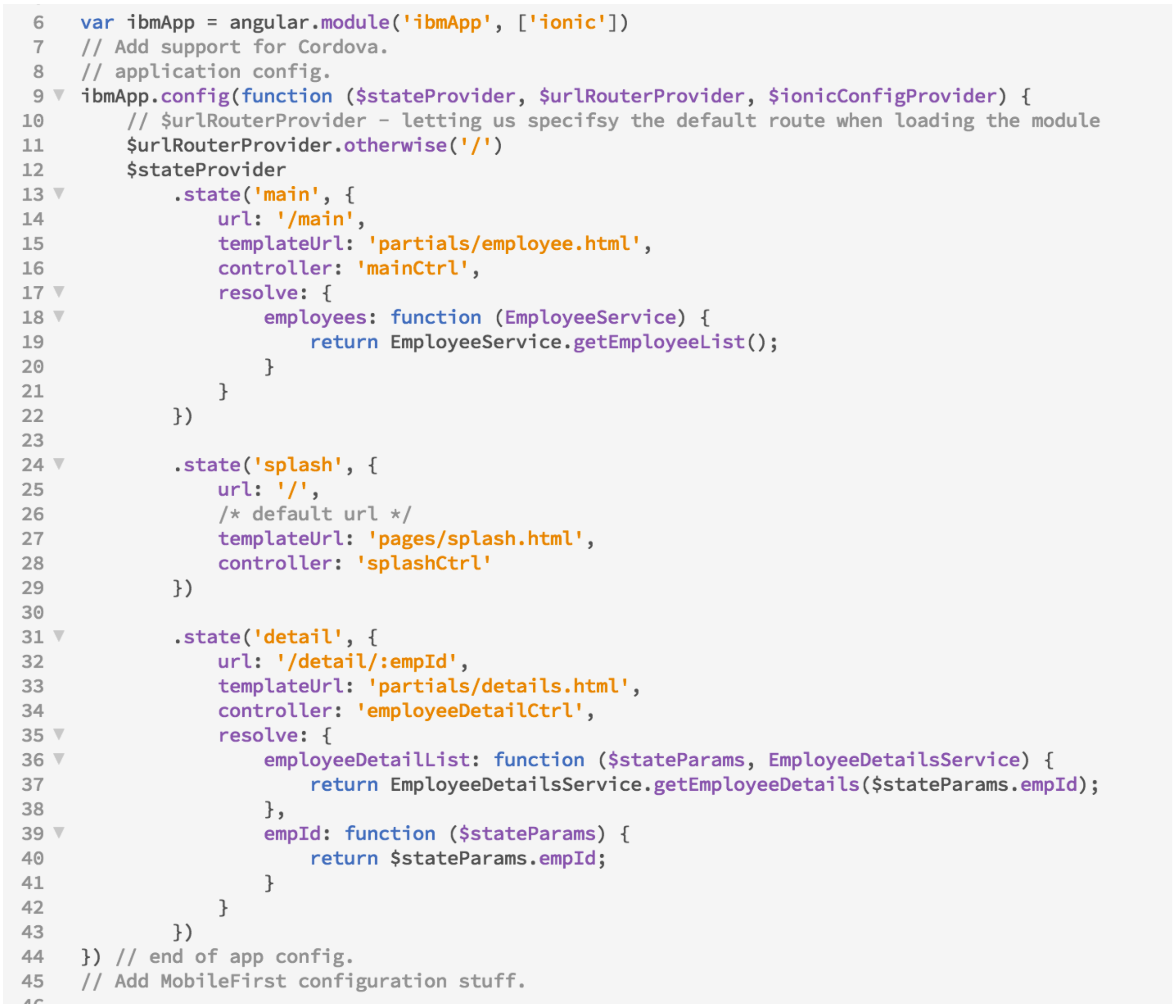
> Note: For this lab there are snippets files included in the **/snippets** folder of your workspace which can be used to quickly copy/paste the large source code blocks below.

Steps

1. Open the **IBMEmployeeApp** project using your favorite IDE. You are going to copy some code from `snippets/lab3.js` file to the `app.js` file in your MobileFirst project.

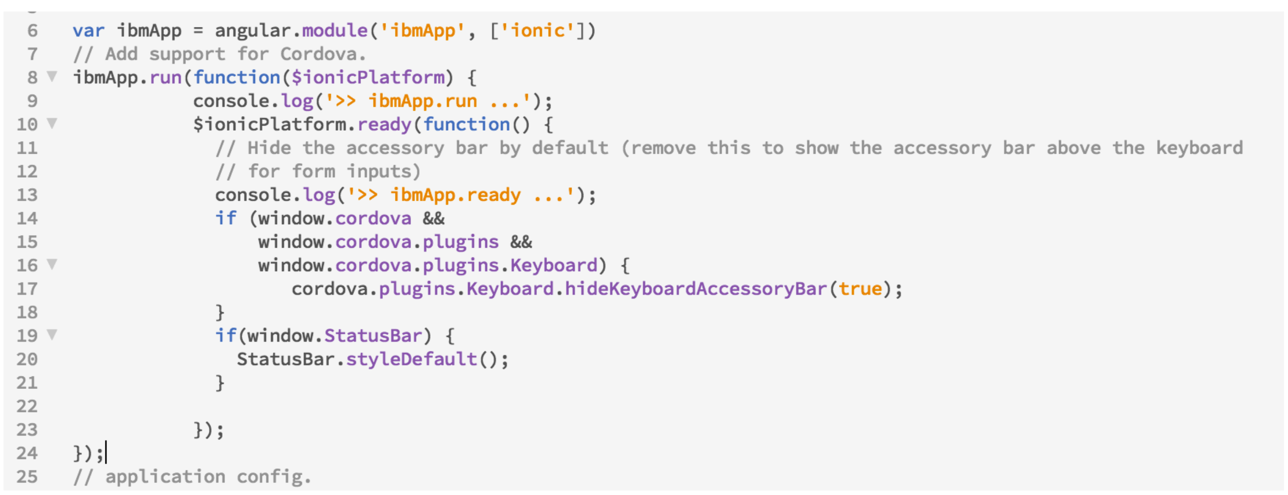
   > Note: You may use any IDE you like to perform the labs. The examples shown use the Brackets IDE.

2. Open the **`app.js`** file in the folder **`IBMEmployeeApp/www/js`** and add the following code immediately after the declaration of ibmApp and just after the *"//Add support for Cordova"* and before the comment *"//application config"*:



```
var ibmApp = angular.module('ibmApp', ['ionic'])
// Add support for Cordova.
// application config.
ibmApp.config(function ($stateProvider, $urlRouterProvider, $ionicConfigProvider) {
    // $urlRouterProvider - letting us specifsy the default route when loading the module
    $urlRouterProvider.otherwise('/')
    $stateProvider
        .state('main', {
            url: '/main',
            templateUrl: 'partials/employee.html',
            controller: 'mainCtrl',
            resolve: {
                employees: function (EmployeeService) {
                    return EmployeeService.getEmployeeList();
                }
            }
        })

        .state('splash', {
            url: '/',
            /* default url */
            templateUrl: 'pages/splash.html',
            controller: 'splashCtrl'
        })

        .state('detail', {
            url: '/detail/:empId',
            templateUrl: 'partials/details.html',
            controller: 'employeeDetailCtrl',
            resolve: {
                employeeDetailList: function ($stateParams, EmployeeDetailsService) {
                    return EmployeeDetailsService.getEmployeeDetails($stateParams.empId);
                },
                empId: function ($stateParams) {
                    return $stateParams.empId;
                }
            }
        })
}) // end of app config.
// Add MobileFirst configuration stuff.
```

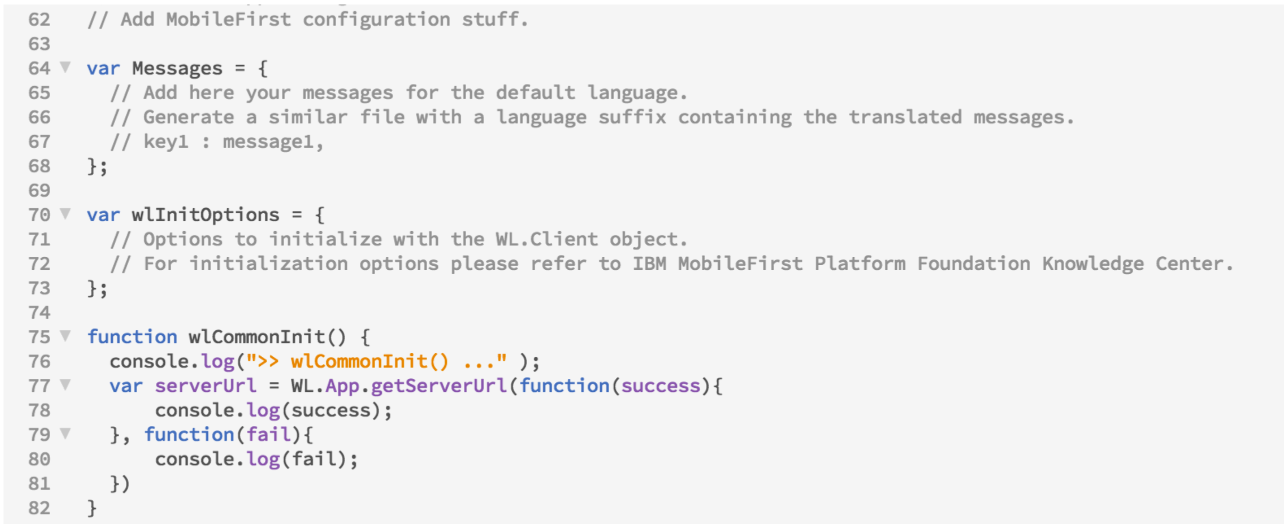
```
 //Adding support for cordova.
     ibmApp.run(function($ionicPlatform) {
           console.log('>> ibmApp.run ...');
           $ionicPlatform.ready(function() {
             // Hide the accessory bar by default (remove this to show the access
ory bar above the keyboard
             // for form inputs)
             console.log('>> ibmApp.ready ...');
             if (window.cordova &&
                 window.cordova.plugins &&
                 window.cordova.plugins.Keyboard) {
                    cordova.plugins.Keyboard.hideKeyboardAccessoryBar(true);
             }
             if(window.StatusBar) {
               StatusBar.styleDefault();
             }
           });
         });
```



```
var ibmApp = angular.module('ibmApp', ['ionic'])
// Add support for Cordova.
ibmApp.run(function($ionicPlatform) {
           console.log('>> ibmApp.run ...');
           $ionicPlatform.ready(function() {
             // Hide the accessory bar by default (remove this to show the accessory bar above the keyboard
             // for form inputs)
             console.log('>> ibmApp.ready ...');
             if (window.cordova &&
                 window.cordova.plugins &&
                 window.cordova.plugins.Keyboard) {
                   cordova.plugins.Keyboard.hideKeyboardAccessoryBar(true);
             }
             if(window.StatusBar) {
               StatusBar.styleDefault();
             }

           });
});
// application config.
```

3. Within `app.js` scroll to the very bottom of the file and add the following code just after the *"// Add MobileFirst configuration stuff."* comment (locate snippet for copy/paste in the **/snippets** folder):

```
// Add MobileFirst configuration stuff.
 var Messages = {
       // Add here your messages for the default language.
       // Generate a similar file with a language suffix containing the translate
d messages.
       // key1 : message1,
};

var wlInitOptions = {
       // Options to initialize with the WL.Client object.
       // For initialization options please refer to IBM MobileFirst Platform Fou
ndation Knowledge Center.
};

function wlCommonInit() {
       console.log(">> wlCommonInit() ..." );
       var serverUrl = WL.App.getServerUrl(function(success){
           console.log(success);
       }, function(fail){
           console.log(fail);
       })
}
```



```
// Add MobileFirst configuration stuff.

var Messages = {
  // Add here your messages for the default language.
  // Generate a similar file with a language suffix containing the translated messages.
  // key1 : message1,
};

var wlInitOptions = {
  // Options to initialize with the WL.Client object.
  // For initialization options please refer to IBM MobileFirst Platform Foundation Knowledge Center.
};

function wlCommonInit() {
  console.log(">> wlCommonInit() ..." );
  var serverUrl = WL.App.getServerUrl(function(success){
      console.log(success);
  }, function(fail){
      console.log(fail);
  })
}
```

4. **Save** the app.js file

Preview the application

There are two options available to preview the application :

- Use the **cordova emulate** command
    - The emulate command launches an android virtual device or Xcode iOS simulator
- Use the **mfpdev app preview** command.
    - The preview command provides options of:
        - Simple browser rendering or
        - Mobile Browser Simulator rendering

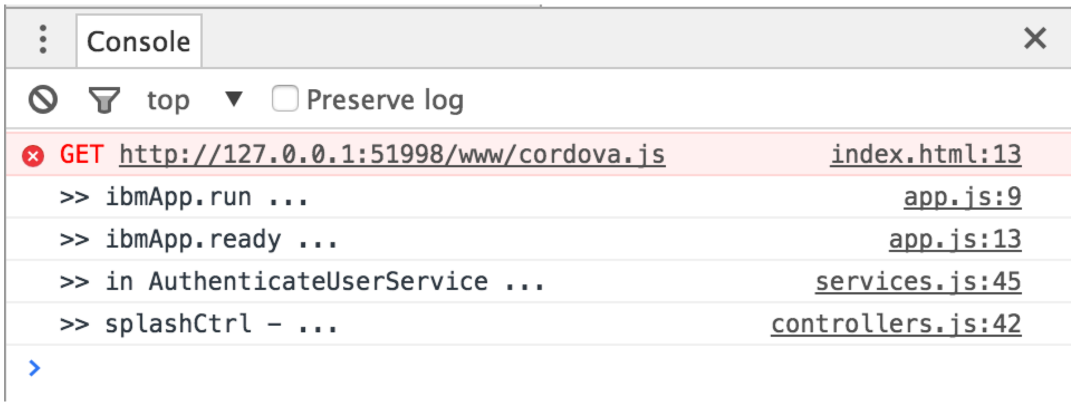
The **mfpdev cordova preview** command provides easy preview, testing, and debugging of applications using the embedded browser debugger. The Mobile Browser Simulator feature also supports many Cordova device emulation controls for items such as GPS and accelerometer. However, this requires that the MobileFirst server will be running, make sure you start the MFP server using the ./run.sh command

We going to preview the application using the **mfpdev app preview** first.

5. **Run** the application in the browser we can run the application using the *lighting* button within Brackets or use the following command and select the first option **browser: Simple browser rendering**

```
mfpdev app preview
```

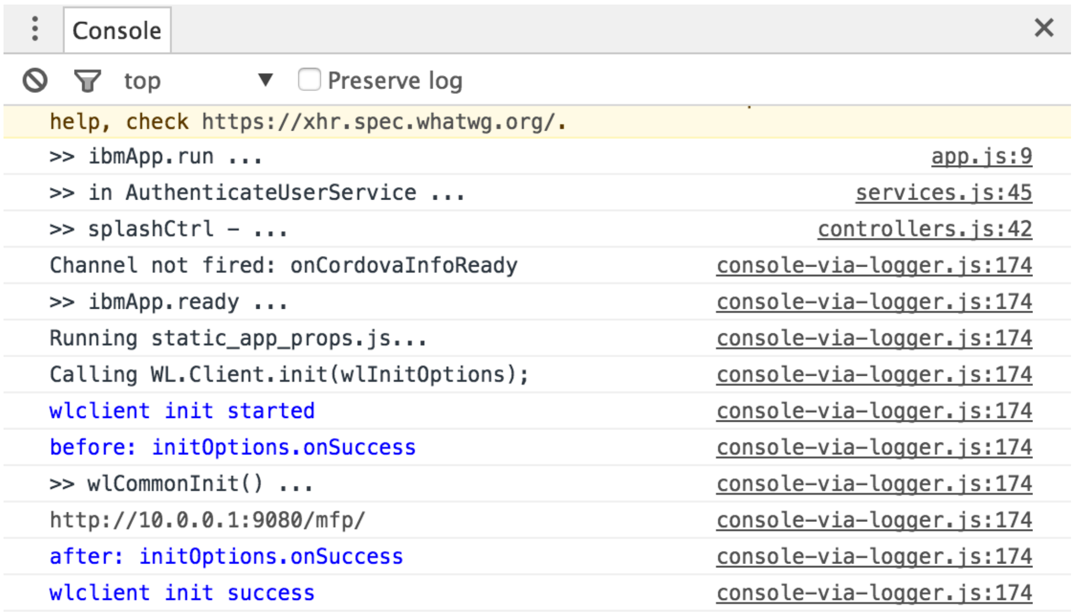
> Note that when you select the **browser: Simple browser rendering** and take a look at the browser console log you will see that the WlCommonInit callback didn't called and also you don't see any indication that the WL SDK was loaded successfully, take a look at the image below



```
GET http://127.0.0.1:51998/www/cordova.js          index.html:13
>> ibmApp.run ...                                        app.js:9
>> ibmApp.ready ...                                     app.js:13
>> in AuthenticateUserService ...                  services.js:45
>> splashCtrl - ...                             controllers.js:42
```

6. **Run** the application in the browser this time we going to use the **mbs: Mobile Browser Simulator**

> Note that when you select the **mbs: Mobile Browser Simulator** and take a look at the browser console log you will see that the WlCommonInit callback was called and we can see that the wlClient init started and the wlClient init success and we can see the printout of the MFP server url.



```
help, check https://xhr.spec.whatwg.org/.
>> ibmApp.run ...                                        app.js:9
>> in AuthenticateUserService ...                  services.js:45
>> splashCtrl - ...                             controllers.js:42
Channel not fired: onCordovaInfoReady    console-via-logger.js:174
>> ibmApp.ready ...                      console-via-logger.js:174
Running static_app_props.js...           console-via-logger.js:174
Calling WL.Client.init(wlInitOptions);   console-via-logger.js:174
wlclient init started                    console-via-logger.js:174
before: initOptions.onSuccess            console-via-logger.js:174
>> wlCommonInit() ...                    console-via-logger.js:174
http://10.0.0.1:9080/mfp/                console-via-logger.js:174
after: initOptions.onSuccess             console-via-logger.js:174
wlclient init success                    console-via-logger.js:174
```

> note that since MobileFirst platform is provided as a standard plugin you will not be able to continue testing/developing your application using the standard browser, you will need to use the Mobile Browser Simulator or device emulator instead.

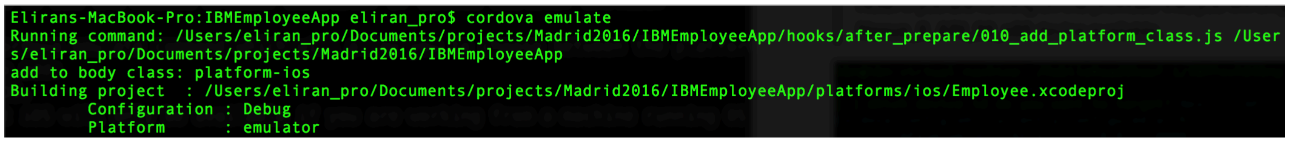
7. Use the cordova emulate command which will allow you to choose between the platform you choose to add: android or iOS.

   > Note that iOS will only be available if you are working from a machine running OS X.

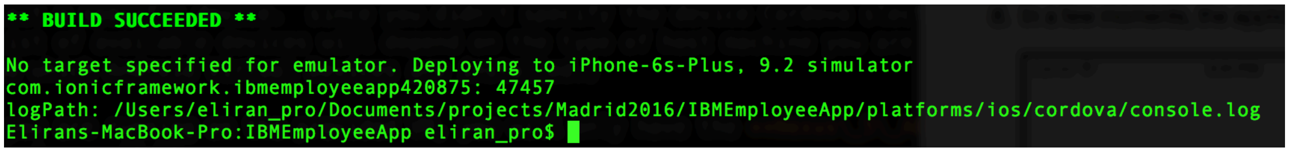
   ```
   cordova emulate
   ```

   You can select a specific device. since you didn't specify the device Cordova select on for you (List of available devices will depend on the type of host machine you are running on and which Android Virtual Devices are installed.)

   > Note: If you are running on the provided VM, you will only have the **Nexus_5_API_22_x86** device available.

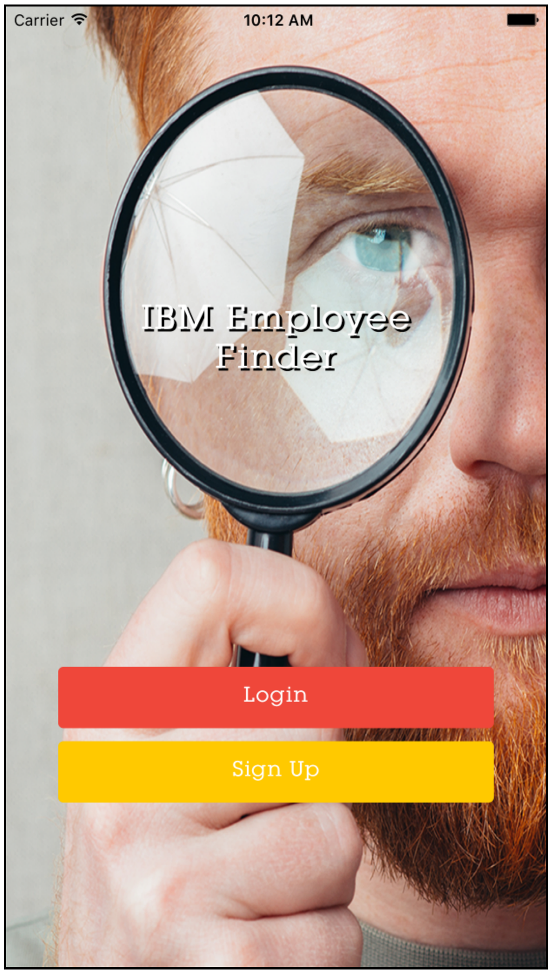


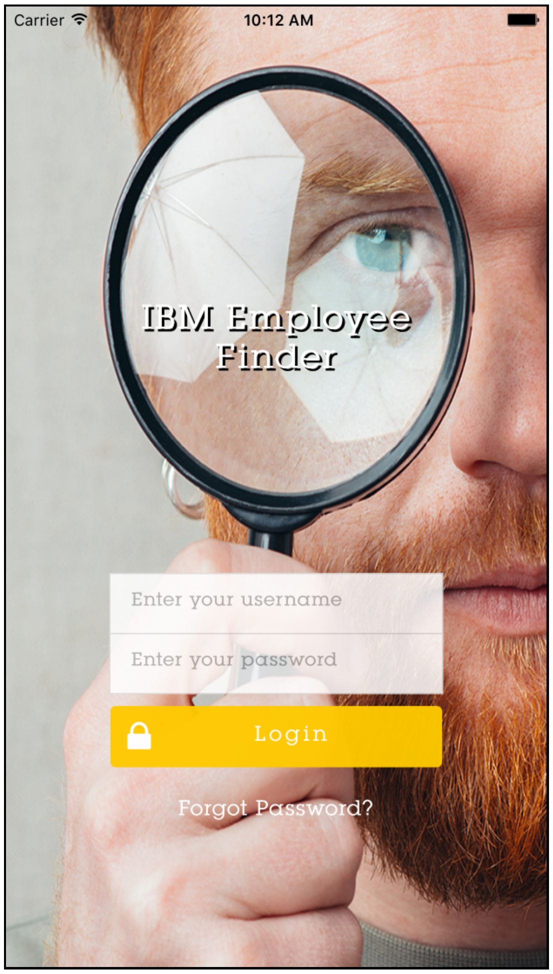
```
Elirans-MacBook-Pro:IBMEmployeeApp eliran_pro$ cordova emulate
Running command: /Users/eliran_pro/Documents/projects/Madrid2016/IBMEmployeeApp/hooks/after_prepare/010_add_platform_class.js /User
s/eliran_pro/Documents/projects/Madrid2016/IBMEmployeeApp
add to body class: platform-ios
Building project  : /Users/eliran_pro/Documents/projects/Madrid2016/IBMEmployeeApp/platforms/ios/Employee.xcodeproj
        Configuration : Debug
        Platform      : emulator
```



```
** BUILD SUCCEEDED **

No target specified for emulator. Deploying to iPhone-6s-Plus, 9.2 simulator
com.ionicframework.ibmemployeeapp420875: 47457
logPath: /Users/eliran_pro/Documents/projects/Madrid2016/IBMEmployeeApp/platforms/ios/cordova/console.log
Elirans-MacBook-Pro:IBMEmployeeApp eliran_pro$
```

8. In a few moments, the application will start up in an ios emulator window.





9. Close the Emulator when finished.

Summary

In this lab, you enabled the MobileFirst project to use the services provided by the platform by adding code to the main app.js file.

If you were unable to complete this lab, you can catch up by running this command:

```
git checkout -f step-3
```