



# Mobile Apps Development



Day 03 Using APIs

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# Topics

- Sending Data to the Server



# SENDING DATA: HTTP CLIENT



## HttpURLConnection

- Most network-connected Android apps use HTTP to send and receive data. The Android platform includes the HttpURLConnection client, which supports HTTPS, streaming uploads and downloads, configurable timeouts, IPv6, and connection pooling.



<http://developer.android.com/training/basics/network-ops/connecting.html#http-client>

We will make use of the previous day's project

# AddActivity

## AddActivity.java

- Add a new activity to yesterday's sample project and make it the startup activity.

## Activity\_add.xml



# Variables and onCreate

```
public class AddActivity extends AppCompatActivity {
    private String urlString =
        "http://mobiledev.ronaldramos.info/writecontact.php";

    TextView tvName;
    TextView tvLocation;
    TextView tvNumber;
    String urlFinal;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_add);

        tvName = (TextView) findViewById(R.id.editText);
        tvLocation = (TextView) findViewById(R.id.editText2);
        tvNumber = (TextView) findViewById(R.id.editText3);
    }
}
```



```
public class AddActivity extends AppCompatActivity {
    private String urlString =
        "http://mobiledev.ronaldramos.info/writecontact.php";
```

```
    TextView tvName;
    TextView tvLocation;
    TextView tvNumber;
    String urlFinal;
```

```
@Override
```

```
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_add);
```

```
    tvName = (TextView) findViewById(R.id.editText);
    tvLocation = (TextView) findViewById(R.id.editText2);
    tvNumber = (TextView) findViewById(R.id.editText3);
```

```
}
```

## OnClick for Save

```
public void process(View V){  
    urlFinal = "name=" + tvName.getText().toString();  
    Log.d("ugh", urlFinal);  
    urlFinal = urlFinal + "&address=" + tvLocation.getText().toString();  
    Log.d("ugh", urlFinal);  
    urlFinal = urlFinal + "&phone=" + tvNumber.getText().toString();  
    Log.d("ugh", urlFinal);  
    new SaveData().execute(urlString);  
}
```



CODE:

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```
public void process(View V){  
    urlFinal = "name=" + tvName.getText().toString();  
    Log.d("ugh", urlFinal);  
    urlFinal = urlFinal + "&address=" + tvLocation.getText().toString();  
    Log.d("ugh", urlFinal);  
    urlFinal = urlFinal + "&phone=" + tvNumber.getText().toString();  
    Log.d("ugh", urlFinal);  
    new SaveData().execute(urlString);  
}
```

# AsyncTask for Save Process

```
//asynctask
public class SaveData extends AsyncTask<String, Void, Integer> {

    @Override
    protected void onPreExecute(){
        setProgressBarIndeterminateVisibility(true);
    }
    @Override
    protected void onPostExecute(Integer result){
        progressBar.setVisibility(View.GONE);
        if(result == 1) {
            Toast.makeText(getApplicationContext(), "Record Saved!",
                Toast.LENGTH_LONG).show();
        }else{
            Toast.makeText(getApplicationContext(), "Failed to save data!",
                Toast.LENGTH_LONG).show();
        }
    }
}
```





# AsyncTask for Save Process

```
@Override
protected Integer doInBackground(String... params){
    URL url;
    HttpURLConnection connection = null;
    try {
        //Create connection
        url = new URL(params[0]);
        connection = (HttpURLConnection)url.openConnection();
        connection.setRequestMethod("POST");
        connection.setRequestProperty("Content-Type",
            "application/x-www-form-urlencoded");

        connection.setRequestProperty("Content-Length", "" +
            Integer.toString(urlFinal.getBytes().length));
        connection.setRequestProperty("Content-Language", "en-US");

        connection.setUseCaches (false);
        connection.setDoInput(true);
        connection.setDoOutput(true);

        //Send request
        DataOutputStream wr = new DataOutputStream(
            connection.getOutputStream ());
        wr.writeBytes (urlFinal);
        wr.flush ();
        wr.close ();

        //Get Response
        InputStream is = connection.getInputStream();
        BufferedReader rd = new BufferedReader(new InputStreamReader(is));
        String line;
```



## AsyncTask for Save Process

```
StringBuffer response = new StringBuffer();
while((line = rd.readLine()) != null) {
    response.append(line);
    response.append('\r');
}
rd.close();
return 1;
} catch (Exception e) {
    e.printStackTrace();
    return 0;
} finally {
    if(connection != null) {
        connection.disconnect();
    }
}
}
} //end of GetData AsyncTask class
}
```



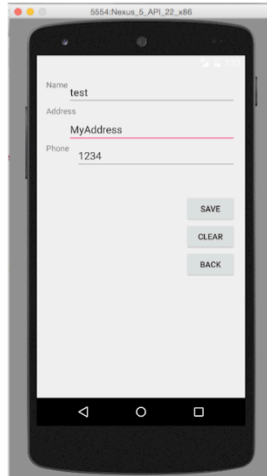
FULL CODE:

```
package ronaldramos.info.cardapp;
```

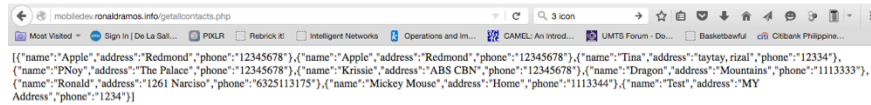
```
import android.os.AsyncTask;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.ProgressBar;
import android.widget.TextView;
import android.widget.Toast;
```

```
import java.io.BufferedReader;
import java.io.DataOutputStream;
import java.io.InputStream;
import java.io.InputStreamReader;
import java.net.HttpURLConnection;
import java.net.URL;
```

# Run the App



# Check the Result online



The screenshot shows a web browser window with the address bar containing the URL `mobiledev.ronaldramos.info/getallcontacts.php`. The page content displays a JSON array of contact information. The browser's address bar also shows several open tabs, including 'Most Visited', 'Sign In | De La Sal...', 'PIXLR', 'Rebrick it!', 'Intelligent Networks', 'Operations and Im...', 'CAMEL: An Introd...', 'UMTS Forum - Do...', 'Basketball', and 'Citibank Philippine...'. The JSON data is as follows:

```
[{"name":"Apple",address:"Redmond",phone:"12345678"}, {"name":"Apple",address:"Redmond",phone:"12345678"}, {"name":"Tina",address:"aytay, rizal",phone:"12334"}, {"name":"PNoy",address:"The Palace",phone:"12345678"}, {"name":"Krisie",address:"ABS CBN",phone:"12345678"}, {"name":"Dragon",address:"Mountains",phone:"1113333"}, {"name":"Ronald",address:"1261 Narciso",phone:"6325113175"}, {"name":"Mickey Mouse",address:"Home",phone:"1113344"}, {"name":"Test",address:"MY Address",phone:"1234"}]
```



**END OF SEMINAR  
THANK YOU!**

