Form-based authentication in native Android applications

fork and edit tutorial (https://github.ibm.com/MFPSamples/DevCenter/tree/master/tutorials/en/foundation/7.0/authentication-security/form-based-authentication/form-based-authentication-native-android-applications.html) | report issue (https://github.ibm.com/MFPSamples/DevCenter/issues/new)

Overview

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

This tutorial covers the following topics:

- Creating the client-side authentication components
- Sample application

Creating the client-side authentication components

1. Create a native Android application and add the MobileFirst native APIs as explained in the documentation.
2. Add an activity, `LoginFormBasedAuth`, which handles and presents the login form.
3. Remember to add this activity to the `AndroidManifest.xml` file, too.

MyChallengeHandler

Create a `MyChallengeHandler` class as a subclass of `ChallengeHandler`.
Your `MyChallengeHandler` class must implement `isCustomResponse`, which checks every custom response received from MobileFirst Server to verify whether this is the expected challenge.

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

The `handleChallenge` method is called after the `isCustomResponse` method returns `true`.
Here this method presents the 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);
    }
}
```

The `submitLogin` method is called by the login form. If the user asked to abort this action, use the `submitFailure()` method, otherwise use the `submitLoginForm()` method to send 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("j_username", userName);
        params.put("j_password", password);
        submitLoginForm("/j_security_check", params, null, 0, "post");
    }
}
```

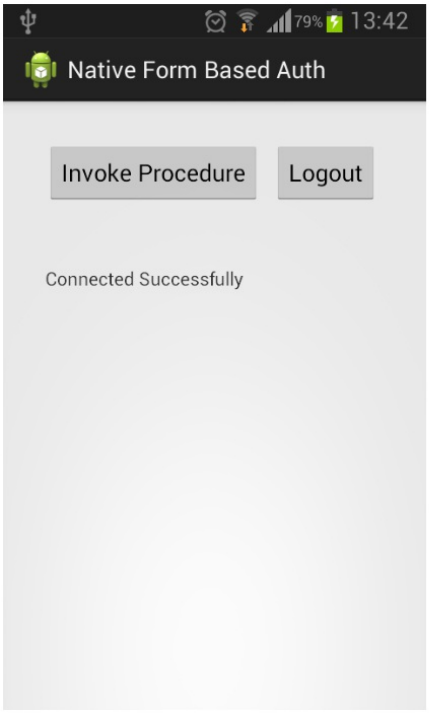
Main activity

In the `MainActivity` class, connect to MobileFirst Server, register your `challengeHandler` object, and invoke the protected adapter procedure.
The procedure invocation triggers MobileFirst Server to send a challenge that will trigger the challenge handler.

```
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) {
        //setMainText("Invoking...");
        WLProcedureInvocationData invocationData = new WLProcedureInvocationData("DummyAdapter", "getSecret
Data");<
        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/NativeFormBasedAuthProject.zip) the Studio project.
Click to download (http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v700/AndroidNativeFormBasedAuthProject.zip) the Native project.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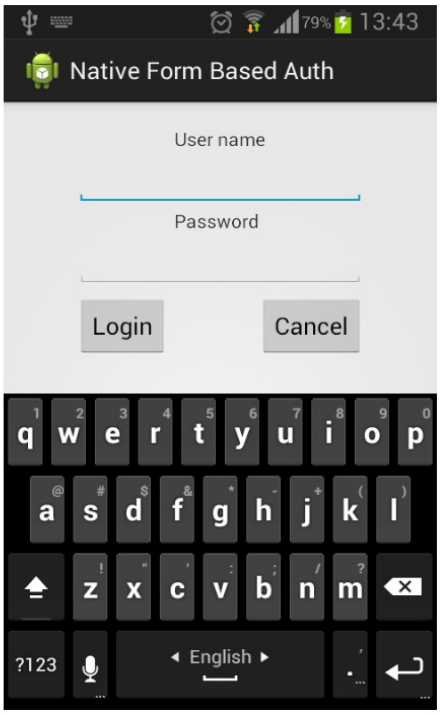
Native Form Based Auth
Invoke Procedure
Logout
Connected Successfully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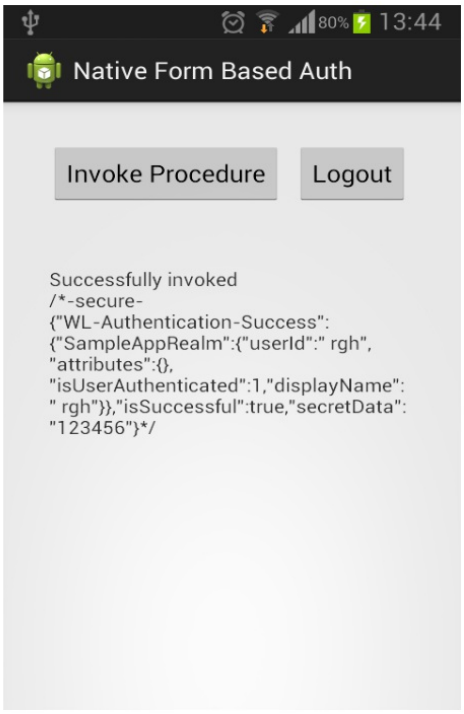
Native Form Based Auth
User name
Password
Login
Cancel
English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Native Form Based Auth
Invoke Procedure
Logout
Successfully invoked
/*-secure-
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"attributes":{},
"isUserAuthenticated":1,"displayName":
" rgh"}},"isSuccessful":true,"secretData":
"123456"}*/