Android

The purpose of this demonstration is to make you experience an end-to-end flow where IBM MobileFirst Platform Foundation SDK for Android is integrated into an Android project and used to retrieve data by using a MobileFirst adapter.

To learn more about creating projects and applications, using adapters and lots more, visit the Native Android Development (../) landing page.

Prerequisite: Make sure that you have installed the following software:

- MobileFirst Platform command line tool (download (file:////home/travis/build/MFPSamples/DevCenter/_site/downloads))
- Android Studio

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1. **Create a MobileFirst back-end project and adapter.**
   - Create a back-end project in a location of your choice.

     [code lang="shell"]
     mfp create MyProject
     cd MyProject
     [/code]
   - Add an HTTP adapter to the project.

     [code lang="shell"]
     mfp add adapter MyAdapter -t http
     [/code]

2. **Deploy artifacts to the MobileFirst Server.**
   - Start the MobileFirst Server and deploy the adapter.

     [code lang="shell"]
     mfp start
     mfp push
     [/code]

3. **Create an Android project in Android Studio.**

4. **Add the MobileFirst Android SDK to the Android Studio project**
   - In **Project > Gradle scripts**, select **build.gradle (Module: app)**.
   - After `apply plugin: 'com.android.application'`, add the following line:
     [code lang="xml"]repositories{

jcenter()
}[/code]

- Inside `android`, add the following lines:
  [code lang="xml"]packagingOptions {
  pickFirst 'META-INF/ASL2.0'
  pickFirst 'META-INF/LICENSE'
  pickFirst 'META-INF/NOTICE'
  }[/code]
- Inside `dependencies`, add the following lines:
  [code lang="xml"]compile group: 'com.ibm.mobile.foundation',
  name: 'ibmmobilefirstplatformfoundation',
  version: '7.1.0.0',
  ext: 'aar',
  transitive: true[/code]
- Add the following permissions to the `AndroidManifest.xml` file:
  [code lang="xml"]
  <uses-permission android:name="android.permission.INTERNET"/>
  <uses-permission android:name="android.permission.ACCESS_WIFI_STATE"/>
  <uses-permission android:name="android.permission.GET_TASKS" />
  [/code]
- Add the MobileFirst UI activity:
  [code lang="xml"]<activity android:name="com.worklight.wlclient.ui.UIActivity" />[/code]
- In Terminal, navigate to the root of the Android Studio project and add the required configuration files by running this command:
  [code lang="xml"]
  mfp push[/code]

Implement MobileFirst adapter invocation.

Main `Activity` class

Make sure that your MainActivity class extends the `Activity` class:
[code lang="java"]
public class MainActivity extends Activity {
...
[/code]
Add the following `import` statements:
[code lang="java"]import com.worklight.wlclient.api.*;
import android.util.Log;
import java.net.URI;
import java.net.URISyntaxException;[/code]

Add the following lines to the `onCreate` method:
[code lang="java"]
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);

final WLClient client = WLClient.createInstance(this);

client.connect(new WLResponseListener() {

@Override
public void onSuccess(WLResponse wlResponse) {
URI adapterPath = null;
try {
adapterPath = new URI("/adapters/MyAdapter/getFeed");
} catch (URISyntaxException e) {
e.printStackTrace();
}
WLResourceRequest request = new
WLResourceRequest(adapterPath,WLResourceRequest.GET);
request.send(new MyInvokeListener());
}

@Override
public void onFailure(WLFailResponse wlFailResponse) {
Log.i("MFPMyProject","Failed connecting to the MobileFirst Server: " +
wlFailResponse.getErrorMsg());
}
});[/code]

- `MyInvokeListener` class

Add a new `MyInvokeListener` class.
Add the following `import` statements:
[code lang="java"]import com.worklight.wlclient.api.*;
import android.util.Log;[/code]

Paste the following lines:
[code lang="java"]
public class MyInvokeListener implements WLResponseListener {

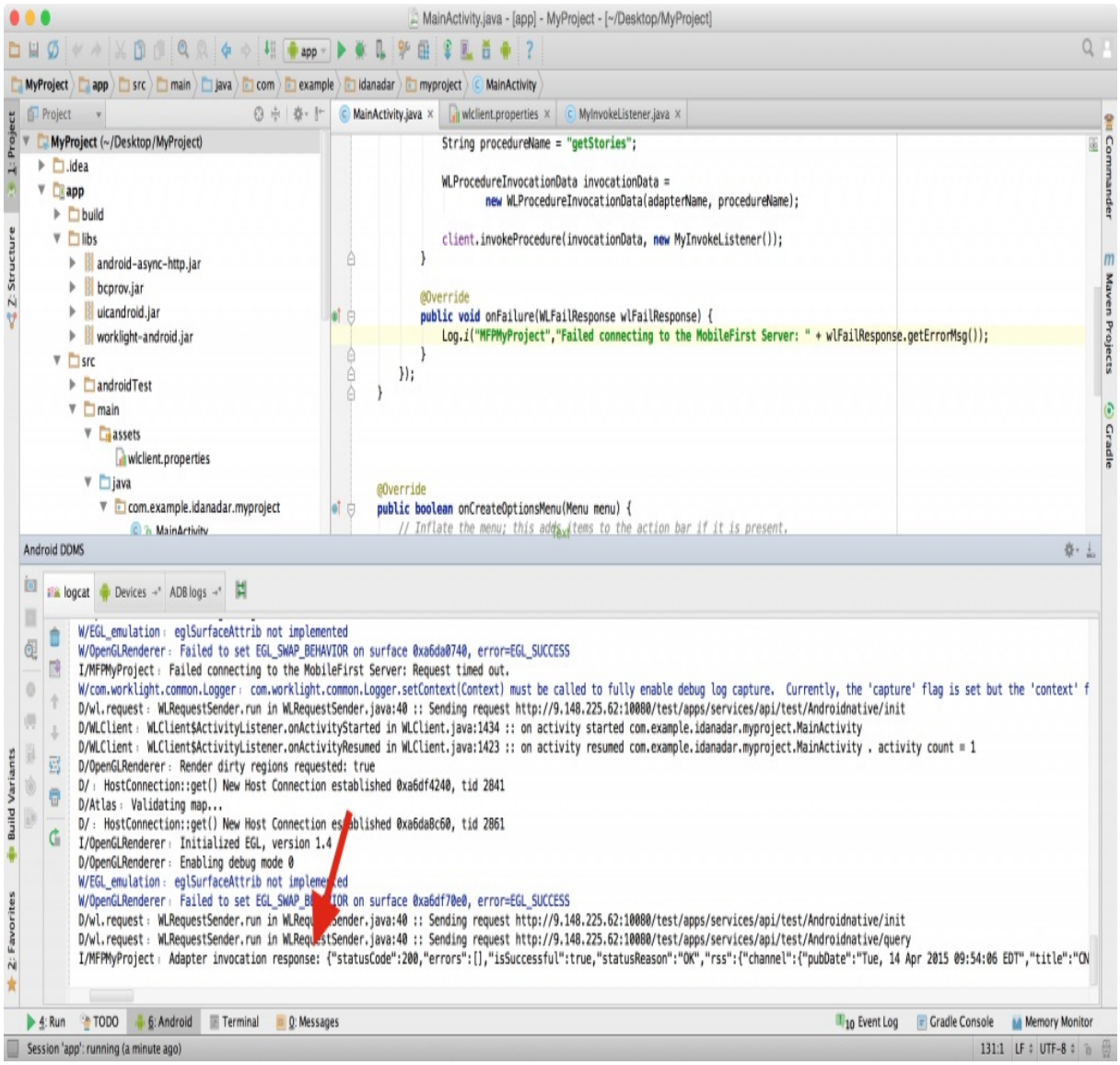
@Override
public void onSuccess(WLResponse wlResponse) {
Log.i("MFPMyProject","Adapter invocation response: " +
wlResponse.getResponseJSON());
}

@Override
public void onFailure(WLFailResponse wlFailResponse) {
Log.i("MFPMyProject", "Adapter invocation response: " +
wlFailResponse.getErrorMsg());
}
}[/code]

- ## Final configurations
    - Create an Android Virtual Device (AVD).

- ## Click Run.

  Review the LogCat view for the data retrieved by the adapter request.



(https://developer.ibm.com/mobilefirstplatform/wp-content/uploads/sites/32/2015/04/Screen-Shot-2015-04-14-at-17.31.24.png)