Custom Authenticator and Login Module in native iOS applications

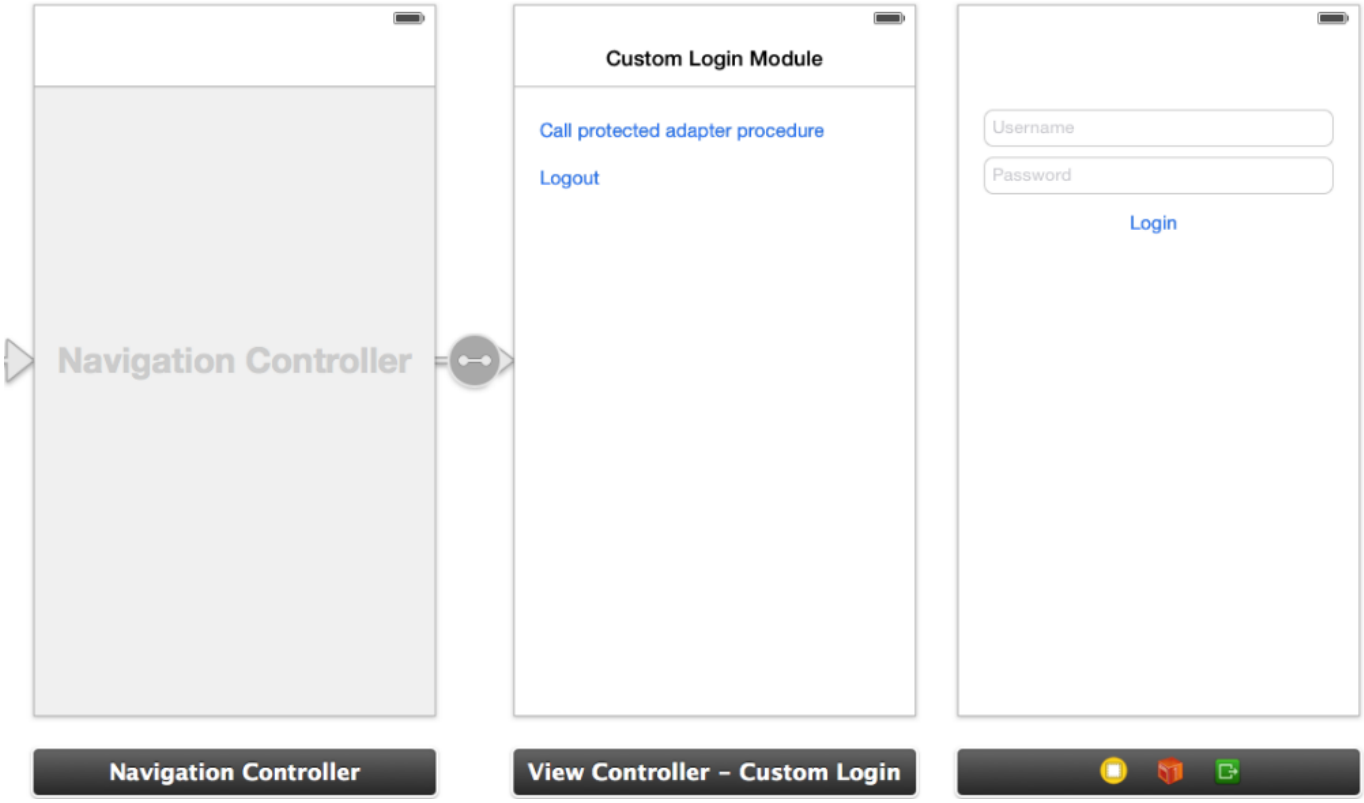
This tutorial explains how to implement the client-side of custom authenticator and login module in native iOS.
Prerequisite: Make sure that you read Custom Authenticator and Login Module (../) first.

Implementing the client-side authentication

Create a native iOS application and add the MobileFirst native APIs as explained in Configuring a native iOS application with the MobileFirst Platform SDK (../../../hello-world/configuring-a-native-ios-with-the-mfp-sdk/).

Storyboard

In your storyboard, add a ViewController containing a login form.



Challenge Handler

- Create a `MyChallengeHandler` class as a subclass of `ChallengeHandler`.

```
@interface MyChallengeHandler : ChallengeHandler
```

- Call the `initWithRealm` method:

```
@implementation MyChallengeHandler
//...<br />
-(id)init:{
    self = [self initWithRealm:@"CustomAuthenticatorRealm"]
;
    return self;
}
```

- Add implementation of the following `ChallengeHandler` methods to handle the custom authenticator and login module challenge:
    1. **`isCustomResponse` method:**
       The `isCustomResponse` method is invoked each time a response is received from the MobileFirst Server. It is used to detect whether the response contains data that is related to this challenge handler. It must return either `true` or `false`.

       ```
       @implementation MyChallengeHandler
       //...
       -(BOOL) isCustomResponse:(WLResponse *)response {
           if(response && [response getResponseJson]){
               if ([[response getResponseJson] objectForKey:@"authStatus"]) {
                   NSString* authRequired = (NSString*) [[response getResponseJson] objectForKey:@"authStat
       us"];
                   return ([authRequired compare:@"required"] == NSOrderedSame);
               }
           }
           return false;
       }
       @end
       ```

    2. **`handleChallenge` method:**
       If `isCustomResponse` returns `true`, the framework calls the `handleChallenge` method. This function is used to perform required actions, such as hiding the application screen and showing the login screen.

       ```
       @implementation MyChallengeHandler
       //...
       -(void) handleChallenge:(WLResponse *)response {
           NSLog(@"A login form should appear");
           LoginViewController* loginController = [self.vc.storyboard instantiateViewControllerWithIdentifier:@"L
       oginViewController"];
           loginController.challengeHandler = self;
           [self.vc.navigationController pushViewController:loginController animated:YES];
       }
       @end
       ```

    3. **`onSuccess` and `onFailure` methods:**
       At the end of the authentication flow, `onSuccess` or `onFailure` will be triggered
       Call the `submitSuccess` method in order to inform the framework that the authentication process completed successfully and for the `onSuccess` handler of the invocation to be called.
       Call the `submitFailure` method in order to inform the framework that the authentication process failed and for the `onFailure` handler of the invocation to be called.

```
@implementation MyChallengeHandler
//...
-(void) onSuccess:(WLResponse *)response {
    NSLog(@"Challenge succeeded");
    [self.vc.navigationController popViewControllerAnimated:YES]
;
    [self submitSuccess:response];
}
-(void) onFailure:(WLFailResponse *)response {
    NSLog(@"Challenge failed");
    [self submitFailure:response];
}
```

submitLoginForm

In your login View Controller, when the user taps to submit the credentials, call the `submitLoginForm` method to send the credentials to the MobileFirst Server.

```
@implementation LoginViewController
//...
- (IBAction)login:(id)sender {
    [self.challengeHandler
        submitLoginForm:@"/my_custom_auth_request_url"
        requestParameters:@{@"username": self.username.text, @"password": self.password.text
}
        requestHeaders:nil
        requestTimeoutInMilliSeconds:0
        requestMethod:@"POST"];
}
```

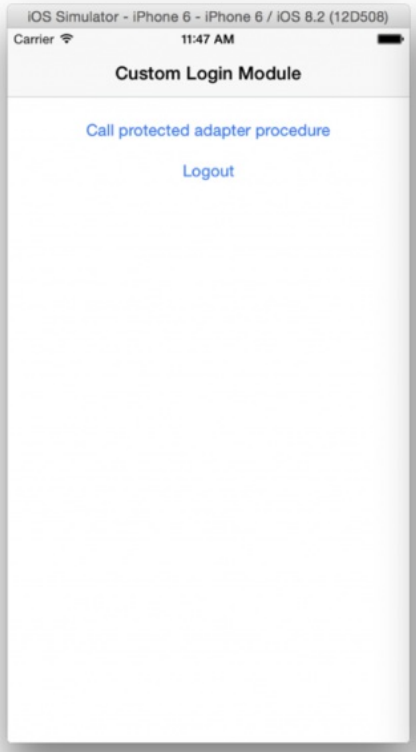
Registering the challenge handler

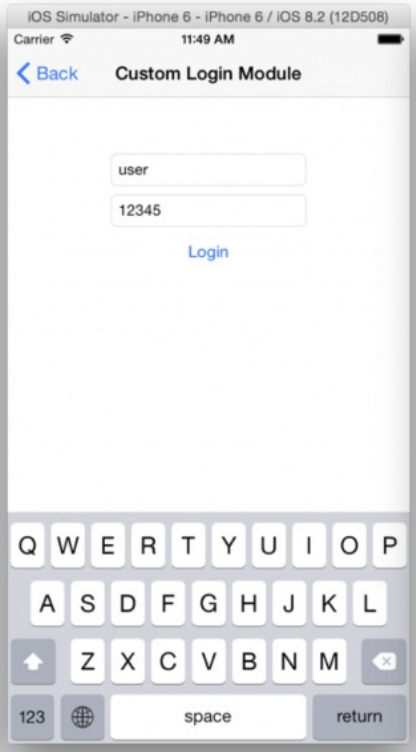
Before calling the protected adapter, in order to listen to incoming challenges, make sure to register the challenge handler by using the `registerChallengeHandler` method of the `WLClient` class.

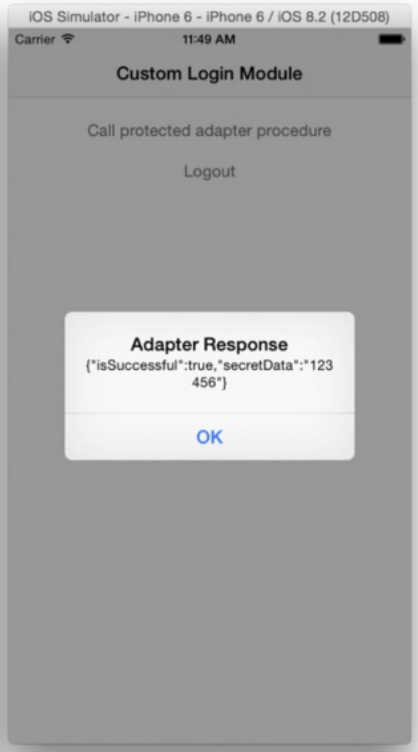
```
[[WLClient sharedInstance] registerChallengeHandler:[[MyChallengeHandler alloc] initWithViewController:self] ];
```

Sample application

Click to download (http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v700/NativeCustomLoginModuleProject.zip) the Studio project.
Click to download (http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v700/iOSNativeCustomLoginModuleProject.zip) the Obj-C project.
Click to download (http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v700/SwiftNativeCustomLoginModuleProject.zip) the Swift project.


iOS Simulator - iPhone 6 - iPhone 6 / iOS 8.2 (12D508)
Carrier
11:47 AM
Custom Login Module
Call protected adapter procedure
Logout


iOS Simulator - iPhone 6 - iPhone 6 / iOS 8.2 (12D508)
Carrier
11:49 AM
Back
Custom Login Module
user
12345
Login
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
123
space
return


iOS Simulator - iPhone 6 - iPhone 6 / iOS 8.2 (12D508)
Carrier
11:49 AM
Custom Login Module
Call protected adapter procedure
Logout
Adapter Response
{"isSuccessful":true,"secretData":"123456"}
OK