

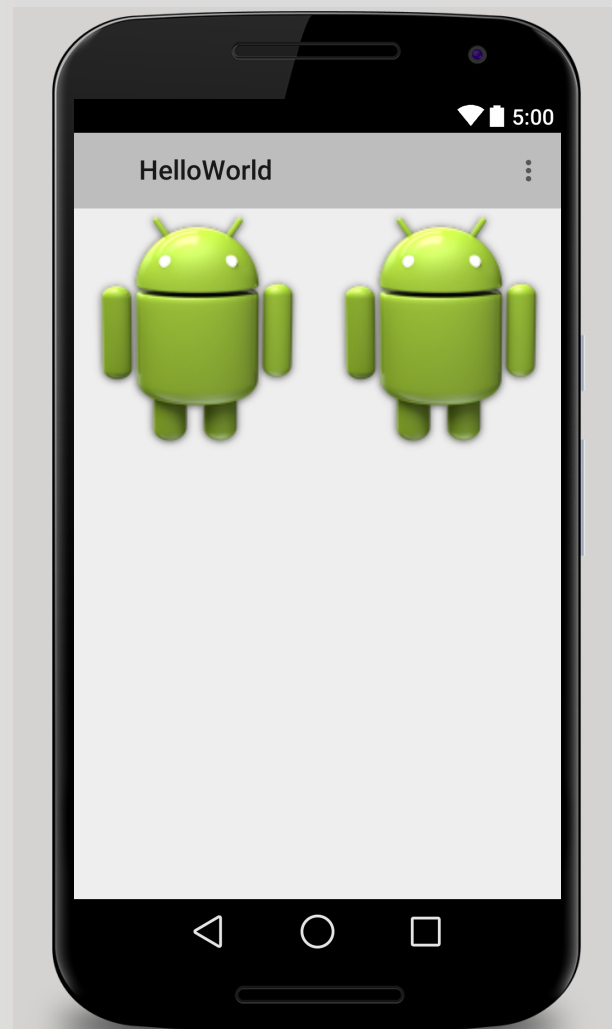


Android Application Development Views Part 2

ImageView

ImageView

Displays an arbitrary image, such as an icon. The ImageView class can load images from various sources (such as resources or content providers), takes care of computing its measurement from the image so that it can be used in any layout manager, and provides various display options such as scaling and tinting.



ImageView

Lab

`android:src`

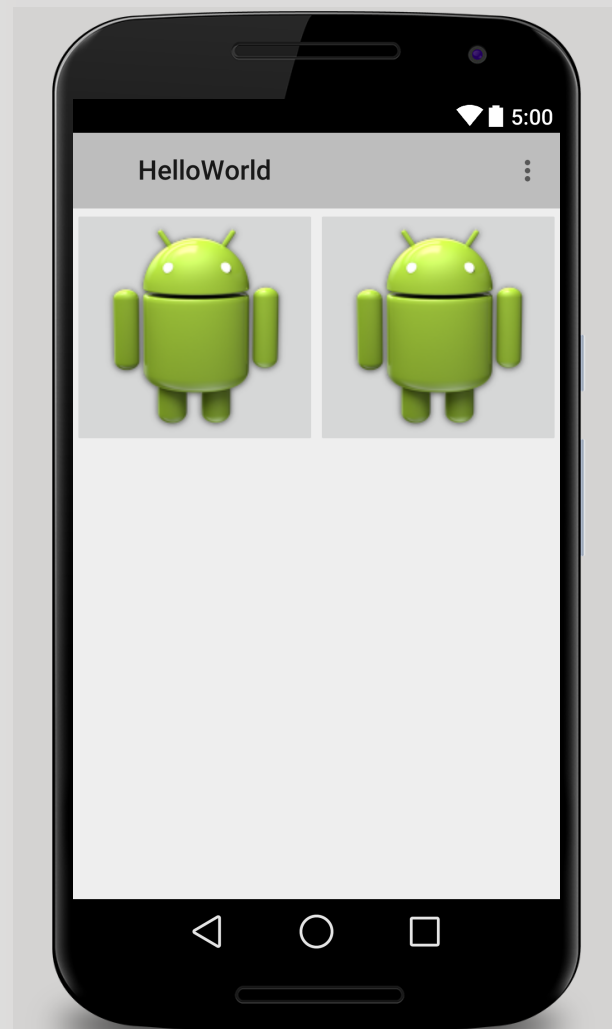
`android:adjustViewBounds`

`android:scaleType`

ImageButton

ImageButton

Displays a button with an image (instead of text) that can be pressed or clicked by the user.



ImageButton

Lab

`android:src`

`android:adjustViewBounds`

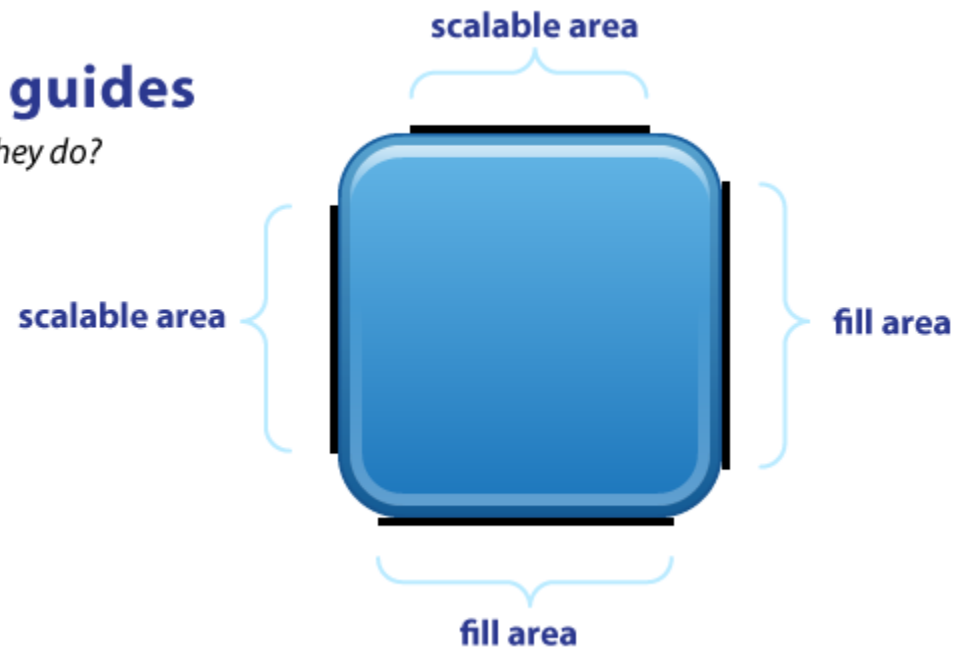
`android:scaleType`

`android:background`

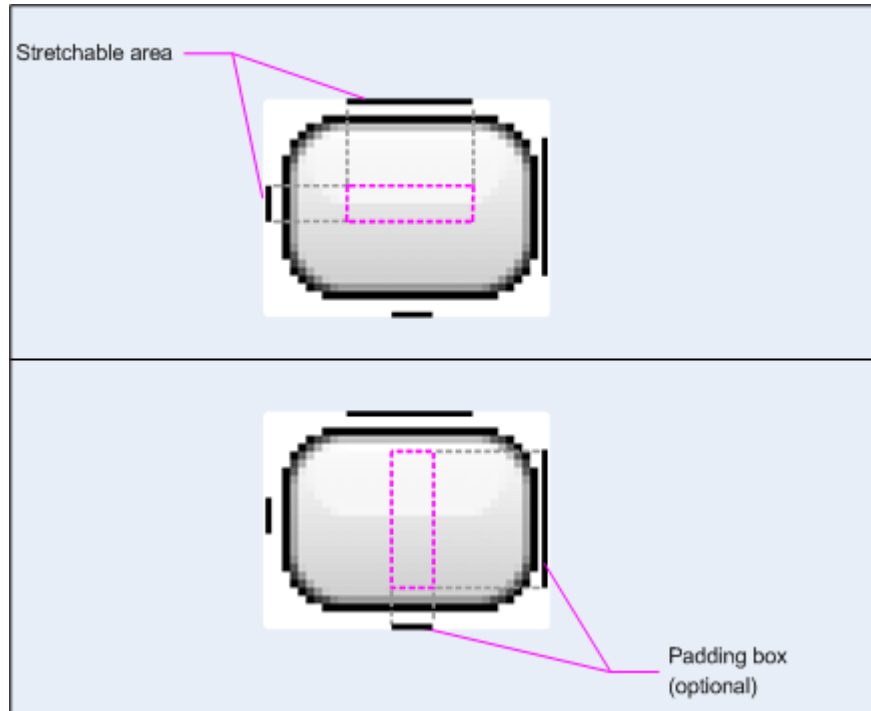
The 9-Patch

9-patch guides

what do they do?



The 9-Patch



The 9-Patch

Scalable Area



*48x48 button can be
scaled to any size larger
than 48x48*



Selector

drawable/selector_btn_default.xml

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

    <item android:drawable="@drawable/btn_default_pressed"
        android:state_pressed="true"/>
    <item android:drawable="@drawable/btn_default_selected"
        android:state_selected="true"/>
    <item android:drawable="@drawable/btn_default_selected"
        android:state_focused="true"/>
    <item android:drawable="@drawable/btn_default_normal"/>

</selector>
```

```
<Button android:background="@drawable/selector_btn_default"
    .../>
```

Make it scroll!: ScrollView

```
<ScrollView
    android:layout_width="match_parent"
    android:layout_height="match_parent"
>

    <!-- Only 1 child allowed -->

    ...

</ScrollView>
```

Use **HorizontalScrollView** for Horizontal Scrolling

Lab

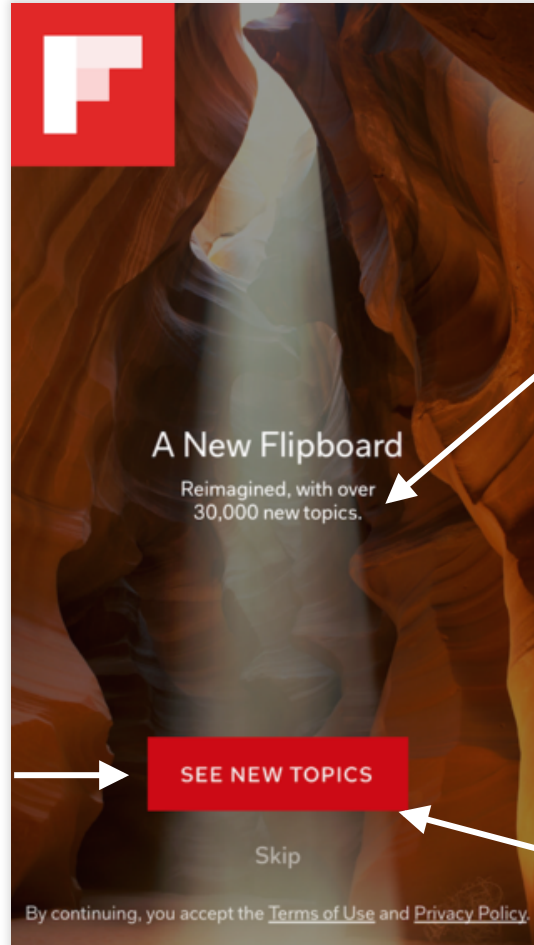
<https://dl.dropboxusercontent.com/u/19243435/bg2.jpg>

100dp

<https://dl.dropboxusercontent.com/u/19243435/logo.jpg>

ทำเลย เดี่ยวมา!

#C62828
#B71C1C



Reimagined with over
30,000 new topics

Font: ?sp

Padding: 16dp

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Lab



Custom View

Custom View



Custom ViewGroup



Custom View

Custom View



How to decide whether we should use Custom View or not?

- Custom Draw
 - Again ... don't fix the position, do everything relatively
- Handle Input Event

Custom ViewGroup

*** Use quite a lot**

How to decide whether we should use Custom View or not?

- Group Layout for Reuse
 - Handle Input Event
- Do something with non-standard behavior

Custom ViewGroup



Custom View: Best Code Structure

- `init`
- `initWithAttrs`

Lab: Test onDraw

Lab: Initiate with XML

Live Demo

Custom View: Input Events

- `onClick`
- `onLongClick`
- `onTouchEvent`
- `GestureDetector`

Live Demo

Custom View: Attributes

1) Define the attributes in `attr.xml`

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <declare-styleable name="CustomViewStyleable">
        <attr name="isBlue" format="boolean"/>
    </declare-styleable>
</resources>
```

2) Declare xmlns and pass value to xml element

Live Demo

Custom View: Attributes

3) Retrieve value through context.getTheme().obtainStyledAttributes(...)

```
TypedArray a = context.getTheme().obtainStyledAttributes(  
    attrs,  
    R.styleable.CustomViewStyleable,  
    defStyleAttr, defStyleRes);  
  
try {  
    isBlue = a.getBoolean(R.styleable.CustomViewStyleable_isBlue, false);  
} finally {  
    a.recycle();  
}
```

Custom ViewGroup: Best Code Structure

- `initInflate`
- `initInstances`
- `initWithAttrs`

Lab: Test Inflation

Lab: Access to UI Components

Lab: Initiate with XML

Live Demo