

# Form-based authentication in native iOS applications

This tutorial explains how to implement the client-side of form-based authentication in native iOS.

**Prerequisite:** Make sure that you read Form-based authentication (../) 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 View Controller containing a login form.



### Challenge Handler

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

```
@interface MyChallengeHandler : ChallengeHandler
```

- Call the `initWithRealm` method:

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

- Add implementation of the following `ChallengeHandler` methods to handle the form-based 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`.

The default login form that returns from the MobileFirst Server contains the `j_security_check` string. If the response contains the string, the challenge handler returns `true`.

```
@implementation MyChallengeHandler
//...
-(BOOL) isCustomResponse:(WLResponse *)response {
    if(response && response.responseText){
        if ([response.responseText rangeOfString:@"j_security_check" options:NSCaseInsensitiveSearch].location != NSNotFound) {
            NSLog(@"Detected j_security_check string - returns true");
            return true;
        }
    }
    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:@"LoginViewController"];
    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];
}
@end

```

## submitLoginForm

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

```

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

```

## 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/NativeFormBasedAuthProject.zip>)  
the Studio project.

Click to download

(<http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v700/iOSNativeFormBasedAuthProject.zip>)  
the Obj-C project.

Click to download

(<http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v700/SwiftNativeFormBasedAuthProject.zip>)  
the Swift project.

