Lazy Android Developers: Be Productive

Paresh Mayani

Paresh Mayani



Sr. Software Engineer @ InfoStretch, India Manager, GDG Ahmedabad







No Googling...

I am new to the world of Android programming and I am trying to crewhich takes in user numbers.









As I mentioned in the question I am new to Android programming and know a little Java. I am trying to receive user input in the application, representing numbers from a lottery ticket, which can then be compared with numbers from the website. I have used JSoup library to parse the numbers from the website but I am struggling with receiving user input into the app. I have used EditText object to allow the user to enter their numbers but currently my app is only displaying the results of the user input. I would like to know how to receive the input that can then be compared with the lottery numbers. Can anyone please help.

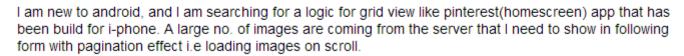
Please Help! I am new to android development



I am quite new to android and SQLite.

Pinterest like custom GridView







Writing boilerplate code

```
HttpClient httpclient = new DefaultHttpClient();
// Prepare a request object
HttpGet httpget = new HttpGet(url);
// Accept JSON
httpget.addHeader("accept", "application/json");
// Execute the request
HttpResponse response;
try {
    response = httpclient.execute(httpget);
   // Get the response entity
  // Log.e("myApp", "Issue is here...!");
   HttpEntity entity = response.getEntity();
   // If response entity is not null
   if (entity != null) {
       // get entity contents and convert it to string
       InputStream instream = entity.getContent();
        String result= convertStreamToString(instream);
       // construct a JSON object with result
        json=new JSONObject(result);
       // Closing the input stream will trigger connection release
        instream.close();
} catch (ClientProtocolException e) {
   // TODO Auto-generated catch block
    e.printStackTrace();
} catch (IOException e) {
   // TODO Auto-generated catch block
    e.printStackTrace();
} catch (JSONException e) {
    // TODO Auto-generated catch block
```





Tip: #1

Productive Development Environment

IDE



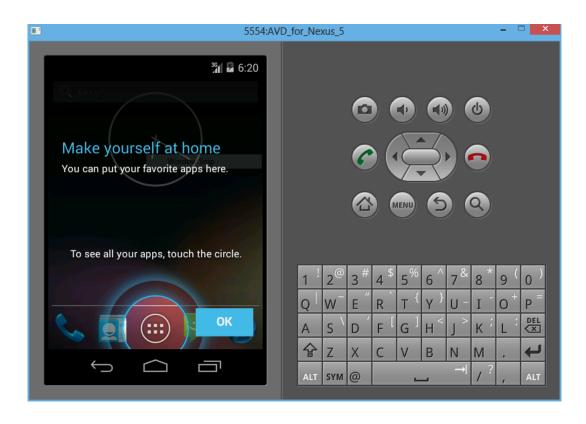




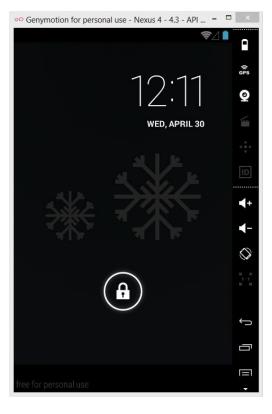


Emulator









Tip: #2

Write less code, Solve more problems

{Less code}
{Less Mistakes}
{Faster Development}



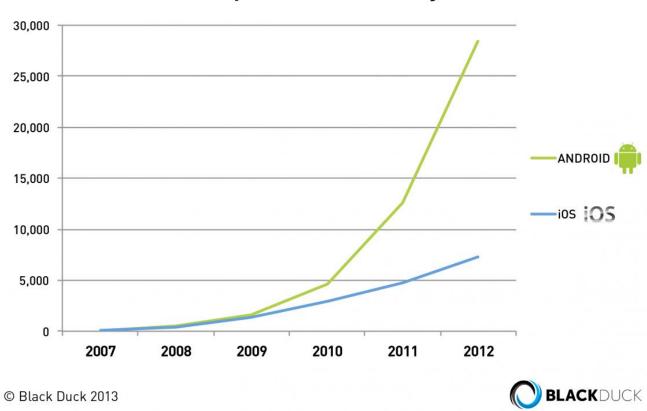
{Code Snippets}



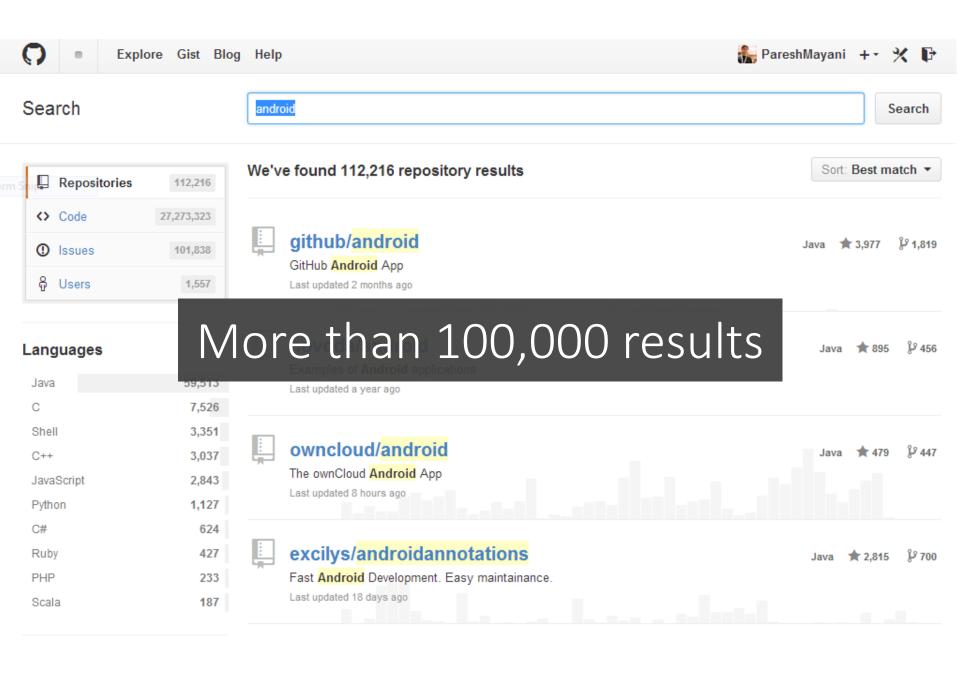
{Open source libraries}

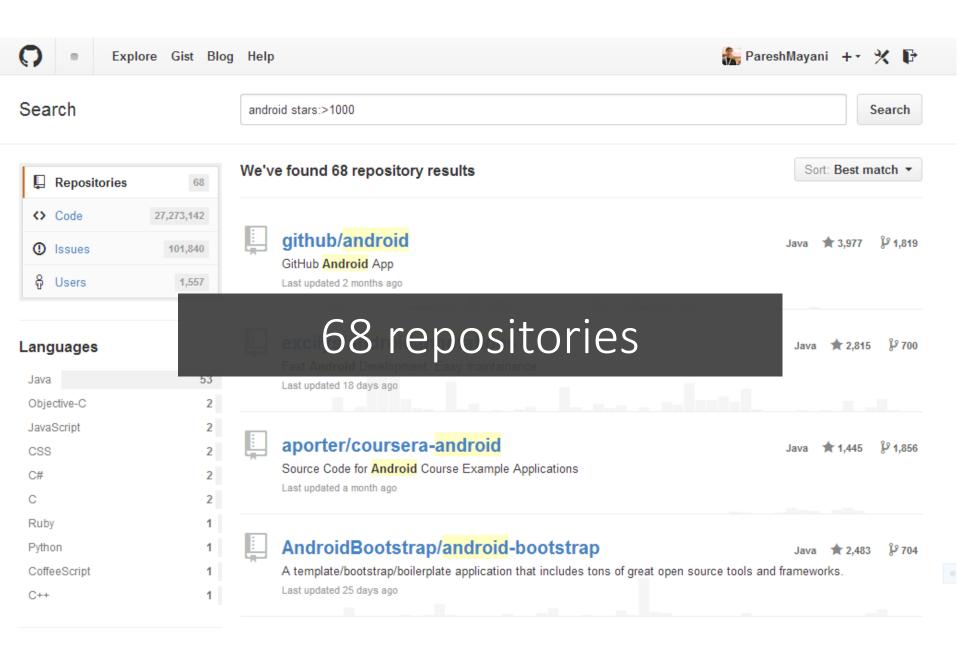
Open source libraries

Cumulative Open Source Projects



Source: http://www.blackducksoftware.com/





Android Libraries Portal



CUSTOM VIEWS

HOLO STYLE IOS STYLE MORE

ANIMATIONS LIBRARIES **DEV TOOLS** RESOURCES CONTACT ME

Q Type and hit ENTER Follow Us

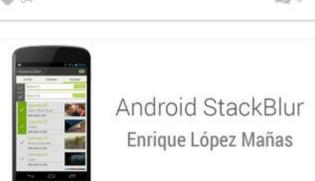




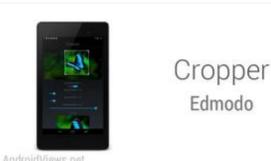




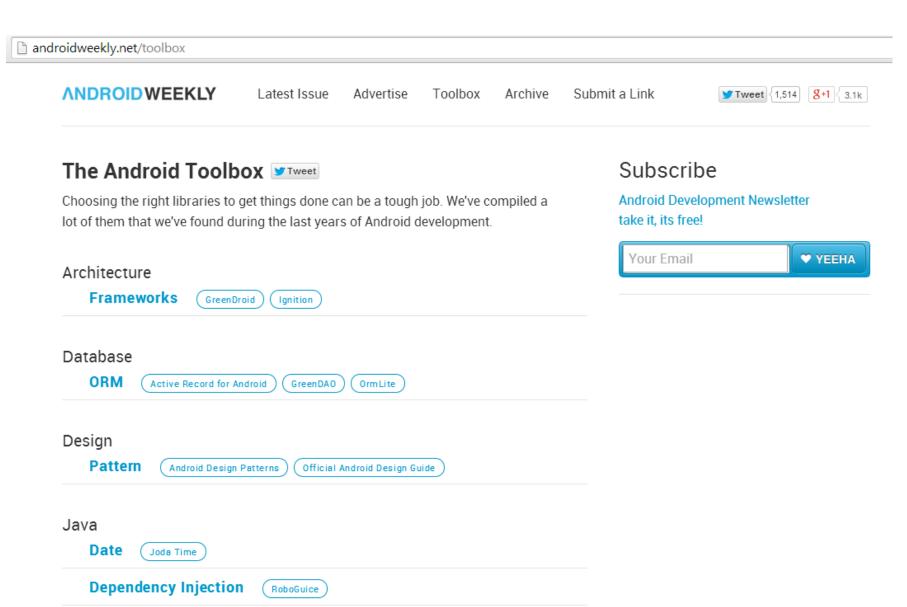




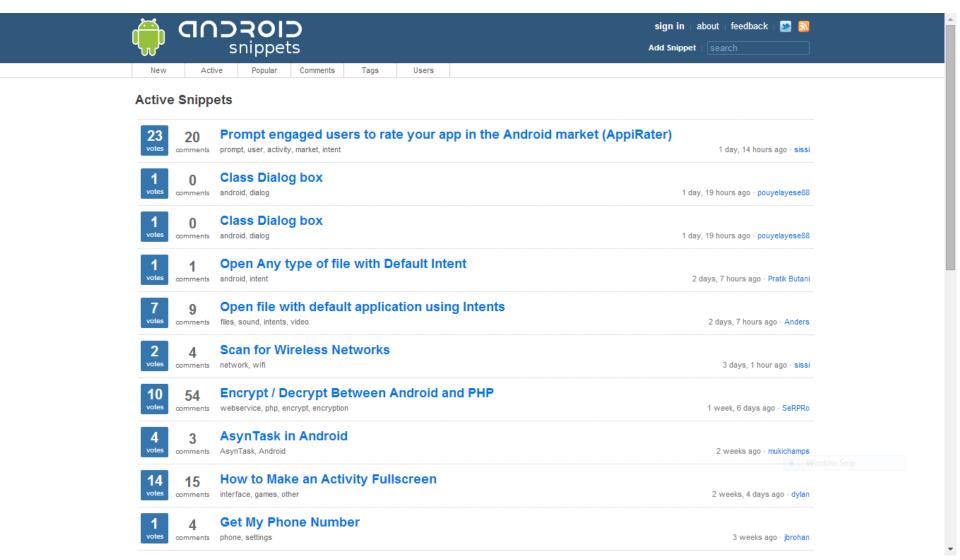




Android Libraries Portal



Code snippets portal



UI & Custom Views

Custom Views

- Crouton
- Staggered GridView
- GoogleProgressBar
- Sticky List Headers
- Card UI
- Fading ActionBar
- Swipe ListView





Networking

REST Clients

- Spring for Android
- Retrofit

Async Requests

- OKHttp
- Volley

	One Discussion	Dashboard (7 requests)	25 Discussions
AsyncTask	941 ms	4,539 ms	13,957 ms
Volley	560 ms	2,202 ms	4,275 ms
Retrofit	312 ms	889 ms	1,059 ms

Asynchronous Image Loading

- Picasso
- Universal Image loader (Nostra)
- UrlImageViewHelper & ion (Koush)



Database

- OrmLite
- Green DAO
- SQL Cipher

Dependency Injection

Class

Dagger

View Injection

• Butter Knife

Universal

- RoboGuice
- Android Annotations (AA)

Example

```
//Before using Android annotation library
public class ActivityWithoutAA extends Activity{
  Button button1;
  ImageView imgView1;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
  // TODO Auto-generated method stub
  super.onCreate(savedInstanceState);
  setContentView(R.layout.activity main);
     button1 = (Button) findViewById(R.id.button1);
     imgView1 = (ImageView) findViewById(R.id.imageView1);
     button1.setOnClickListener(new OnClickListener() {
     @Override
     public void onClick(View v) {
     // TODO Auto-generated method stub
        imgView1.setImageResource(R.drawable.ic launcher);}
     });
```

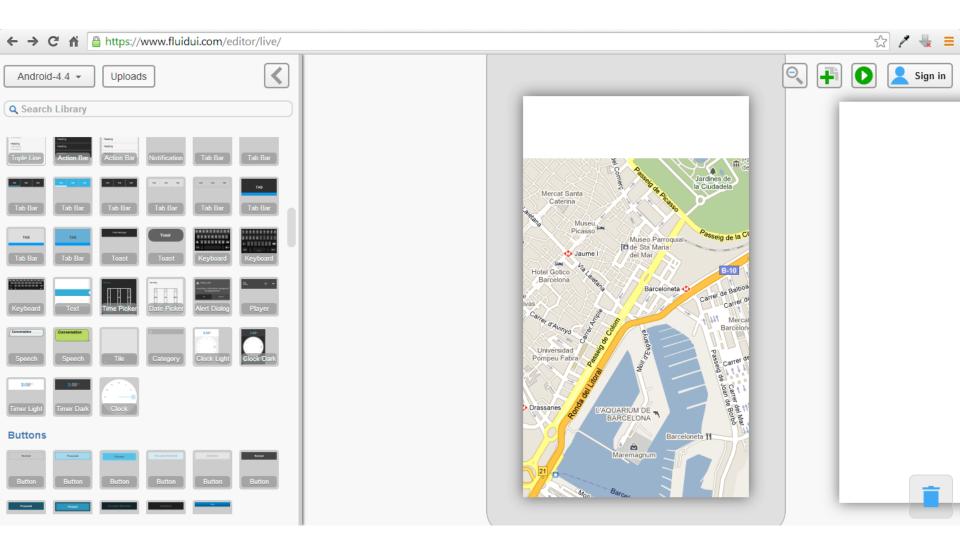
Example

```
//After using Android annotation library, result is less code.
@EActivity (R.layout.activity main)
public class MainActivity extends Activity {
  @ViewById
  Button button1;
                           View Initialization
  @ViewById
  ImageView imageView1;
  @Click
  void button1() {
                                                               Click Listener
     imageView1.setImageResource(R.drawable.ic launcher);
  @Override
  protected void onCreate(Bundle savedInstanceState) {
     super.onCreate(savedInstanceState);
```

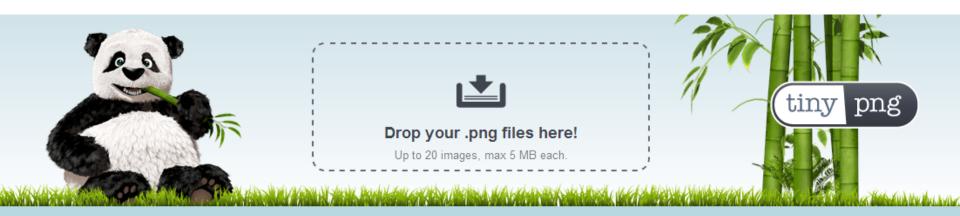
Tip: #3

Use Available Tools

Mockup design tool



Shrink icon/image size



Shrink PNG files

Advanced lossy compression for PNG images that preserves full alpha transparency.

What does TinyPNG do?

TinyPNG uses smart lossy compression techniques to **reduce the file size** of your PNG files. By selectively decreasing the number of colors in the image, fewer bytes are required to store the data. The effect is nearly invisible but it makes a very large difference in file size!

Why should I use TinyPNG?

PNG is useful because it's the only widely supported format that can store partially **transparent images**. The format uses compression, but the files can still be large. Use TinyPNG to shrink images for your apps and sites. It will use less bandwidth and **load faster**.

TinyPNG for Photoshop

We are proud to announce the TinyPNG plugin for Photoshop, available for **Windows** and **Mac**.

Get Photoshop plugin

Why did you create TinyPNG?

Android Asset Studio

ICON GENERATORS - MAKE ICONS FOR YOUR APP

Icon generators allow you to quickly and easily generate icons from existing source images, clipart, or text.

Launcher icons

Action bar and tab icons

Notification icons

Navigation drawer indicator

Generic icons

Tab icons (pre-Android 3.0)

Menu icons (pre-Android 3.0)

OTHER GENERATORS — MISCELLANEOUS ASSET CREATION TOOLS

<u>Device frame generator</u> (or see the <u>official version for Nexus devices</u>) Simple nine-patch generator

COMMUNITY TOOLS — SIMILAR TOOLS FROM THE OPEN SOURCE COMMUNITY

Android Action Bar Style Generator by Jeff Gilfelt

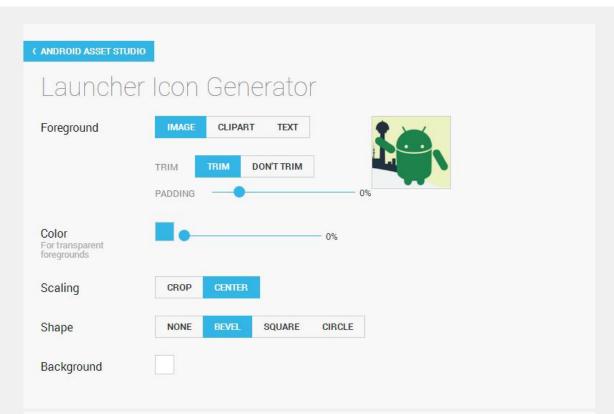
Android Holo Colors Generator by Jérôme Van Der Linden

Android Action Bar Style Generator

<< Android Asset Studio

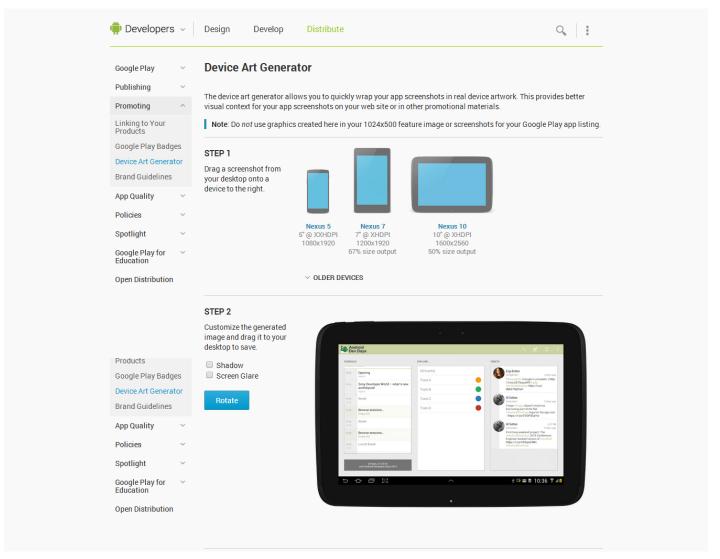
The Android Action Bar Style Generator allows you to easily create a simple, attractive and seamless custom action bar style for your Android application. It will generate all necessary nine patch assets plus associated XML drawables and styles which you can copy straight into your project.







Device Art Generator



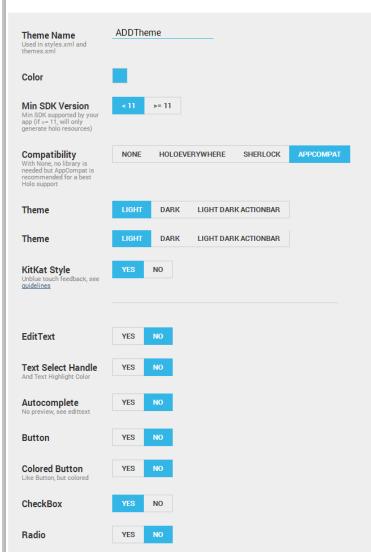
Android Holo Colors Generator

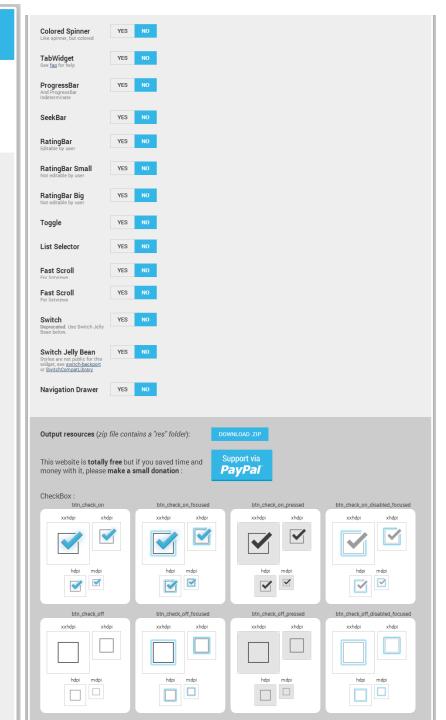
<< Android Asset Studio

Spinner

The **Android Holo Colors Generator** allows you to easily create Android components such as editext or spinner with your own colours for your Android application. It will generate all necessary nine patch assets plus associated XML drawables and styles which you can copy straight into your project.

If you have any question, please refer to the FAQ or report an issue.





Gradle, please



```
dependencies {
    // Google Play Services
    compile 'com.google.android.gms:play-services:4.3.23'

    // Support Libraries
    compile 'com.android.support:support-v4:19.0.1'
    compile 'com.android.support:appcompat-v7:19.0.1'
    compile 'com.android.support:gridlayout-v7:19.0.1'
    compile 'com.android.support:mediarouter-v7:19.0.1'
    compile 'com.android.support:support-v13:19.0.1'

// Note: these libraries require the "Google Repository" and "Android Repository"
    // to be installed via the SDK manager.
}
```

Something else?

picasso

Popular

gson actionbarsherlock joda-time picasso otto slf4j crouton nineoldandroids butterknife guava okhttp dagger

Where do the results come from?

Maven Central. To have your library listed here (and have people include your library easily), upload your project to Maven Central. The easiest way to do this is via Sonatype.

Portions of this page are reproduced from work created and <u>shared by the Android Open Source Project</u> and used according to terms described in the <u>Creative Commons 2.5 Attribution License</u>.





Android Button Maker

Android Button Maker is online tool to generate buttons code for Android Apps. Android API provide Drawable Resources where XML file defines geometric shape, including colors, border and gradients.

These button is generating based on shape drawable XML code which load faster compare to normal png buttons. You can customize button properties in setting panel and get source code.



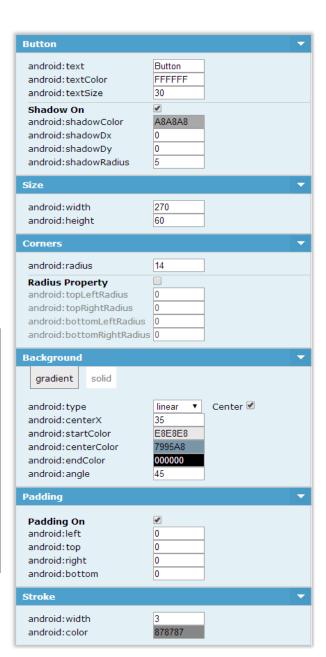
```
Button

android:id="@+id/angry_btn"

android:text="Button"
android:textColor="#FFFFFF"
android:textSize="30sp"

android:layout_width="270dp"
android:layout_height="60dp"
android:background="@drawable/buttonshape"
android:shadowColor="#A8A8A8"
android:shadowDy="0"
android:shadowDy="0"
android:shadowDy="0"
android:shadowRadius="5"

/>
```



Android Layout Finder | Buzzing Android

The Android Layout Finder helps you create the code that ties your Android UI and Java code together.

It's real easy! Just paste your Android XML layout code in the first text field, pick the views that you need, and your code is automatically generated for you.

No more typing out all those nearly identical findViewById() and findFragmentById() calls in your activities or fragments whenever you change your Android layouts.





2. Pick your Views: Select the views that you need to inferact with If container RelativeLayout If on progressBar ProgressBar If will button 1 Button If migher com.android.volley.toolbox.NetworkImageView





DPI Calculator for Android - Install Extension for Chrome

96	72	48	36	24	18	31.92
xxxhdpi	xxhdpi	xhdpi	hdpi	mdpi	ldpi	tvdpi
192	144	96	72	48	36	63.84
xxxhdpi	xxhdpi	xhdpi	hdpi	mdpi	ldpi	tvdpi
xxxhdpi	xxhdpi	xhdpi	hdpi	mdpi	ldpi	tvdpi

With thanks to martincohen | http://coh.io/adpi/

jsonschema2pojo

Generate Plain Old Java Objects from JSON or JSON-Schema.

```
Package com.androiddevdays.demo
    "type": "Participant",
    "Participants":
                                                           Class name ParticipantsBean
      {"name": "Paresh"},
     {"name":"Murat"}
6
                                                           Source type:
7 }
                                                           JSON SchemaJSON
                                                           Annotation style:
                                                           Jackson 2.xJackson 1.x
                                                           • Gson
                                                                          None
                                                           Generate builder methods
                                                           Use primitive types
                                                           Use long integers
                                                           Use double numbers.
                                                           Use Joda dates
                                                           Use Commons-Lang3
                                                           ■ Include hashCode and equals
                                                           ☐ Include toString
                                                           Include JSR-303 annotations
Preview
            Jar
```

jsonschema2pojo

Generate Plain Old Java Objects from JSON or JSON-Schema.

```
Preview
com.androiddevdays.demo.Participant.java------
package com.androiddevdays.demo;
import javax.annotation.Generated;
import com.google.gson.annotations.Expose;
@Generated("org.jsonschema2pojo")
public class Participant {
@Expose
private String name;
public String getName() {
return name:
public void setName(String name) {
this.name = name;
com.androiddevdays.demo.ParticipantsBean.java-
package com.androiddevdays.demo;
```

JSONLint

The JSON Validator

Want more from JSONLint? Try JSONLint Pro



A Tool from the Arc90 Lab. Source is on GitHub.

Props to Douglas Crockford of JSON and JS Lint and
Zach Carter, who provided the pure JS implementation of jsonlint.

```
2
         "FirstObject": {
 3
             "attr1": "one value",
 4
             "attr2": "two value",
             "sub": {
 6
                 "sub1": [
 7
 8
                          "sub1_attr": "sub1_attr_value"
 9
10
11
                          "sub1_attr": "sub2_attr_value"
12
13
14
15
16
17
18
19
```

Validate

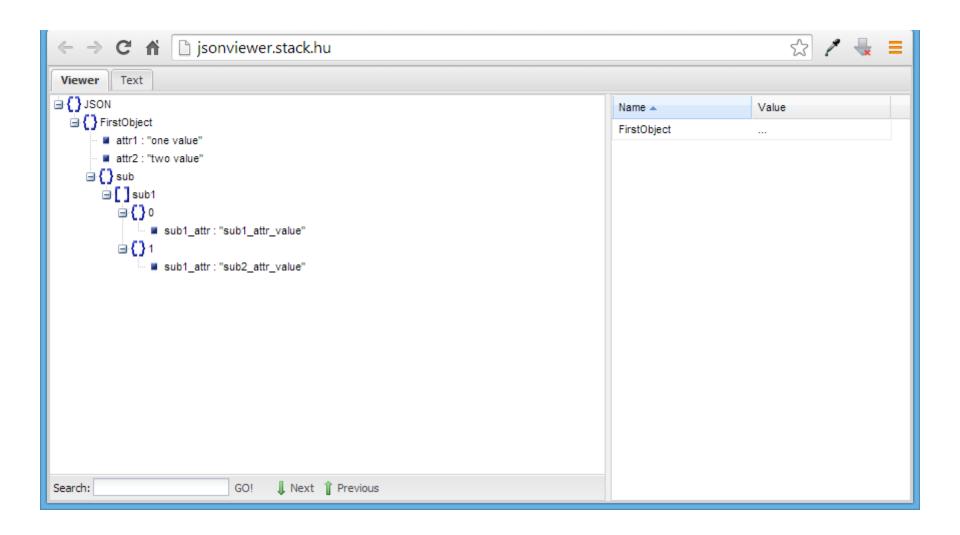
JSON Lint is an idea from Arc90's Kindling



FAQ

Results

Valid JSON



Tip: #4

Don't Waste Time!

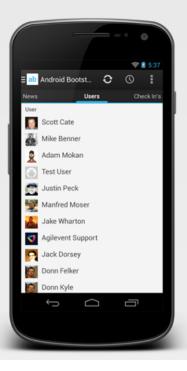
How?

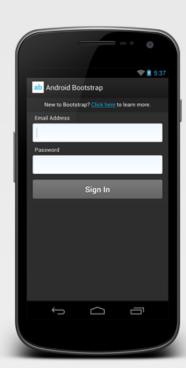
How?

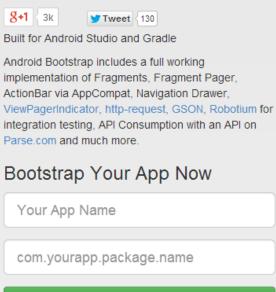
Bootstrap your project

Did you heard about Twitter Bootstrap?

Bootstrap your next Android Application







Generate Your App

Find an issue?Report it here



Start your next Android app in 10 seconds.

AndroidKickstartR helps you to quickly create a well configured Android application using the most popular libraries. It creates and configures your project for you. Just focus on code!

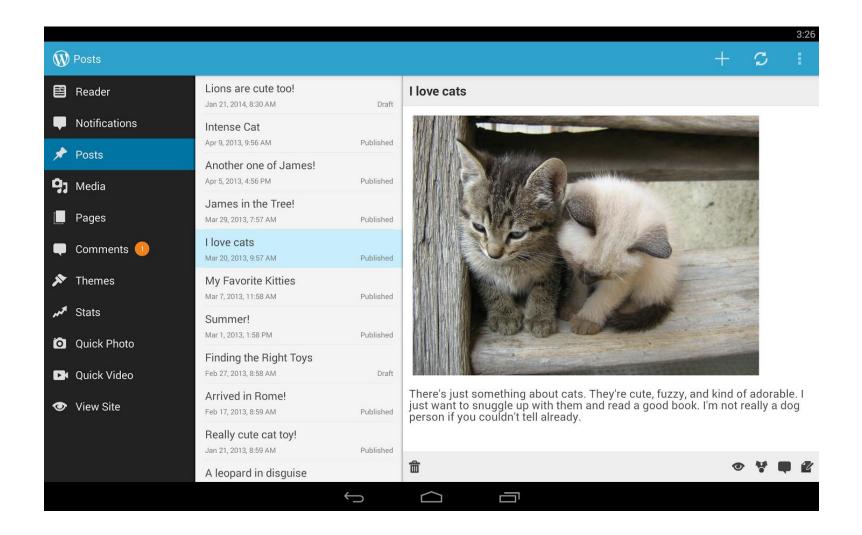
Tip: #5

Learn from Open Source Projects

iosched



WordPress for Android

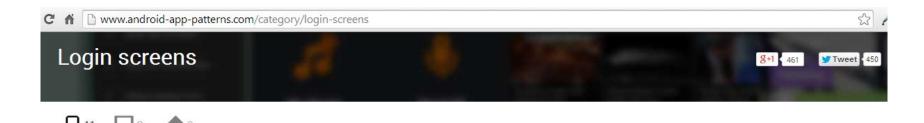


More open source projects

- http://en.wikipedia.org/wiki/List_of_free_and_opensource_Android_applications
- http://www.aopensource.com/

Tip: #6

Learn and Check UI Patterns













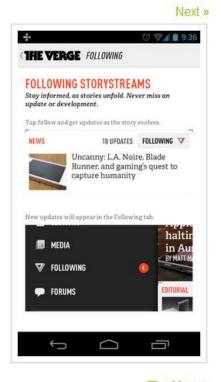
19

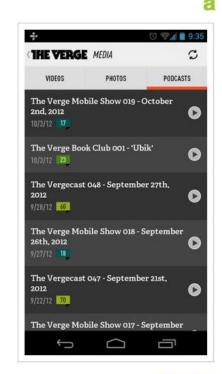
Recently added
Action bar
Article
Activity feed
Dashboard
Grid
List
Login Screen
Media player
Profile
Quick action
Search
Settings
Sliding menu
Tab bar

androidpttrns.com is the shameless copy of the awesome pttrns.com for android.

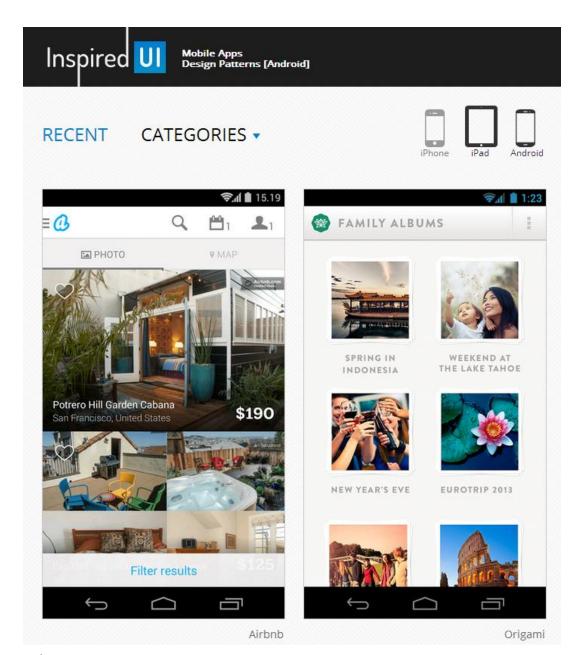








The Verge Article The Verge List Tab bar



Thank You







