

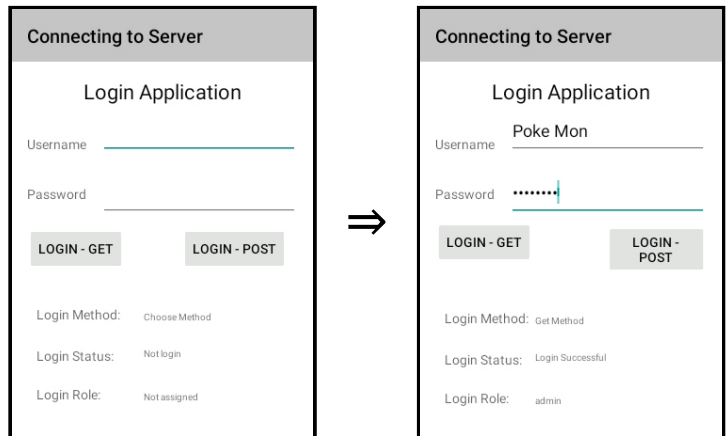
Slide 11.6: Java source code: MainActivity.java

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Java Source Code: SigninActivity.java

This class is used to connect to the server and includes the following three methods:



- `SigninActivity`, which is the constructor,
- `doInBackground`, which performs a computation on a background thread, and
- `onPostExecute`, which runs on the UI thread after `doInBackground`.

Server/app/src/main/java/com/wenchen/server/SigninActivity.java

```

01 package com.wenchen.server;
02
03 import android.content.Context;
04 import android.os.AsyncTask;
05 import android.widget.TextView;
06 import java.net.URL;
07 import java.net.URLConnection;
08 import java.net.URLEncoder;
09 import java.io.BufferedReader;
10 import java.io.InputStreamReader;
11 import java.io.OutputStreamWriter;
12
13 public class SigninActivity extends AsyncTask<String, Void, String> {
14     private TextView statusField, roleField;
15     private Context context;
16     private int byGetOrPost = 0;
17
18     // Flag 0 means GET and 1 means POST. (By default it is GET.)
19     public SigninActivity( Context context, TextView statusField, TextView roleField,
20 int flag ) {
21         this.context = context;
22         this.statusField = statusField;
23         this.roleField = roleField;

```

```
23     byGetOrPost      = flag;
24 }
25
26 protected void onPreExecute( ) { }
27
28 @Override
29 protected String doInBackground( String... arg0 ) {
30     try {
31         String username = (String) arg0[0];
32         String password = (String) arg0[1];
33         String link      = "http://wenchen.cs.und.edu/course/457/11/Android/";
34
35         // Complete the URL.
36         if ( byGetOrPost == 0 ) { // Get method
37             link += "login_get.php";
38             link += "?username=" + URLEncoder.encode( username, "UTF-8" );
39             link += "&password=" + URLEncoder.encode( password, "UTF-8" );
40         }
41         else { // Post method
42             link += "login_post.php";
43         }
44
45         // Connect to the server.
46         URL url = new URL( link );
47         URLConnection conn = url.openConnection( );
48         conn.setDoOutput( true );
49
50         // Send the arguments via standard output for the POST method.
51         if ( byGetOrPost == 1 ) { // Post method
52             String data = URLEncoder.encode( "username", "UTF-8" ) + "=";
53             data += URLEncoder.encode( username, "UTF-8" ) + "&";
54             data += URLEncoder.encode( "password", "UTF-8" ) + "=";
55             data += URLEncoder.encode( password, "UTF-8" );
56             OutputStreamWriter wr = new OutputStreamWriter(
57                 conn.getOutputStream( ) );
58             wr.write( data );
59             wr.flush( );
60         }
61
62         // Read server response.
63         BufferedReader reader = new BufferedReader(
64             new InputStreamReader( conn.getInputStream( ) ) );
65         StringBuilder sb = new StringBuilder( );
66         String line = null;
67         while ( ( line = reader.readLine( ) ) != null ) {
68             sb.append( line );
69             break;
70         }
71         return sb.toString( );
72     }
73     catch( Exception e ) {
74         return new String( "Exception: " + e.getMessage( ) );
75     }
76 }
77
78 @Override
79 protected void onPostExecute( String result ) {
80     this.statusField.setText( "Login Successful" );
81     this.roleField.setText ( result );
82 }
83 }
```

[Slide 11.6: Java source code: MainActivity.java](#)

[Slide 11.8: Java source code: SigninActivity.java \(cont.\)](#)

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