

# Custom Authenticator and Login Module in native Android applications

This is a continuation of Custom Authenticator and Login Module (../).

## Creating the client-side authentication components

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

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

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

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

`MyChallengeHandler` should implement 2 main methods:

- `isCustomResponse`
- `HandleChallenge`

In our sample we add another method to present and handle the received data from our form (`submitLogin`).

### `isCustomResponse`

This method checks every custom response received from the MobileFirst Server to see if that's the challenge we are expecting.

```
public boolean isCustomResponse(WLResponse response) {
    if (response == null || response.getResponseJSON() == null) {
        return false;
    }
    if(response.toString().indexOf("authStatus") > -1){
        return true;
    }
    else{
        return false;
    }
}
```

### `handleChallenge`

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

*Here we use this method to present our login form.*

```

public void handleChallenge(WLResponse response){
    try {
        if(response.getResponseJSON().getString("authStatus") == "complete"){
            submitSuccess(response);
        }
        else {
            cachedResponse = response;
            Intent login = new Intent(parentActivity,
            LoginCustomLoginModule.class);
            parentActivity.startActivityForResult(login, 1);
        }
    } catch (JSONException e) {
        e.printStackTrace();
    }
}

```

## submitLogin

If the user asked to abort this action we use `submitFailure()` method, otherwise we send the information we collected from our login form to our custom authenticator using `submitLoginForm()` method.

```

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("/my_custom_auth_request_url", params, null, 0, "post");
    }
}

```

## Main Activity

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

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

```

final WLClient client = WLClient.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) {
        WLProcedureInvocationData invocationData = new WLProcedureInvocationData("DummyAdapter", "getSecretData");
        WLRequestOptions options = new WLRequestOptions();
        options.setTimeout(30000);
        client.invokeProcedure(invocationData, new MyResponseListener(), options);
    }
});

```

## Sample application

Click to download

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

Click to download

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

