

# 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.

