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.

```
1  public boolean isCustomResponse(WLResponse response) {
2     if (response == null || response.getResponseJSON() == null) {
3        return false;
4     }
5     if(response.toString().indexOf("authStatus") > -1){
6        return true;
7     }
8     else{
9        return false;
10    }
11 }
```

handleChallenge

This method is called after the *isCustomResponse* method returned *true*.
Here we use this method to present our login form.

```
1  public void handleChallenge(WLResponse response){
2     try {
3        if(response.getResponseJSON().getString("authStatus") == "complete"){
4           submitSuccess(response);
5        }
6        else {
7           cachedResponse = response;
8           Intent login = new Intent(parentActivity, LoginCustomLoginModule.class);
9           parentActivity.startActivityForResult(login, 1);
10       }
11    } catch (JSONException e) {
12       e.printStackTrace();
13    }
14 }
```

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");<
    }
}
```

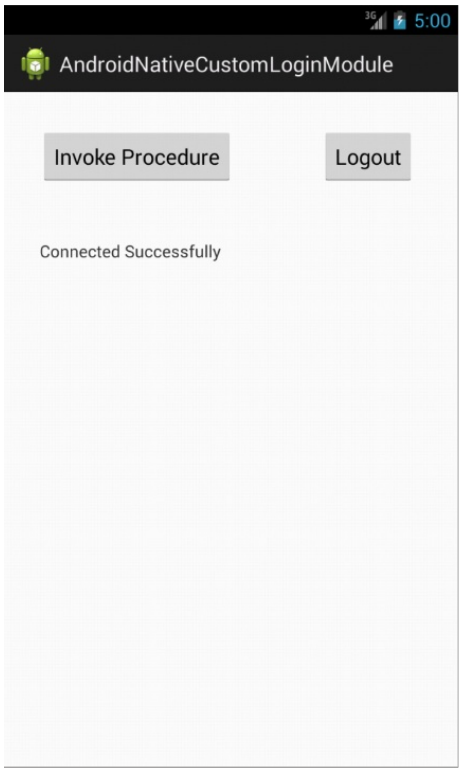
Main Activity

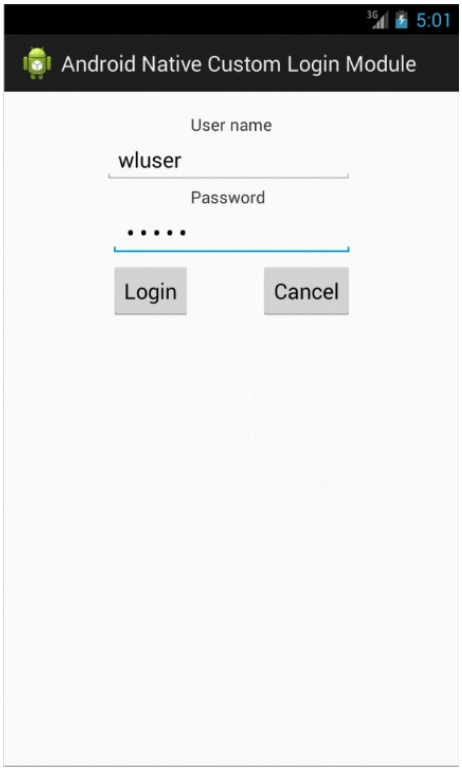
In the Main Activity class connect to the MobileFirst server, register your *challengeHandler* and invoke the protected adapter procedure.
The procedure invocation will trigger the MobileFirst server to send a challenge that will trigger our *challengeHandler*.

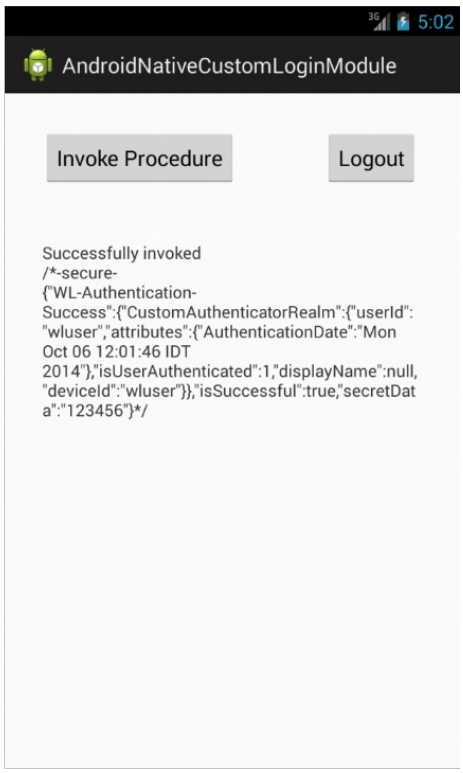
```
final WLClient client = WLClient.createInstance(this);
client.connect(new MyConnectionListener());
challengeHandler = new AndroidChallengeHandler(this, realm);
client.registerChallengeHandler(challengeHandler);
invokeBtn = (Button) findViewById(R.id.invoke);
invokeBtn.setOnClickListener(new View.OnClickListener() {
    @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/v700/NativeCustomLoginModuleProject.zip) the Studio project.
Click to download (http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v700/AndroidNativeCustomLoginModuleProject.zip) the Native project.


5:00
AndroidNativeCustomLoginModule
Invoke Procedure
Logout
Connected Successfully


5:01
Android Native Custom Login Module
User name
wluser
Password
Login
Cancel


5:02
AndroidNativeCustomLoginModule
Invoke Procedure
Logout
Successfully invoked
/*-secure-
{"WL-Authentication-
Success":{"CustomAuthenticatorRealm":{"userId":
"wluser","attributes":{"AuthenticationDate":"Mon
Oct 06 12:01:46 IDT
2014"},"isUserAuthenticated":1,"displayName":null,
"deviceId":"wluser"}},"isSuccessful":true,"secretDat
a":"123456"}*/