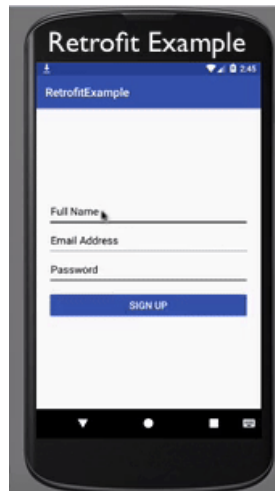


## Retrofit Tutorial With Example In Android Studio [Step by Step]

In Android, Retrofit (<https://abhiandroid.com/programming/retrofit/>) is a REST Client for Java (<https://abhiandroid.com/java/>) and Android by Square inc under Apache 2.0 license. Its a simple network library that used for network transactions. By using this library we can seamlessly capture JSON (<https://abhiandroid.com/programming/json/>) response from web service/ web API. It's easy and fast library to retrieve and upload the data(JSON (<https://abhiandroid.com/programming/json/>) or any other structured data) via a REST based web service.



### Table Of Contents :

- 1 Need of Retrofit in Android.
- 2 Difference Between Retrofit and other libraries:
- 3 Performance benchmarking for Android AsyncTask, Volley and Retrofit (in milliseconds, lower value is better):
- 4 Steps to Integrate Retrofit in Android Studio Project.

Premium Project !  
Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andr  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fo

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/ei

Smart News Anc  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

- [illegible]

```
TestsWithAndroid
(array adapter-
(custom-
example.html))
```

to the world!

Customizable Text View  
with Unlimited Text  
Interchange  
Network Translators  
Word Processing  
Document Management  
Interactive View  
Free Storage  
(No View/Save)  
Storage View

## Benefit and other

**Full-time Software Developer**

# Programming

# Annotations for Android

Chalchicomula (K'ab'ch'ik)

[illegible]

Live TV Streamin  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andri  
App Project Sou  
rming/Volley//  
Code  
of Volley  
(/sourcecode/q!  
her libraries in  
Food Ordering  
Android App Pr  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Arc  
o parse JSON  
Source Code  
data. What we  
(/sourcecode/e

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Android  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
[\(/sourcecode/ci](#)

QR/Barcode Scanner  
Android App Project  
Source Code  
(/sourcecode/qr)

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

**2. Volley:**

one(1) discussion: 5

Seven(7) discussions:

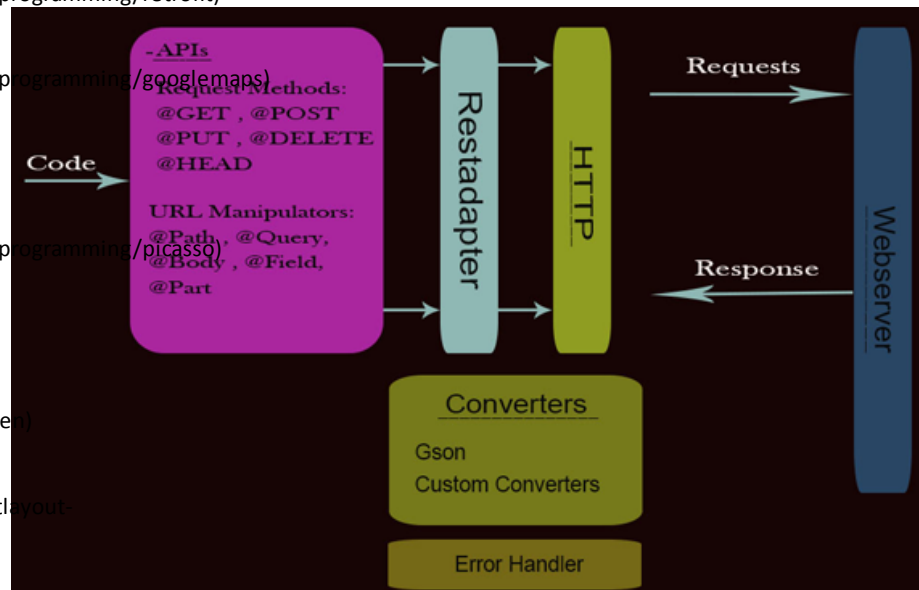
Twenty Five(25) discussions:

**3. Retrofit:**

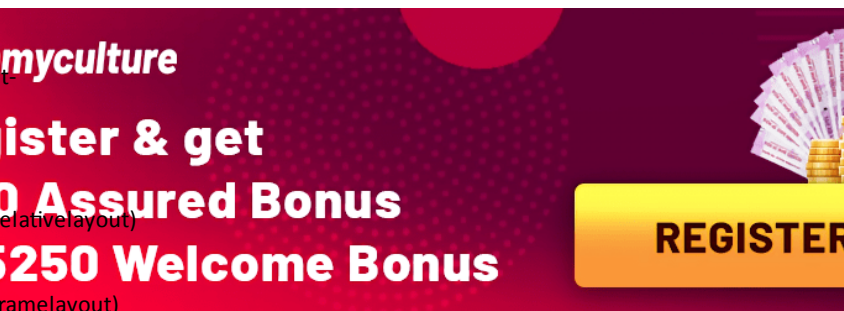
one(1) discussion: 3

Seven(7) discussions:

Twenty Five(25) discussions:

**Steps to Integrate Retrofit in our Android Studio Project.**

Here are the main steps to integrate Retrofit in our project.

Premium Project !  
Code:Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/liQuiz Game Andr  
App Project Sou  
Code  
(/sourcecode/qiFood Ordering  
Android App Pro  
Source Code  
(/sourcecode/fcEcommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/eiSmart News Anc  
App Project Sou  
Code  
(/sourcecode/nConvert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/wCity Guide Andr  
App Project Sou  
Code  
(/sourcecode/ciQR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qiRadio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra



## 1. Add dependency in gradle

Firstly add this library in build gradle file in app module.

Compile 'com.squareup.retrofit2:retrofit:2.0.0'

## Add Internet Permission in AndroidManifest.xml:

For network transaction we need to define Internet permission in our Manifest file.

```
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.abhiandroid.retrofitexample">

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

    <application>
        <activity android:name=".MainActivity"
            android:label="@string/app_name"
            android:theme="@style/AppTheme">
            <intent-filter>
                <action android:name="android.intent.action.MAIN"></action>
                <category android:name="android.intent.category.LAUNCHER"></category>
            </intent-filter>
        </activity>
    </application>
</manifest>
```

## 3. POJO/Model Class

For fetching response we need to create POJO class that automatically parse the JSON data using Gson in background. We just need to create this POJO class. For creating POJO class first method is using Gson and every variable by ourself and other best and fast method is using <http://www.jsonschema2pojo.org/> platform. By using this platform you can easily convert JSON response to POJO class, for this we need to copy our JSON response and paste it in jsonschema2pojo and it will create some getter methods as per our requirement.

```
Sample POJO class
public class SamplePOJO {
    private int userId;
    private String name;

    public int getUserId() {
        return userId;
    }

    public String getName() {
        return name;
    }
}
```

4. Add downloaded POJO class in your project.

## 5. API Interface :

Now we need to create an interface to define our different methods that will be used for network transactions. Here is the sample of API Interface.

Premium Project !  
Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code

Quiz Game Andri  
App Project Sou  
Code

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Form get Stor  
Android App Pro  
Source Code  
(/sourcecode/e

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andri  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

```

public interface ApiInterface {
    // For POST request (used with POST type request)
    @FormUrlEncoded
    @POST("/demo/login")
    void login(@Field("user_email") String user_email,
               @Field("user_pass") String user_pass, Callback<SignUpResponse> callback);

    // for GET request (used with GET type request)
    @GET("/demo/country")
    void getCountryList(Callback<List<CountryResponse>> callback);
}

// CountryResponse is a POJO class which receives the response of this API

```

## 6. RestAdapter:

We need to define RestAdapter to implement API's. Suppose we have to implement login API then we need to build RestAdapter, setting root url and create connection between our adapter (com.abhiandroid.com/ui/adapters) and API Interface. For this, its better to create a class in which we have a method that create the connection and then returns the RestAdapter object. You can create this RestAdapter where you want to implement API but its better to create a common class/method and use it where you want.

```

public class ApiInterface {
    // Setting the Root URL
    private static String rootUrl = "http://abhiandroid.com/ui/adapters/";

    // Creating the RestAdapter
    public static RestAdapter.Builder builder() {
        RestAdapter.Builder builder = new RestAdapter.Builder();
        builder.setRootUrl(rootUrl);
        builder.setLogLevel(LogLevel.NONE);
        builder.setConverter(new GsonConverter());
        builder.setClient(new OkHttpClient());
        return builder;
    }
}

```

Example Of Retrofit Using POST Type In Android Studio:

Premium Project :  
Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andr  
App Project Sou  
Code  
(/sourcecode/q

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/e

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/c

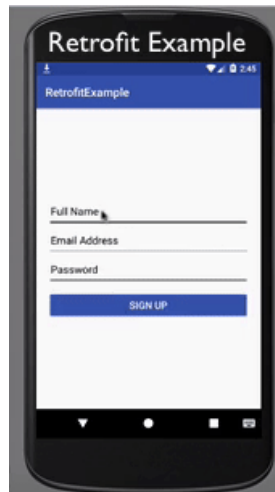
QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/q

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

Below is the example of retrofit which we have implement the POST type request. In this we are implementing sign up api. In this example firstly we create sign up page design with 3 EditText (https://abhiandroid.com/ui/edittext/) name, email and password and one sign up Button (https://abhiandroid.com/ui/button/). After that in our MainActivity we are using EditText (https://abhiandroid.com/ui/edittext/) and Button (https://abhiandroid.com/ui/button/) and on click of sign up Button (https://abhiandroid.com/ui/button/) the data in EditText (https://abhiandroid.com/ui/edittext/) is validate and then we are implementing signup api to save the data in our database. After saving data from api we are displaying the message on the screen by using a Toast (https://abhiandroid.com/programming/custom-toast-tutorial-example.html/).

Below you can download the final output and step by step explanation of example:

Download Code (https://github.com/abhisheksaini4/RetrofitExample)



**Step 1:** Create a new project And Name it RetrofitExample.

**Step 2:** Open Gradle Scripts > build.gradle and add Retrofit and RecyclerView (https://abhiandroid.com/materialdesign/recyclerview/) Library dependency in it.

## Big Data Online PG Prog

Ad Want to join a bigger, better Start learning Big Data from N

www.edureka.co

Open

Premium Project :  
Code:

Save the data in  
YouTube Channel  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game And  
App Project Sou  
Code  
(/sourcecode/q

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/e

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/q

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

```

apply plugin: 'com.android.application'

android {
    compileSdkVersion 26
    defaultConfig {
        applicationId "com.abhiandroid.retrofitexample"
        minSdkVersion 15
        targetSdkVersion 26
        versionCode 1
        versionName "1.0"
        testInstrumentationRunner "android.support.test.runner.AndroidJUnitRunner"
    }
    buildTypes {
        release {
            minifyEnabled false
            proguardFiles getDefaultProguardFile('proguard-android.txt'), 'proguard-rules.pro'
        }
    }
}

dependencies {
    implementation 'com.android.support:appcompat-v7:26.1.0'
    compile 'com.squareup.retrofit:retrofit:1.9.0' // dependency for Retrofit
}

```

**Step 3:** Add Internet permission in your AndroidManifest.xml (<https://abhiandroid.com/ui/xml/>):

For network transactions we need to define Internet permission in our Manifest file.

Premium Project :  
Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andr  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/ei

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra



**Step 4:** Open res -> layout -> activity\_main.xml (https://abhiandroid.com/ui/xml/) (or) main.xml (https://abhiandroid.com/ui/xml/) and add following code:

In this step we created `RecyclerView` (<https://abhiandroid.com/materialdesign/recyclerview/>) in our XML file.

[illegible]

Radio Streaming  
Android App Pr  
Source Code  
(/sourcecode/ra




[illegible]

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

[illegible]

**Step 5:** Create a new class `SignUpResponse.java` (<https://abhiandroid.com/java/>) in which we have setter/getter method to get the data from API.

[illegible]

Premium Project : Code: 	Live TV Streaming Youtube Channel Android App Source Code (/sourcecode/livetv)
<u>Quiz Game Android App Project Source Code</u> (/sourcecode/quiz)	
Food Ordering Android App Project Source Code (/sourcecode/food)	
Ecommerce Store Android App Project Source Code (/sourcecode/ecom)	
Smart News And App Project Source Code (/sourcecode/news)	
Convert Website Advance Android App Project Source Code (/sourcecode/convert)	
City Guide Android App Project Source Code (/sourcecode/city)	
QR/Barcode Scanner Android App Project Source Code (/sourcecode/qr)	
Radio Streaming Android App Project Source Code (/sourcecode/radio)	

```

package com.abhiandroid;

import java.util.HashMap;
import java.util.Map;
import java.util.concurrent.TimeUnit;

public class Signup {

    private String username;
    private String password;
    private Integer useid;
    private Map<String, Object> additionalProperties = new HashMap<String, Object>();

    public String getUsername() {
        return username;
    }

    public void setUsername(String username) {
        this.username = username;
    }

    public String getPassword() {
        return password;
    }

    public void setPassword(String password) {
        this.password = password;
    }

    public Integer getUseid() {
        return useid;
    }

    public void setUseid(Integer useid) {
        this.useid = useid;
    }

    public Map<String, Object> getAdditionalProperties() {
        return this.additionalProperties;
    }

    public void setAdditionalProperties(Map<String, Object> value) {
        this.additionalProperties.put(name, value);
    }

}

```

**Step 6:** Create an interface and name it ApiInterface.java and paste the following code in it.

In this step we create a method for registration post request method to send the data using api to our server.

Premium Project !  
Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andr  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/ei

Smart News And  
App Project Sou  
Code  
(/sourcecode/ni

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

```

package com.abhiandroid.programming.retrofit;

import java.util.List;
import retrofit.Call;
import retrofit.Callback;
import retrofit.HttpError;
import retrofit.RetrofitError;
import retrofit.client.Response;
import retrofit2.Call;
import retrofit2.Callback;
import retrofit2.HttpError;
import retrofit2.Retrofit;
import retrofit2.converter.gson.GsonConverterFactory;

public interface ApiInterface {

    @FormUrlEncoded
    @POST("/retrofit/register")
    public void register(@Body User user, Callback<Response> callback);

    // In registration method, @Body used to set the keys and String data type is representing its a string type value and callback is used to get the response from api and it will set it in our POJO class.

}

```

**Step 7:** Create a new class `Register.java` and paste the following code in it.

**programming**

**Topics**

**Register & get**

**5510 Assured Bonus**

**5250 Welcome Bonus**

**REGISTER**

In this step we create a new class to set the RestAdapter. In this class getClient method returns the Api Interface class object which we are using in our MainActivity.

**programming**

**Topics**

**Register & get**

**5510 Assured Bonus**

**5250 Welcome Bonus**

**REGISTER**

Premium Project !  
Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andr  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Prc  
Source Code  
(/sourcecode/fc

ecommerce stor  
Android App Prc  
Source Code  
(/sourcecode/ei

Smart News Anc  
App Project Sou  
Code  
(/sourcecode/ni

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Prc  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Prc  
Source Code  
(/sourcecode/ra



Premium Project :
Code:

Live TV Streaming  
Youtube Channel  
Android App Source  
Code  
(/sourcecode/live)

Quiz Game Andr  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
on the data in  
Source Code

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
[\(/sourcecode/ci](#)

QR/Barcode Scanner  
Android App Project  
Source Code  
(/sourcecode/qr)

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

In this step Firstly we are getting reference of EditText and Button. After that we implement `setOnClickListener` event on Button and on click of sign up Button the data in EditText is validate and `setOnClickListener` implementing signup api to save the data in our database. After getting response from api we are displaying the message on the screen by using a Toast (<https://realandroid.com/programming/custom-toast-tutorial-example.html/>).

## Topics

Include Merge Tag

Shinichi Kudo

text/programming/splashscreen)

(/ui/analogue clock-  
The first (1930s) ...)

Linear Layout

florist@edn.ro

seekbar (7ur/seekbar)  
b/differt)ntdown-timer)

RelativeLayout/LinearLayout/

(Full Relative Payout)  
 (Full Dialog Interlistview)

f:/mj/teer/teerdesign/toolbar)

Chromometer)

Custom Alert Dialog

```

(//min/custom/alert/
  frameLayout(
    tabLayout-

```

(/dynamerlayout)

~~she/krishna/cher/bts/~~

(Adapted from *Adaptation and Survival*)

Phonetic layout  
(/u/adapter) new  
t/wid/proiect/did/eg)u)entres loc

Switzerland (see also [Switzerland](#)), central relations

Basic Swatcher  
HTML in Android layout

```
t/midnet)/design/perce
```

```
(/ui/togglebutton)
```

~~for a small number of days~~

```
package com.abhiandroid.tutorial;
import android.Manifest.permission;
import android.app.Activity;
import android.os.Bundle;
import android.support.design.widget.CardView;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import java.util.List;
import retrofit.Call;
import retrofit.Callback;
import retrofit.client.Response;
public class MainActivity extends AppCompatActivity {
    SignUpResponse signUpResponsesData;
    EditText email, password, name;
    Button signUp;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        // init the UI elements
        name = (EditText) findViewById(R.id.username);
        email = (EditText) findViewById(R.id.email);
        password = (EditText) findViewById(R.id.password);
        signUp = (Button) findViewById(R.id.signUp);
        // implement the onClick listener event on sign up button
        signUp.setOnClickListener(new View.OnClickListener() {
            @Override public void onClick(View view) {
                // validate the fields and call sign method to implement the api
                if (validate(name) && validate(email) && validate(password)) {
                    // call the sign up method
                }
            }
        });
    }
    private boolean validateField(EditText editText) {
        // check the value of the entered data in EditText and give error if its empty
        if (editText.getText().toString().trim().length() > 0) {
            return true;
        } else {
            return false;
        }
    }
}
```

Premium Project :	
Code:	

Live TV Streaming  
Youtube Channel  
Android App Source  
Code  
(/sourcecode/live)

Quiz Game Andr  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/e

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Scanner  
Android App Project  
Source Code  
(/sourcecode/qr)

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

```

editText.requestFocus();
return false;
}

private void signUp() {
    // display progress dialog
    final ProgressDialog progressDialog = new ProgressDialog(MainActivity.this);
    progressDialog.setCancelable(false); // set cancelable to false
    progressDialog.setMessage("Please Wait"); // set message
    progressDialog.show(); // show progress dialog

    // Api is a class in which we define a method getClient() that returns the API Interface class object
    // register for POST request type method in which we are sending our field's data
    Api.getClient().post(new RequestBody.Builder().add("email", email.getText().toString().trim(), "password", password.getText().toString().trim()).build()).enqueue(new Callback() {
        @Override public void onResponse(Call<SignUpResponse> call, Response<SignUpResponse> response) {
            // dismiss progress dialog
            progressDialog.dismiss();
            // display message from web api
            Toast.makeText(MainActivity.this, signUpResponse.getMessage(), Toast.LENGTH_SHORT).show();
        }

        @Override public void onFailure(Call<SignUpResponse> call, Throwable t) {
            // display error message
            Toast.makeText(MainActivity.this, t.getMessage(), Toast.LENGTH_LONG).show();
        }
    });
}

// Retrofit 1.9 Example for GET type Request In Android Studio:
// Below is the example in which we have implement the GET type request. In this we are displaying a list of items by using RecyclerView.
// Firstly we declare a RecyclerView in our XML file and then get the reference of it in our Activity.
// create POJO Class, API Interface, Rest Adapter (https://abhiandroid.com/ui/adapters/) and then implement the API in our onCreate method of MainActivity.
// After getting the success response from server we are calling our adapter (https://abhiandroid.com/ui/adapters/) to set the data in RecyclerView.
// Below you can download code, see final output and step by step explanation of example:
// Download Code (https://github.com/abhisheksaini4/RetrofitExample)

```

### Retrofit 1.9 Example for GET type Request In Android Studio:

Below is the example in which we have implement the GET type request. In this we are displaying a list of items by using RecyclerView (https://abhiandroid.com/ui/adapters/recyclerview/). Firstly we declare a RecyclerView in our XML file and then get the reference of it in our Activity. create POJO Class, API Interface, Rest Adapter (https://abhiandroid.com/ui/adapters/) and then implement the API in our onCreate method of MainActivity. After getting the success response from server we are calling our adapter (https://abhiandroid.com/ui/adapters/) to set the data in RecyclerView.

Below you can download code, see final output and step by step explanation of example:

Download Code (https://github.com/abhisheksaini4/RetrofitExample)

Premium Project !  
Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andri  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/ei

Smart News Andri  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andri  
App Project Sou  
Code

(/sourcecode/ci  
Recyclerview

After that we  
Android App Pro  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra



**Step 1:** Create A New Project And Name It RetrofitExample.

**Step 2:** Open Gradle Scripts and add Retrofit and RecyclerView Library dependency in it.

```
apply plugin: 'com.android.application'

android {
    compileSdkVersion 26
    defaultConfig {
        applicationId "com.abhiandroid.retrofitexample"
        minSdkVersion 15
        targetSdkVersion 26
        versionCode 1
        versionName "1.0"
        testInstrumentationRunner "android.support.test.runner.AndroidJUnitRunner"
    }
    buildTypes {
        release {
            minifyEnabled false
            proguardFiles getDefaultProguardFile('proguard-android.txt'), 'proguard-rules.pro'
        }
    }
}

dependencies {
    implementation 'com.android.support.constraint:constraint-layout:1.0.2'
    implementation 'com.android.support:appcompat-v7:26.1.0'
    compile 'com.android.support:recyclerview-v7:24.1.1' // dependency for RecyclerView
    compile 'com.squareup.retrofit2:retrofit:2.1.0' // dependency for Retrofit
}
```

**Step 3:** Add Internet Permission in the AndroidManifest.xml:

Premium Project !

Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andr  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/ei

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra



For network transactions we need to define Internet permission in our Manifest file.

```
<?xml version="1.0" encoding="utf-8"
><manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.abhiandroid.retrofitexample">

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

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportRtl="true"
        android:theme="@style/AppTheme">
        <activity
            android:name=".MainActivity"
            android:label="@string/app_name"
            android:launchMode="singleTask"
            android:screenOrientation="portrait"
            android:windowSoftInputMode="adjustResize">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>
```

**Step 4:** Open res -> Layout -> main.xml (or) main.xml and add following code:

In this step we create a new xml file for item row in which we creates two TextView (https://abhiandroid.com/ui/textview/) to show the data.

```
<?xml version="1.0" encoding="utf-8"
><RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context="com.abhiandroid.retrofitexample.MainActivity">

    <android.support.design.widget.TextInputLayout
        android:id="@+id/text_input_layout"
        android:layout_width="match_parent"
        android:layout_height="wrap_content">
        <android.support.design.widget.TextInputEditText
            android:id="@+id/text_input_edit_text"
            android:layout_width="match_parent"
            android:layout_height="wrap_content" />
    </android.support.design.widget.TextInputLayout>

    <android.support.design.widget.Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="10dp" />

</RelativeLayout>
```

**Step 5:** Create a new xml file for item row in which we creates two TextView (https://abhiandroid.com/ui/textview/) to show the data.

In this step we create a new xml file for item row in which we creates two TextView (https://abhiandroid.com/ui/textview/) to show the data.

```
<?xml version="1.0" encoding="utf-8"
><LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    tools:context="com.abhiandroid.retrofitexample.MainActivity">

    <android.support.design.widget.TextInputLayout
        android:id="@+id/text_input_layout"
        android:layout_width="match_parent"
        android:layout_height="wrap_content">
        <android.support.design.widget.TextInputEditText
            android:id="@+id/text_input_edit_text"
            android:layout_width="match_parent"
            android:layout_height="wrap_content" />
    </android.support.design.widget.TextInputLayout>

    <android.support.design.widget.Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="10dp" />

</LinearLayout>
```

Premium Project :

Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andr  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/ei

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

```

<?xml version="1.0" encoding="utf-8"
<LinearLayout android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:padding="10dp"
    android:gravity="center"
    android:background="@color/white"
    android:orientation="vertical"
    xmlns:android="http://schemas.android.com/apk/res/android">
    <!-- create TextView and email id -->
    <TextView
        android:id="@+id/textview"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Enter Email"
        android:textColor="@color/colorPrimary"
        android:textSize="17sp"
        android:padding="10dp"
    >
    <TextView
        android:id="@+id/email"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Email"
        android:textColor="@color/colorPrimary"
        android:textSize="17sp"
        android:padding="10dp"
    >
    <View
        android:id="@+id/view"
        android:layout_width="match_parent"
        android:layout_height="100dp"
        android:background="@color/white"
        android:padding="10dp"
    >
</LinearLayout>

```

**Step 6:** Create a new class `ApiResponse.java` in which we have setter/getter method to get the data from API.

Premium Project !  
Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andr  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/ei

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

```

package com.abhiandroid;

import java.util.HashMap;
import java.util.Map;

public class User {
    // POJO class to store data from web api
    private String id;
    private String name;
    private String email;
    private String password;
    private String status;
    private String role;
    private Map<String, Object> properties = new HashMap<String, Object>();

    public String getId() {
        return id;
    }

    public void setId(String id) {
        this.id = id;
    }

    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    public String getEmail() {
        return email;
    }

    public void setEmail(String email) {
        this.email = email;
    }

    public String getPassword() {
        return password;
    }

    public void setPassword(String password) {
        this.password = password;
    }

    public String getStatus() {
        return status;
    }

    public void setStatus(String status) {
        this.status = status;
    }

    public String getRole() {
        return role;
    }

    public void setRole(String role) {
        this.role = role;
    }

    public Map<String, Object> getProperties() {
        return properties;
    }

    public void setProperties(Map<String, Object> properties) {
        this.properties = properties;
    }
}

```

Premium Project !  
Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andr  
App Project Sou  
Code  
(/sourcecode/q

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/e

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w


City Guide Andr  
App Project Sou  
Code  
(/sourcecode/c

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/q

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

[illegible]

In this step we created `UserController` in which we have `getUserList` method to get the data from web api.

Premium Project : Code: 	Live TV Streaming Youtube Channel Android App Source Code (/sourcecode/livetv)
<u>Quiz Game Android App Project Source Code</u> (/sourcecode/quiz)	
Food Ordering Android App Project Source Code (/sourcecode/food)	
Ecommerce Store Android App Project Source Code (/sourcecode/ecom)	
Smart News And App Project Source Code (/sourcecode/news)	
Convert Website Advance Android App Project Source Code (/sourcecode/convert)	
City Guide Android App Project Source Code (/sourcecode/city)	
QR/Barcode Scanner Android App Project Source Code (/sourcecode/qr)	
Radio Streaming Android App Project Source Code (/sourcecode/radio)	







[illegible]

Copy the `MyTestApp` class from `Chapter10` into `Chapter11` and add the following code.

<pre> // ViewHolder class class ViewHolder {     TextView textView;     ImageView imageView; }  // Custom Adapter class class CustomAdapter extends RecyclerView.Adapter&lt;ViewHolder&gt; {     // Constructor     CustomAdapter(List&lt;User&gt; users) {         this.users = users;     }      // onCreateViewHolder method     @Override     public ViewHolder onCreateViewHolder(ViewGroup parent) {         // Inflate the layout for the ViewHolder         LayoutInflater inflater = LayoutInflater.from(parent.getContext());         ViewHolder holder = new ViewHolder(inflater.inflate(R.layout.item_user, parent, false));         return holder;     }      // onBindViewHolder method     @Override     public void onBindViewHolder(ViewHolder holder, int position) {         // Get the user object from the list         User user = users.get(position);          // Set the user name to the TextView         holder.textView.setText(user.getName());          // Set the user profile picture to the ImageView         Picasso.get().load(user.getProfilePicture()).into(holder.imageView);     }      // getItemCount method     @Override     public int getItemCount() {         return users.size();     } } </pre>	<p>ViewHolder class and extends RecyclerView.Adapter class with View Holder in it. After that we implement the overridden methods and create a CustomAdapter class. In this custom Adapter two methods are more important first is onCreateViewHolder in which we inflate the layout for the ViewHolder and other is onBindViewHolder in which we set the data in the view's with the help of View Holder. Finally we implement the getItemCount method. In the onCreateViewHolder method we display the name of the user with the help of Toast (<a href="https://abhiandroid.com/programming/custom-toast-tutorial/">https://abhiandroid.com/programming/custom-toast-tutorial/</a>) and in the onBindViewHolder method we display the user's profile picture with the help of Picasso (<a href="https://abhiandroid.com/programming/picasso/">https://abhiandroid.com/programming/picasso/</a>).</p>
---	---

Premium Project : Code:	
Live TV Streaming Youtube Channel Android App Sou Code (/sourcecode/li	
<u>Quiz Game Andr</u> <u>App Project Sou</u> <u>Code</u> (/sourcecode/qu	
Food Ordering Android App Pro Source Code (/sourcecode/fo	
is and create a Ecommerce Store Layout Item.xml Android App Pro On Click Listener Source Code (/sourcecode/e	
Smart News And App Project Sou Code (/sourcecode/n	
Convert Website Advance Androi App Project Sou Code (/sourcecode/w	
City Guide Andr App Project Sou Code (/sourcecode/ci	
QR/Barcode Sca Android App Pro Source Code (/sourcecode/qu	
Radio Streaming Android App Pro Source Code (/sourcecode/ra	





```

    }

    class UsersViewHolder extends RecyclerView.ViewHolder {
        // init the textView
        TextView name;
        TextView email;

        public UsersViewHolder(View itemView) {
            super(itemView);
            // get the textView of item view's
            name = itemView.findViewById(R.id.name);
            email = (TextView) itemView.findViewById(R.id.email);
        }
    }
}

```

### Difference between Retrofit 1.9 and 2.x in android:

- 1. Gradle Dependency:** In Retrofit 1.9 version we need to import the HTTP client but in 2.x OKHttp dependency is already defined.
- 2. RestAdapter and RestAdapter.Builder:** In Retrofit 1.9 we use RestAdapter but in 2.x we use Retrofit. The builder pattern using these two is still same.

Retrofit 1.9

```
RestAdapter.Builder builder = new RestAdapter.Builder();
```

Retrofit 2.x

```
Retrofit.Builder builder = new Retrofit.Builder();
```

### 3. setEndpoint and baseUrl method

In Retrofit 1.9, the setEndpoint(String url) method defines the API's base url but in 2.x baseUrl(API\_BASE\_URL) is used to set the base url.

- 4. Dynamic Urls** – One of the best feature in retrofit 2.x is dynamic urls. Lets take a use-case, we need to download file from internet source and files will have different urls. The files are either stored on our server or somewhere else on the web. So the main problem in 1.9 is we need to create RestAdapter with base url. If we wanted to load a file from dynamic urls, for implementing it we can leave the HTTP verb annotation empty and use the @url annotation as a parameter of method. Retrofit will automatically map the provided url string and do the job for us.

```

@GET
public Call<File> getFile(String url);

```

- 5. Synchronous & Asynchronous Requests** – In 1.9 synchronous methods required return type. In contrast asynchronous method required a generic callback as the last method parameter. In 2.x there is no differentiation for synchronous and asynchronous requests. Requests are now wrapped into generic call class using the desired response type.

Premium Project :  
Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andr  
App Project Sou  
Code  
(/sourcecode/q

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/e

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/q

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

**6. Cancel Requests** [Cancel Requests](#) There was no way to cancel the requests even if they weren't executed yet but in 2.x we can cancel requests if Http scheduler didn't executed it already. [Cancel Requests](#)

**7. Default Converter** [Default Converter](#) GSON is default integrated for JSON converter but in 2.x we don't have any default converter for JSON. We need to define GSON converter dependency in our project. We can use the following gradle import to define the sibling module:

```
compile 'com.squareup.retrofit2:converter-gson:2.1.0'
```

## Steps to Integrate Retrofit 2.x in Our Android Studio Project

Here are the main steps to integrate Retrofit in our project.

**1. Add dependencies** [Add dependencies](#) In the build.gradle file in app module.

```
// Retrofit
compile 'com.squareup.retrofit2:retrofit:2.1.0'
```

```
// JSON Parsing
compile 'com.google.code.gson:gson:2.8.5'
```

```
compile 'com.squareup.retrofit2:converter-gson:2.1.0'
```

**2. Add Internet Permission** [Add Internet Permission](#) In the AndroidManifest.xml: For network transactions we need to define Internet permission in our Manifest file.

```
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.abhiandroid.myapplication" >

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

    <application>
```

**3. POJO/Model Class** [POJO/Model Class](#) When we receive response we need create POJO class that automatically parse the JSON data using Gson in background. We just need to create this POJO class. For creating POJO class first method is defining each and every variable by ourself and other best and fast method is using <http://www.jsonschema2pojo.org/> platform. By using this online platform we easily convert your JSON response to POJO class, for this we need to copy our JSON response and paste it in jsonschema2pojo and it will create setter getter methods as per our requirement.

Sample POJO class:

```
import java.util.List;
import retrofit2.Call;
import retrofit2.http.GET;

interface ApiService {
    @GET("api/endpoint")
    Call<ApiResponse> getData();
}

class ApiResponse {
    // Your POJO fields here
}
```

Premium Project !  
Code:  
Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li  
  
Quiz Game Andri  
App Project Sou  
Code  
(/sourcecode/qi  
  
Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc  
  
Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/ei  
  
Smart News And  
App Project Sou  
Code  
(/sourcecode/n  
  
Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w  
  
QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qi  
  
Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

```

public class SampleAppCompatActivity {
    private int usedColor;
    private String appName;

    public int getUsedColor() {
        return usedColor;
    }

    public String getAppName() {
        return appName;
    }
}

```

4. Add downloaded `POLIO` class in your project (<https://github.com/programmer-retrofit>)

5. API Interface : Now we need to create an Interface to define our different methods that will be used for network transactions. Here is the sample of API Interface

```

// For POST request
public interface ApiService {
    // For POST request
    @FormUrlEncoded
    @POST("/retrofit/sign-up")
    Call<SignUpResponse> signUp(@Field("name") String name,
                               @Field("email") String email);
}

// UserListResponse is a POJO class which contains user details
// For GET request
@GET("/retrofit/get-users")
Call<UserListResponse> getUsers();

```

6. Creating the Retrofit instance for network requests with Retrofit we need to create instance using retrofit builder class and then configure it with base URL. Suppose we have to implement an API that returns the list of products. We need to build retrofit instance, setting base url and create connection between our retrofit instance and API Interface. It's better to create a class that will have a method that create the connection and then returns the API Interface object. You can create this Retrofit instance where you want to implement API but it's better to create a common class/method and use it where you want.

Premium Project :	
Code:	

Live TV Streaming  
Youtube Channel  
Android App Source  
Code  
(/sourcecode/live)

Quiz Game Android  
App Project Source  
Code  
(/sourcecode/android)

Food Ordering  
Android App Pro  
Source Code

Ecommerce Store  
Android App Pro  
Source Code  
(/sourcecode/e

Smart News And  
App Project Sou  
hiCode receives t  
(/sourcecode/ne

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Scanner. Suppose we  
Android App Project. For this, its  
source code is available at  
<https://sourcecode4u.com>

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

```

public class ApiClient {
    private static Retrofit retrofit = null;

    public static Retrofit getClient() {
        // change base url
        if (retrofit == null) {
            retrofit = new Retrofit.Builder()
                .baseUrl("https://api.abhiandroid.com/")
                .addConverterFactory(GsonConverterFactory.create())
                .build();
        }

        // Creating an API interface
        ApiInterface apiInterface = retrofit.create(ApiInterface.class);

        return apiInterface;
    }
}

```

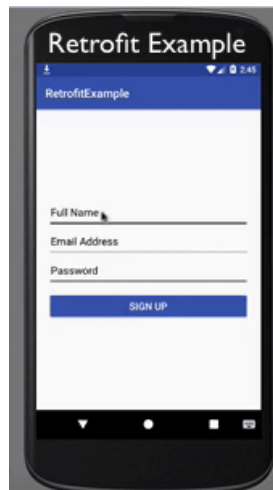
### Example Of Retrofit In Android Studio:

Below is the example of Retrofit in which we have implemented the POST type request. In this we are implementing sign up api. In this example firstly we create a sign up page design with 3 EditText (Full Name, email and password) and one sign up Button. After that in our MainActivity we are getting our EditText and Button and on click of sign up Button the data in EditText is validated and then we are implementing signup api to save the data in our database. After getting response from api we are displaying the message on the screen by using a Toast.

### Programming

Below you can download the source code and step by step explanation of example:

Download Code (<https://github.com/abhisheksaini4/RetrofitExample>)



**Step 1:** Create A New Project In Android Studio With Name RetrofitExample.

Premium Project !  
Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andri  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
create sign up  
Source Code  
(/sourcecode/ei

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andri  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra



**Step 2:** Open Gradle Scripts and add Retrofit and RecyclerView Library dependency in it.

```

apply plugin: 'com.android.support'
android {
    compileSdkVersion 28
    defaultConfig {
        applicationId "com.abhiandroid.retrofitexample"
        minSdkVersion 16
        targetSdkVersion 28
        versionCode 1
        versionName "1.0"
        testInstrumentationRunner "android.support.test.runner.AndroidJUnitRunner"
    }
    buildTypes {
        release {
            minifyEnabled false
            proguardFiles getDefaultProguardFile('proguard-android.txt'), 'proguard-rules.pro'
        }
    }
}

dependencies {
    implementation fileTree(include: ['*.jar'], dir: 'libs')
    implementation 'com.android.support:appcompat-v7:28.1.0'
    // dependency for retrofit
    compile 'com.squareup.retrofit2:retrofit:2.1.0'
    // JSON Parsing in Retrofit
    compile 'com.google.code.gson:gson:2.5.1'
    compile 'com.squareup.retrofit2:converter-gson:2.1.0'
    compile 'com.github.abhiandroid:splashscreen'
}

```

**Step 3:** Add Internet Permission in the AndroidManifest.xml:

For network transactions we need to define Internet permission in our Manifest file.

Premium Project :

Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andr  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/ei

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

**Step 4:** Open res -> layout -> activity\_main.xml (or) main.xml and add following code:

In this step we created **Recycling** in our XML file.

[illegible]

Radio Streaming  
Android App Pr  
Source Code  
(/sourcecode/ra

**ഇന്റർനാഷണൽ കോളേജ് ഓഫ് ഹ്യൂമൻ റിസോഴ്സ്**

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

```

<EditText android:id="@+id/password"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:background="@drawable/rounded_rect"
    android:padding="10dp"
    android:inputType="textPassword"
    android:imeOptions="actionDone"
    android:hint="Password"
    android:layout_marginBottom="15dp"
    android:paddingLeft="10dp"
    android:paddingRight="10dp"
    android:paddingTop="10dp"
    android:singleLine="true"
    android:textColor="@color/colorPrimary"
    android:textColorHint="@color/colorPrimary"
    android:textSize="17sp" />

<Button android:id="@+id/signin"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:background="@color/colorPrimary"
    android:padding="10dp"
    android:text="Sign In"
    android:textColor="@color/white"
    android:textSize="17sp" />

</LinearLayout>

</RelativeLayout>

```

**Step 5:** Create a new class `ApiResponse.java` in which we have setter/getter method to get the data from API.

```

// ApiResponse.java
package com.abhiandroid.programming;

import android.os.Bundle;

public class ApiResponse {
    private Bundle data;

    public ApiResponse(Bundle data) {
        this.data = data;
    }

    public Bundle getData() {
        return data;
    }

    public void setData(Bundle data) {
        this.data = data;
    }
}

```

Premium Project :  
Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andri  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/ei

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andri  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra



In this step we create an interface in which we have registration post request method to send the data using api to our server.

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

In this step we created `ApiInterface` to set the Retrofit. In this class `getClient` method returns the Api Interface class object which we are using in our MainActivity.

[illegible]

Premium Project : Code :	
Live TV Streaming Youtube Channel Android App Source Code (/sourcecode/li	
<u>Quiz Game Andri</u> <u>App Project Sou</u> <u>Code</u> (/sourcecode/qi	
Food Ordering Android App Pro Source Code (/sourcecode/fc	
Online from api c Ecommerce Store Android App Pro Source Code ▶ (/sourcecode/eu	
Smart News And App Project Sou Code (/sourcecode/n	
Convert Website Advance Androi App Project Sou Code (/sourcecode/w	
City Guide Andr App Project Sou Code (/sourcecode/ci	
QR/Barcode Sca Android App Pro Source Code (/sourcecode/qi	
Radio Streaming Android App Pro Source Code (/sourcecode/ra	

```

package com.abhiandroid.programming.retrofit;

import retrofit2.Call;
import retrofit2.Callback;
import retrofit2.Response;
import retrofit2.Retrofit;
import retrofit2.converter.gson.GsonConverterFactory;

public class Api {
    private static Retrofit retrofit = null;

    public static Retrofit getRetrofit() {
        retrofit = new Retrofit.Builder()
            .baseUrl("https://api.abhiandroid.com/")
            .addConverterFactory(GsonConverterFactory.create())
            .build();

        return retrofit;
    }

    //Creating an interface
    public interface ApiInterface {
        //Return the ApiInterface object
    }
}

```

**Step 8:** Now open `app > src > main > package` -> `MainActivity.java` and add the below code.

In this step Firstly you are getting reference of `EditText` and `Button`. After that we implement `setOnClickListener` event on `Button` and on click of sign up `Button` the data in `EditText` is validate and we are implementing sign up api to save the data in our database. After getting response from api we are displaying the message by using a `Toast`.

```

package com.abhiandroid.programming.retrofit;

import android.os.Bundle;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

import retrofit2.Call;
import retrofit2.Callback;
import retrofit2.Response;

import com.abhiandroid.programming.retrofit.Api;
import com.abhiandroid.programming.retrofit.ApiInterface;

public class MainActivity extends AppCompatActivity {

    EditText editText;
    Button button;

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

        editText = findViewById(R.id.editText);
        button = findViewById(R.id.button);

        button.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick() {
                // TODO: Implement your API call logic here
            }
        });
    }
}

```

Premium Project !  
Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andr  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/ei

Smart News Anc  
App Project Sou  
Code  
(/sourcecode/m

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

```

package com.abhiandroid.com.programming.volley;

import android.Manifest.permission.WRITE_EXTERNAL_STORAGE;
import android.app.Activity;
import android.app.AlertDialog;
import android.os.Bundle;
import android.support.design.widget.Snackbar;
import android.support.design.widget.TextInputLayout;
import android.text.TextUtils;
import android.util.Log;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import retrofit2.Call;
import retrofit2.Callback;
import retrofit2.Response;

public class MainActivity extends AppCompatActivity {

    SignUpResponse signUpResponse;
    EditText emailId, password, name;
    Button signUp;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        // init the edittext and button
        name = (EditText) findViewById(R.id.username);
        emailId = (EditText) findViewById(R.id.email);
        password = (EditText) findViewById(R.id.password);
        signUp = (Button) findViewById(R.id.signUp);
        // implement the click listener event on sign up button
        signUp.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                // validate the fields and call sign method to implement the api
                if (validate(name) && validateEmail() && validate(password)) {
                    // valid fields
                    // call the api
                    // show toast message
                } else {
                    // invalid fields
                    // show toast message
                }
            }
        });
    }

    private boolean validate(String email) {
        String email = emailId.getText().toString().trim();
        BasicAdapter basicAdapter = new BasicAdapter(emailId);
        if (email.isEmpty() || !TextUtils.isDigitsOnly(email)) {
            Toast.makeText(this, "Email is not valid.",
                Toast.LENGTH_SHORT).show();
        }
    }
}

```

Premium Project :  
Code:

Live TV Streaming  
Youtube Channel  
Android App Source  
Code  
(/sourcecode/live)

Quiz Game Andr  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Store  
Android App Project  
Source Code  
(/sourcecode/ecommerce)

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Scanner  
Android App Project  
Source Code  
(/sourcecode/qr)

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra



```

email = RequestBody.create(MediaType.parse("text/plain"), email);
return false;
}

@Override
public void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    return true;
}

private static boolean isValidEmail(String email) {
    return !TextUtils.isEmpty(email) && android.util.Patterns.EMAIL_ADDRESS.matcher(email).matches();
}

private boolean validateEditText(EditTextView editText) {
    // check the email address in EditText and give error if its empty
    if (TextUtils.isEmpty(editText.getText().toString().trim().length() > 0)) {
        return false;
    }
    editText.setText("");
    return false;
}

private void showDialog() {
    // display a dialog
    final ProgressDialog progressDialog = new ProgressDialog(MainActivity.this);
    progressDialog.setMessage("Please wait");
    progressDialog.show();
}

// Api is a class that we define a method getClient() that returns the API Interface class object
// enqueue is a method in Retrofit class that returns a Response object
(Api.getClient().enqueue(new Callback<SignUpResponse>() {
    @Override() {
        public void onResponse(Call<SignUpResponse> call, Response<SignUpResponse> response) {
            // get the response body
            Toast.makeText(getApplicationContext(), response.body().getMessage(), Toast.LENGTH_SHORT).show();
        }
    }
}));
}

@Override
public void onCreate(Call<SignUpResponse> call, Throwable t) {
    // get the response body
    Toast.makeText(getApplicationContext(), t.getMessage(), Toast.LENGTH_SHORT).show();
}
}

```

Premium Project :  
Code:

Live TV Streaming  
Youtube Channel  
Android App Source  
Code  
(/sourcecode/live)

Quiz Game Andr  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/e

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Android  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
[\(/sourcecode/ci](#)

QR/Barcode Scanner  
Android App Project  
Source Code  
(/sourcecode/qr)

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

## Example Of Retrofit Example In Android Studio:

Below is the example of Retrofit Example In Android Studio which we have implemented the GET type request. In this we are displaying a list of items by using RecyclerView. Firstly we declare a RecyclerView in our XML file and then get the reference of it in our Activity. After that we create POJO Class, API Interface, Retrofit builder and then implement the API in our onCreate method of MainActivity. After getting the success response from server we are calling our adapter to set the data in RecyclerView.

Download Code (<https://github.com/abhisheksaini4/RetrofitExample>)



**Step 1:** Create A New Project And Name It RetrofitExample.

**Step 2:** Open Gradle Script & build.gradle and add Retrofit and RecyclerView Library dependency in it.

Premium Project !  
Code:

Live TV Streamir  
Youtube Channe  
Android App So  
Code  
(/sourcecode/li

Quiz Game And  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/ei

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

```

apply plugin: 'com.android.application'

android {
    compileSdkVersion 26
    defaultConfig {
        applicationId "com.abhiandroid.retrofitexample"
        minSdkVersion 15
        targetSdkVersion 26
        versionCode 1
        versionName "1.0"
        testInstrumentationRunner "android.support.test.runner.AndroidJUnitRunner"
    }
    buildTypes {
        release {
            minifyEnabled false
            proguardFiles getDefaultProguardFile('proguard-android.txt'), 'proguard-rules.pro'
        }
    }
}

dependencies {
    implementation fileTree(dir: 'libs', include: ['*.jar'])
    implementation 'com.android.support:appcompat-v7:26.1.0'
    // dependency for retrofit
    compile 'com.squareup.retrofit2:retrofit:2.1.0'
    // JSON Parsing
    compile 'com.google.code.gson:gson:2.5.1'
    compile 'com.squareup.okhttp3:okhttp:2.7.5'
    // dependency for Picasso
    compile 'com.squareup.picasso:picasso:2.7.1'
    compile 'com.android.support:recyclerview-v7:24.1.1'
}

```

**Step 3:** Add Internet Permission in the AndroidManifest.xml:

For network transactions we need to define Internet permission in our Manifest file.

Premium Project :  
Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andri  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/ei

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andri  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

**Step 4:** Open res -> AndroidManifest.xml (or) main.xml and add following code:

In this step we created **Recycling** in our XML file.

**Step 5:** Create a new XML file `user_list_items.xml` for item of RecyclerView and paste the following code in it.

In this step we create a new xml file for item row in which we creates two TextView (<https://abhiandroid.com/ui/textview/>) to show the data.

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra



**Step 6:** Create a new `Response.java` in which we have setter/getter method to get the data from API.

Radio Streaming  
Android App Pr  
Source Code  
(/sourcecode/ra

```

package com.abhiandroid;

import java.util.HashMap;
import java.util.Map;

public class UserLogin {

    // POJO class to receive data from web api
    private String id;
    private String name;
    private String email;
    private String password;
    private String status;
    private String forget_password;
    private Map<String, Object> properties = new HashMap<String, Object>();

    public String getId() {
        return id;
    }

    public void setId(String id) {
        this.id = id;
    }

    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    public String getEmail() {
        return email;
    }

    public void setEmail(String email) {
        this.email = email;
    }

    public String getPassword() {
        return password;
    }

    public void setPassword(String password) {
        this.password = password;
    }

    public String getStatus() {
        return status;
    }

    public void setStatus(String status) {
        this.status = status;
    }

    public String getForget_password() {
        return forget_password;
    }

    public void setForget_password(String forget_password) {
        this.forget_password = forget_password;
    }

    public Map<String, Object> getProperties() {
        return properties;
    }

    public void setProperties(Map<String, Object> properties) {
        this.properties = properties;
    }
}

```

Premium Project !  
Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andri  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/ei

Smart News And  
App Project Sou  
Code  
(/sourcecode/ni

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andri  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

```

return com_code;
}

public void setCom_code(String com_code) {
this.com_code = com_code;
}

public String getStatus() {
return status;
}

public void setStatus(String status) {
this.status = status;
}

public String getForgot() {
return forgot;
}

public void setForgot(String forgot) {
this.forgot = forgot;
}

public Map<String, String> getAdditionalProperties() {
return this.additionalProperties;
}

public void setAdditionalProperties(Map<String, String> additionalProperties) {
this.additionalProperties = additionalProperties;
}
}

```

**Step 7:** Create an IntelliJ file named `ApplPrinter.java` and paste the following code in it.

In this step we created `UserService` in which we have `getUserList` method to get the data from web api.

[illegible]

Premium Project : Code:	
Live TV Streaming Youtube Channel Android App Source Code (/sourcecode/li	
<u>Quiz Game Andri</u> <u>App Project Sou</u> <u>Code</u> (/sourcecode/qi	
Food Ordering Android App Pro Source Code (/sourcecode/fc	
Ecommerce Stor Android App Pro Source Code (/sourcecode/ei	
Smart News And App Project Sou Code (/sourcecode/n	
Convert Website Advance Androi App Project Sou Code (/sourcecode/w	
City Guide Andr App Project Sou Code (/sourcecode/ci	
QR/Barcode Sca Android App Pro Source Code (/sourcecode/qi	
Radio Streaming Android App Pro Source Code (/sourcecode/ra	

```

package com.abhiandroid.retrofitexample;

import java.util.List;
import retrofit2.Call;
import retrofit2.http.GET;

public interface ApiInterface {
    @GET("/retrofitexample/users")
    Call<List<UserListResponse>> getUsers();
}

// UserListResponse is a class to get the data from API, we use List<UserListResponse> in callback because the data in our API is starting from JSONArray
}

```

**Step 8:** Create a new class `ApiClient` and paste the following code in it.

In this step we create a new class to set the Retrofit builder. In this class `getClient` method returns the Api Interface class object which we are using in our `MainActivity`.

```

package com.abhiandroid.retrofitexample;

import retrofit2.Retrofit;
import retrofit2.converter.gson.GsonConverterFactory;

/**
 * Created by Abhi Android on 2019/03/01.
 */
public class Api {
    private static Retrofit retrofit = null;

    public static Retrofit getClient() {
        // change the url here
        if (retrofit == null) {
            retrofit = new Retrofit.Builder()
                    .baseUrl("http://www.abhiandroid.in/")
                    .addConverterFactory(GsonConverterFactory.create())
                    .build();
        }

        //Creating an ApiInterface object
        ApiInterface apiInterface = retrofit.create(ApiInterface.class);

        return apiInterface;
    }
}

```

**Step 9:** Now open `app > java > package > MainActivity.java` and add the below code.

Premium Project !  
Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andr  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/ei

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra





Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

[illegible]

Premium Project :  
Code:

Live TV Streamir  
Youtube Channe  
Android App So  
Code  
(/sourcecode/li

[Quiz Game Android App Project Source Code](#)  
(/sourcecode/q)

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/e

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
[\(/sourcecode/ci](#)

QR/Barcode Scanner  
Android App Project  
Source Code  
(/sourcecode/qr)

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

[illegible]

Put `libcrypto.dylib` inside package and add the following code.

Custom Adapter class and extends RecyclerView.Adapter class with View Holder in it. After that we implement the overridden methods and create a ViewHolder class. In this custom Adapter two methods are more important first is onCreateViewHolder in which we inflate the layout item.xml and onBindViewHolder is onBindViewHolder in which we set the data in the view's with the help of View Holder. Finally we implement the setOnClickListener to display the name of the user with the help of Toast.

Full Fragmentation  
Data Allocator  
Flow-Based Scheduler  
Scalable New Queues

# Programming

## Topics

Include Merge Tag

Salpichorda merge-  
rtae in Android  
text programming/splashscreen)

(/ui/analogue-clock-

Fluorine (F) is a gas.

<http://materialdesign/text>

Source: *Journal of the American Statistical Association*, 1997, Vol. 92, No. 439, p. 1020. Copyright 1997 by the American Statistical Association.

6/diff(60)ntdown-timer)

Expandable listView

Full relative layout  
 Full dialog (interlistview)

4/mi/toolbar/sign/toolbar)

Chromometer (out)

Custom Alert Dia

file:///C:/Program%20Files/Internet%20Explorer/privacystatement.html

1. What is the purpose of the study?  
 2. What are the research objectives?  
 3. What is the scope of the study?  
 4. What is the significance of the study?  
 5. What are the limitations of the study?  
 6. What is the conclusion of the study?  
 7. What are the recommendations of the study?  
 8. What are the future research directions?  
 9. What are the acknowledgments?  
 10. What are the references?  
 11. What are the appendices?  
 12. What are the footnotes?  
 13. What are the endnotes?  
 14. What are the glossary?  
 15. What are the index?  
 16. What are the bibliography?  
 17. What are the list of figures?  
 18. What are the list of tables?  
 19. What are the list of equations?  
 20. What are the list of symbols?  
 21. What are the list of abbreviations?  
 22. What are the list of acronyms?  
 23. What are the list of initialisms?  
 24. What are the list of contractions?  
 25. What are the list of colloquialisms?  
 26. What are the list of idioms?  
 27. What are the list of proverbs?  
 28. What are the list of sayings?  
 29. What are the list of maxims?  
 30. What are the list of aphorisms?  
 31. What are the list of epigrams?  
 32. What are the list of epigrams?  
 33. What are the list of epigrams?  
 34. What are the list of epigrams?  
 35. What are the list of epigrams?  
 36. What are the list of epigrams?  
 37. What are the list of epigrams?  
 38. What are the list of epigrams?  
 39. What are the list of epigrams?  
 40. What are the list of epigrams?  
 41. What are the list of epigrams?  
 42. What are the list of epigrams?  
 43. What are the list of epigrams?  
 44. What are the list of epigrams?  
 45. What are the list of epigrams?  
 46. What are the list of epigrams?  
 47. What are the list of epigrams?  
 48. What are the list of epigrams?  
 49. What are the list of epigrams?  
 50. What are the list of epigrams?  
 51. What are the list of epigrams?  
 52. What are the list of epigrams?  
 53. What are the list of epigrams?  
 54. What are the list of epigrams?  
 55. What are the list of epigrams?  
 56. What are the list of epigrams?  
 57. What are the list of epigrams?  
 58. What are the list of epigrams?  
 59. What are the list of epigrams?  
 60. What are the list of epigrams?  
 61. What are the list of epigrams?  
 62. What are the list of epigrams?  
 63. What are the list of epigrams?  
 64. What are the list of epigrams?  
 65. What are the list of epigrams?  
 66. What are the list of epigrams?  
 67. What are the list of epigrams?  
 68. What are the list of epigrams?  
 69. What are the list of epigrams?  
 70. What are the list of epigrams?  
 71. What are the list of epigrams?  
 72. What are the list of epigrams?  
 73. What are the list of epigrams?  
 74. What are the list of epigrams?  
 75. What are the list of epigrams?  
 76. What are the list of epigrams?  
 77. What are the list of epigrams?  
 78. What are the list of epigrams?  
 79. What are the list of epigrams?  
 80. What are the list of epigrams?  
 81. What are the list of epigrams?  
 82. What are the list of epigrams?  
 83. What are the list of epigrams?  
 84. What are the list of epigrams?  
 85. What are the list of epigrams?  
 86. What are the list of epigrams?  
 87. What are the list of epigrams?  
 88. What are the list of epigrams?  
 89. What are the list of epigrams?  
 90. What are the list of epigrams?  
 91. What are the list of epigrams?  
 92. What are the list of epigrams?  
 93. What are the list of epigrams?  
 94. What are the list of epigrams?  
 95. What are the list of epigrams?  
 96. What are the list of epigrams?  
 97. What are the list of epigrams?  
 98. What are the list of epigrams?  
 99. What are the list of epigrams?  
 100. What are the list of epigrams?

```
(/dlyParameterLayout)
end {void}std::die<html>
```

$\frac{1}{2} \left( \frac{1}{2} + \frac{1}{2} \right) = 1$

Adapted from Oxford  
Press Publishing layout

7/11/2017  
1/11/2017

SWITCH (ON/OFF) MODE  
5/1/2/3/4/5

Basic Android  
BETA4 for Android out(7) 41/ Base adapter  
 41/ (width) discards /

For example, if

(/ui/togglebutton)

programming/retrofit

gramming/evaluation

Premium Project :	
Code:	

Live TV Streaming  
Youtube Channel  
Android App Source  
Code  
(/sourcecode/live)

Quiz Game Android App Project Source Code  
(/sourcecode/quiz-game-android-app-project-source-code)

Food Ordering  
Android App  
Source Code  
layout item xml  
(/sourcecode/fo  
OnClickListener

Ecommerce Store  
Android App Pro  
Source Code  
(/sourcecode/e

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
[\(/sourcecode/ci](#)

QR/Barcode Scanner  
Android App Project  
Source Code  
(/sourcecode/qr)

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

```
package com.abhiyan.simplerecipe;

import android.content.Context;
import android.support.design.widget.Snackbar;
import android.support.design.widget.TextInputLayout;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.BaseAdapter;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ImageView;
import android.widget.ListView;
import android.widget.TextView;
import android.widget.Toast;

import java.util.List;

public class UsersAdapter extends RecyclerView.Adapter<UsersAdapter.UsersViewHolder> {

    Context context;
    List<UserListResponse> userListResponseData;

    public UsersAdapter(Context context, List<UserListResponse> userListResponseData) {
        this.context = context;
        this.userListResponseData = userListResponseData;
    }

    @Override
    public UsersViewHolder onCreateViewHolder(ViewGroup parent, int viewType) {
        View view = LayoutInflater.from(context).inflate(R.layout.users_list_items, null);
        UsersViewHolder viewHolder = new UsersViewHolder(view);
        return viewHolder;
    }

    @Override
    public void onBindViewHolder(UsersViewHolder holder, final int position) {
        // set the name
        holder.name.setText(userListResponseData.get(position).getName());
        holder.email.setText(userListResponseData.get(position).getEmail());
        // implement sendOnClick listener on itemView
        holder.itemView.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Toast.makeText(context, userListResponseData.get(position).getName(), Toast.LENGTH_SHORT).show();
            }
        });
    }

    @Override
    public int getItemCount() {
        return userListResponseData.size(); // size of the List items
    }
}
```

Premium Project :  
Code:

Live TV Streaming  
Youtube Channel  
Android App Source  
Code  
(/sourcecode/live)

Quiz Game Andr  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/e

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Android  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Scanner  
Android App Project  
Source Code  
(/sourcecode/qr)

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra



```

}

class UsersViewHolder extends RecyclerView.ViewHolder {
    // init the view
    TextView name;
    TextView email;

    public UsersViewHolder(View itemView) {
        super(itemView);
        // get the view from item view's
        name = itemView.findViewById(R.id.name);
        email = itemView.findViewById(R.id.email);
    }
}

```

## 19 thoughts on “Retrofit Tutorial With Example In Android Studio [Step by Step]”

- CK Sharma** says: February 22, 2018 at 3:29 pm (<https://abhiandroid.com/programming/retrofit#comment-543>)  
 How to Write php code for show all record in Recycler view?  
 Reply (/programming/retrofit?replytocom=543#respond)
- Elvredo Tjar** says: November 20, 2018 at 11:20 pm (<https://abhiandroid.com/programming/retrofit#comment-484>)  
 So Awesome, Great tutorial to understand and very helpful.  
 Thanks Abhi.  
 Reply (/programming/retrofit?replytocom=484#respond)
- Akash says:** October 13, 2018 at 9:12 pm (<https://abhiandroid.com/programming/retrofit#comment-472>)  
 awesome man, please keep it updated.. great job  
 Reply (/programming/retrofit?replytocom=472#respond)
- dhiru singh** says: August 29, 2018 at 11:46 am (<https://abhiandroid.com/programming/retrofit#comment-452>)  
 nice and helpful tutorial for beginners  
 Reply (/programming/retrofit?replytocom=452#respond)
- vickey says:** August 29, 2018 at 11:46 am (<https://abhiandroid.com/programming/retrofit#comment-446>)  
 How to write php code for Get and Post Request  
 Reply (/programming/retrofit?replytocom=446#respond)
- vickey says:** August 29, 2018 at 11:46 am (<https://abhiandroid.com/programming/retrofit#comment-445>)  
 what is the php code to get & post request?  
 Reply (/programming/retrofit?replytocom=445#respond)
- ART says:** June 20, 2019 at 11:46 am (<https://abhiandroid.com/programming/retrofit#comment-401>)  
 how to write php code for Get and Post Request?  
 Reply (/programming/retrofit?replytocom=401#respond)

Premium Project :  
Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game And  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/ei

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

I am getting this error: jsonReader.setLenient(true) to accept malformed JSON at line 1 column 1 path \$

Can you please provide the server side php code for the register.php file?

Thank You

Reply (/programming/retrofit?replytocom=401#respond)

8. **Slice says:** April 4, 2018 at 10:57 am (https://abhiandroid.com/programming/retrofit#comment-241)

how i can insert my android api url in this tutorial? this is api key https://api.themoviedb.org/3/movie/550?api\_key=06f10fc8741a672af455421c239a1ffc (https://api.themoviedb.org/3/movie/550?api\_key=06f10fc8741a672af455421c239a1ffc)

how to use it in this tutorial

Reply (/programming/retrofit?replytocom=241#respond)

9. **Novice Developer says:** April 4, 2018 at 10:57 am (https://abhiandroid.com/programming/retrofit#comment-205)

Its amazingly written step by step

Thanks a lot for this tutorial

Reply (/programming/retrofit?replytocom=205#respond)

10. **S Chatterjee says:** April 4, 2018 at 10:57 am (https://abhiandroid.com/programming/retrofit#comment-180)

Registration response is coming null

Reply (/programming/retrofit?replytocom=180#respond)

11. **Anjali says:** April 4, 2018 at 10:57 am (https://abhiandroid.com/programming/retrofit#comment-164)

how to connect android app and oracle db for a simple login page

Reply (/programming/retrofit?replytocom=164#respond)

12. **aasia singh says:** April 4, 2018 at 10:57 am (https://abhiandroid.com/programming/retrofit#comment-162)

Thanks this is a good tutorial

Reply (/programming/retrofit?replytocom=162#respond)

13. **Yogesh Gulia says:** April 4, 2018 at 10:57 am (https://abhiandroid.com/programming/retrofit#comment-155)

Thank you so much for this awesome tutorial... Gbu always....

Reply (/programming/retrofit?replytocom=155#respond)

14. **basuki says:** April 4, 2018 at 10:57 am (https://abhiandroid.com/programming/retrofit#comment-144)

Hi abhisek,

can you tell me how to write server file in php.

Thanks,

Basuki

Reply (/programming/retrofit?replytocom=144#respond)

15. **Billy Panshak says:** April 4, 2018 at 10:57 am (https://abhiandroid.com/programming/retrofit#comment-143)

how to use it in this tutorial

Premium Project :  
Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andri  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/ei

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

Wow!! this tutorial is easy and comprehensible. Good work to you sir!! I wished i have met you before now.

Reply (/programming/retrofit?replytocom=143#respond)

- 16. **Nirmala says:** <https://abhiandroid.com/programming/retrofit#comment-142>

Hello Abhi,

Thank you so much for sharing Retrofit tutorial.This is best guide for beginners also to learn Retrofit library.

Reply (/programming/retrofit?replytocom=142#respond)

17. **Avinash says:** <https://abhiandroid.com/programming/retrofit#comment-141>

Hello Abhi @ <https://abhiandroid.com/programming/retrofit#comment-141> you provide the backend code means php code for the above example.Also,If u have time please teach how to write php code.

Reply (/programming/retrofit?replytocom=141#respond)

18. **Ibrahim says:** <https://abhiandroid.com/programming/retrofit#comment-140>

Hi, first comment

I've tried to use Volley (you says it's the best one, but it looks kinda of verbose for me, so I'm still using VolleyPlus (not Volley) with full image caching, and I don't need Gson because using GsonSurper with Groovy in @StaticCompile approach, I can easily cast any JSON object to POJO (just as: userJson as User) with third party libraries. And as suggestion can you add Kotlin code because looks like a lot of developers are using Kotlin for Android now (I know this is more work for you, but I can't wait up to date with Android developers), and last thing can you make the code in your blog nicer with Syntax highlighter?

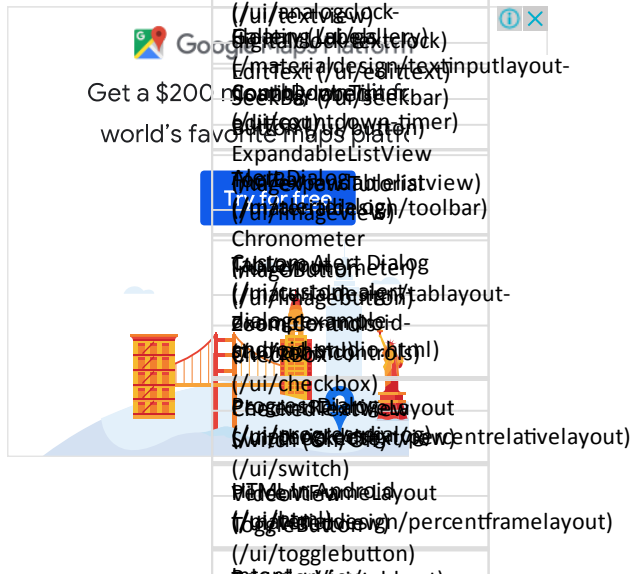
Regards

Reply (/programming/retrofit?replytocom=140#respond)

19. **Earbaj says:** <https://abhiandroid.com/programming/retrofit#comment-139>

it's a good tutorial

Reply (/programming/retrofit?replytocom=139#respond)



Premium Project !  
Code:

Live TV Streamir  
Youtube Channe  
Android App Sou  
Code  
(/sourcecode/li

Quiz Game Andri  
App Project Sou  
Code  
(/sourcecode/qi

Food Ordering  
Android App Pro  
Source Code  
(/sourcecode/fc  
Ecommerce Stor  
Android App Pro  
Source Code  
(/sourcecode/ei

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andri  
App Project Sou  
Code  
(/sourcecode/ci

QR/Barcode Sca  
Android App Pro  
Source Code  
(/sourcecode/qi

Radio Streaming  
Android App Pro  
Source Code  
(/sourcecode/ra

Big Data Online PG Program

<http://stackoverflow.com/questions/10484462/android-completing-textview-volley-always-watches-textview>

Ad RummyCulture

abhiandroid.com

Ad greps.com

/picasso)

abhiandroid.com

Your email address will not be published. Required fields are marked \*

[illegible][illegible]

Live TV Streaming  
Youtube Channel  
Android App Source  
Code  
(/sourcecode/lin

Food Ordering  
Android App Pr  
Source Code  
(/sourcecode/fc

Ecommerce Stor  
Android App Pr  
Source Code  
(/sourcecode/ei

Smart News And  
App Project Sou  
Code  
(/sourcecode/n

Convert Website  
Advance Androi  
App Project Sou  
Code  
(/sourcecode/w

City Guide Andr  
App Project Sou  
Code  
[\(/sourcecode/ci](#)

QR/Barcode Scanner  
Android App Project  
Source Code  
(/sourcecode/qr)

Radio Streaming  
Android App Pr  
Source Code  
(/sourcecode/ra



