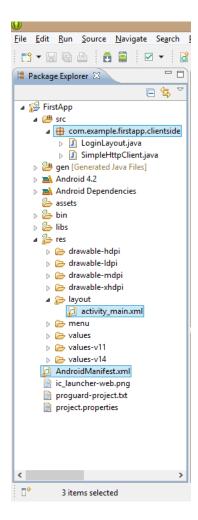


# Login Application For Android

Below is a simple android application for login. It accepts user name and password from the user and sends to remote server application for validation/authentication. Finally displays the result to the user.



Step 1: Create the layout for the application.

FirstApp/res/layout/activity\_main.xml



```
android: Layout alignTop="@id/tv pw
        android:layout below="@id/et un"
        android:inputType="textPassword"/>"
    <Button
        android:id="@+id/btn login"
        android:layout_width="100dip"
        android:layout_height="wrap_content"
        android:layout_below="@id/et_pw"
        android:layout_alignParentLeft="true"
        android:layout_marginTop="15dip"
        android:layout_marginLeft="160dip"
        android:text="Login" />
     <TextView
        android:id="@+id/tv error"
        android:layout_width="400dip"
        android:layout_height="100dip"
        android:textSize="7pt"
        android:layout alignParentLeft="true"
        android:layout below="@id/btn login"
        android:layout_marginRight="9dip"
        android:layout_marginTop="15dip"
        android:layout_marginLeft="120dip"
        android:textColor="#AA0000"
        android:text=""/>
</RelativeLayout>
```

Step 2: Create a java class to create UI threads.

### com.example.firstapp.clientside.LoginLayout.java

```
/**

*

*/

package com.example.firstapp.clientside;

/**

* @author Prabu

*

*/

import java.util.ArrayList;

import org.apache.http.NameValuePair;
import org.apache.http.message.BasicNameValuePair;

import com.example.firstapp.R;

import android.annotation.SuppressLint;
import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.EditText;
import android.widget.TextView;

@SuppressLint("NewApi")
```

Note: Please use your IP address in below statement;

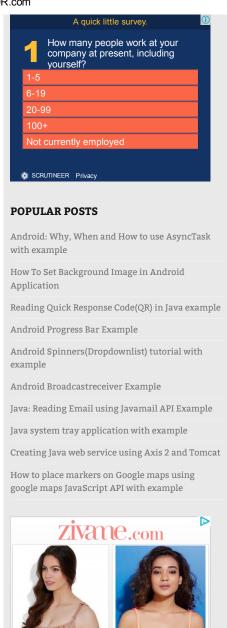
response = SimpleHttpClient.executeHttpPost("http://192.168.1.3:8084/LoginServer/login.do", postParameters);

http://192.168.1.3:8084/LoginServer/login.do is the url of my server application's servlet.

## Step 3: Create a java class to post the username and password to a remote server.

Normally the database and other resources like servlets will reside in separate computer and the Android application will communicate with that computer to authenticate the user. Thats why we are creating this java class

## com. example. first app. client side. Simple Http Client. java



```
package com.example.firstapp.clientside;
 * @author Prabu
import java.io.BufferedReader;
import java.io.IOException;
import java.io.InputStreamReader;
import java.net.URI;
import java.util.ArrayList;
import org.apache.http.HttpResponse;
import org.apache.http.NameValuePair;
import org.apache.http.client.HttpClient;
import org.apache.http.client.entity.UrlEncodedFormEntity;
import org.apache.http.client.methods.HttpGet;
import org.apache.http.client.methods.HttpPost;
import org.apache.http.conn.params.ConnManagerParams;
import org.apache.http.impl.client.DefaultHttpClient;
import org.apache.http.params.HttpConnectionParams;
import org.apache.http.params.HttpParams;
```

## Step 4: Add permissions to access internet

To be able to access the internet from the application (To send the user name and the password to the remote machine) we need to add permissions using following line to the AndroidManifest.xml file

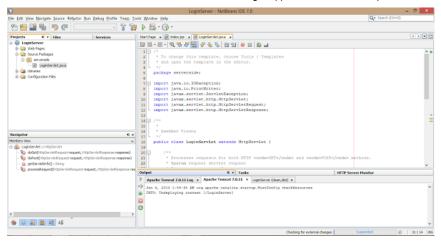
<uses-permission android:name="android.permission.INTERNET"/>

So your final AndroidManifest.xml file will look like;

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"</pre>
    package="com.example.firstapp"
    android:versionCode="1"
    android:versionName="1.0" >
    <uses-sdk android:minSdkVersion="8"</pre>
        android:targetSdkVersion="16" />
 <uses-permission android:name="android.permission.INTERNET"/>
    <application
        android:allowBackup="true"
        android:icon="@drawable/ic launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name="com.example.firstapp.clientside.Logical")
            android:label="@string/app name" >
             <intent-filter>
                 <action android:name="android.intent.action.MA"</pre>
                <category android:name="android.intent.categor"</pre>
            </intent-filter>
        </activity>
    </application>
</manifest>
```

# Step 5: Create the login server application

We are done at the android application side. Now we need the server application to check the user name and the password. Here I have used a simple web application with a servlet. This application runs in a Tomcat server. You can have your own logic to validate the username and the password in the servlet. You can do database operations etc. But here I am just doing static validation of the username and password.

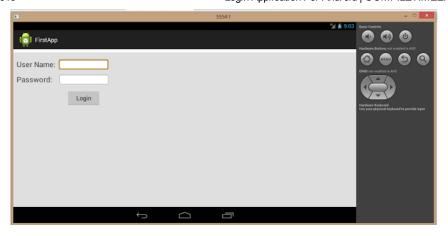


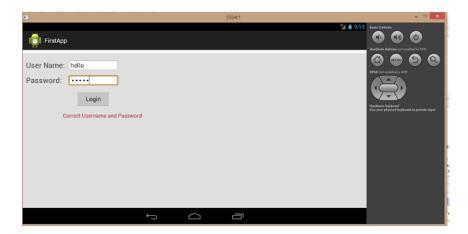
# LoginServlet.java

```
* To change this template, choose Tools | Templates
* and open the template in the editor.
package serverside;
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
 * @author Vienna
public class LoginServlet extends HttpServlet {
    * Processes requests for both HTTP <code>GET</code> and <
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error oc
     * @throws IOException if an I/O error occurs
```

Step 6: We are done and ready to run the application.







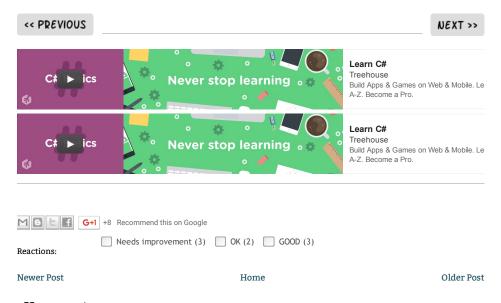
Note that this application is just to demonstrate how to make a communication with a remote application. It is always recommended to consider using AsyncTask while making network calls.

This example has been upgraded with SSL support and AsynTaskSupport here. Have a look..

Please dont forget to share your views!!

Source code of the android app: LoginApp.zip

Source code of the server app: LoginServer.zip



52 comments :

Anonymous January 8, 2013 at 10:52 PM



Code is simple and easy to understand. thanks

Reply



Anonymous March 7, 2013 at 2:49 PM

awsome...

Reply



Anonymous March 25, 2013 at 10:51 PM

When i press the login button i get import and roid.os. Network On Main Thread Exception; in username box. how to fix it

Reply

Replies



## X March 25, 2013 at 11:16 PM

According with the new StrictGuard policy, running long tasks on the Main UI thread is not possible. So I have created a new thread and given my network logic in the new thread.

new Thread(new Runnable() {

//Network/long running task goes here

}

Please refer step2. I have clearly mentioned. This will resolve your issue.

It is recommended to use AsyncTask for such long running/networking tasks to avoid lagging of your application.

To know how to use AsyncTask please refer AsyncTask tutorial

## Reply



# Anonymous April 5, 2013 at 10:09 PM

I always get incorrect username or password error.

Reply

Replies



Hi,

please post the error stack trace so that we can narrow down the issue.



kathtaz1315 July 30, 2013 at 6:27 AM

i also get the same result

the error is:

Unable to start service Intent { act=com.android.email.ACCOUNT\_INTENT } U=0: 07-30 00:51:53.271: D/ExchangeService(758): !!! Email application not found; stopping self 07-30 00:51:53.281: W/ActivityManager(293): Unable to start service Intent { act=com.android.email.ACCOUNT\_INTENT } U=0: not found 00:51:53.291: D/ExchangeService(758): onStartCommand, startingUp = true, running = false 07-30 00:51:53.301: E/ActivityThread(758): Service com.android.exchange.ExchangeService has leaked ServiceConnection com. and roid. email common. service. Service Proxy \$Proxy Connection @40 ce8588that was originally bound here 00:51:53.301: E/ActivityThread(758): android.app.ServiceConnectionLeaked: Service com.android.exchange.ExchangeService has leaked ServiceConnection com. and roid. email common. service. Service Proxy \$Proxy Connection @40 ce8588that was originally bound here 07-30 00:51:53.301: E/ActivityThread(758): at and roid. app. Loaded Apk \$ Service Dispatcher. (Loaded Apk. java: 969)E/ActivityThread(758): 07-30 00:51:53.301: at and roid. app. Loaded Apk. get Service Dispatcher (Loaded Apk. java: 863)00:51:53.301: E/ActivityThread(758): 07-30 at android.app.ContextImpl.bindService(ContextImpl.java:1418) 07-30 00:51:53.301: E/ActivityThread(758): at and roid. app. Context Impl. bind Service (Context Impl. java: 1407)07-30 00:51:53.301: E/ActivityThread(758): at and roid. content. Context Wrapper. bind Service and the content of the contentice(ContextWrapper.java:473) 00:51:53.301: E/ActivityThread(758): 07-30 at com.android.emailcommon.service.ServiceProxy.setTask(ServiceProxy.java:157) E/ActivityThread(758): 07-30 00:51:53.301: com.android.emailcommon.service.Service Proxy.setTask(ServiceProxy.java:145) 07-30 00:51:53.301: E/ActivityThread(758): com. and roid. email common. service. Account Service Proxy. get Device Id (Account Service Proxy) and the service of the serviceProxy.java:116) 07-30 00:51:53.301: E/ActivityThread(758): com. and roid. exchange. Exchange Service. get Device Id (Exchange Service. java: 1249)07-30 00:51:53.301: E/ActivityThread(758): at com.android.exchange.ExchangeService\$7.run(ExchangeService.java:1856) E/ActivityThread(758): 07-30 00.51.53.301. at com.android.emailcommon.utility.Utility\$2.doInBackground(Utility.java:551) E/ActivityThread(758): 07-30 00:51:53.301: com.android.emailcommon.utility.Utility\$2.doInBackground(Utility.java:549) 00:51:53.301: E/ActivityThread(758): 07-30 at android.os.AsvncTask\$2.call(AsvncTask.java:287) 07-30 00:51:53.301: E/ActivityThread(758): at Task.java:234) java.util.concurrent.FutureTask.run(Future 07-30 00:51:53.301: E/ActivityThread(758): at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:10 80) 07-30 00:51:53.301: E/ActivityThread(758): java.util.concurrent. Thread Pool Executor \$Worker.run (Thread Pool Executor. java: 500 for the property of the property of73) 07-30 00:51:53.301: E/ActivityThread(758): at java.lang.Thread.run(Thread.java:856)

## Reply



## Navtej Singh Jabbal April 19, 2013 at 8:33 PM

Hey.. the application looks good but I did not understand the URL used to call the server application. I am trying to execute this with a local host. So I do not know which URL to give. How is it that the login.do file is generated?

## Reply

Replies



Hi Navtej singh,

Looks like you have missed the step5.

login.do is the separate servlet running in tomcat server. I have created a web project in netbeans with this servlet and that runs in tomcat server. The android application communicates with this server app.

You have to give the url of this server application.



# Milan Harkhani May 18, 2014 at 2:26 AM

use your ip address instead of "localhost"....it might be work



### Anonymous November 15, 2014 at 1:24 AM

@Navej Singh --> I have been trying to execute this code word-for-word... but I keep getting a connection to "my IP address": "Port" is refused. Any ideas as to why this happens?

Reply



## Joan Sanchez May 28, 2013 at 12:40 AM

Hello, it works! Good tutorial. but, there is something that i don't understand. I don't understand this:

Why i have to do click twice in the button login?

Reply

Replies



## Wil July 3, 2013 at 10:52 PM

I would like to know this as well. Kinda lame.



## compiletimeerror CTE August 15, 2013 at 7:04 PM

The application sends data to another server that runs somewhere else. It takes time to do the network operation. Maybe you need to wait for few more seconds to see if it actually requires second press (of the login button). During network operation, it may look like the application is not responding. To avoid this we normally use async task to perform the network operations.

Reply



## KAVITA JAGTAP July 16, 2013 at 12:38 PM

Hi

thanks for logic. But I need more about this. Means once I logged in then I need to store the cookies so I can remain login in page transition and in various request.

Reply



## Santosh Kumar August 15, 2013 at 11:00 AM

same as above this code take little bit time when we click on login button

Reply

Replies



## compiletimeerror CTE August 15, 2013 at 7:00 PM

The application sends data to another server that runs somewhere else. It takes time to do the network operation. I do not see any other lag in the application.

Reply



## avinash sankrit September 7, 2013 at 1:51 AM

thanx dear finally done!!

Reply



# Anonymous September 13, 2013 at 9:04 AM

Hello every body,

I have a problem in step 5,

Would you explain me how to create the login server application?

Reply

Replies



# $\textbf{compiletimeerror CTE} \ \ \text{September 13, 2013 at 11:36 PM}$

It is a separate servlet running in tomcat server. I have created a dynamic web project in netbeans with this servlet and that runs in tomcat server. The android application communicates with this server app using its url.

compiletimeerror CTE September 13, 2013 at 11:58 PM



From netbeans IDE,

1.Choose File > New Project (Ctrl-Shift-N) from the main menu. Under Categories, select Java Web. Under Projects, select Web Application then click Next. Give a project name and finish the setup.

- 2. In projects view, right click on source packages and create new package with any name.(I have named it as serverside).
- 3. Right click on the newly created package and create new servlet and name it as LoginServlet  $\,$
- 4. Copy,paste the code we have given in step 5
- 5. Save it. Run the project on server.

Note: you need to have tomcat or glassfish configured on netbeans to run this.

From the Eclipse IDE, select File > New > Project to view the project wizards. Type Web in the Wizards box, and the New Project window filters the wizards to show the ones that match. This is an easy way to locate the wizard you want instead of going through each item.

- 1. Choose Dynamic Web Project from the list and create the project
- 2. Expand the project explorer, right click on src and create new package.
- 3. Right click on the newly created package and create new Servlet and name it as LoginServlet  $\,$
- 4. Copy, paste the code we have given in step 5
- 5. Right click on project>Run as>Run on server>select any of the server you have>finish

### Reply



### sami iqbal November 9, 2013 at 8:04 PM

faceing error at is empty.....!! plz help

if (null != errorMsg && !errorMsg.isEmpty()) {

Reply

Replies



# compiletimeerror CTE November 9, 2013 at 8:21 PM

What is the error you are facing? Give us more information about the error!

## Reply



## sami iqbal November 11, 2013 at 9:07 PM

This method is Empty() is undefined for the type string.

This is the error and one more thing i can not understand your 5 step can you explain me pleasure!!! how you can do it. Actually i am totally new in android world......

## Reply

Replies



# compiletimeerror CTE November 13, 2013 at 12:15 AM

is Empty() method is available since java 1.6. From your error message, we think that your work space is using java version <1.6.

Please go to Eclipse preference->java->compiler and change the compiler version to 1.6  $\,$ 

## About the step:5

It is a separate servlet running in tomcat server. I have created a dynamic web project in netbeans with this servlet and that runs in tomcat server. The android application communicates with this server app using its url.

Please read previous comments, we have already explained this!!!



# sami iqbal November 21, 2013 at 1:57 AM

it's compiler version is already 1.6....-(

## Reply



# Anonymous November 27, 2013 at 5:09 PM

Can you give me the code for registration? With username, password and phonenumber

Reply



#### Lejin January 8, 2014 at 9:21 AM

This is a nice tutorial but i have to tap the login button twice. I have waited a long time after a single tap and nothing happens, but if i tap twice then the result is printed instantly can you please help me?

#### Reply

Replies



## \_admin March 29, 2014 at 10:59 PM

The main thread doesn't wait for the response from server. It immediately renders the view. We recommend to use asyncTask while doing a network operation.

### Reply



### Brandon Milambo January 19, 2014 at 2:47 AM

I tried to use your tutorial to fix my app's registrationActivity.java which was running on the Main thread, It resulted in My app finally registering by sending the data to my online database but it crashes straight away giving me this error:

01-18 15:48:04.361: E/AndroidRuntime(2052): FATAL EXCEPTION: Thread-116 01-18 15:48:04.361: E/AndroidRuntime(2052): Process: com.milamboltd.barz, PID: 2052 01-18 15:48:04.361: E/AndroidRuntime(2052): and roid. view. View Root Impl \$ Called From Wrong Thread Exception: Only the original thread thatcreated a view hierarchy can touch its views. 01-18 E/AndroidRuntime(2052): 15:48:04.361: at and roid. view. View Root Impl. check Thread (View Root Impl. java: 6006)01-18 15:48:04.361: E/AndroidRuntime(2052): at and roid. view. View Root Impl. invalidate Child In Parent (View Root Impl. java: 855)01-18 15:48:04.361: E/AndroidRuntime(2052): at android.view.ViewGroup.invalidateChild(ViewGroup.java:4320) 01-18 15:48:04.361: E/AndroidRuntime(2052): at android.view.View.invalidate(View.java:10919) 15:48:04.361: E/AndroidRuntime(2052): at android.view.View.invalidate(View.java:10874) 01-18 15:48:04.361: E/AndroidRuntime(2052): at and roid.widget. Text View. check For Relayout (Text View. java: 6598)01-18 15:48:04.361: E/AndroidRuntime(2052): at android.widget.TextView.setText(TextView.java:3824) 01-18 15:48:04.361: E/AndroidRuntime(2052): at android.widget.TextView.setText(TextView.java:3682) 01-18 15:48:04.361: E/AndroidRuntime(2052): at android.widget.TextView.setText(TextView.java:3657) 15:48:04.361: E/AndroidRuntime(2052): com.milamboltd.barz.LoginActivity\$1\$1.run(LoginActivity.java:68) 01-18 15:48:04.361: E/AndroidRuntime(2052): at java.lang.Thread.run(Thread.java:841) If you could help me fix my code below I know I am almost there ??

## Reply

Replies



## \_admin January 20, 2014 at 9:59 PM

It seems you are trying to update your View (Layout) from some other thread. Try to 'return' the value to your Main Activity class and update the view from there.

If this doesn't help, please post your code block here so that we can understand better.

## Reply



# **Bart Win** February 21, 2014 at 11:28 PM

hey is it possible to just get a full source code in zip package of this ????? Thanks R.!

## Reply

Replies



**\_admin** February 25, 2014 at 11:24 PM

Please find the source code zip above.

## Reply

## Sourav Suman March 12, 2014 at 2:19 AM



i am getting error as: connection to localhost:8084 refused..please help



## Srini Vasn March 19, 2014 at 7:14 PM

whats the different between webservice and httpclient

Reply



## Zalhan Paula March 20, 2014 at 3:37 PM

You said that http://192.168.1.3:8084/LoginServer/login.do is the url of your server application's servlet.

I've created the servlet in NetBeans but what do I have to write as URL in response = SimpleHttpClient.executeHttpPost("???")? I've made a copy from serrvlet project an put it in tomcar->webapp->ROOT and I tried the following URL response = SimpleHttpClient.executeHttpPost(

"http://10.0.2.2:8080/LoginServer/LoginServlet",

postParameters); but it doesn't work

Reply

Replies



#### admin March 29, 2014 at 10:54 PM

- 1. check your ip address
  - 2. LoginServer should the your application name
  - 3. LoginServlet should be the name of servlet mapping in web.xml

Reply



## Anonymous March 29, 2014 at 3:20 PM

This is working perfectly in the emulator, but says connection refused on the actual device. what could be the problem?

Reply

Replies



### \_admin March 29, 2014 at 10:51 PM

In first case, both server and client are in same machine. So no problem. But in second case they are in different devices. To access the sever app from android mobile, your server app should be hosted on internet. One simple way is creating a web service and hosting it on internet.

see this post to know to create a simple web service

http://www.compiletimeerror.com/2013/09/creating-java-web-service-using-axis-2.html

see this post to know how to access the web service from android application

http://www.compiletimeerror.com/2013/09/accessing-web-service-from-android.html

Reply



## Ian May 5, 2014 at 2:30 AM

Hello, good tutorial, however, a export de apk file and install it in android devices with android 4.0 and i only get "Se ha detenido la ejecución de la app": the app has been sttoped.

I have tried in 3 different devices.

Reply



## Bibash Shah May 5, 2014 at 2:56 PM

I am not getting any response from server. Even System.out.println is blank in logcat. Could you please explain me why??

Reply



## ViJAY Jaiswal May 26, 2014 at 12:40 AM

[2014-05-26 00:37:46 - FirstApp] Starting activity com.example.firstapp.clientside.LoginLayout on device emulator-5554
[2014-05-26 00:37:49 - FirstApp] ActivityManager: Starting: Intent { act=android.intent.action.MAIN cat=[android.intent.category.LAUNCHER] cmp=com.example.firstapp/.clientside.LoginLayout yet registered with the greater Moiting 3

[2014-05-26 00:37:49 - FirstApp] New package not yet registered with the system. Waiting 3 seconds before next attempt.

 $[2014-05-26\ 00:37:52\ -\ First App]\ Starting\ activity\ com. example. first app. client side. Login Layout\ on\ device\ emulator-5554$ 

[2014-05-26 00:37:54 - FirstApp] ActivityManager: Starting: Intent { act=android.intent.action.MAIN cat=[android.intent.category.LAUNCHER]

cmp=com.example.firstapp/.clientside.LoginLayout }
[2014-05-26 00:37:54 - FirstApp] ActivityManager: Error type 3

 $\begin{tabular}{lll} [2014-05-26 & 00:37:54 & - & FirstApp] & Activity Manager: & Error: & Activity & class $$\{com.example.firstapp/com.example.firstapp.clientside.LoginLayout\}$ does not exist. \\ \end{tabular}$ 

I am getting above error. Please help.

Reply



### majid kh June 2, 2014 at 2:09 AM

hi

i want to connect to an access point router that is connect to an imbedded web server with IP address: http://192.168.1.100. when i click on login button i face to this error:

HTTP 1.0 401 Error. Unauthorized Access

You are not authorized to access this server. please help me

Reply



### Anonymous August 9, 2014 at 11:04 AM

hi

i want create picture password for android moblie .how to write code for it pls helpme.....

Reply



### Anonymous November 15, 2014 at 1:07 AM

Hi, I have been trying to use this code "word for word" since I have not been able to get any response, [except for the IP address part], But when I click on the Login button, There is no response at all. Could anyone please tell why this is happening.?

Reply



### Rusbel Rubio Peña March 4, 2015 at 10:12 PM

Good morning , I have a couple of questions , as I am completely neophyl in android development. This source code shown , supports the development environment Google Android Studio ?. I see this in Netbeans , which is according to your experience the best IDE for Android development.

Thank You

Reply

Replies



## \_admin March 5, 2015 at 12:03 AM

Hello Rusbel,

Android application shown in this example above is developed in Eclipse with ADT.

The server application was developed on Netbeans.

As per Google, Android Studio is now the official IDE for Android. So this will be best choice.

Reply



## Rusbel Rubio Peña March 4, 2015 at 10:29 PM

One more question , if my web service is hosted on a secure site with https protocol, what changes would take the code above , additional factors have to be considered for the code to work?. Some have an example?

Thank You

Reply

Replies



## **\_admin** March 5, 2015 at 12:06 AM

Hello Rusbel,

You may want to check this tutorial;

http://www.compiletimeerror.com/2013/01/login-application-for-android-android.html

Reply



Rusbel Rubio Peña March 6, 2015 at 6:48 PM

Hello, I have a new question!

I have to develop an Android application that connects to a web service developed in ASP.Net 4.5.

Through the connection with the Wsb, The Android application must obtain a datatable object type, which contains rows and columns of information, presented in the Android application to the user.

How could you do this? that object can return the Wsb that contains rows and columns, perhaps a list?

I really appreciate your ideas, and if anyone knows an example of this is of great value. Thanks to All

Reply



## Veena patel Naluvala March 16, 2015 at 8:13 PM

im getting an error message as:175.101.0.229:8080 timed out plzzz someone help meee.....

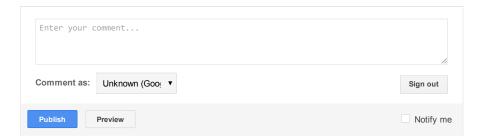
Reply



## Ahmad Budairi April 15, 2015 at 4:14 AM

Ho can we use ListView on netbean. Please explain to me!

Reply



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