

# Form-based authentication in native Android applications

## Overview

This tutorial illustrates the native Android client-side authentication components for form-based authentication. Make sure you read Form-based authentication (../) first.

## Creating the client-side authentication components

Create a native Android application and add the MobileFirst native APIs following the documentation.

Add an Activity, `LoginFormBasedAuth`, that will handle and present the login form.

Remember to add this Activity to the `AndroidManifest.xml` file as well.

## MyChallengeHandler

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

`MyChallengeHandler` should implement `isCustomResponse` which checks every custom response received from MobileFirst Server to see if this is the challenge we are expecting.

```
public boolean isCustomResponse(WLResponse response) {
    if (response == null || response.getResponseText() == null ||
        response.getResponseText().indexOf("_security_check") == -1)
    {
        return false;
    }
    return true;
}
```

`handleChallenge` is called after the `isCustomResponse` method returned true.

Here we use this method to present our login form.

```
public void handleChallenge(WLResponse response){
    if (!isCustomResponse(response)) {
        submitSuccess(response);
    } else {
        cachedResponse = response;
        Intent login = new Intent(parentActivity, LoginFormBasedAuth.class)
        ;
        parentActivity.startActivityForResult(login, 1);
    }
}
```

`submitLogin` is called by the login form. If the user asked to abort this action we use `submitFailure()` method, otherwise we use `submitLoginForm()` method to send our input data to the authenticator.

```

public void submitLogin(int resultCode, String userName, String password, boolean back){
    if (resultCode != Activity.RESULT_OK || back) {
        submitFailure(cachedResponse);
    } else {
        HashMap<String, String> params = new HashMap<String, String>();
        params.put("_username", userName);
        params.put("_password", password);
        submitLoginForm("/_security_check", params, null, 0, "post");
    }
}

```



## Main Activity

In the Main Activity class connect to MobileFirst server, register your `challengeHandler` and invoke the protected adapter procedure.

The procedure invocation will trigger MobileFirst server to send a challenge that will trigger our `challengeHandler`.

```

final WLCClient client = WLCClient.createInstance(this);
client.connect(new MyConnectionListener());
challengeHandler = new AndroidChallengeHandler(this, realm);
client.registerChallengeHandler(challengeHandler);
invokeBtn = (Button) findViewById(R.id.invoke);
invokeBtn.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        //setMainText("Invoking...");
        WLProcedureInvocationData invocationData = new WLProcedureInvocationData("DummyAdapter", "getSecretData");
        WLRequestOptions options = new WLRequestOptions();
        options.setTimeout(30000);
        client.invokeProcedure(invocationData, new MyResponseListener(), options);
    }
});

```

## Sample application

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(<http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v630/NativeFormBasedAuthProject.zip>) the Studio project.

Click to download

(<http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v630/AndroidNativeFormBasedAuthProject.zip>) the Native project.

