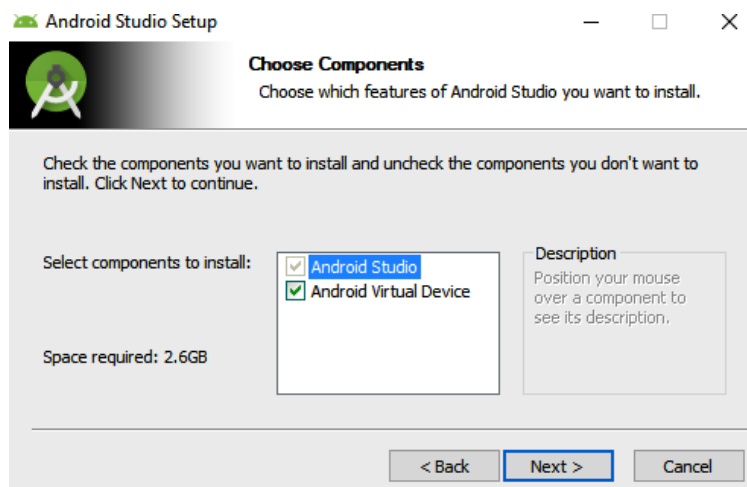
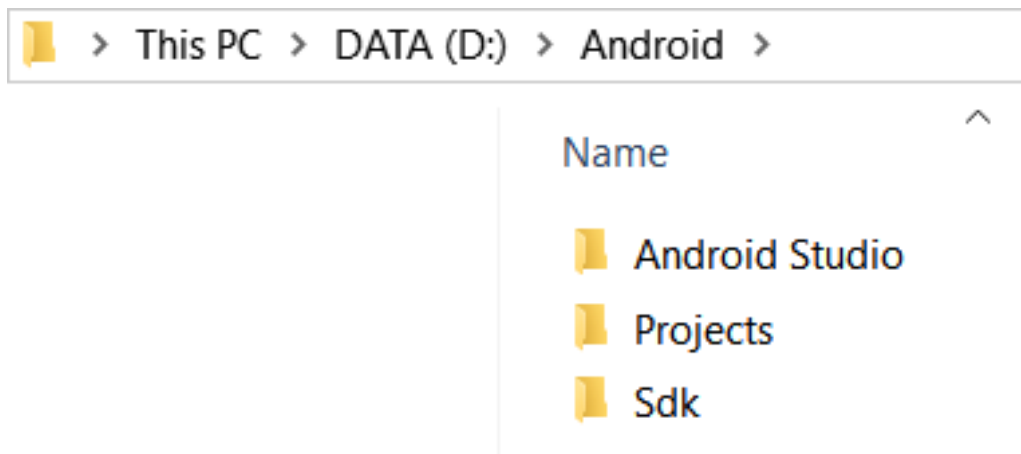
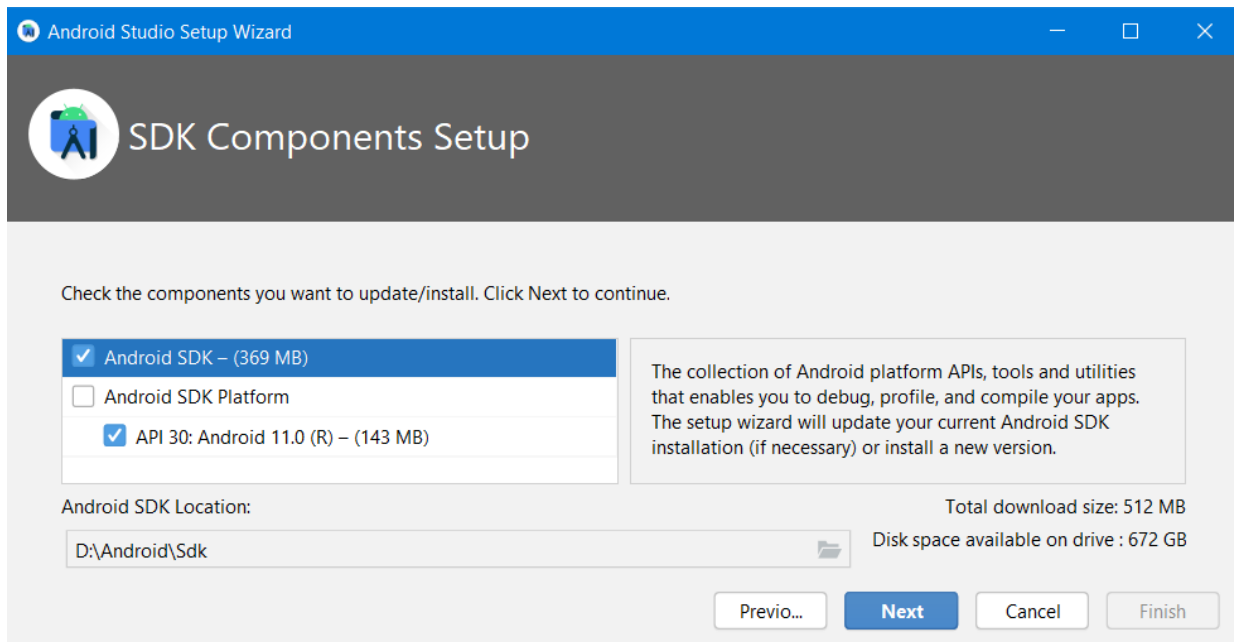
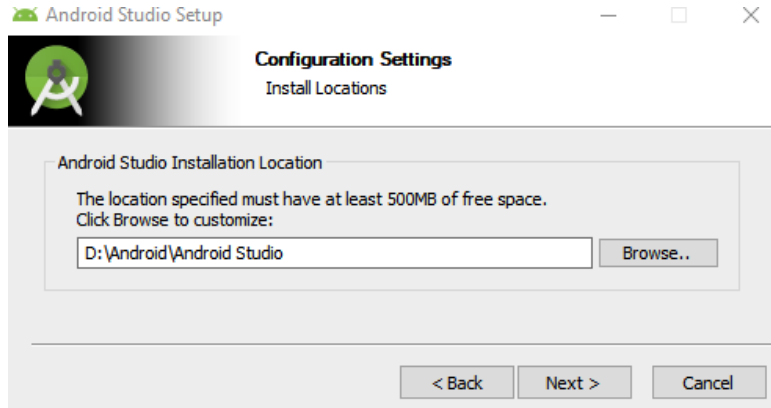
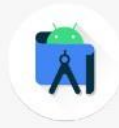


# Chapter 01: Beginning Android and Java







# Android Studio

Version 4.1.2

+ Create New Project

📁 Open an Existing Project

✓ Get from Version Control

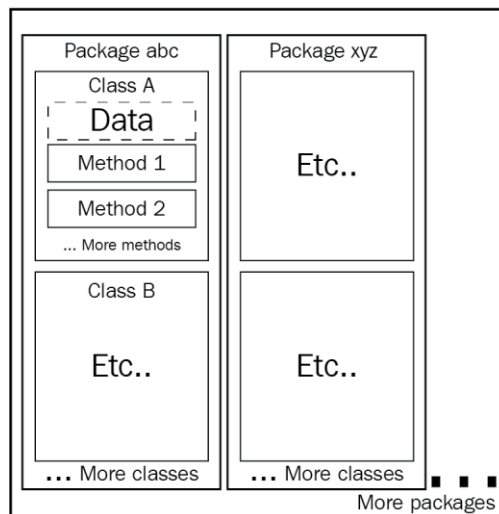
🔍 Profile or Debug APK

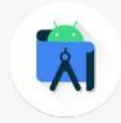
📄 Import Project (Gradle, Eclipse ADT, etc.)

📄 Import an Android Code Sample

⚙️ Configure ▾ Get Help ▾

## Android API





# Android Studio

Version 4.1.2

+ Create New Project

Open an Existing Project

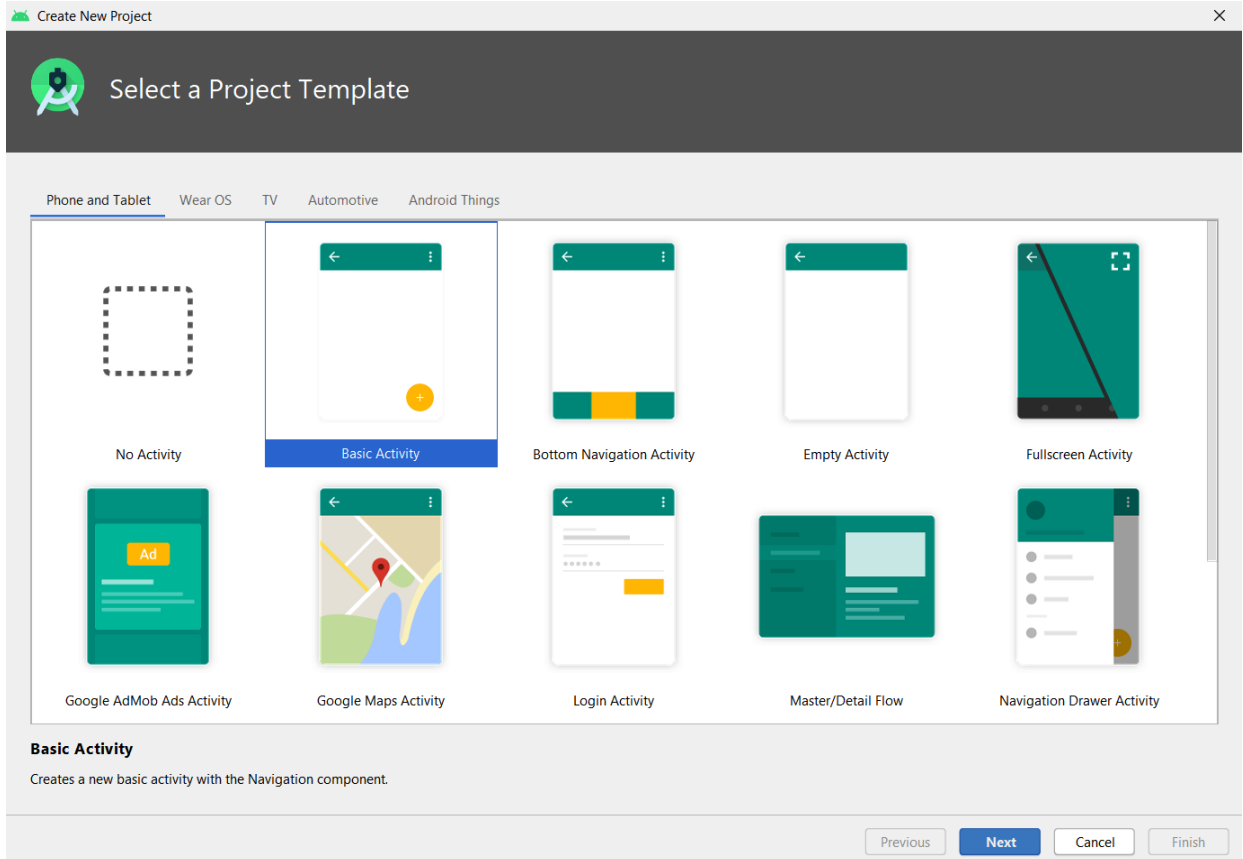
Get from Version Control

Profile or Debug APK

Import Project (Gradle, Eclipse ADT, etc.)

Import an Android Code Sample

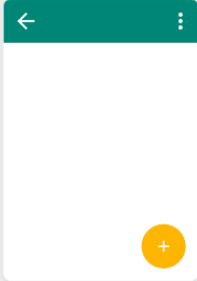
⚙️ Configure ▾ Get Help ▾



Option	Value entered
Name	Hello World
Package name	com.gamecodeschool.helloworld
Save location	D:\Android\Projects\HelloWorld
Language	Java
Minimum SDK	Leave this and any other options at their defaults

Create New Project X

**Configure Your Project**



**Basic Activity**

Creates a new basic activity with the Navigation component.

**Name**  
Hello World

**Package name**  
com.gamecodeschool.helloworld

**Save location**  
D:\Android\Projects\HelloWorld

**Language**  
Java

**Minimum SDK** API 16: Android 4.1 (Jelly Bean)


**i** Your app will run on approximately **99.8%** of devices.  
[Help me choose](#)

Use legacy android.support libraries ?

Previous Next Cancel Finish

Android Virtual Device Manager \_ □ X

**Your Virtual Devices**  
Android Studio

Type	Name	Play Store	Resolution	API	Target	CPU/ABI	Size on Disk	Actions
	Pixel_3a_API_30_x...		1080 x 2220: 440d...	30	Android 10.0+ (G...	x86	9.6 GB	▶ ✎ ▼

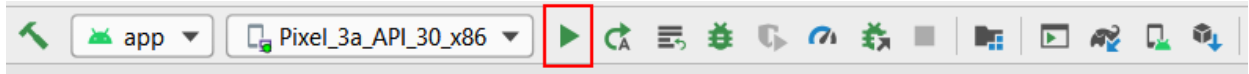
+ Create Virtual Device...
↺
?

Actions

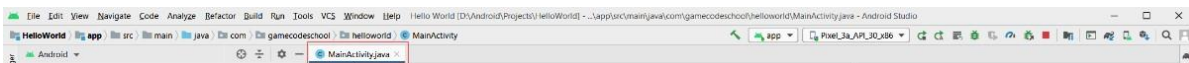
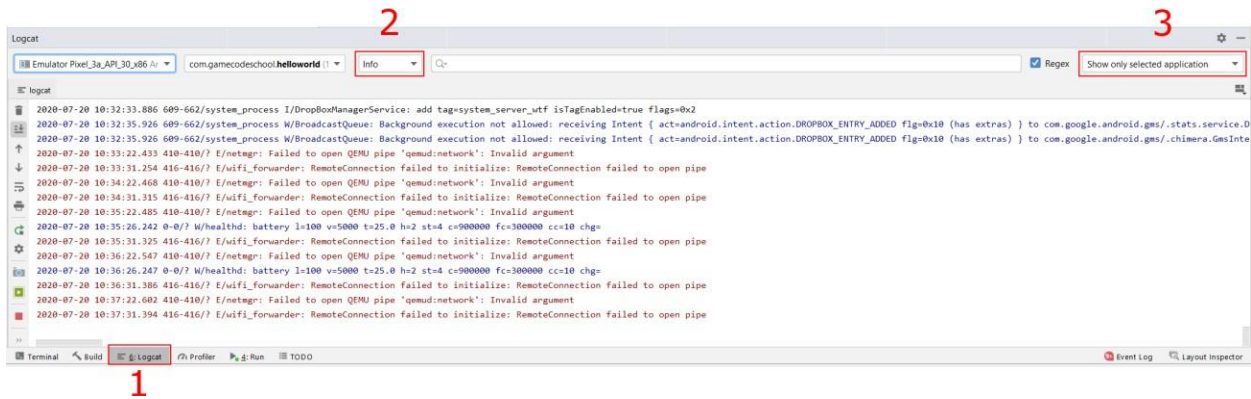








# Chapter 02: First Contact: Java, XML, and the UI Designer



```
package com.gamecodeschool.helloworld; — 1

import android.os.Bundle;

import com.google.android.material.floatingactionbutton.FloatingActionButton;
import com.google.android.material.snackbar.Snackbar;

import androidx.appcompat.app.AppCompatActivity;
import androidx.appcompat.widget.Toolbar;

import android.view.View;
import android.view.Menu;
import android.view.MenuItem;

public class MainActivity extends AppCompatActivity { — 3

    @Override
    protected void onCreate(Bundle savedInstanceState) { — 5
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        Toolbar toolbar = (Toolbar) findViewById(R.id.toolbar);
        setSupportActionBar(toolbar);

        FloatingActionButton fab = (FloatingActionButton) findViewById(R.id.fab);
        fab.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Snackbar.make(view, "Replace with your own action", Snackbar.LENGTH_LONG)
                    .setAction("Action", null).show();
            }
        }); — 6

        @Override
        public boolean onCreateOptionsMenu(Menu menu) { ... } — 7

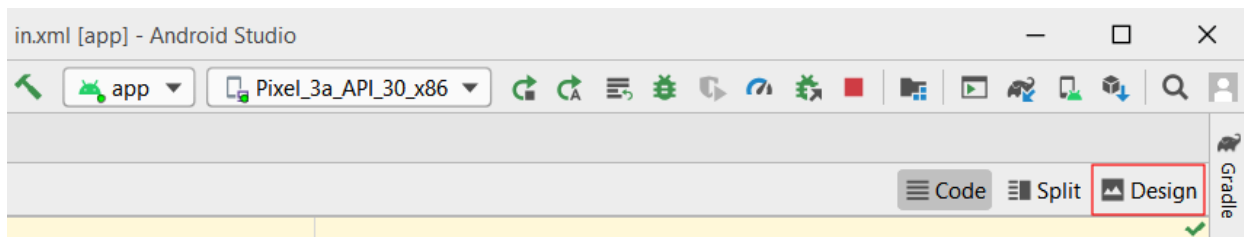
        @Override
        public boolean onOptionsItemSelected(MenuItem item) { ... } — 8
    }
}
```

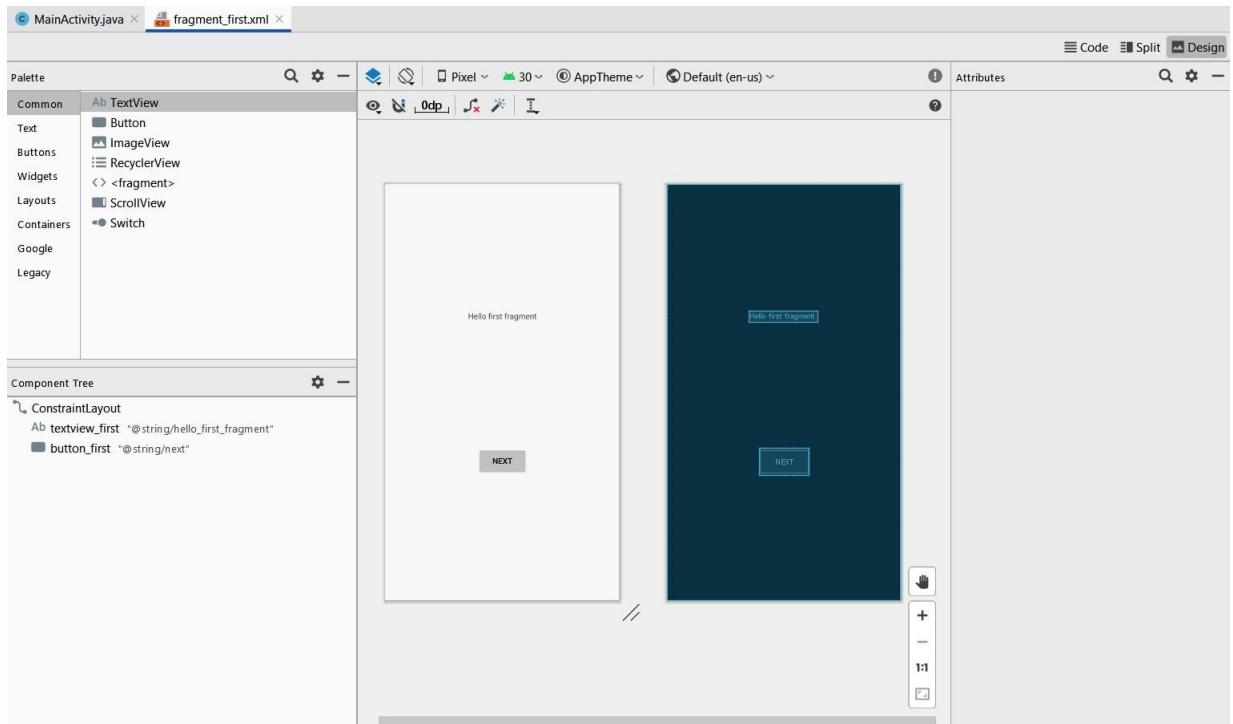
9

2

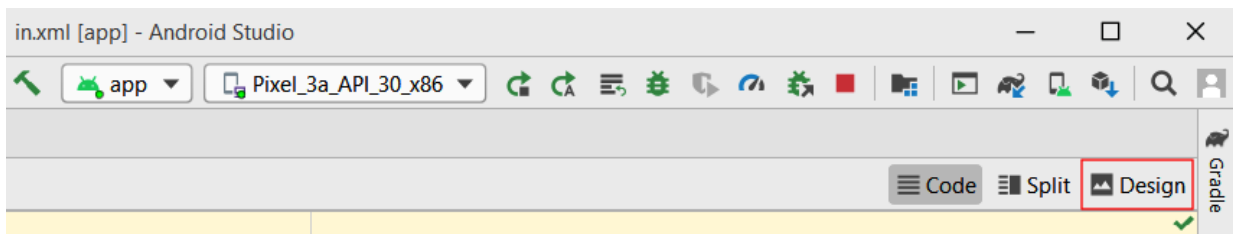
Resource files

4





```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".FirstFragment">
    <TextView
        android:id="@+id/textview_first"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello first fragment"
        app:layout_constraintBottom_toTopOf="@id/button_first"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
    <Button
        android:id="@+id/button_first"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Next"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@id/textview_first" />
</androidx.constraintlayout.widget.ConstraintLayout>
```




Palette




Common

Ab TextView


Text

 Button


Buttons

 ImageView


Widgets

 RecyclerView


Layouts

 <fragment>

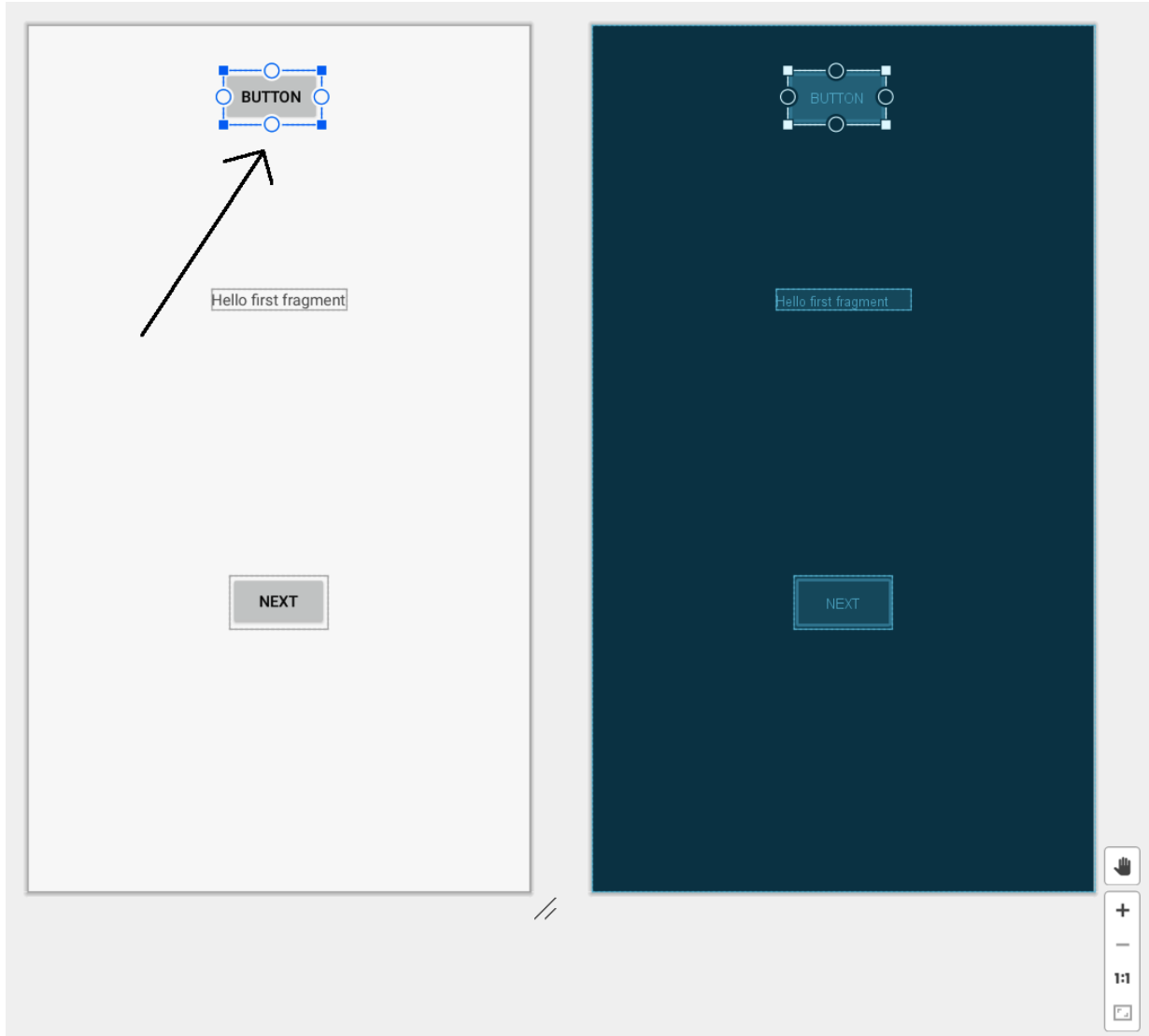
Containers

 ScrollView

Google

 Switch

Legacy



BUTTON



Hello first fragment

NEXT

BUTTON

Hello first fragment

NEXT







Attributes 🔍 ⚙️ —

button Button

id

▶ Declared Attributes + -

▶ Layout

▼ Common Attributes

style

onClick

background

text

✎ text

contentDescription



▶ textAppearance

alpha

▼ All Attributes

alpha		<input type="text" value=""/>
▶ autoLink	<input checked="" type="checkbox"/>	<input type="text" value=""/>
autoText	<input checked="" type="checkbox"/>	<input type="text" value=""/>
background	<input type="text" value="@android:drawable/t"/>	<input type="text" value=""/>
bufferType		<input type="text" value=""/>
capitalize		<input type="text" value=""/>
clickable	<input checked="" type="checkbox"/> true	<input type="text" value=""/>
contentDescripti...		<input type="text" value=""/>
cursorVisible	<input checked="" type="checkbox"/>	<input type="text" value=""/>
digits		<input type="text" value=""/>
drawableBottom	<input type="text" value=""/>	<input type="text" value=""/>
drawableEnd	<input type="text" value=""/>	<input type="text" value=""/>
drawableLeft	<input type="text" value=""/>	<input type="text" value=""/>
drawablePadding		<input type="text" value=""/>
drawableRight	<input type="text" value=""/>	<input type="text" value=""/>
drawableStart	<input type="text" value=""/>	<input type="text" value=""/>
drawableTop	<input type="text" value=""/>	<input type="text" value=""/>
drawingCacheQu...		<input type="text" value=""/>
duplicateParentS...	<input checked="" type="checkbox"/>	<input type="text" value=""/>
editable	<input checked="" type="checkbox"/>	<input type="text" value=""/>
editorExtras		<input type="text" value=""/>
ellipsize		<input type="text" value=""/>
ems		<input type="text" value=""/>
enabled	<input checked="" type="checkbox"/>	<input type="text" value=""/>

▼ **Common Attributes**

style	@android:style/Wic	▼	0
onClick		▼	0
background	 @android:drawable/b		0
text	Button		0
 text			0
contentDescription			0
▶ textAppearance	@android:style/Tex	▼	0
alpha			0

▼ **Common Attributes**

style	@android:style/Wic	▼	0
onClick	topClick	▼	0

```
<Button  
    android:id="@+id/button"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:onClick="topClick"  
    android:text="Button"  
    tools:layout_editor_absoluteX="147dp"  
    tools:layout_editor_absoluteY="30dp" />
```

```
<Button  
    android:id="@+id/button"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:onClick="topClick"  
    android:text="Button"  
    tools:layout_editor_absoluteX="147dp"  
    tools:layout_editor_absoluteY="30dp" />
```

<Button

```
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="topClick"
    android:text="Button"
    tools:layout_editor_absoluteX="147dp"
    tools:layout_editor_absoluteY="30dp" />
```

End of previous button

```
    tools:layout_editor_absoluteY="30dp" />
```

New error

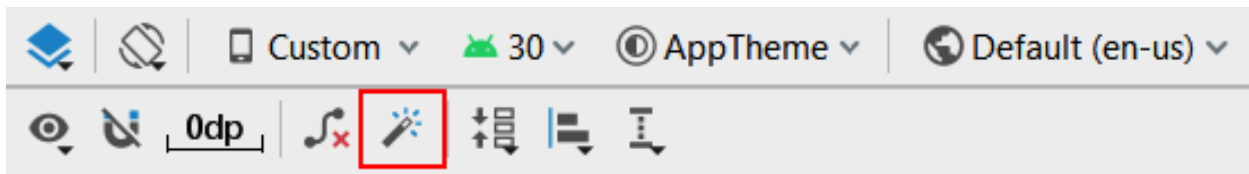
<Button

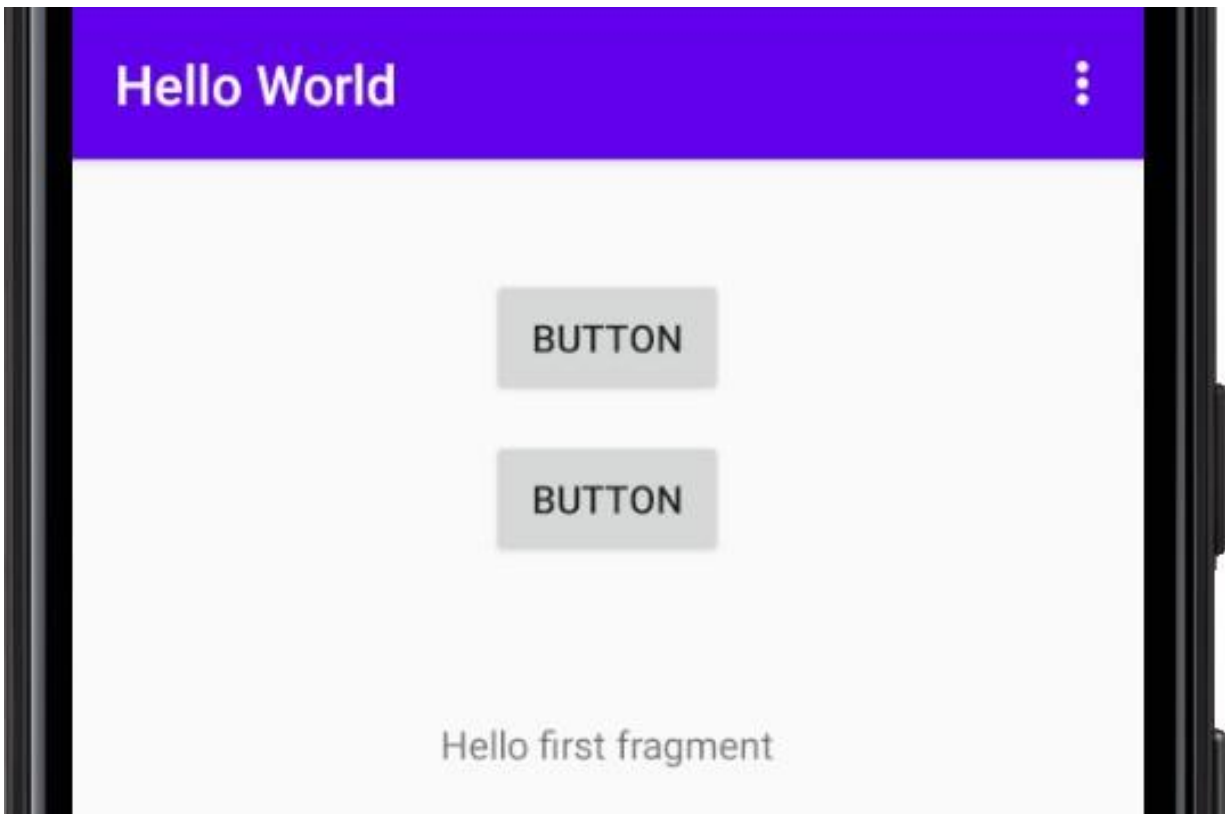
```
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="topClick"
    android:text="Button"
    tools:layout_editor_absoluteX="147dp"
    tools:layout_editor_absoluteY="30dp" />
```

New  
Button

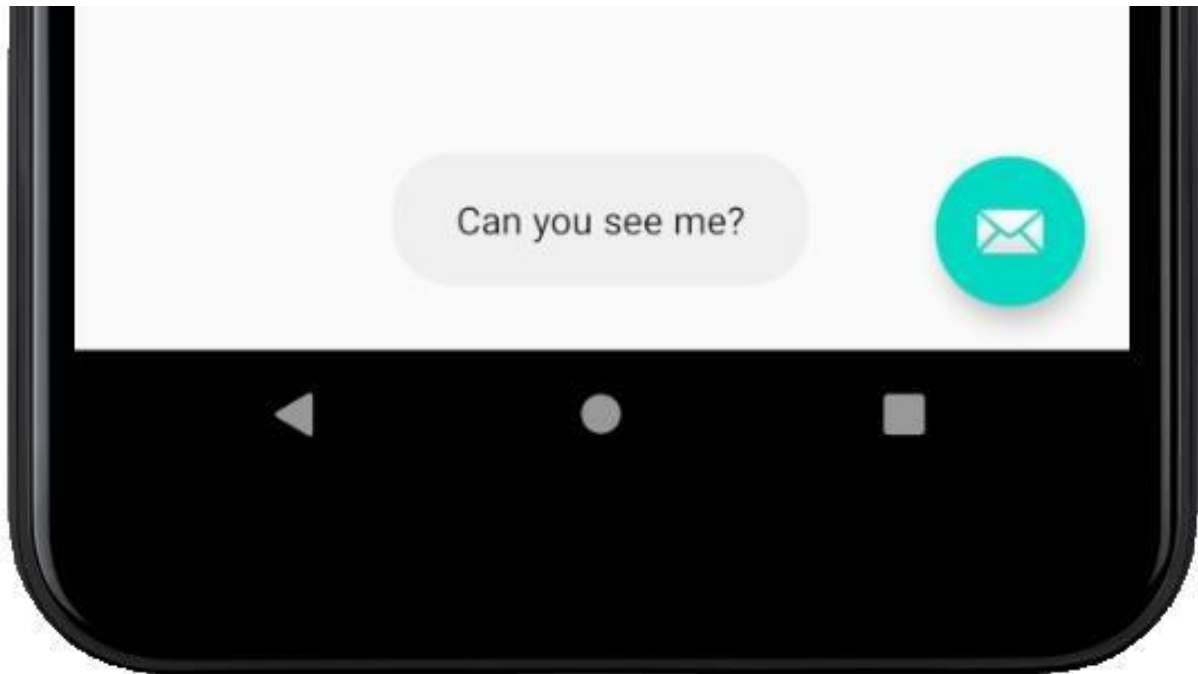
```
</androidx.constraintlayout.widget.ConstraintLayout>
```

End of ConstraintLayout

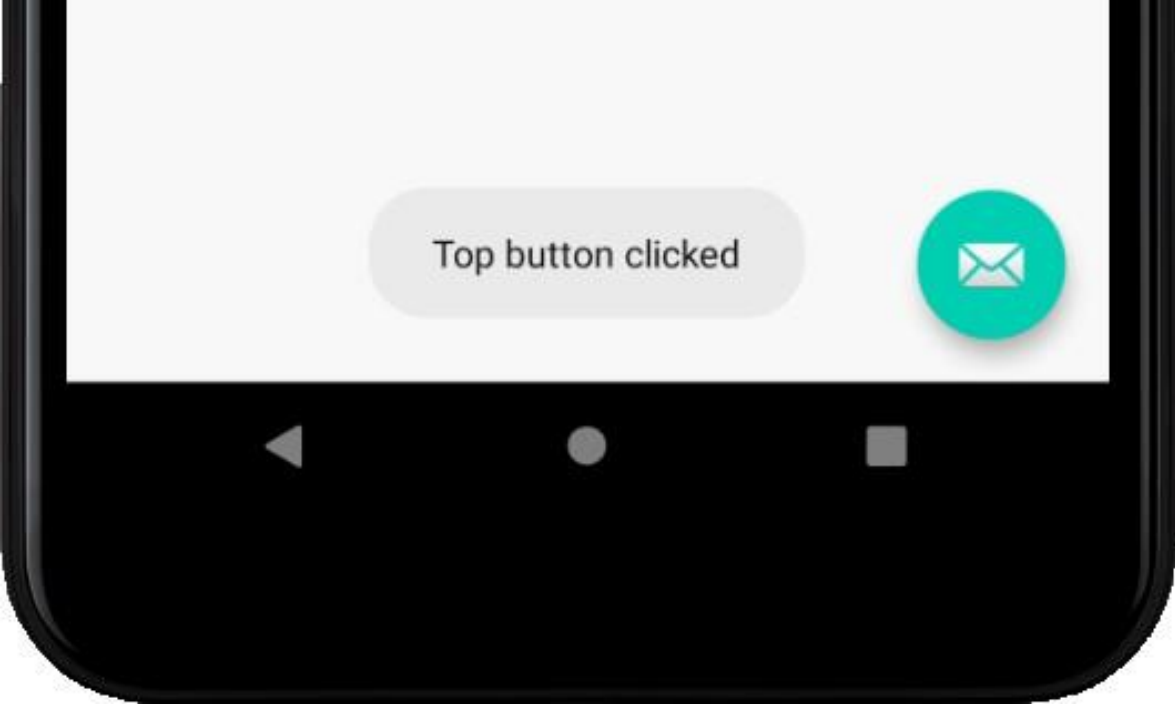




```
com.gamecodeschool.helloworld W/hool.helloworl: Accessing hidden  
com.gamecodeschool.helloworld W/hool.helloworl: Accessing hidden  
com.gamecodeschool.helloworld I/info: Done creating the app  
com.gamecodeschool.helloworld I/ConfigStore: android::hardware::  
com.gamecodeschool.helloworld I/ConfigStore: android::hardware::
```

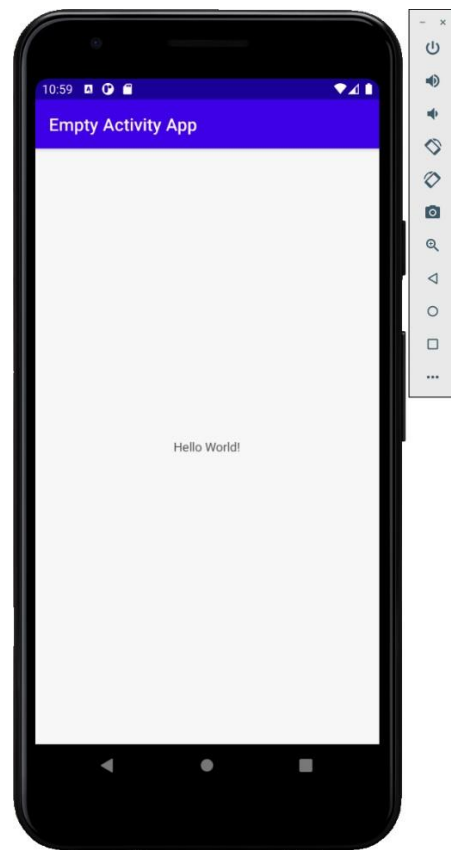


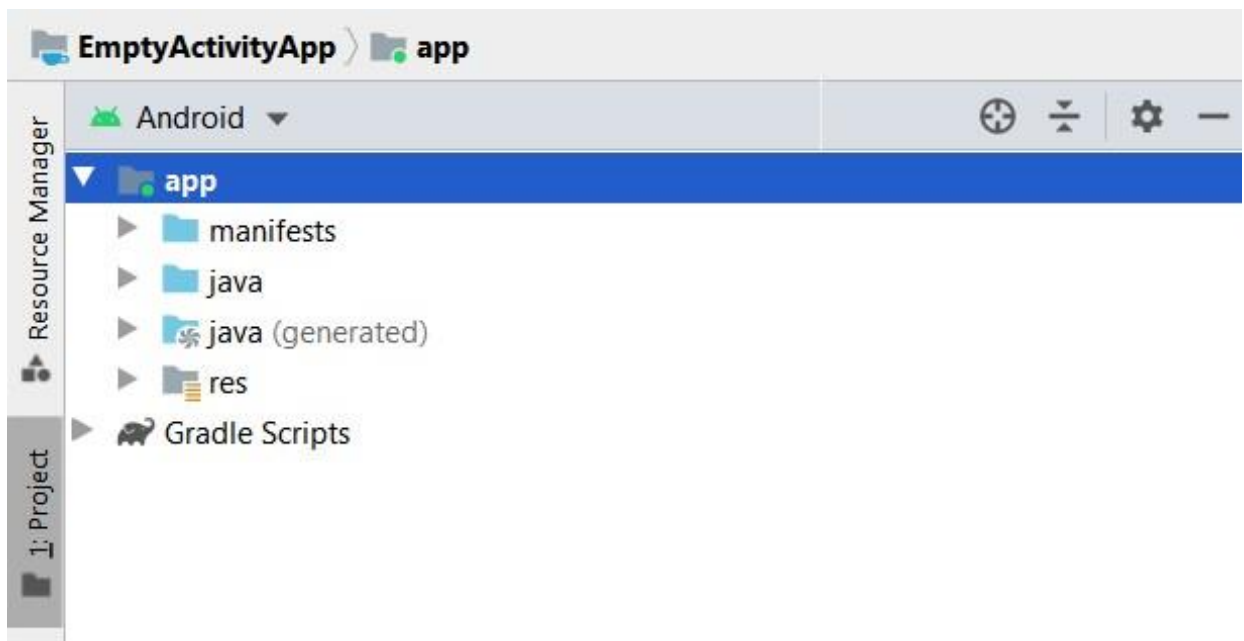
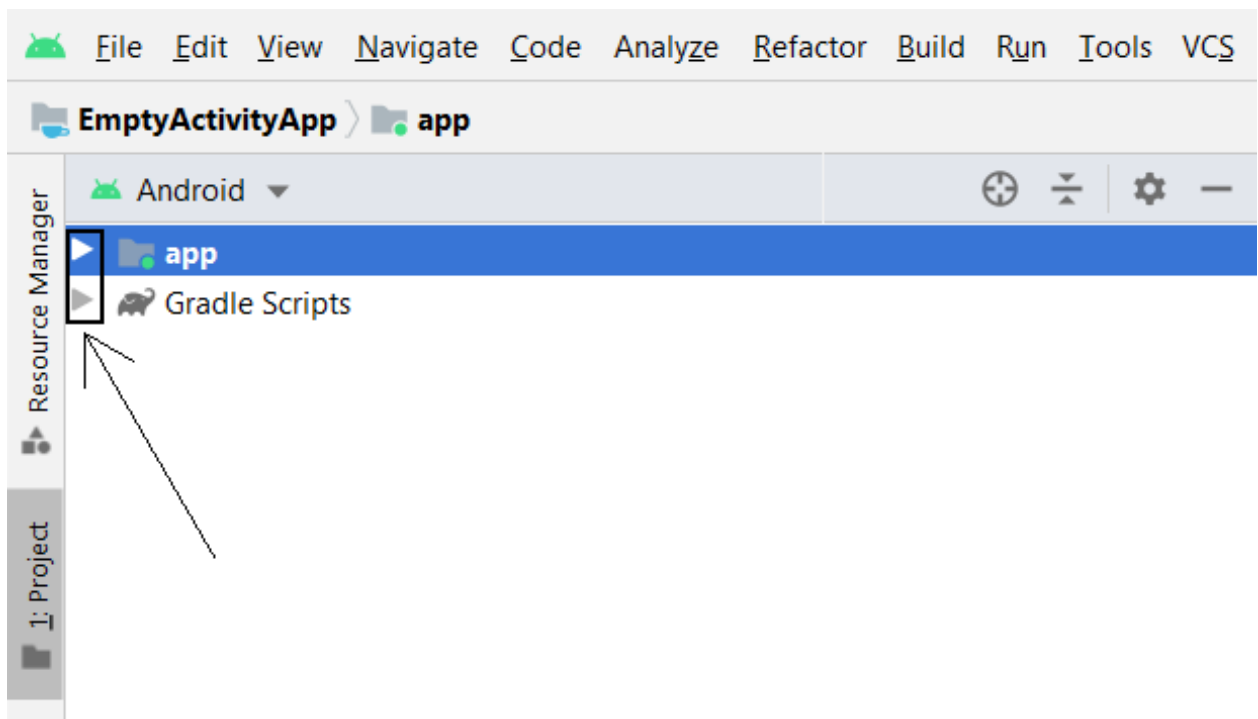
```
com.gamecodeschool.helloworld I/info: The user clicked the top button  
com.gamecodeschool.helloworld I/info: The user clicked the top button  
com.gamecodeschool.helloworld I/info: The user clicked the top button  
com.gamecodeschool.helloworld I/info: The user clicked the bottom button  
com.gamecodeschool.helloworld I/info: The user clicked the bottom button  
com.gamecodeschool.helloworld I/info: The user clicked the bottom button
```



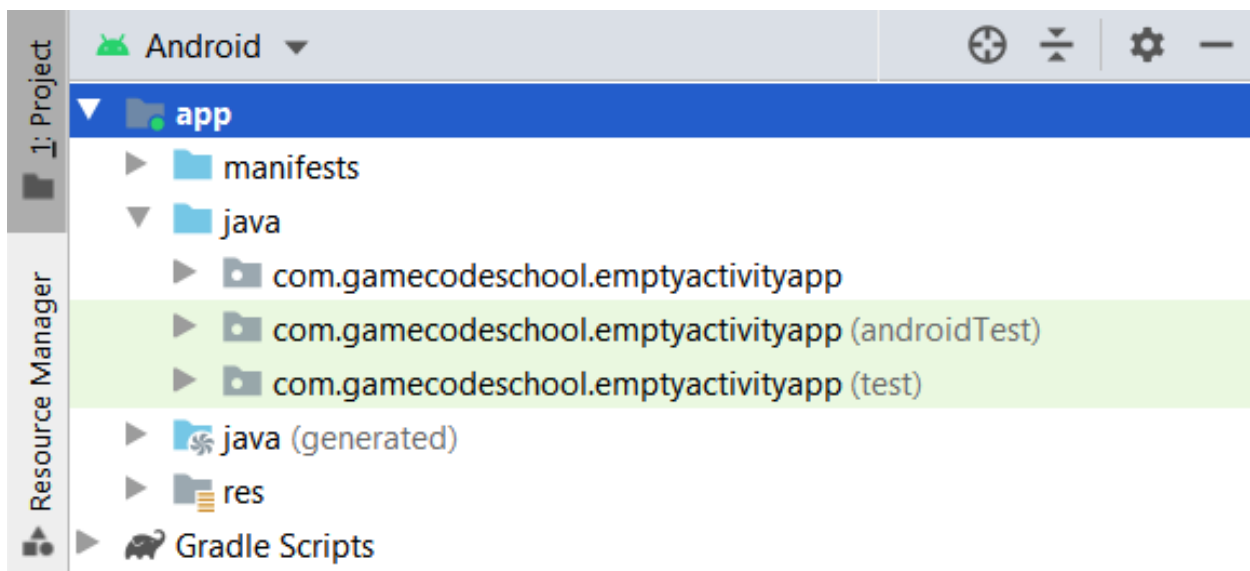


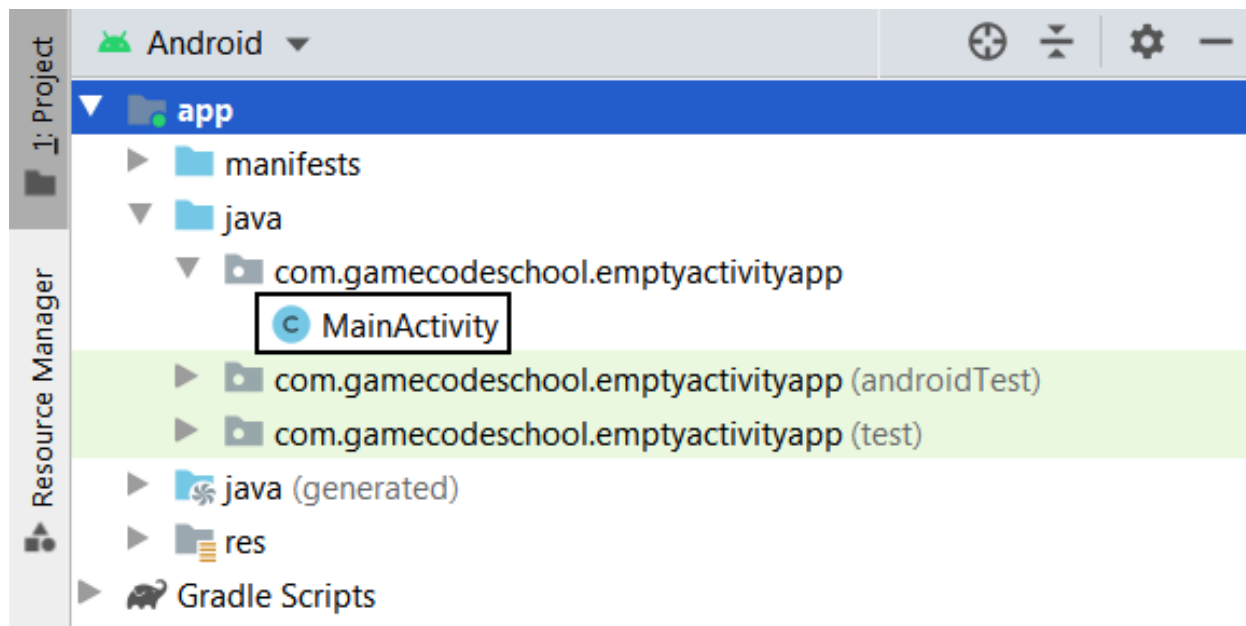
# Chapter 03: Exploring Android Studio and the Project Structure






```
activity_main.xml x MainActivity.java x AndroidManifest.xml x
1 <?xml version="1.0" encoding="utf-8"?>
2 <manifest xmlns:android="http://schemas.android.com/apk/res/android"
3     package="com.gamecodeschool.emptyactivityapp">
4
5     <application
6         android:allowBackup="true"
7         android:icon="@mipmap/ic_launcher"
8         android:label="@string/app_name"
9         android:roundIcon="@mipmap/ic_launcher_round"
10        android:supportsRtl="true"
11        android:theme="@style/AppTheme">
12        <activity android:name=".MainActivity">
13            <intent-filter>
14                <action android:name="android.intent.action.MAIN" />
15
16                <category android:name="android.intent.category.LAUNCHER" />
17            </intent-filter>
18        </activity>
19    </application>
20
21 </manifest>
```





```
package com.gamecodeschool.emptyactivityapp;
```

```
import ...
```

```
 public class MainActivity extends AppCompatActivity {
```

```
    @Override
```






```
    protected void onCreate(Bundle savedInstanceState) {
```
















```
        super.onCreate(savedInstanceState);
```

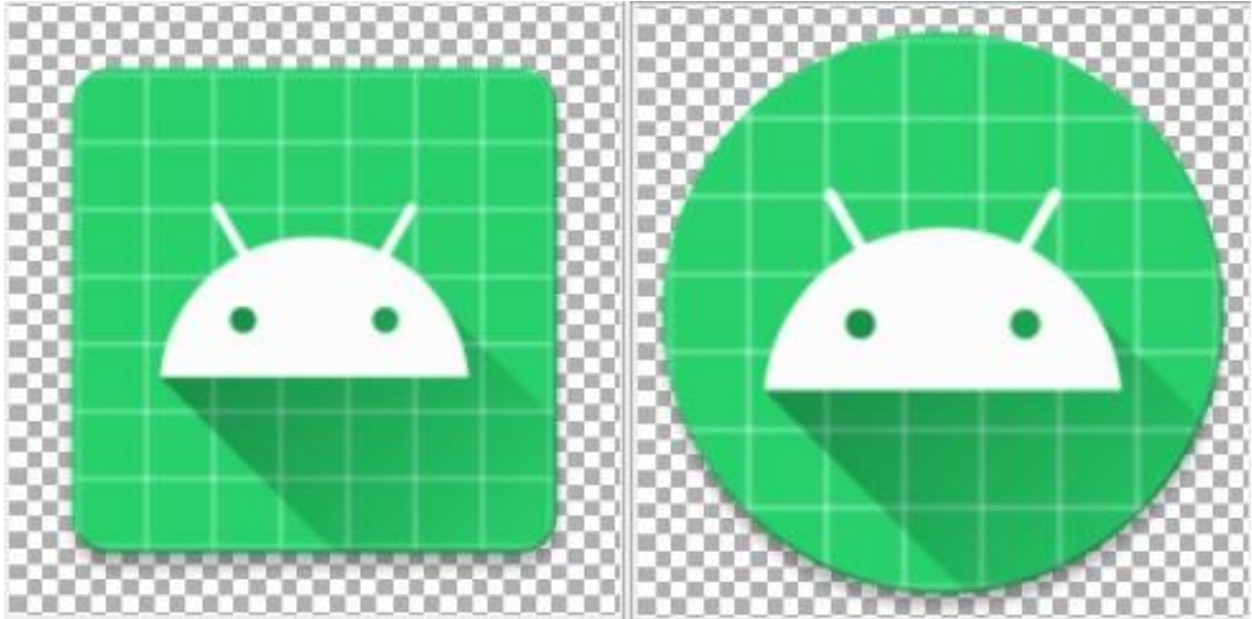
```
        setContentView(R.layout.activity_main);
```

```
    }
```

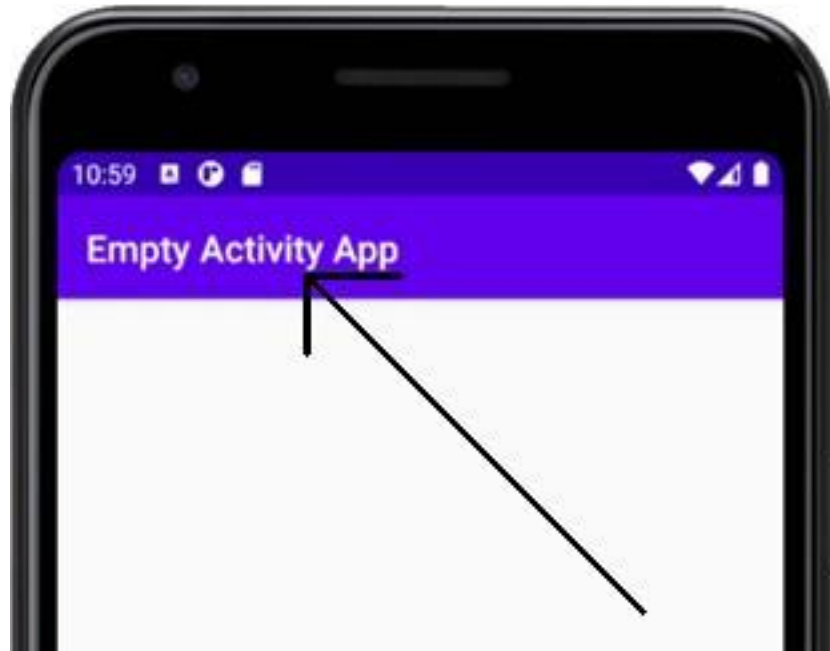
```
}
```

- ▼  res
  - ▶  drawable
  - ▶  layout
  - ▶  mipmap
  - ▶  values

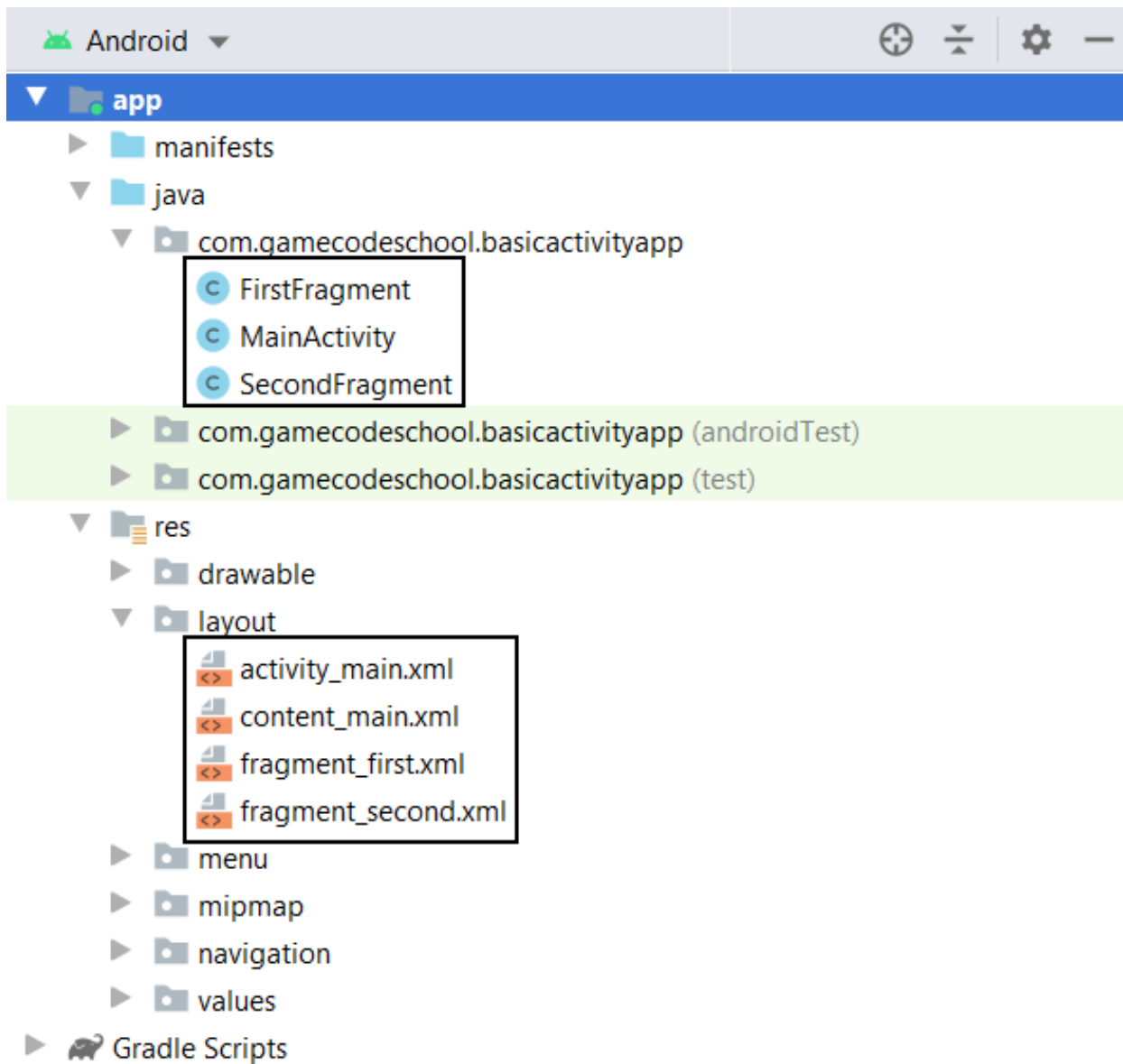
- ▼  mipmap
  - ▼  ic\_launcher (6)
    -  ic\_launcher.png (hdpi)
    -  ic\_launcher.png (mdpi)
    -  ic\_launcher.png (xhdpi)
    -  ic\_launcher.png (xxhdpi)
    -  ic\_launcher.png (xxxhdpi)
    -  ic\_launcher.xml (anydpi-v26)
  - ▼  ic\_launcher\_round (6)
    -  ic\_launcher\_round.png (hdpi)
    -  ic\_launcher\_round.png (mdpi)
    -  ic\_launcher\_round.png (xhdpi)
    -  ic\_launcher\_round.png (xxhdpi)
    -  ic\_launcher\_round.png (xxxhdpi)
    -  ic\_launcher\_round.xml (anydpi-v26)



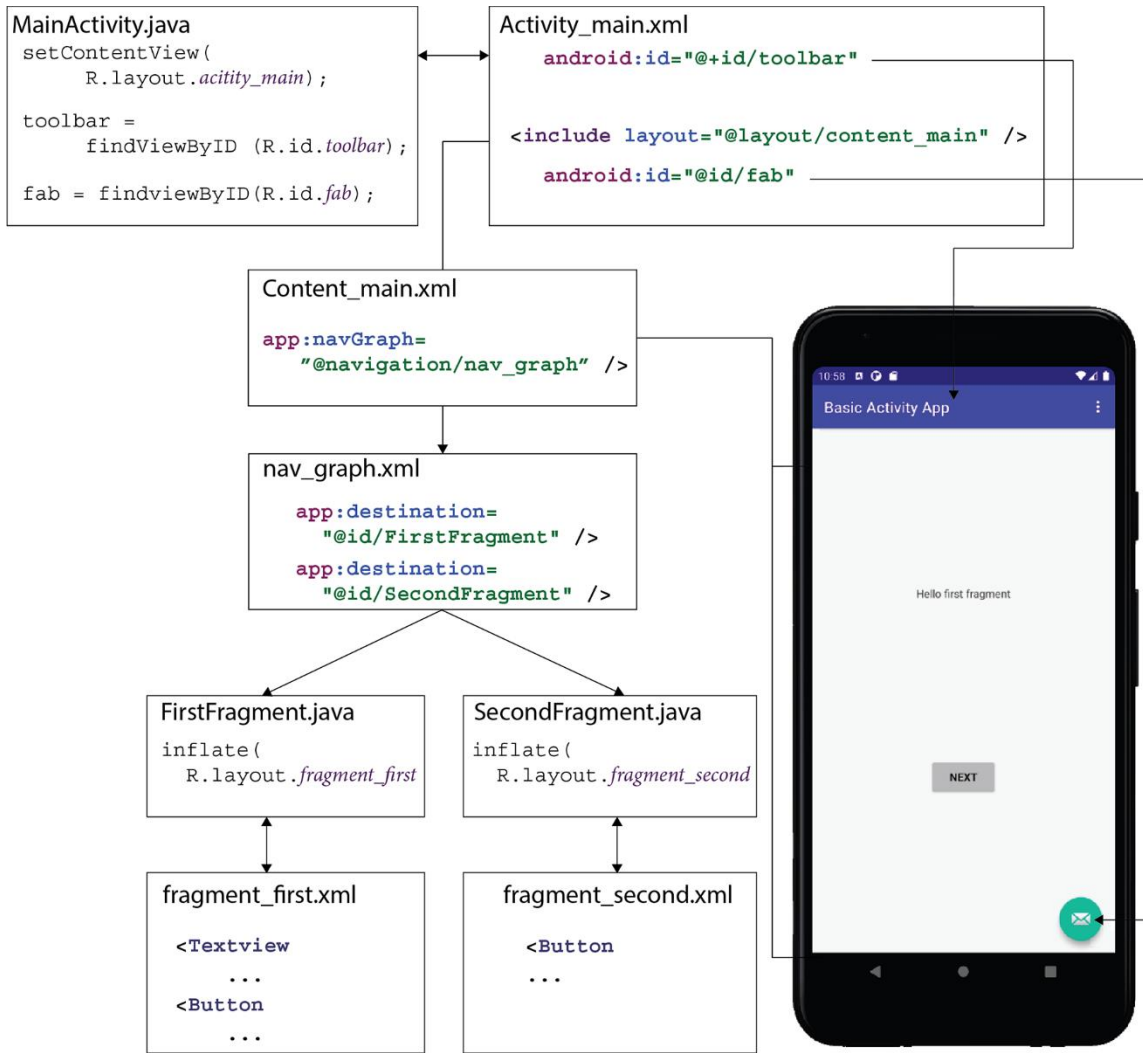
- ▼ values
  - colors.xml
  - strings.xml
  - styles.xml

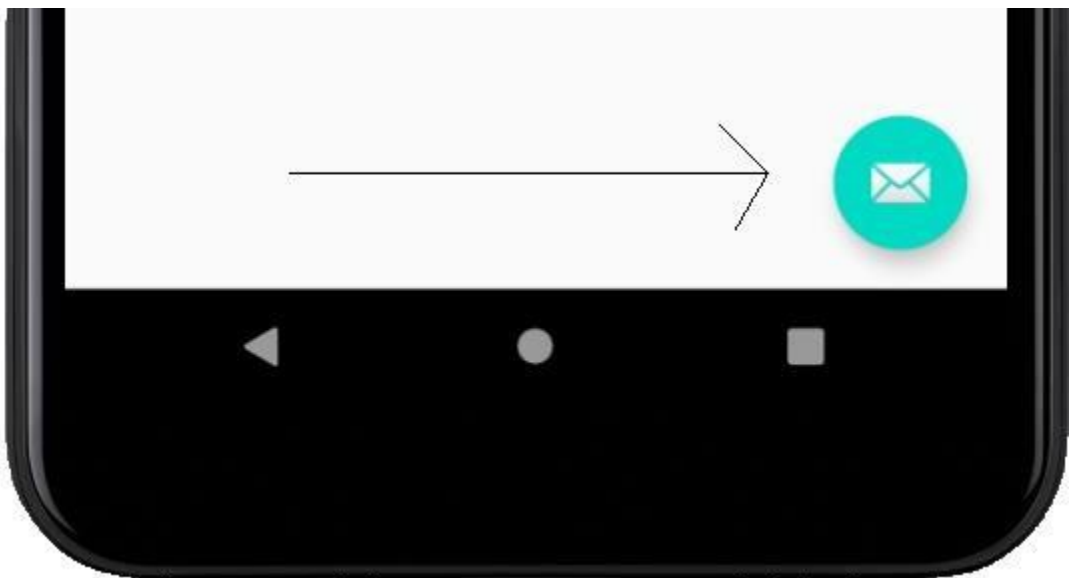


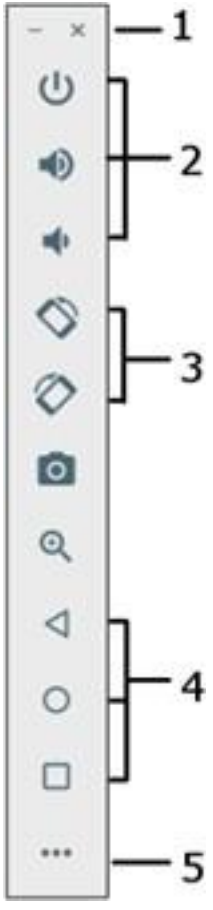
Option	Value entered
Name:	Basic Activity App
Package name:	com.gamecodeschool. basicactivityapp
Save location:	D:\Android\Projects\ BasicActivityApp
Language:	Java
Minimum SDK:	Leave this and any other options at their defaults settings







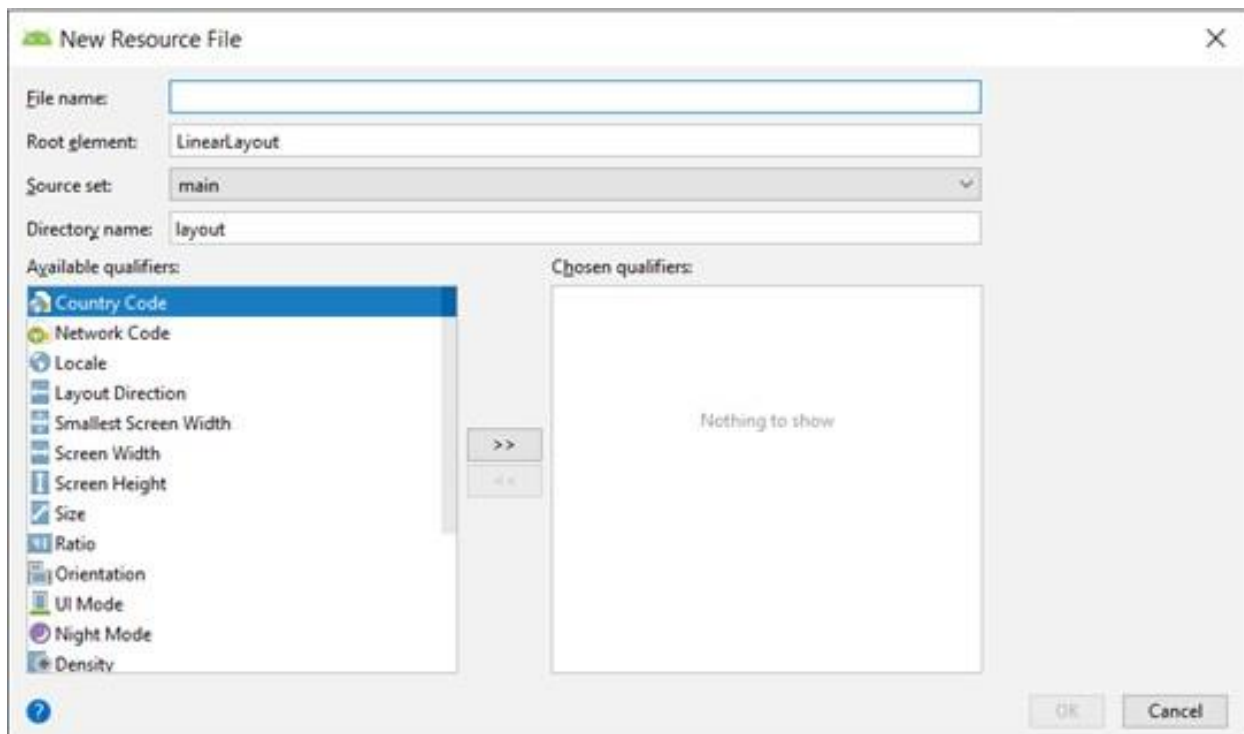
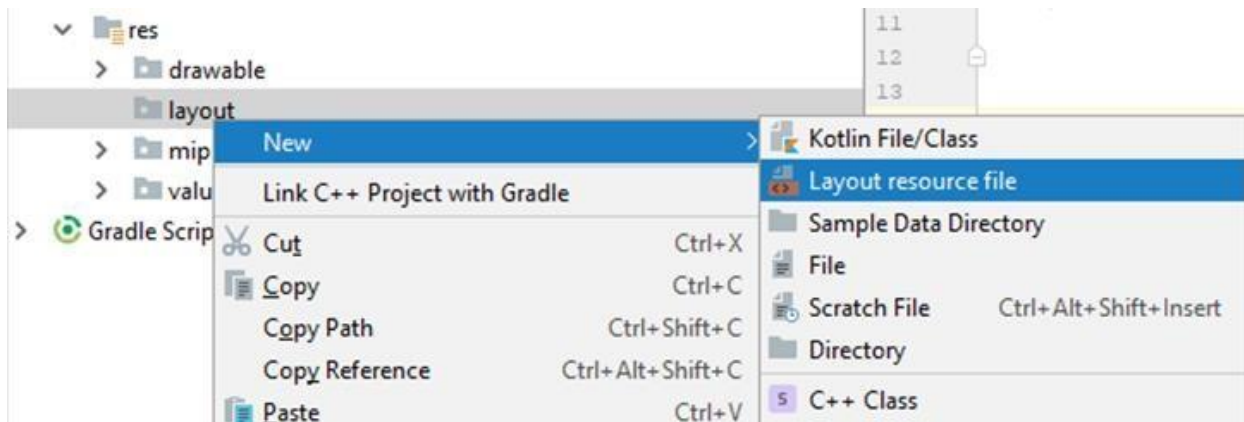


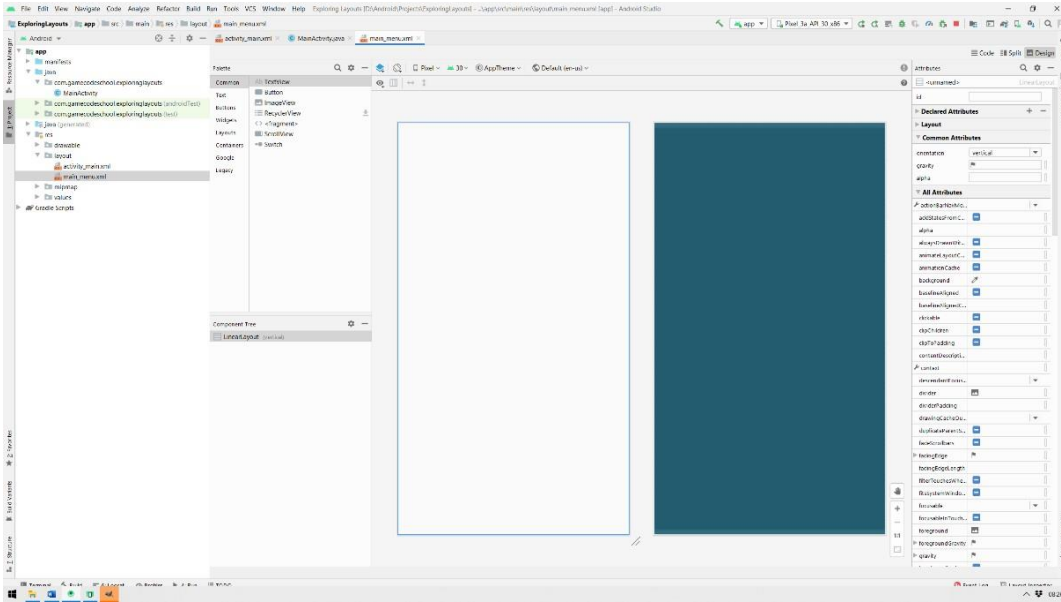






# Chapter 04: Getting Started with Layouts and Material Design





Code Split Design

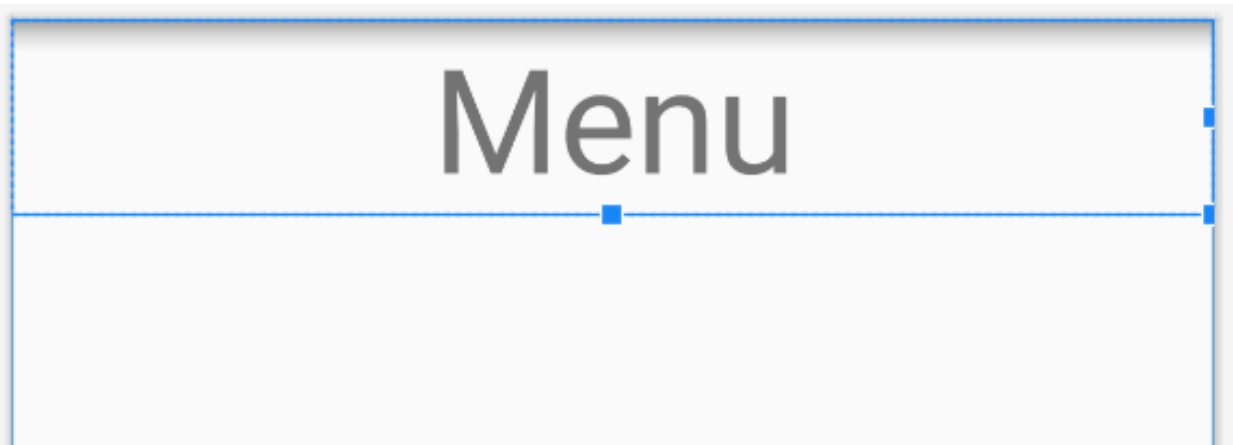
text

Ab textView		TextView
autoSizeMaxTextS...		
autoSizeMinTextSi...		
autoSizeTextType		
autoText	<input type="checkbox"/>	
freezesText	<input type="checkbox"/>	
inputType	<input type="checkbox"/>	
text	<input checked="" type="checkbox"/>	TextView
textAllCaps	<input type="checkbox"/>	

gravity			
Ab textView		TextView	
▶ foregroundGravity	🚩		0
▼ gravity	🚩		0
bottom	<input type="checkbox"/>	false	0
clip_horizontal	<input type="checkbox"/>	false	0
center	<input type="checkbox"/>	false	0
clip_vertical	<input type="checkbox"/>	false	0
start	<input type="checkbox"/>	false	0
right	<input type="checkbox"/>	false	0
center_horizontal	<input type="checkbox"/>	false	0
fill	<input type="checkbox"/>	false	0
fill_horizontal	<input type="checkbox"/>	false	0
top	<input type="checkbox"/>	false	0
left	<input type="checkbox"/>	false	0
center_vertical	<input type="checkbox"/>	false	0
fill_vertical	<input type="checkbox"/>	false	0
end	<input type="checkbox"/>	false	0
▶ layout_gravity	🚩		0



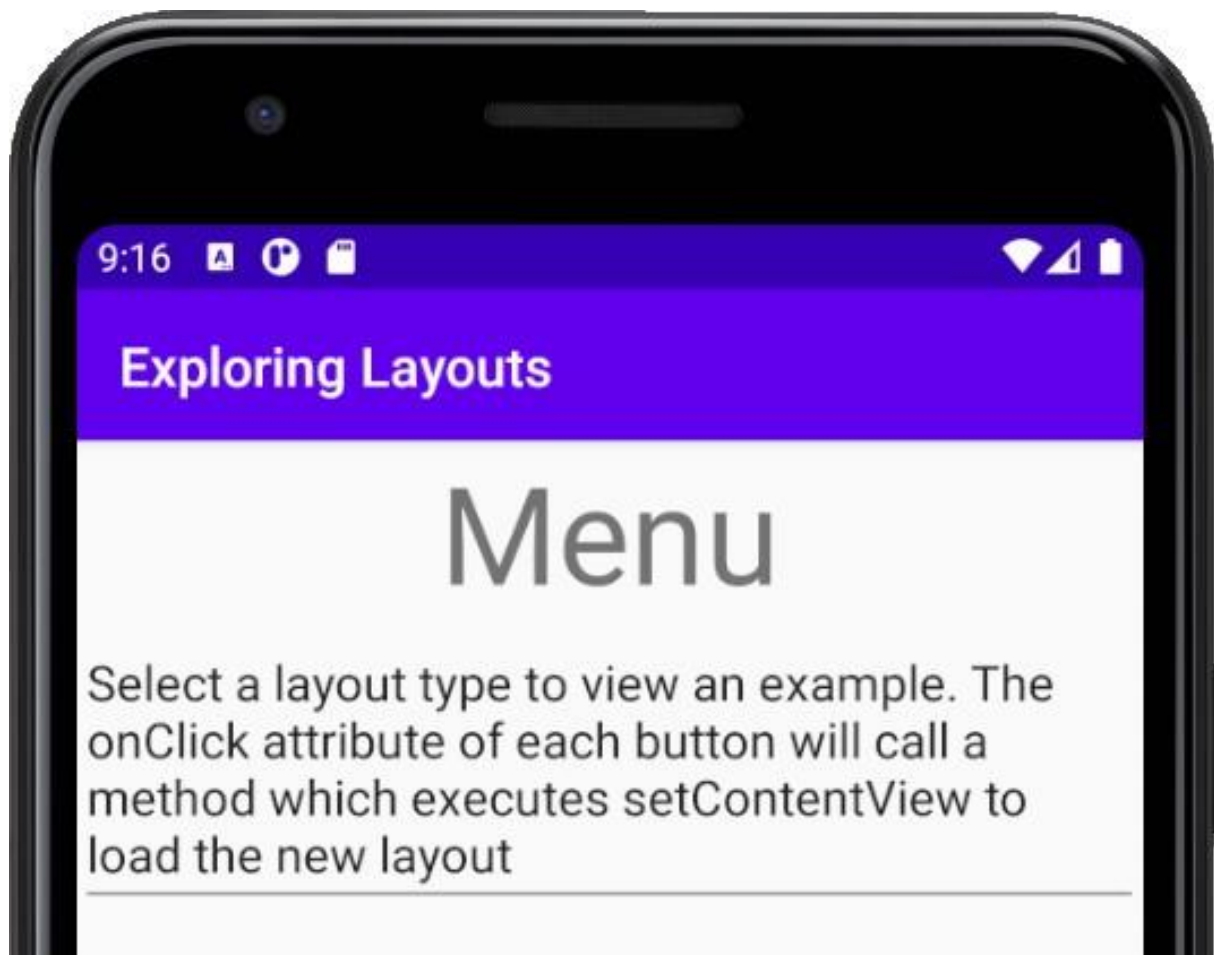
right	<input type="checkbox"/>	false	
center_horizontal	<input checked="" type="checkbox"/>	true	
fill	<input type="checkbox"/>	false	



# Menu

Select a layout type to view an example. The `onClick` attribute of each button will call a method which executes `setContentView` to load the new layout

---



## ⚠ Import class

⚠ Create class 'View'

⚠ Create enum 'View'

⚠ Create inner class 'View'

⚠ Create interface 'View'

⚠ Create type parameter 'View'

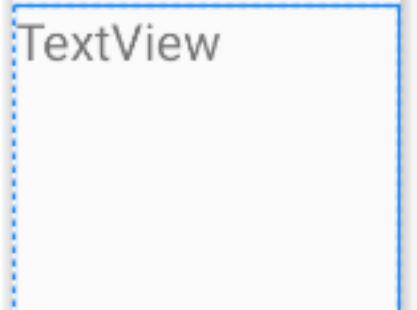
🔗 Create field for parameter 'v' ▶

🔗 Generate overloaded method with default parameter values ▶

## Menu

Select a layout type to view an example. The onClick attribute of each button will call a method which executes setContentView to load the new layout

— Blue border —

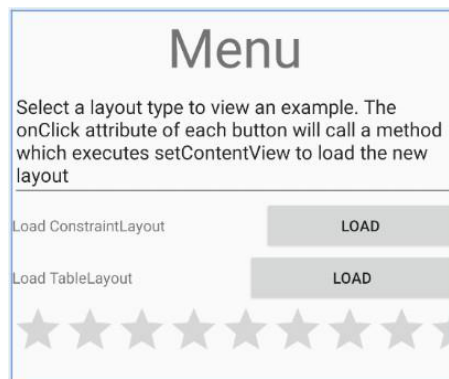


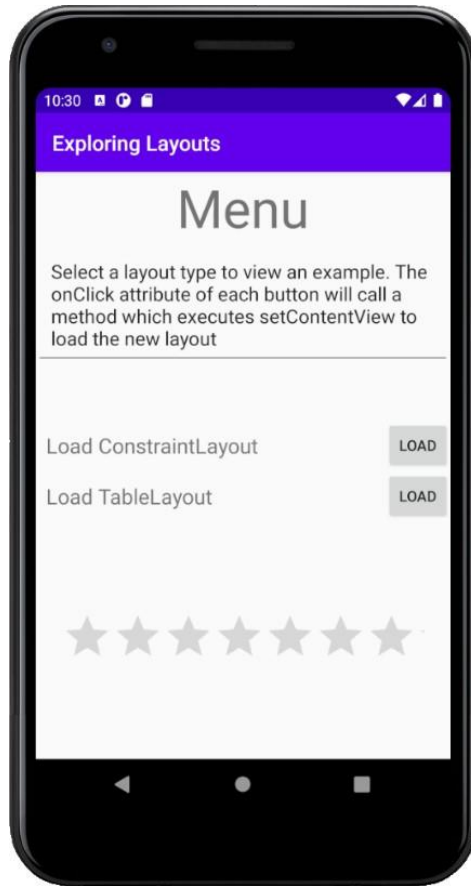
# Menu

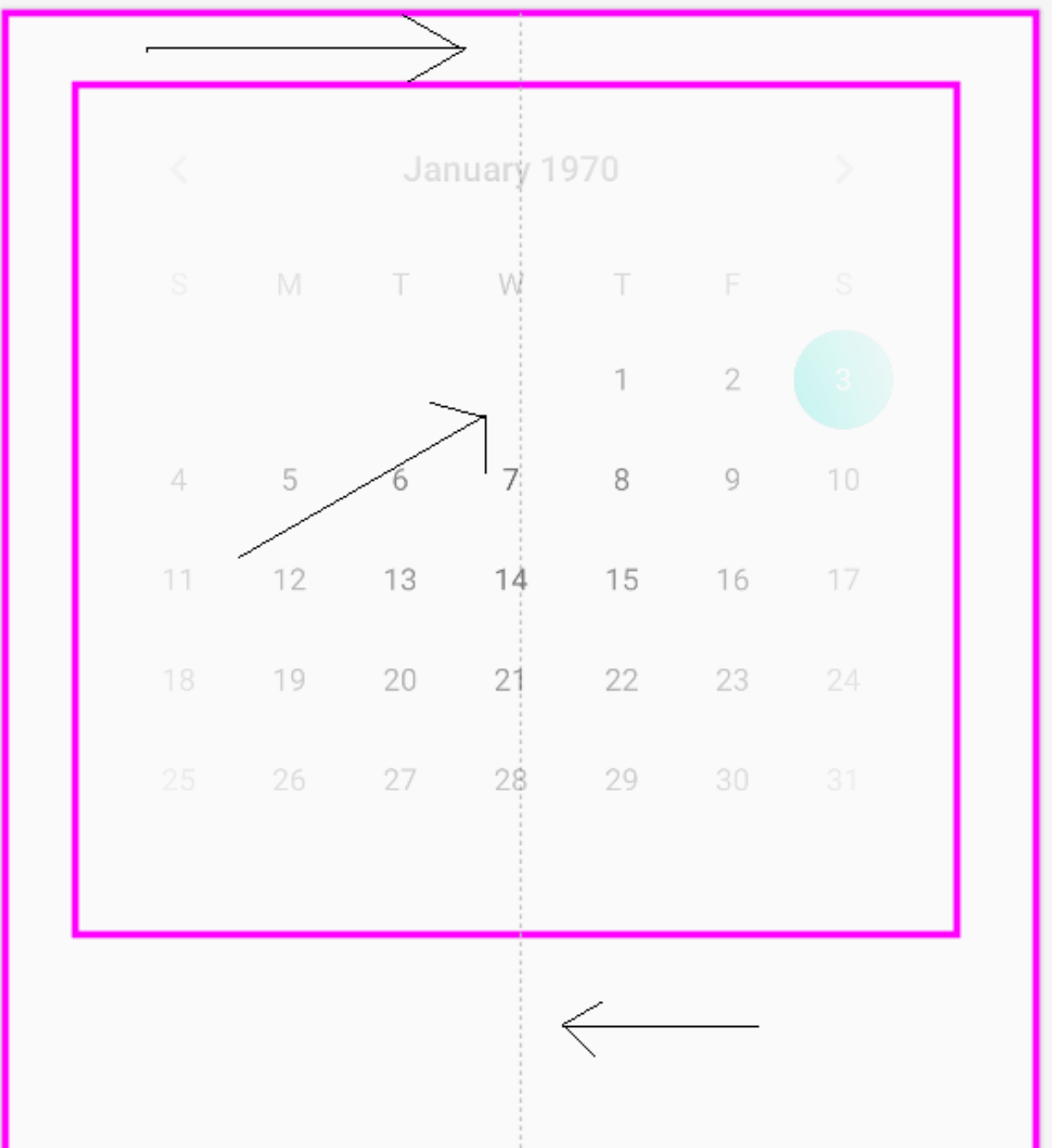
Select a layout type to view an example. The `onClick` attribute of each button will call a method which executes `setContentView` to load the new layout

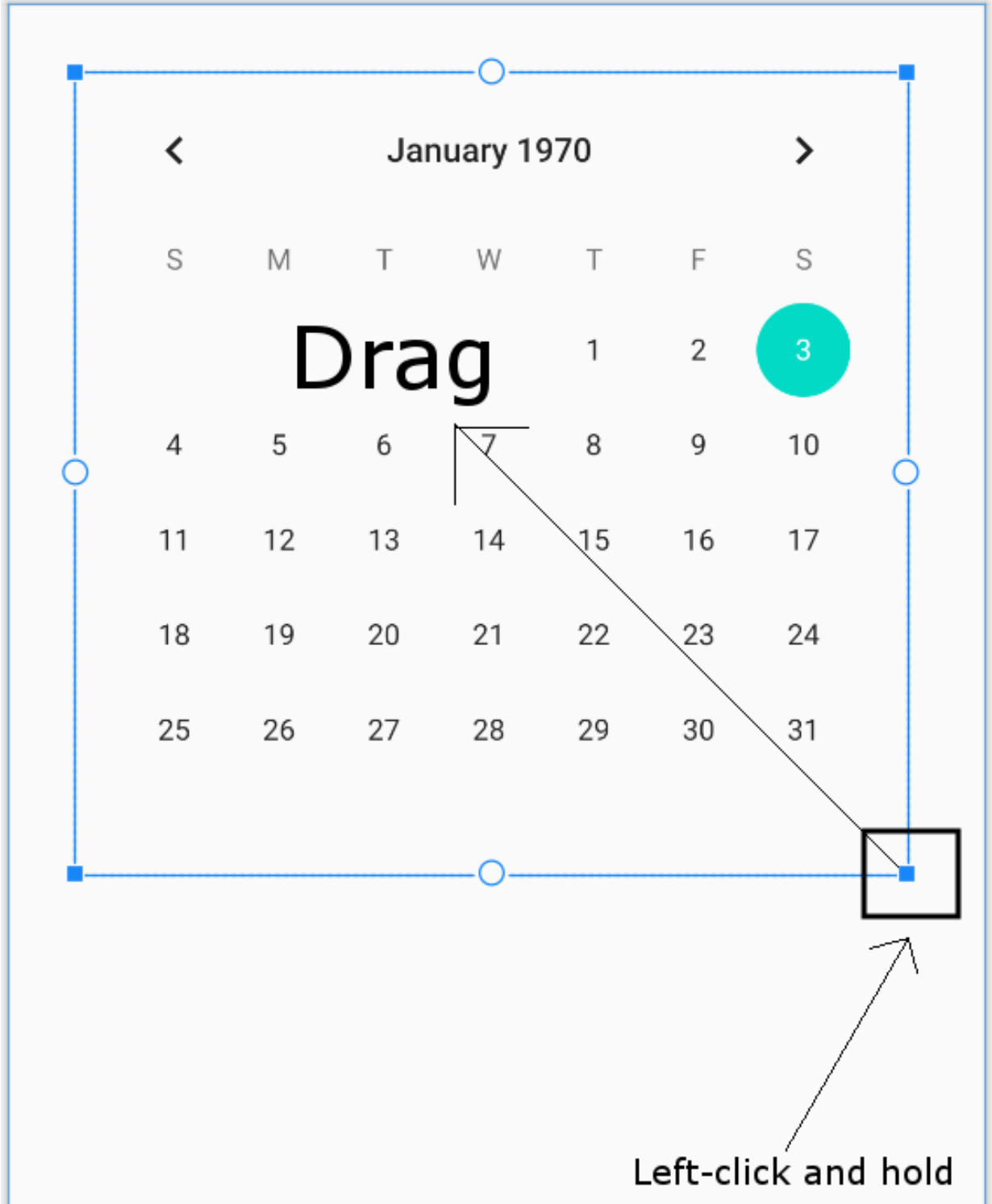
Load ConstraintLayout

LOAD

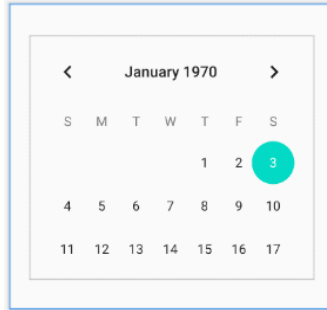












Component Tree

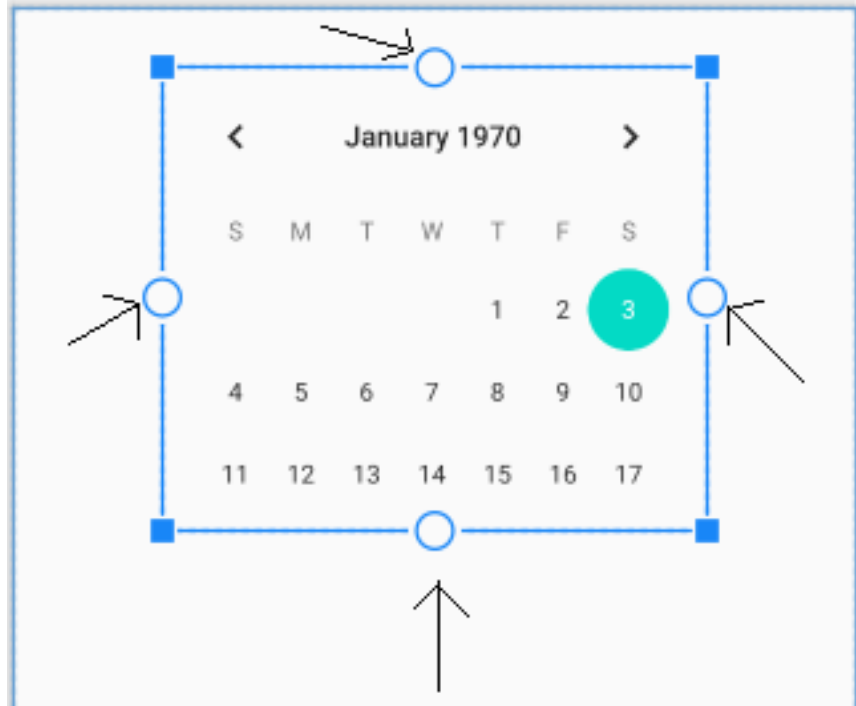
- ConstraintLayout
- calendarView

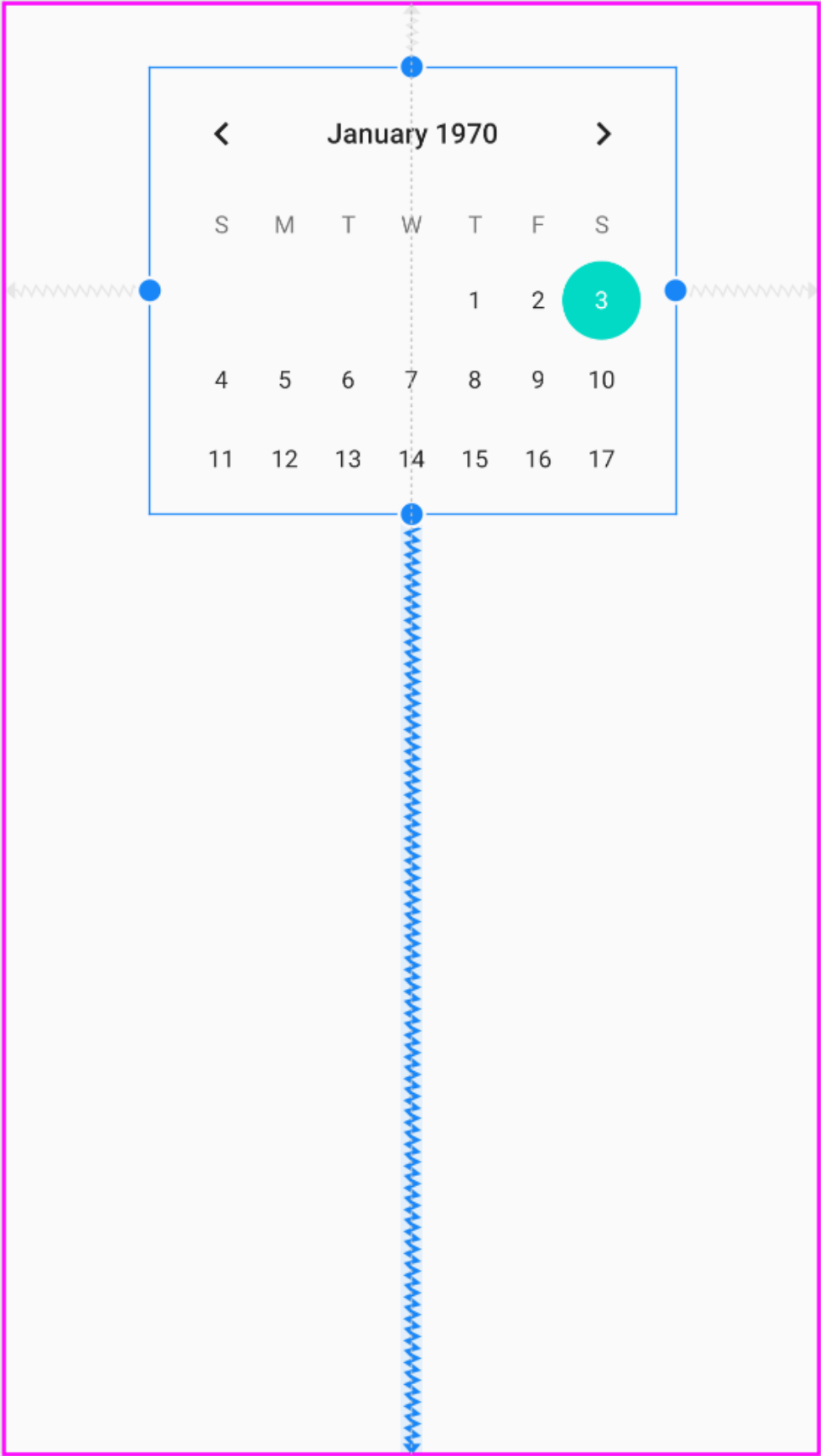
This view is not constrained. It only has designtime positions, so it will jump to (0,0) at runtime unless you add the constraints

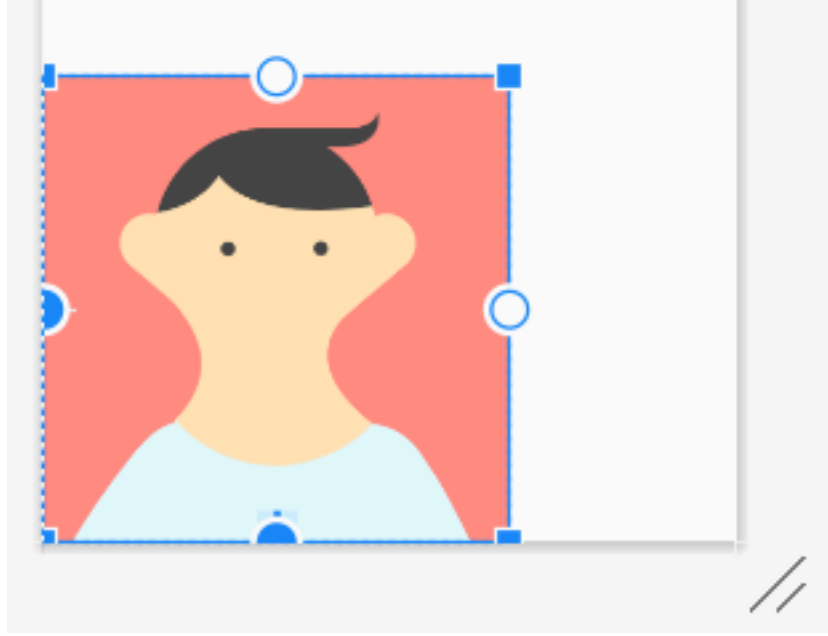
Custom 30 AppTheme Default (en-us)

0dp

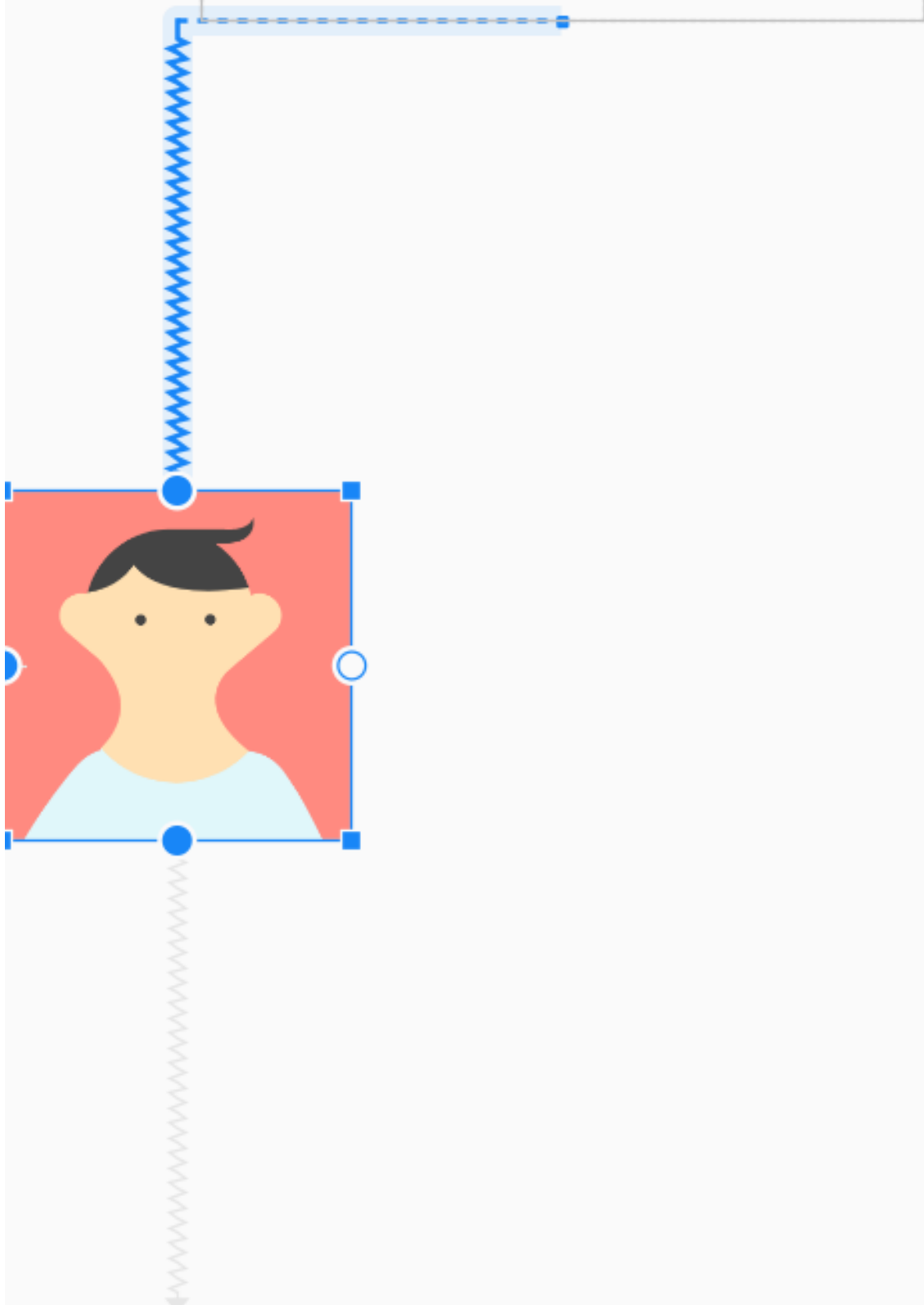
ConstraintLayout icon

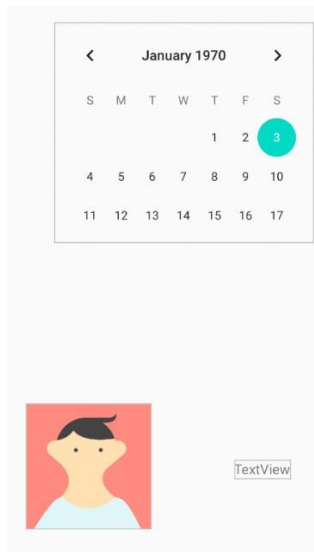
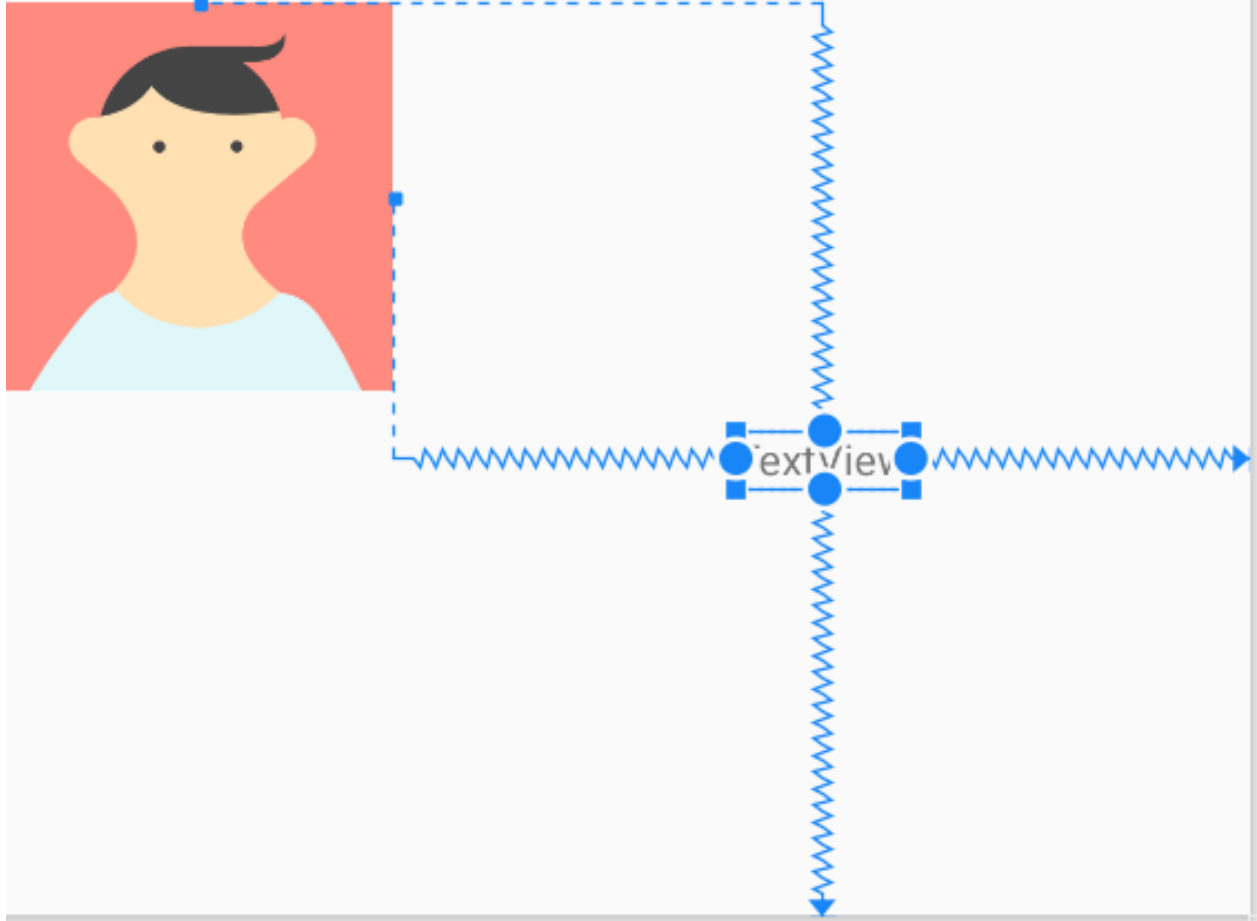






11 12 13 14 15 16 17





Back to the menu



Back to the menu menu

Component Tree

- TableLayout
  - ▼ TableRow
    - Ab textView7 "TextView"** ⚠
    - Ab textView6 "TextView" ⚠
    - Ab textView5 "TextView" ⚠

TextView | TextView | TextView

A visual representation of three TextView components arranged horizontally. The first component is selected, indicated by a blue highlight and a small blue square cursor.

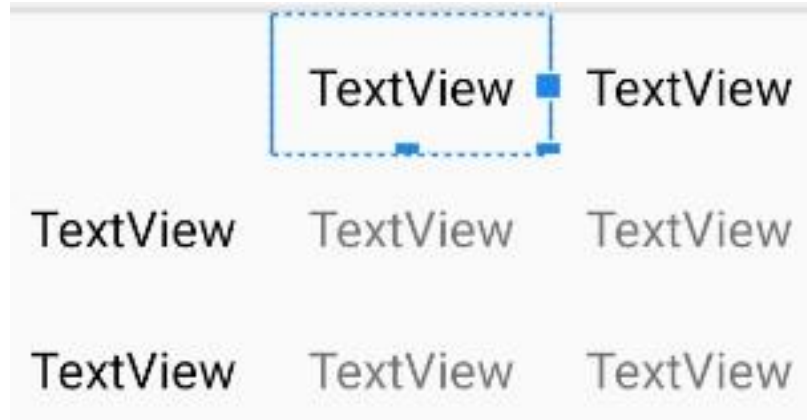
Component Tree

- TableLayout
  - TableRow
    - Ab textView7 "TextView" !
    - Ab textView6 "TextView" !
    - Ab textView5 "TextView" !
  - TableRow
    - Ab textView7 "TextView" !
    - Ab textView6 "TextView" !
    - Ab textView5 "TextView" !
  - TableRow
    - Ab textView7 "TextView"
    - Ab textView6 "TextView"
    - Ab textView5 "TextView"

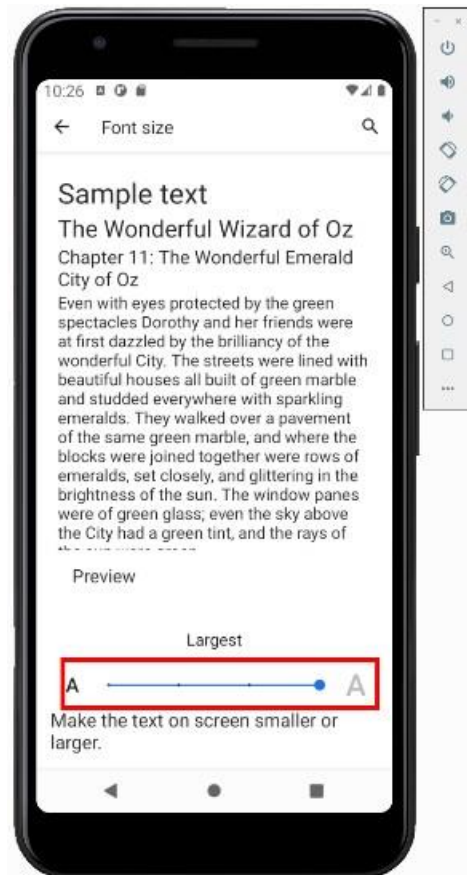
TextView	TextView	TextView	
TextView	TextView	TextView	
TextView	TextView	TextView	

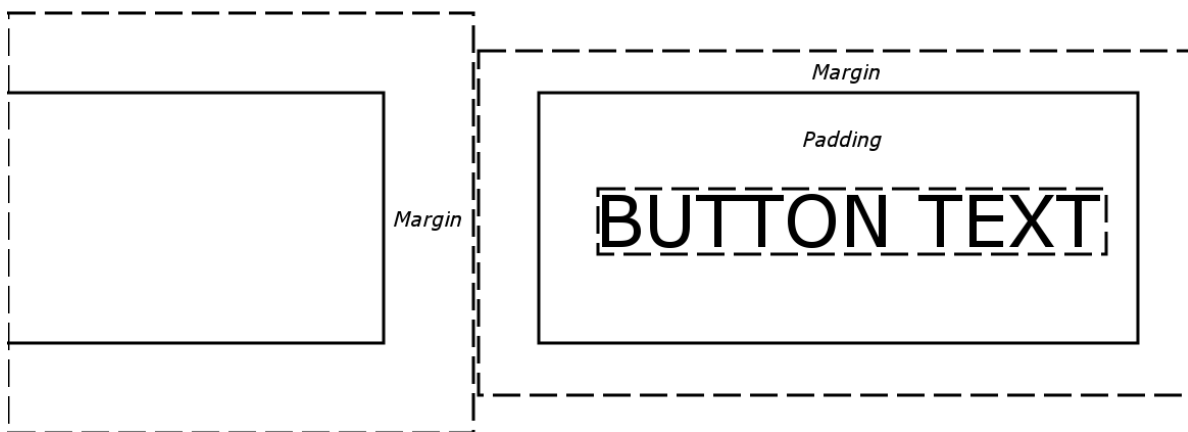
TextView	TextView	TextView
TextView	TextView	TextView
TextView	TextView	TextView



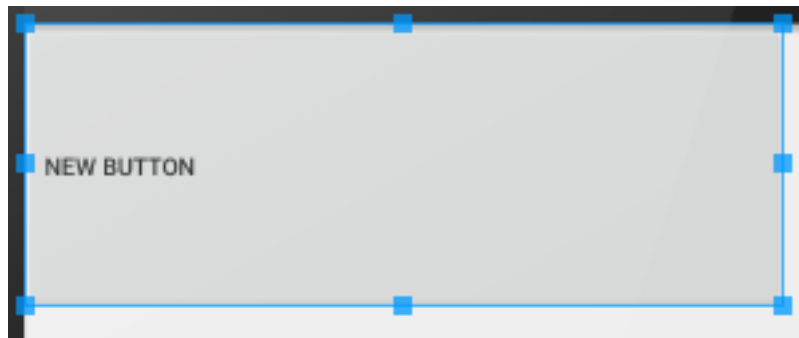


# Chapter 05: Beautiful Layouts with CardView and ScrollView









▼ res

▼ drawable

ic\_launcher\_background.xml

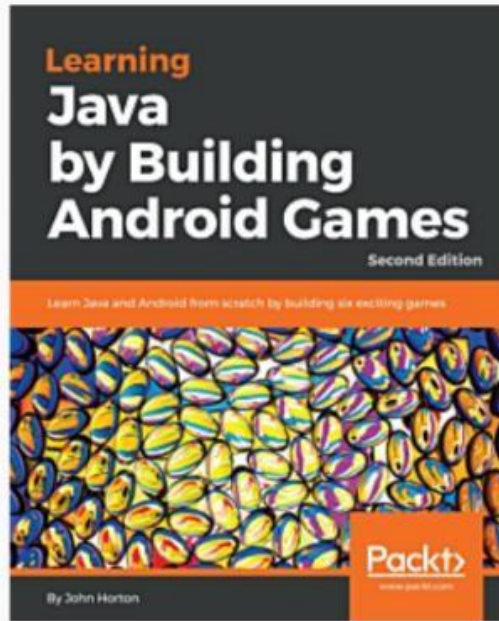
ic\_launcher\_foreground.xml (v24)

image\_1.png

image\_2.png

image\_3.png

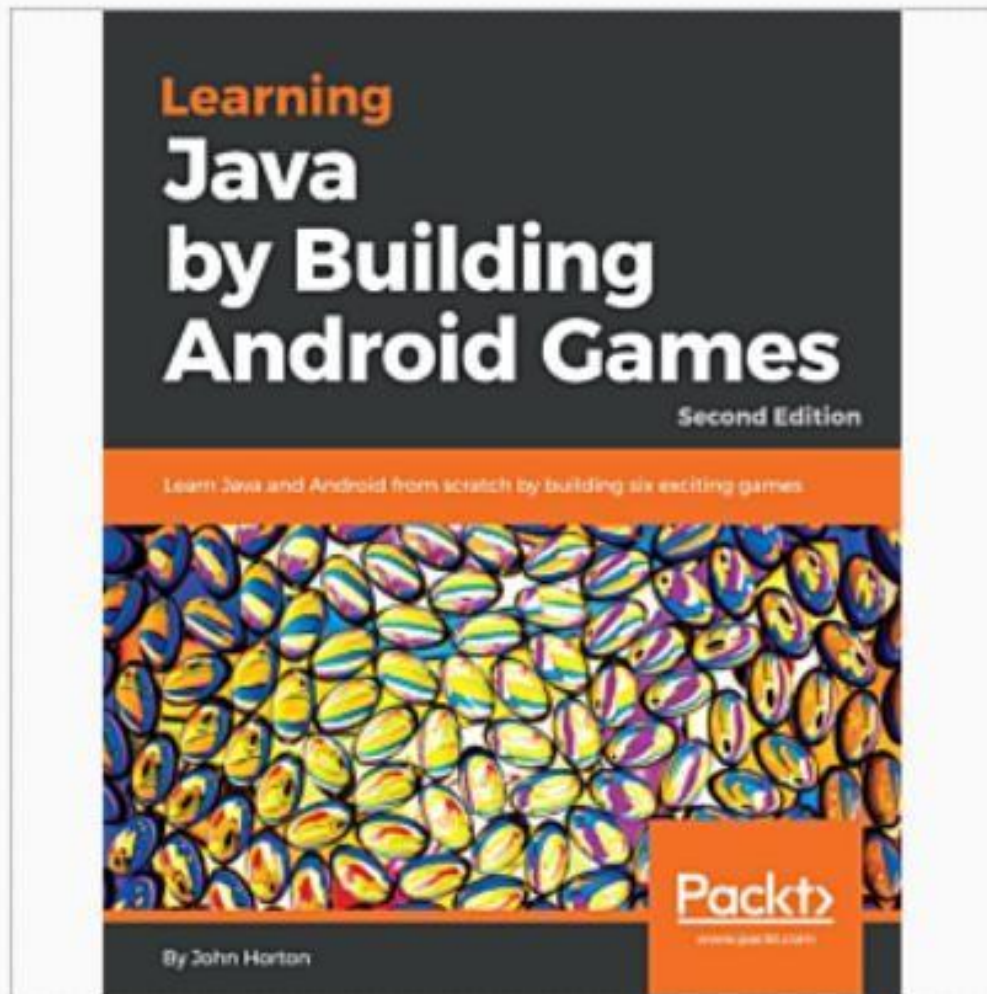
TextView



TextView

TextView

# Learning Java by Building Android Games



Learn Java and Android from scratch by building 6 playable games

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 **LinearLayout (vertical)**

 **Add Project Dependency** ✕

 This operation requires the library cardview.

Would you like to add this library now?



9:28

## CardView Layout

### Learning Java by Building Android Games



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9:43



## CardView Layout

John Horton

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Android Programming with Kotlin

**Android Programming with Kotlin for Beginners**

Build Android apps starting from zero programming experience with the new Kotlin programming language





## Select Hardware

## Choose a device definition

Q-

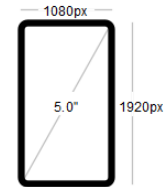
Category	Name	Play Store	Size	Resolution	Density
TV	Pixel 3 XL		6.3"	1440x2960	560dpi
Phone	Pixel 3		5.46"	1080x2160	440dpi
Wear OS	Pixel 2 XL		5.99"	1440x2880	560dpi
Tablet	Pixel 2		5.0"	1080x1920	420dpi
Automotive	Pixel		5.0"	1080x1920	420dpi
	Nexus S		4.0"	480x800	hdpi
	Nexus One		3.7"	480x800	hdpi
	Nexus 6P		5.7"	1440x2560	560dpi

New Hardware Profile

Import Hardware Profiles



## Pixel 2

Size: large  
Ratio: long  
Density: 420dpi

Clone Device...

Previous

Next

Cancel

Finish

Help

Learning Java by



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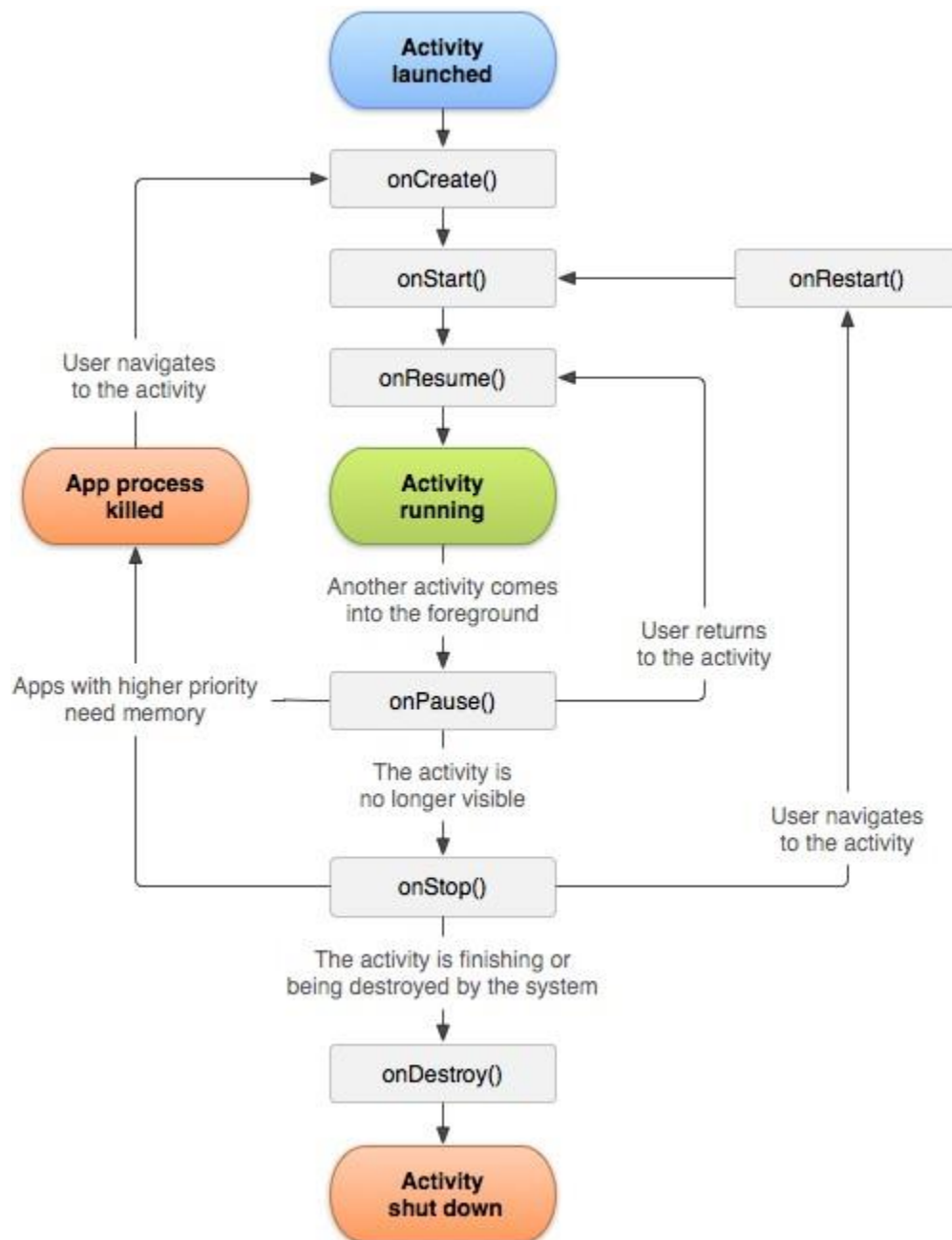
Beginning C++ Game

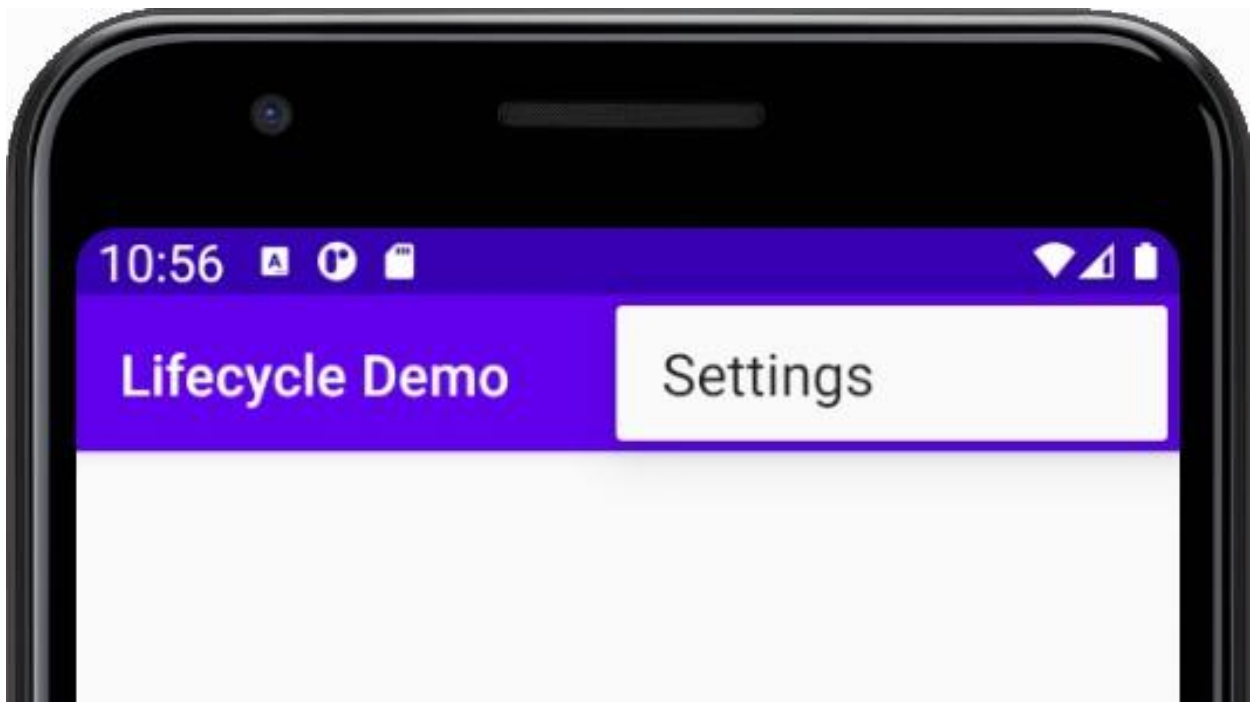
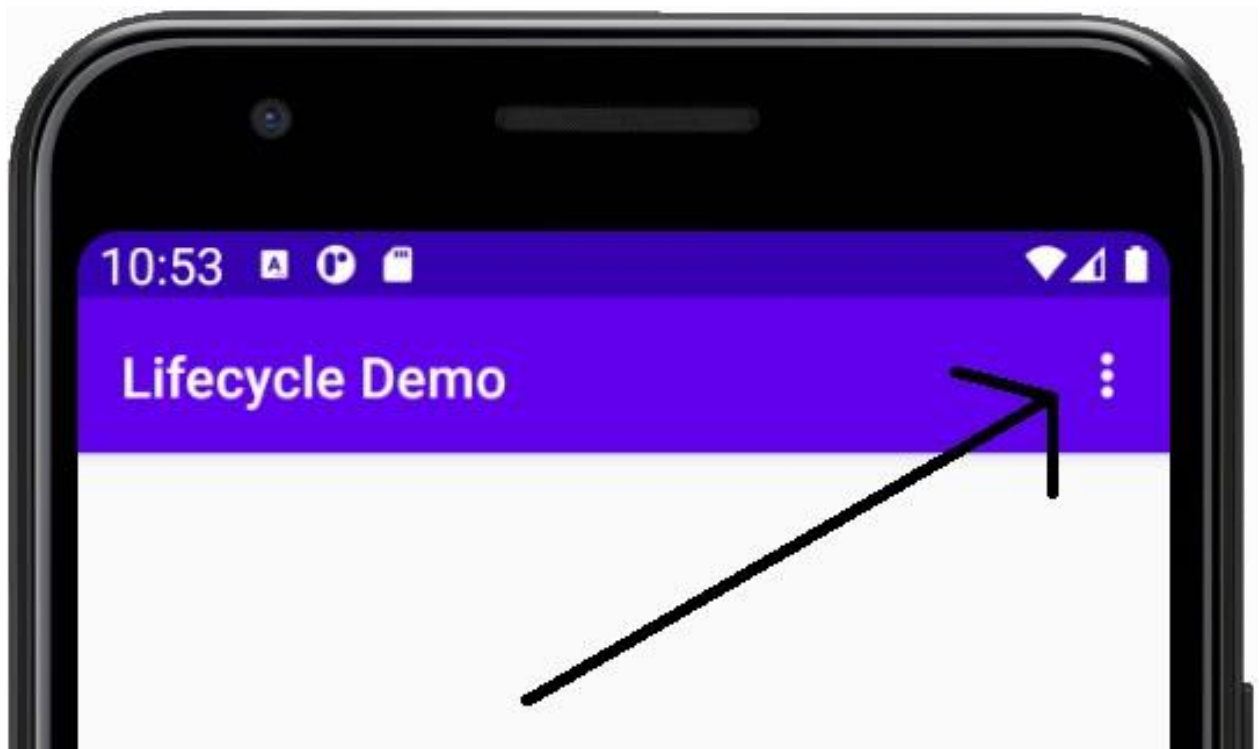


Learn C++ by Building Games

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## Chapter 06: The Android Lifecycle

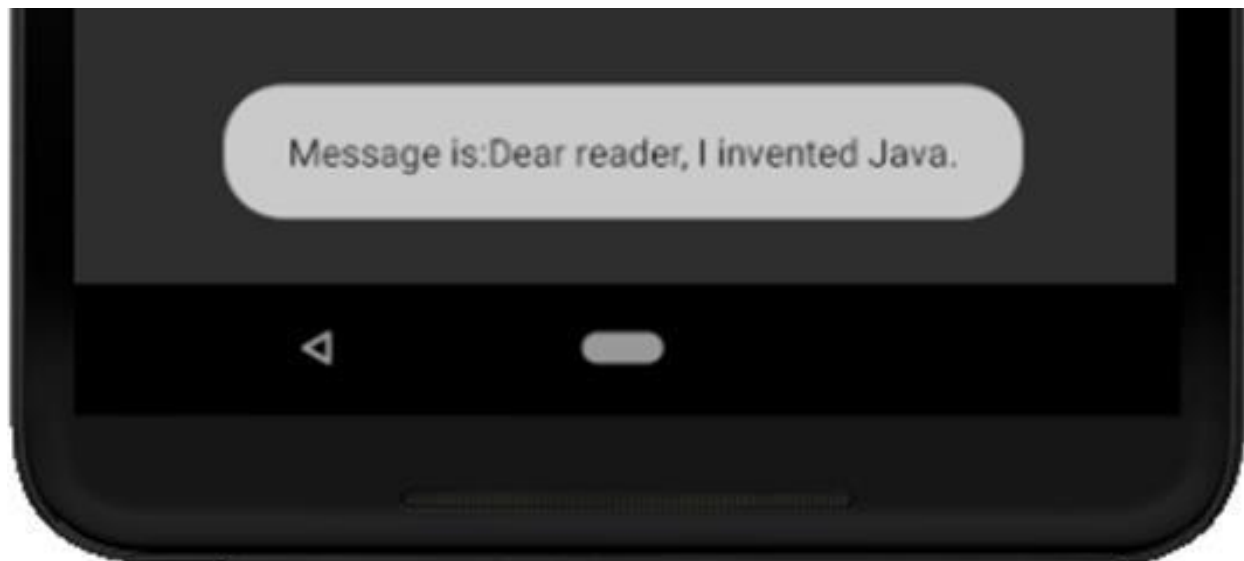




# Chapter 07: Java Variables, Operators and Expressions

```
int score = "Jeff Minter";
```

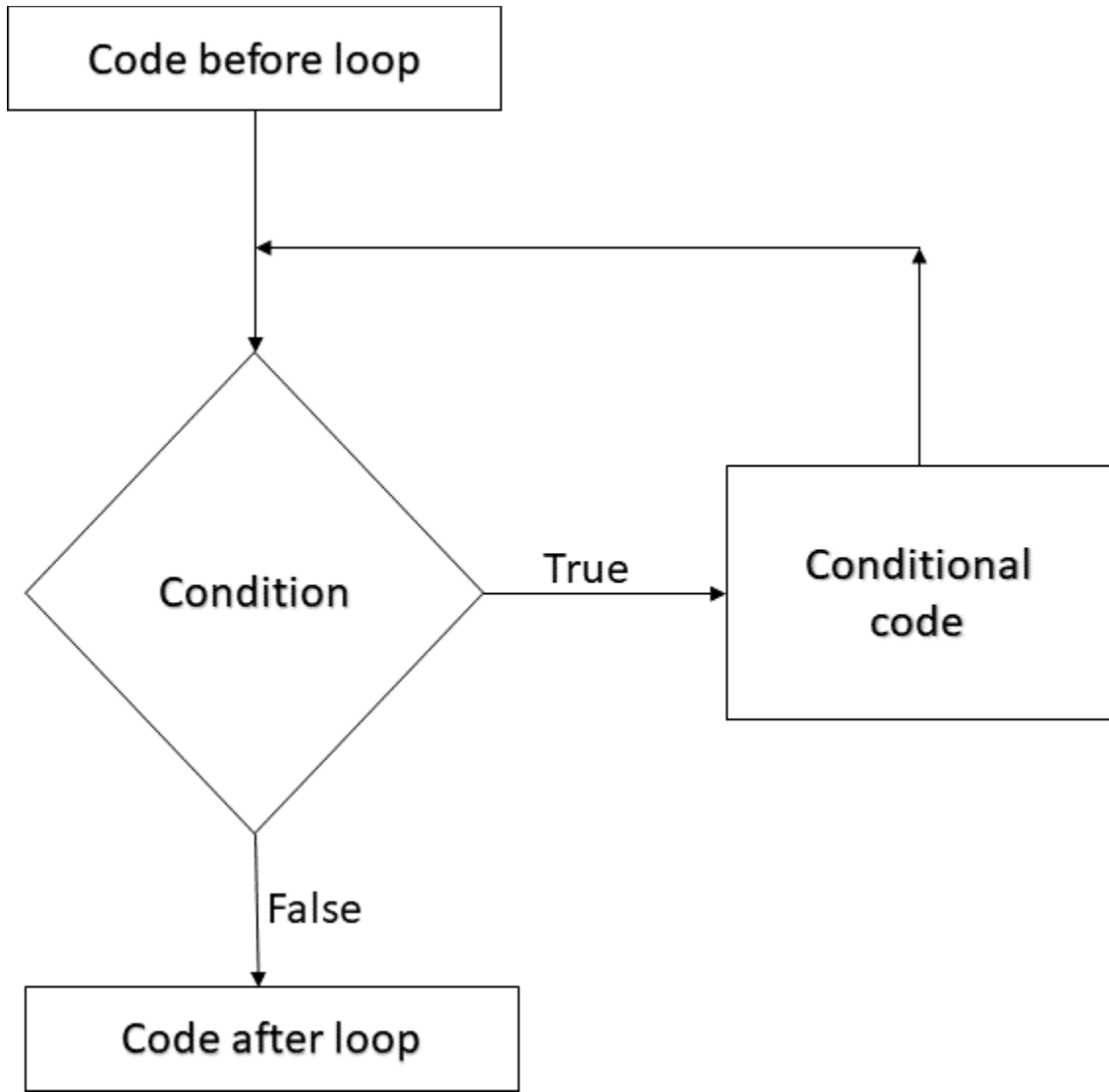
Required type:	int	⋮
Provided:	String	
Change field 'score' type to 'String' Alt+Shift+Enter    More actions... Alt+Enter		

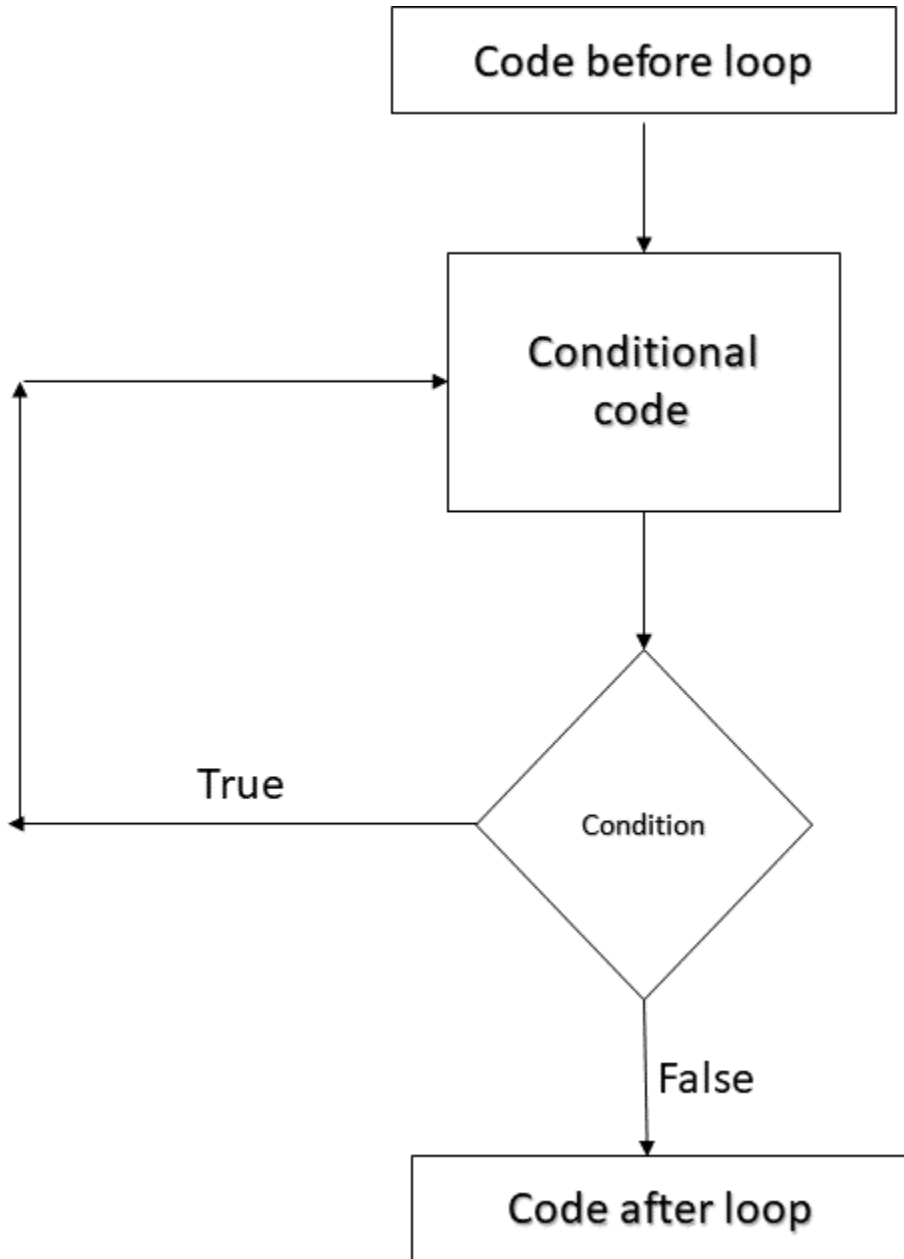


## Chapter 08: Java Decisions and Loops

```
public class MainActivity extends AppCompatActivity {  
  
    TAB @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        TAB super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
        Toolbar toolbar = (Toolbar) findViewById(R.id.toolbar);  
        setSupportActionBar(toolbar);  
  
        FloatingActionButton fab = (FloatingActionButton) findViewById(R.id.fab);  
        fab.setOnClickListener((view) -> {  
            Snackbar.make(view, text: "Replace with your own action", Snackbar.LENGTH_LONG)  
                .setAction(text: "Action", listener: null).show();  
        });  
    }  
}
```







8:43



## Loops

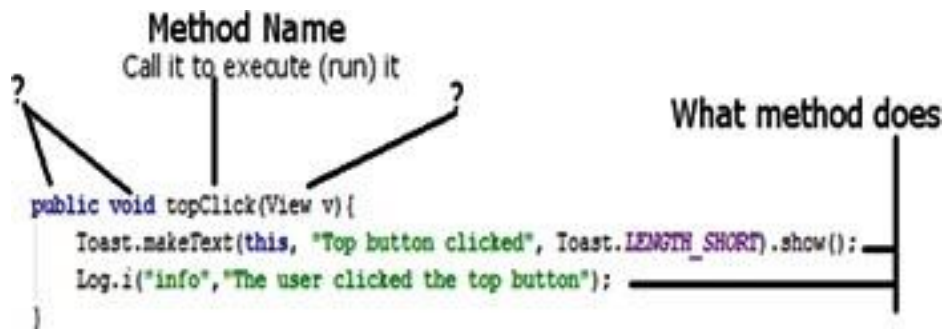
COUNT UP

COUNT DOWN

NESTED

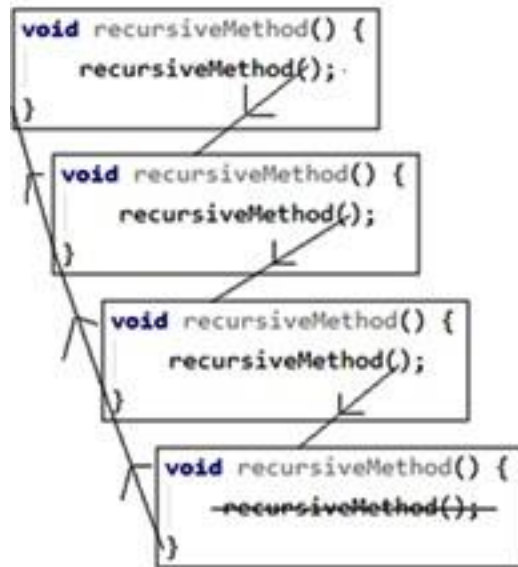
```
// a nested for loop
for(int i = 0; i < 3; i ++){
    for(int j = 3; j > 0; j --){
        // Output the values of i and j
        Log.i("i =" + i, "j=" + j);
    }
}
```

# Chapter 09: Learning Java Methods



Part of signature	Examples
modifier	public, private, protected, package-private (without modifier specified).
return-type	Int; you can also use any of the Java primitive types (such as boolean, float, long, and so on) or any predefined reference types (such as String and class types).
name of method	addContact, setCoordinates, addAToB.
parameters	(boolean isFriend, String name), (int x, int y), (int a, int b).

# The Stack



## Chapter 10: Object-Oriented Programming

**Type**                      **Name**                      **Assignment**

`Soldier mySoldier = new Soldier();`

Special "constuctor" method  
that creates a Soldier

member variable

```
mySoldier.soldierType = "sniper";
```

object  
name

dot operator

```
mySoldier.shootEnemy();
```

method call



## Soldier.java

```
public class Soldier {  
  
    // Member variables  
    int health;  
    String soldierType;  
  
    // Method of the class  
    void shootEnemy(){  
        // bang bang  
    }  
  
}
```

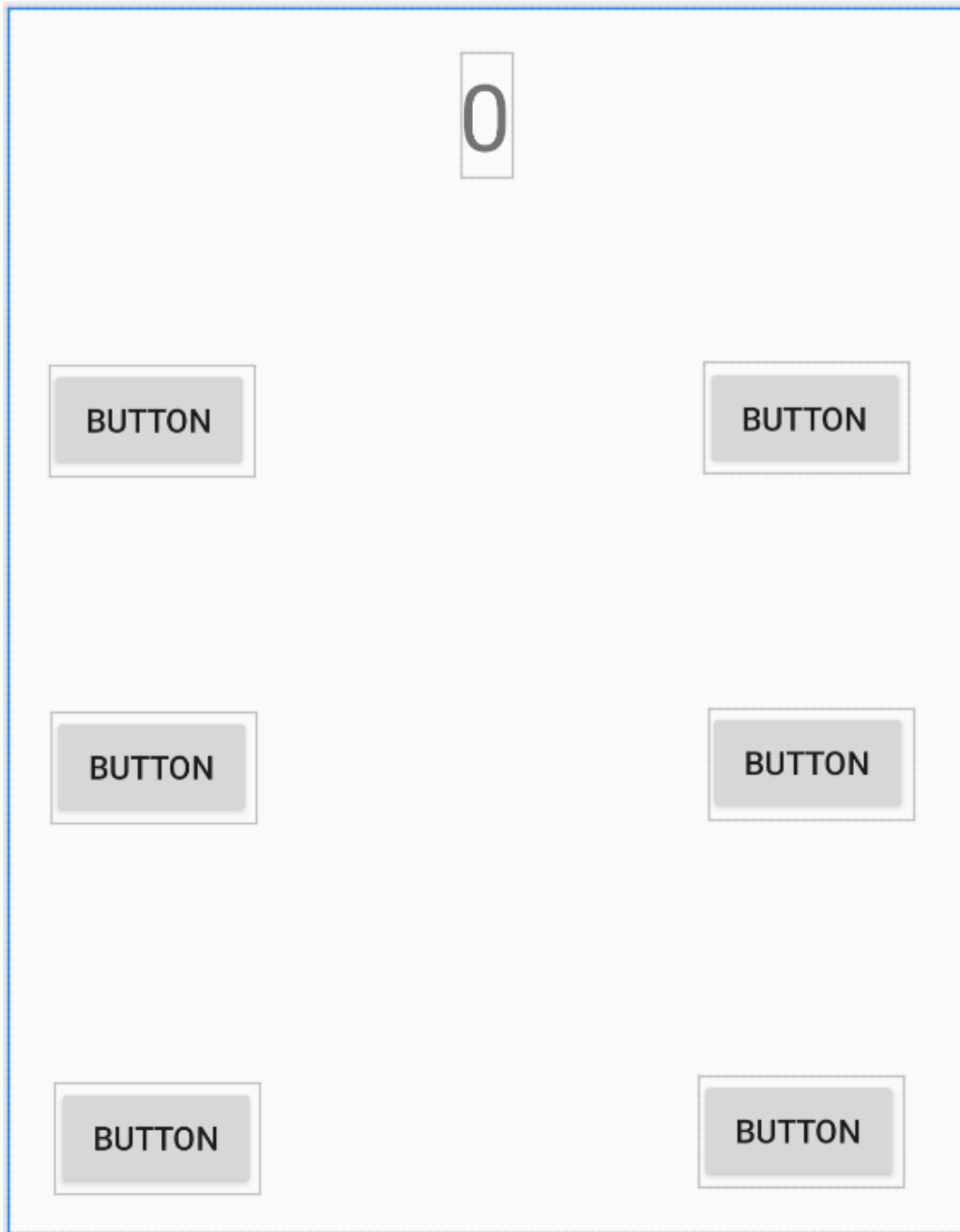
## mySoldier

```
mySoldier.health = 100;  
mySoldier.soldierType = "sniper";
```

## mySoldier2

```
mySoldier2.health = 200;  
mySoldier2.soldierType = "commando";
```

# Chapter 12: The Stack, the Heap, and the Garbage Collector



<b>The text property</b>	<b>The id property</b>
Add	btnAdd
Take	btnTake
Grow	btnGrow
Shrink	btnShrink
Hide	btnHide
Reset	btnReset

0

ADD

TAKE

GROW

SHRINK

HIDE

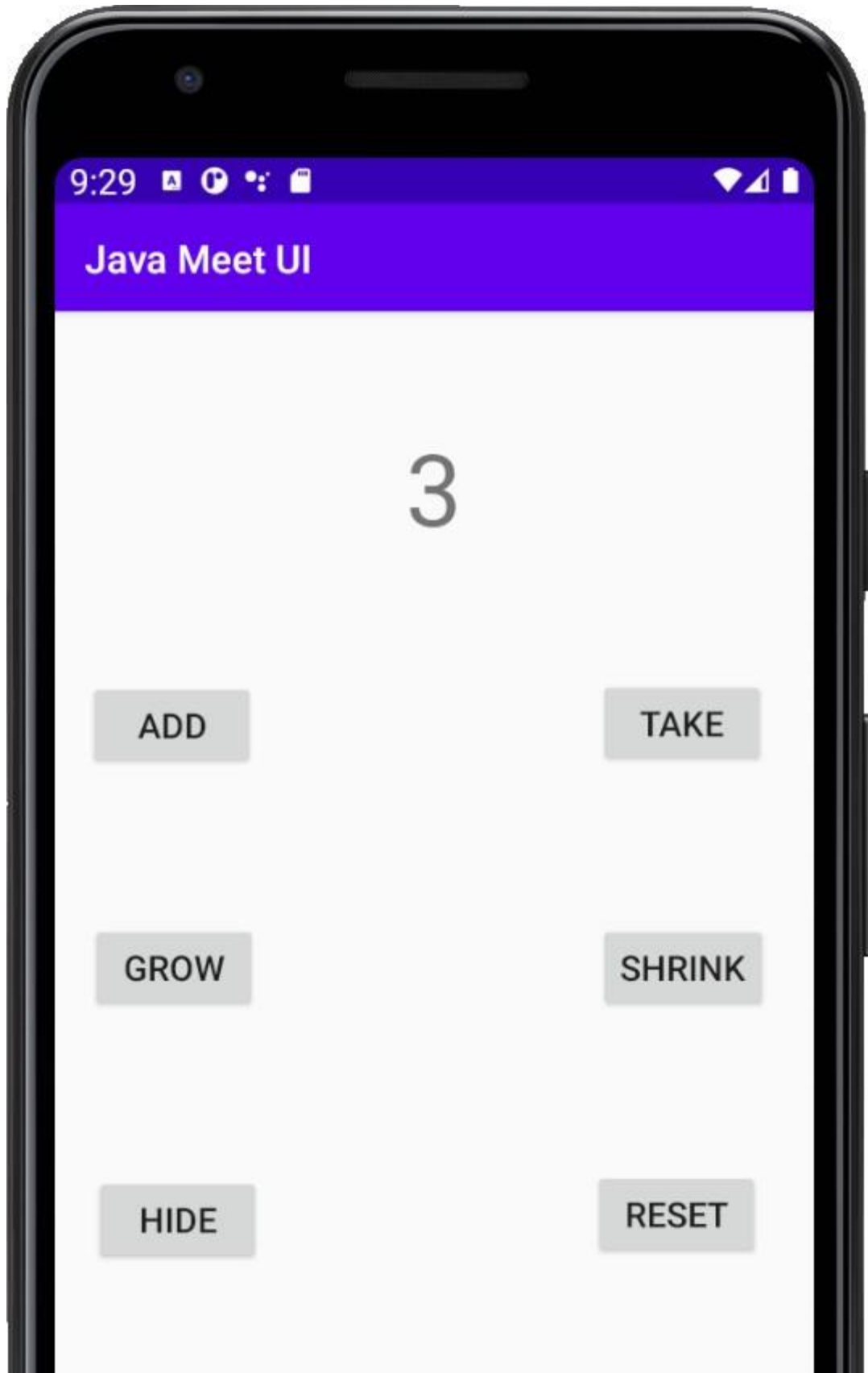
RESET

```
public class MainActivity extends AppCompatActivity implements
```

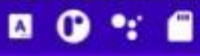
- Implement methods
- Make 'MainActivity' abstract
- Create Test
- Create subclass
- Make 'MainActivity' package-private
- Adjust code style settings

```
savedInstanceState) {  
    ceState);
```

```
    }  
}
```



9:29



## Java Meet UI

3

ADD

TAKE

GROW

SHRINK

HIDE

RESET

9:32



# Java Meet UI



ADD

TAKE

GROW

SHRINK

HIDE

RESET

## Chapter 13: Anonymous Classes- Bringing Android Widgets to Life

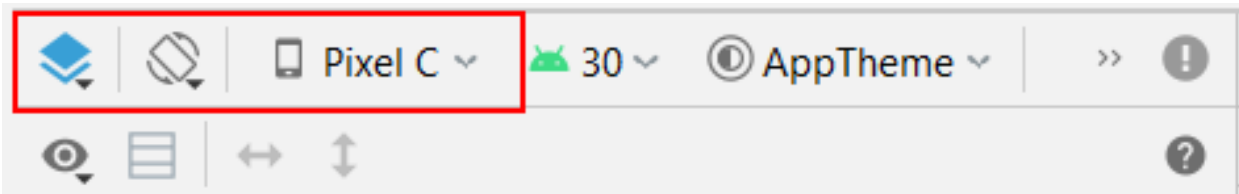
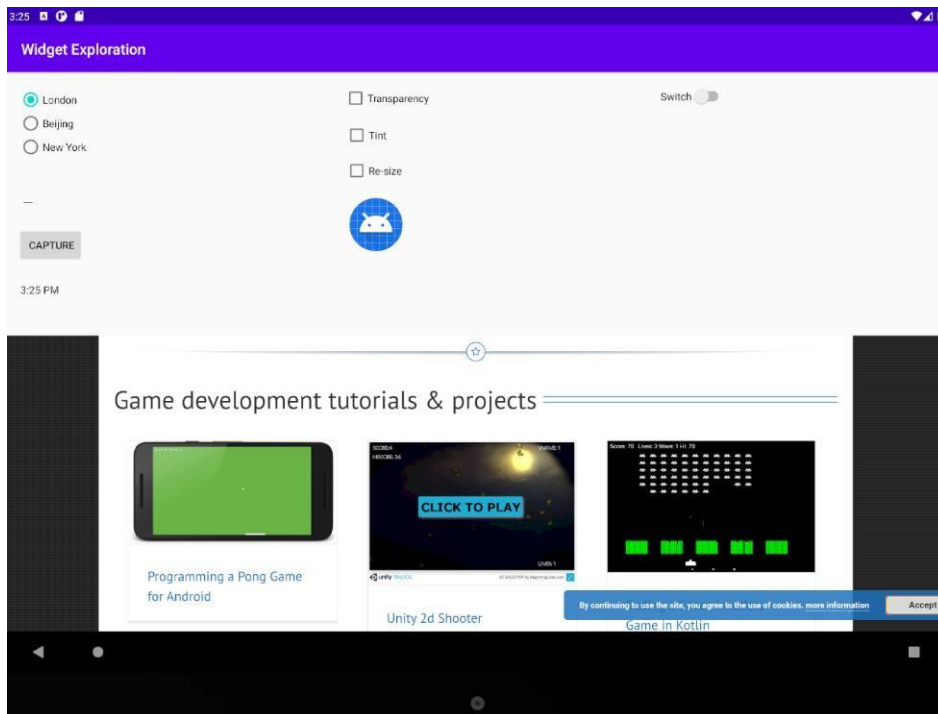
- Option 1
- Option 2
- Option 3


Switch

CheckBox



4:28 PM



Switch 

TextView

CheckBox

CheckBox

CheckBox



RadioButton

RadioButton

RadioButton

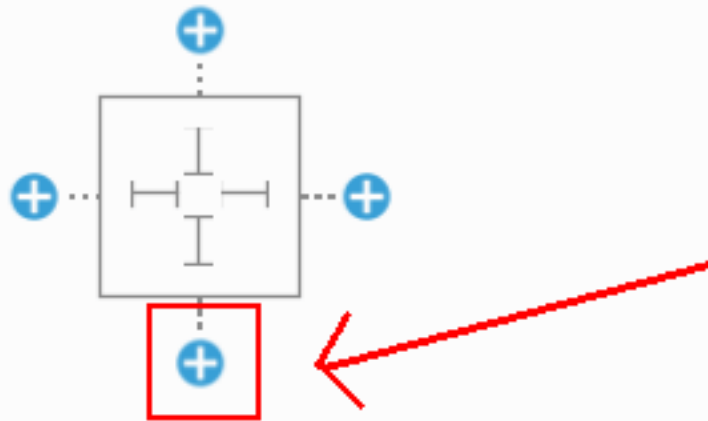
TextView



Widget type	Property	Value to set to
RadioGroup	ID	radioGroup
RadioButton (top)	ID	radioButtonLondon
RadioButton (top)	Text	London
RadioButton (top)	Checked	Select the tick icon for true
RadioButton (second)	ID	radioButtonBeijing
RadioButton (second)	Text	Beijing
RadioButton (third)	ID	radioButtonNewYork
RadioButton (third)	Text	New York
EditText (underneath the RadioButton widgets)	ID	editText
Button	ID	Button
Button	Text	Capture
CheckBox (top)	Text	Transparency
CheckBox (top)	ID	checkBoxTransparency
CheckBox (middle)	Text	Tint
CheckBox (middle)	ID	checkBoxTint
CheckBox (bottom)	Text	Re-Size
CheckBox (bottom)	ID	checkBoxReSize
ImageView	ID	imageView
Switch	ID	switch1
Switch	Enabled	Select the tick icon for true
Switch	Clickable	Select the tick icon for true
TextView (underneath the Switch widget)	ID	textView
TextView	textSize	24sp
TextView	layout_width	wrap_content
TextView	layout_height	wrap_content

## ▼ Layout

### Constraint Widget



London  
 Beijing  
 New York

TextView


CAPTURE

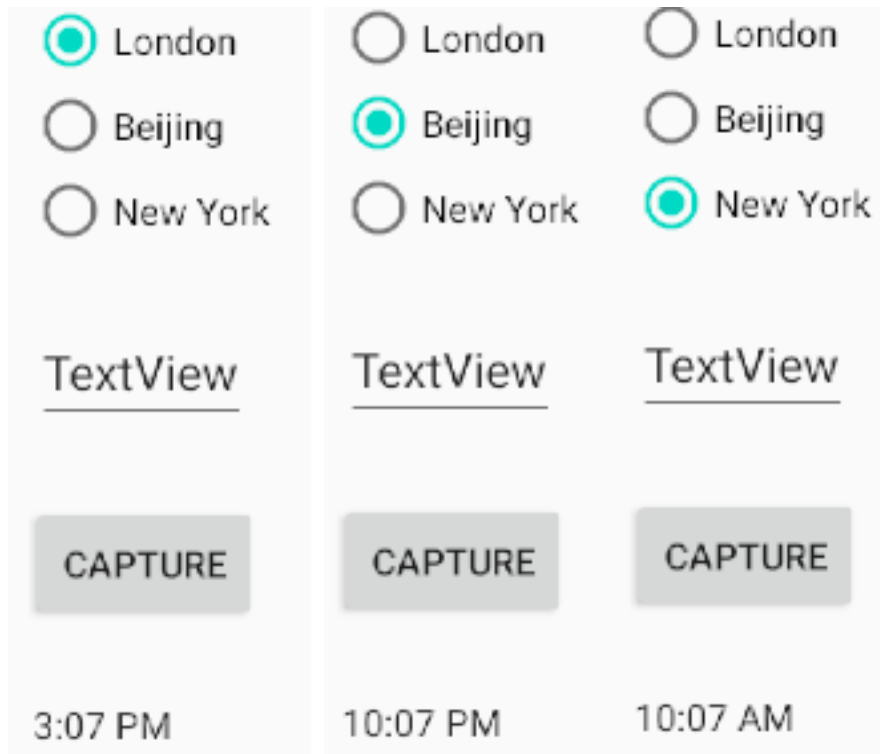
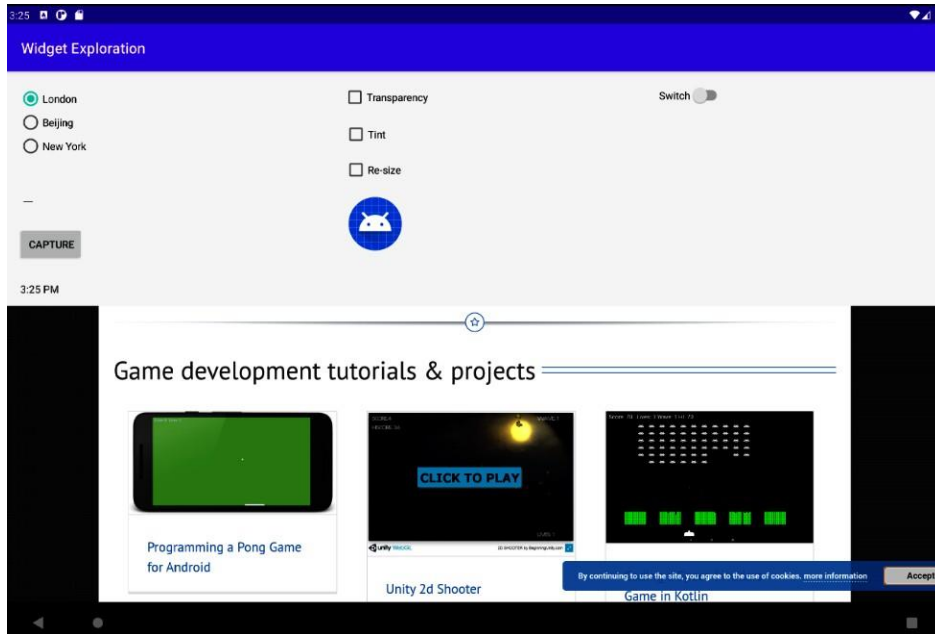
TextCloc

Transparency  
 Tint  
 Re-size

Switch

TextView





## Widget Exploration

London

Beijing

New York

Hello from over here

CAPTURE

Transparency

Tint

Re-size



3 → Switch

4 → Hello from over here

1



2



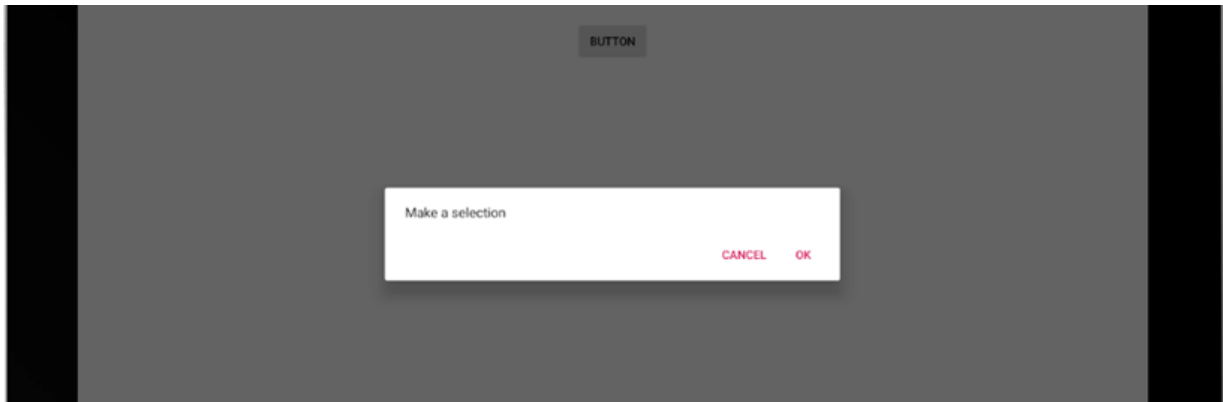
Transparency

Tint

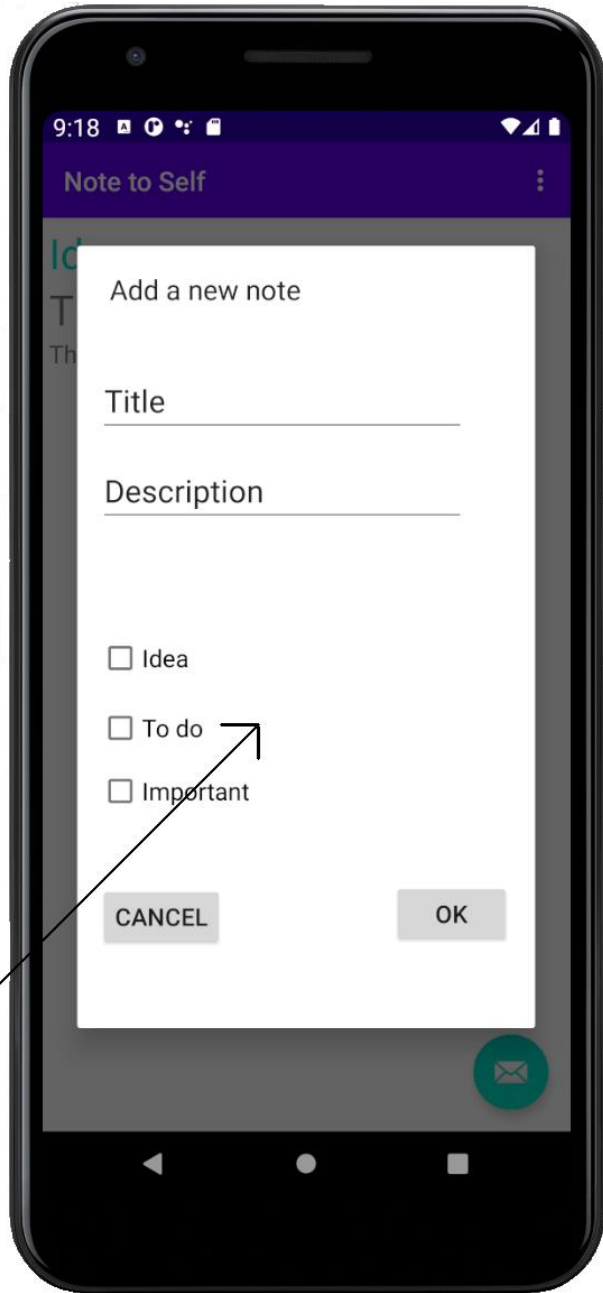
Re-size

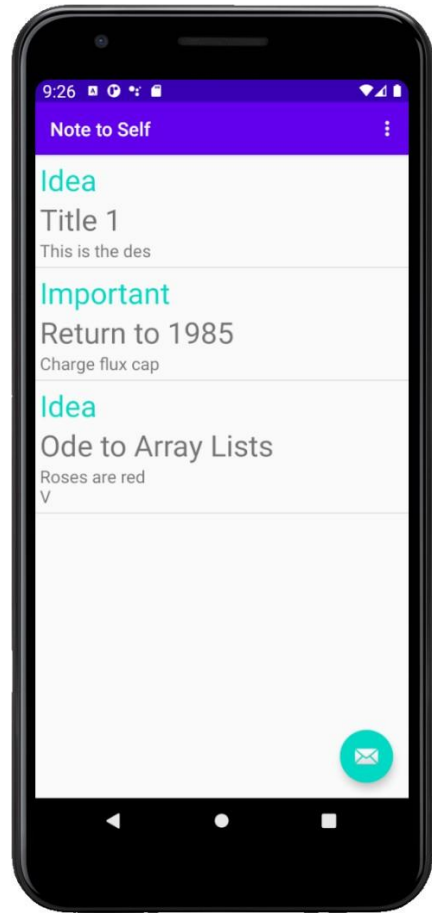


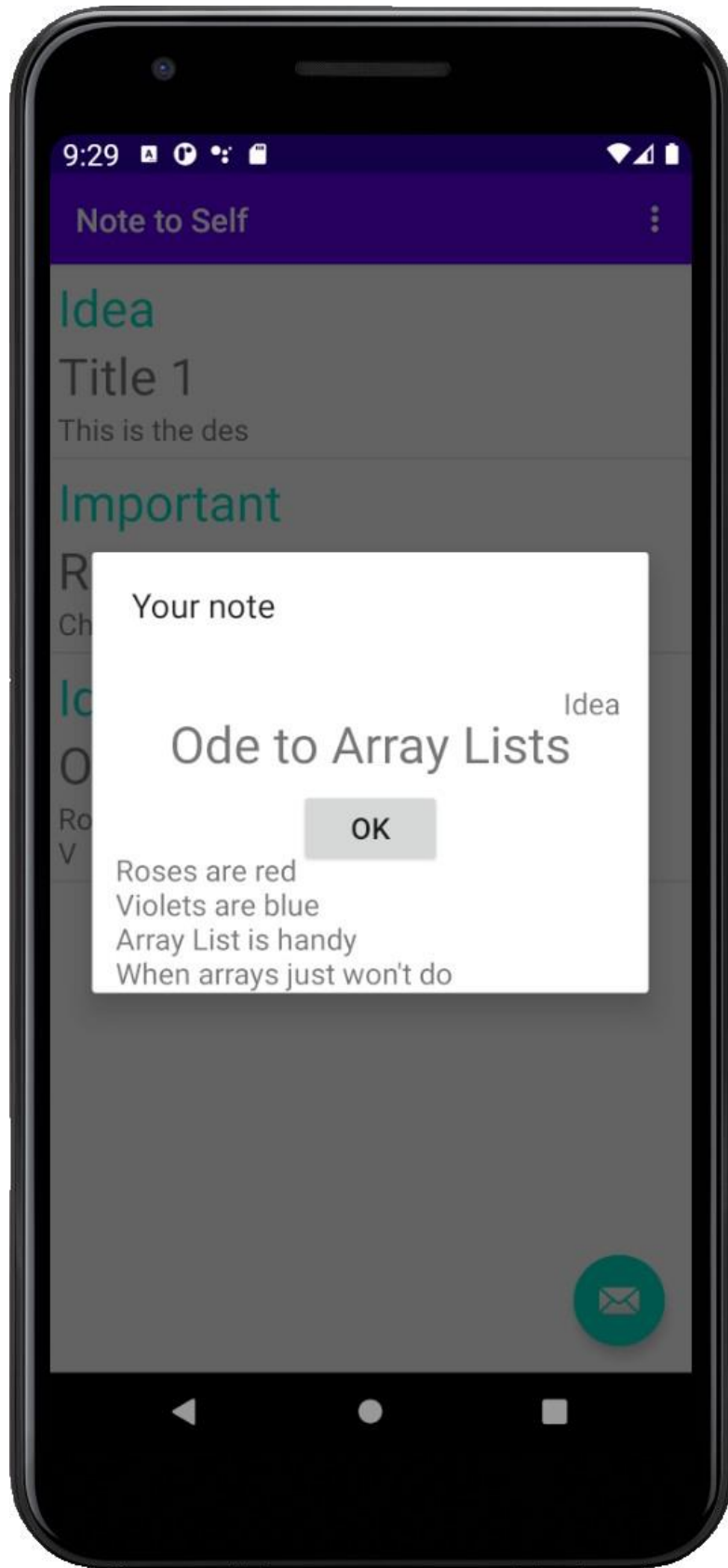
# Chapter 14: Android Dialog Windows











9:29

Note to Self

Idea

Title 1

This is the des

Important

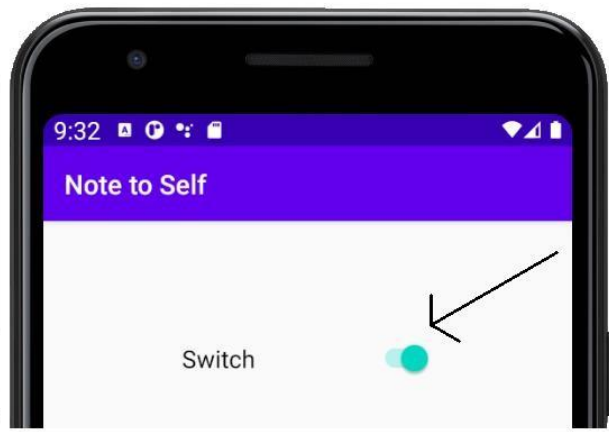
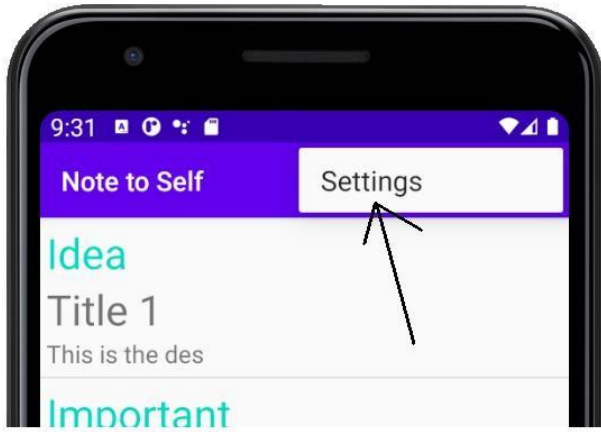
Your note

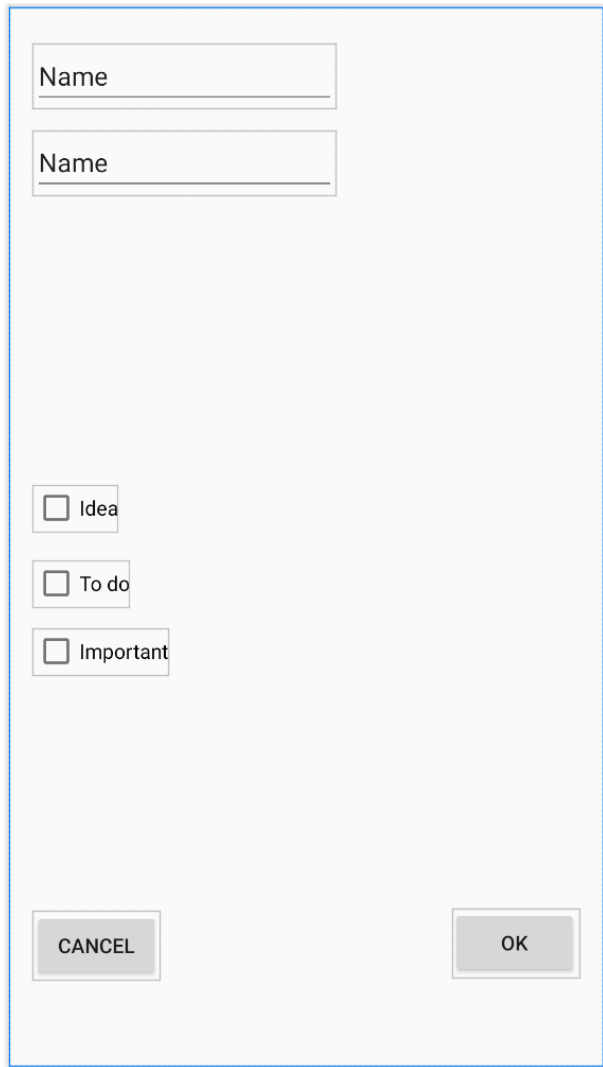
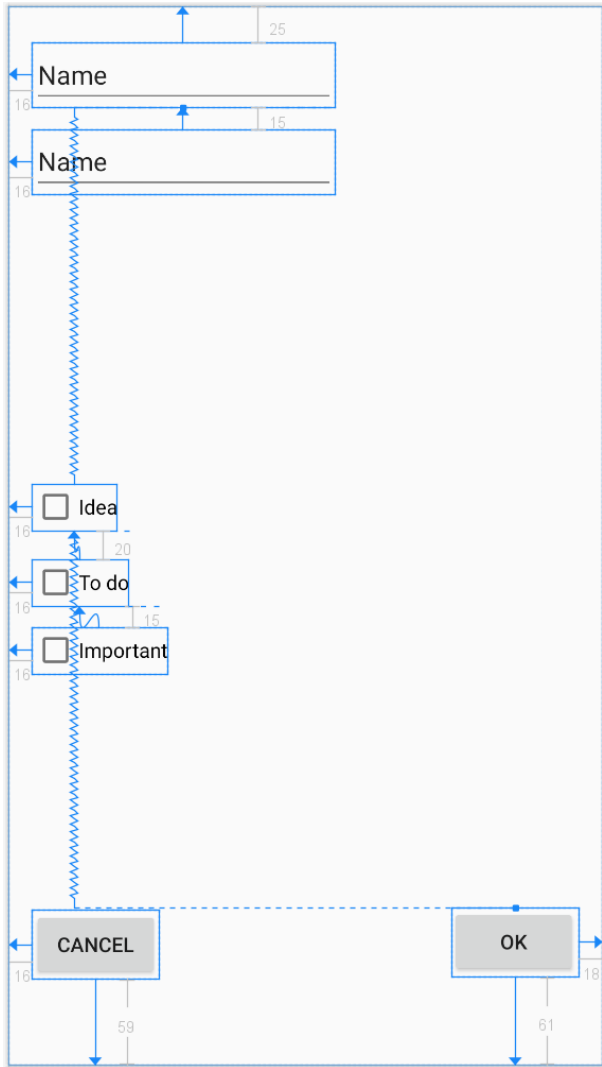
Ode to Array Lists

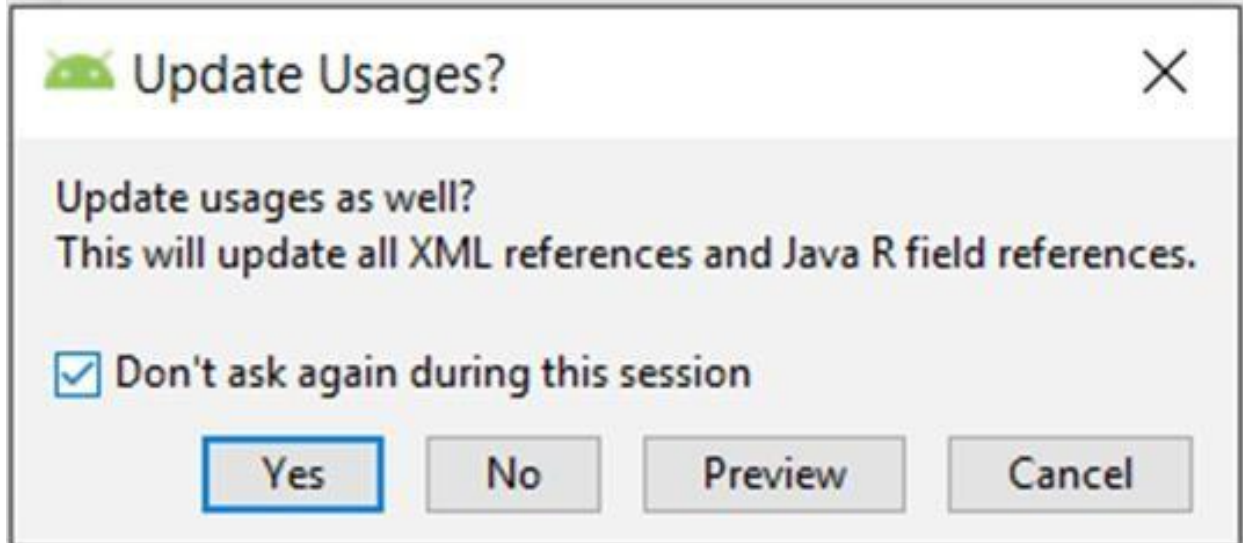
OK

Roses are red  
Violets are blue  
Array List is handy  
When arrays just won't do

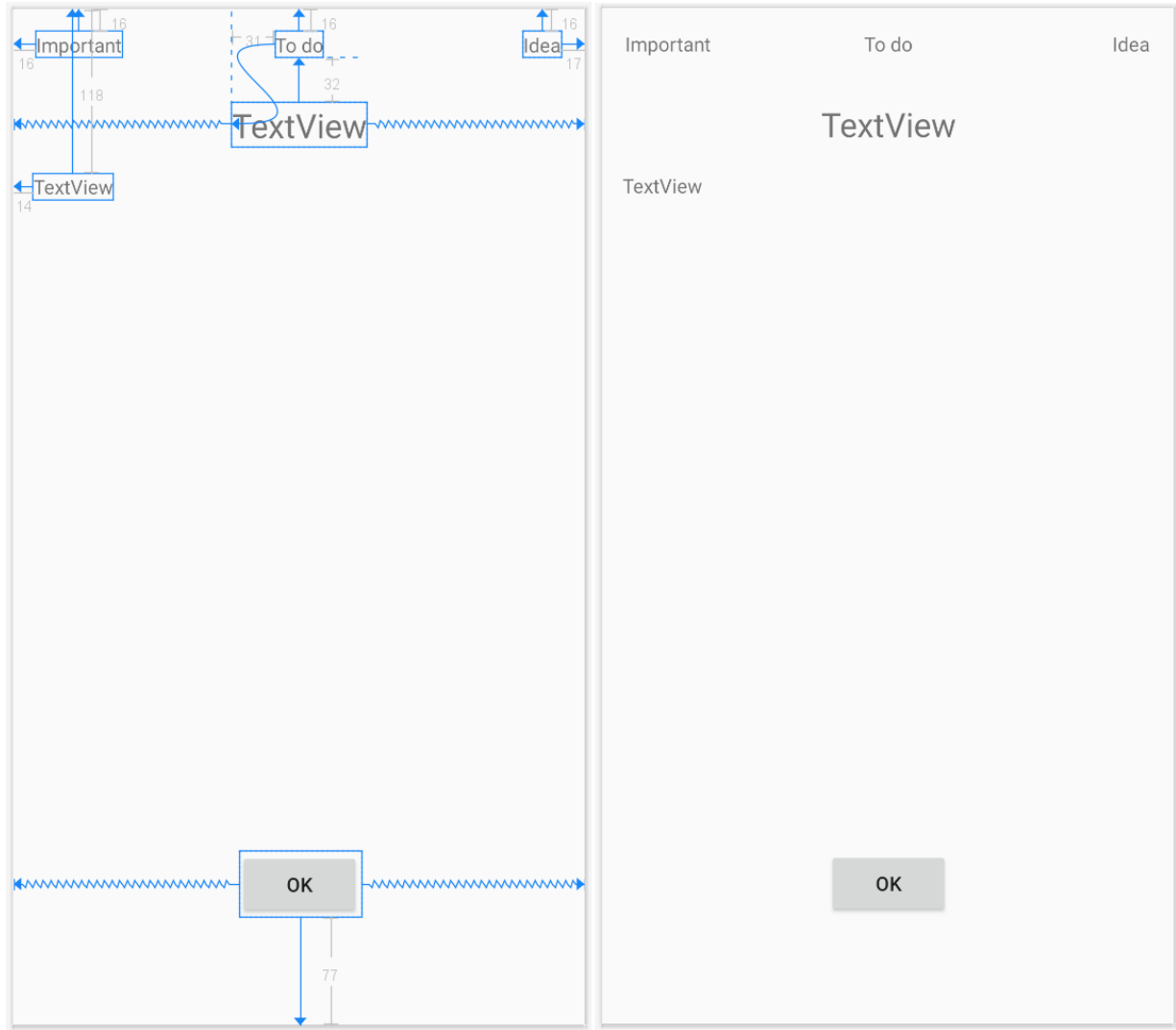








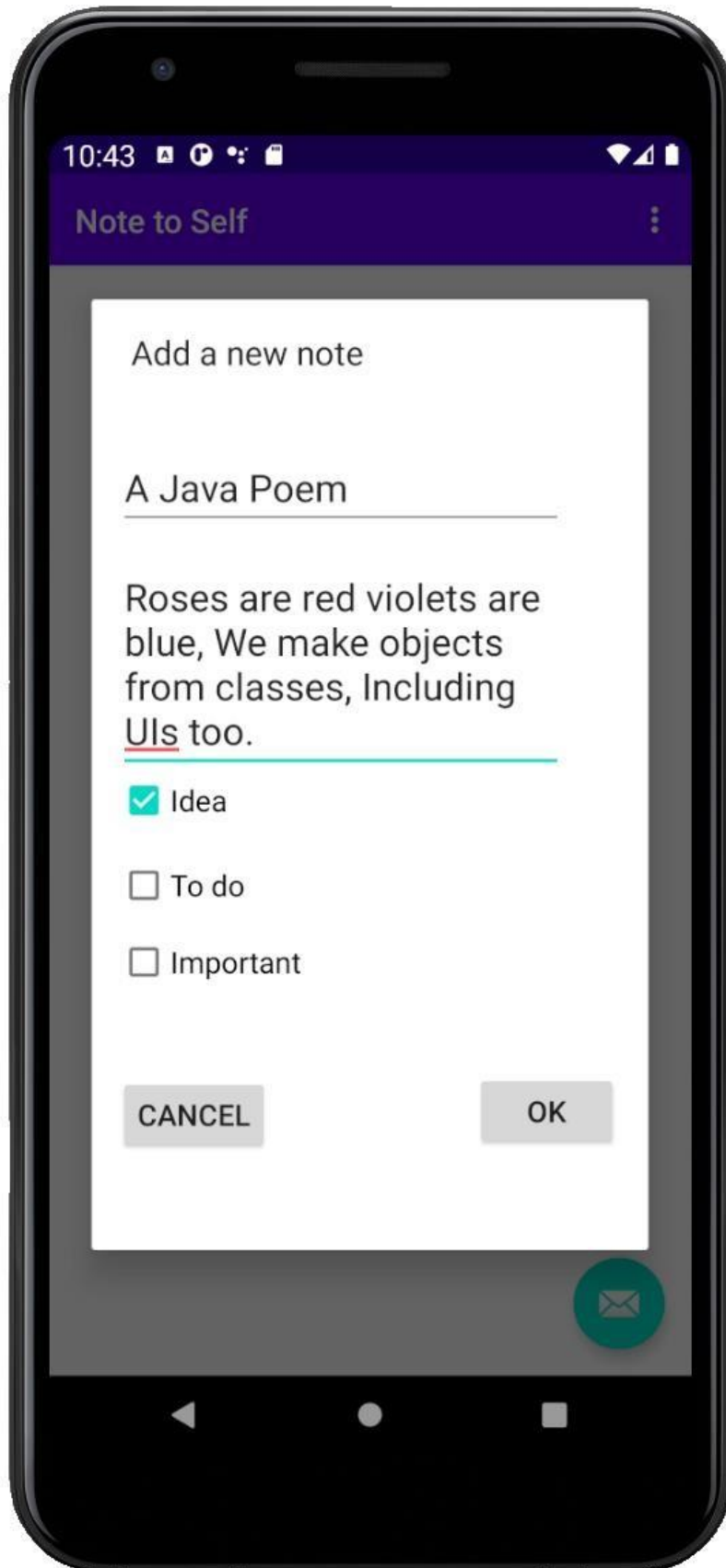
Widget type	Property	Value to set to
Plain Text (top)	ID	editTitle
Plain Text (top)	Hint	@string/title_hint
Plain Text (top)	Text	@string/title_hint
Plain Text (bottom)	ID	editDescription
Plain Text (bottom)	Hint	@string/description_hint
Plain Text (bottom)	Text	@string/description_hint
Plain Text (bottom)	inputType	textMultiLine
CheckBox (top)	ID	checkBoxIdea
CheckBox (top)	Text	@string/idea_text
CheckBox (middle)	ID	checkBoxTodo
CheckBox (middle)	Text	@string/todo_text
CheckBox (bottom)	ID	checkBoxImportant
CheckBox (bottom)	Text	@string/important_text
Button (left)	ID	btnCancel
Button (left)	Text	@string/cancel_button
Button (right)	ID	btnOK
Button (right)	Text	@string/ok_button



<b>Widget type</b>	<b>Attribute</b>	<b>Value to set to</b>
TextView (upper-left)	ID	textViewImportant
TextView (upper-left)	Text	@string/important_text
TextView (top-center)	ID	textViewTodo
TextView (top-center)	Text	@string/todo_text
TextView (upper-right)	ID	textViewIdea
TextView (upper-right)	Text	@string/idea_text
TextView (center, second row)	ID	txtTitle
TextView (center, second row)	textSize	24sp
TextView (last one added)	ID	txtDescription
Button	ID	btnOK
Button	Text	@string/ok_button







SHOW NOTE

Your Note

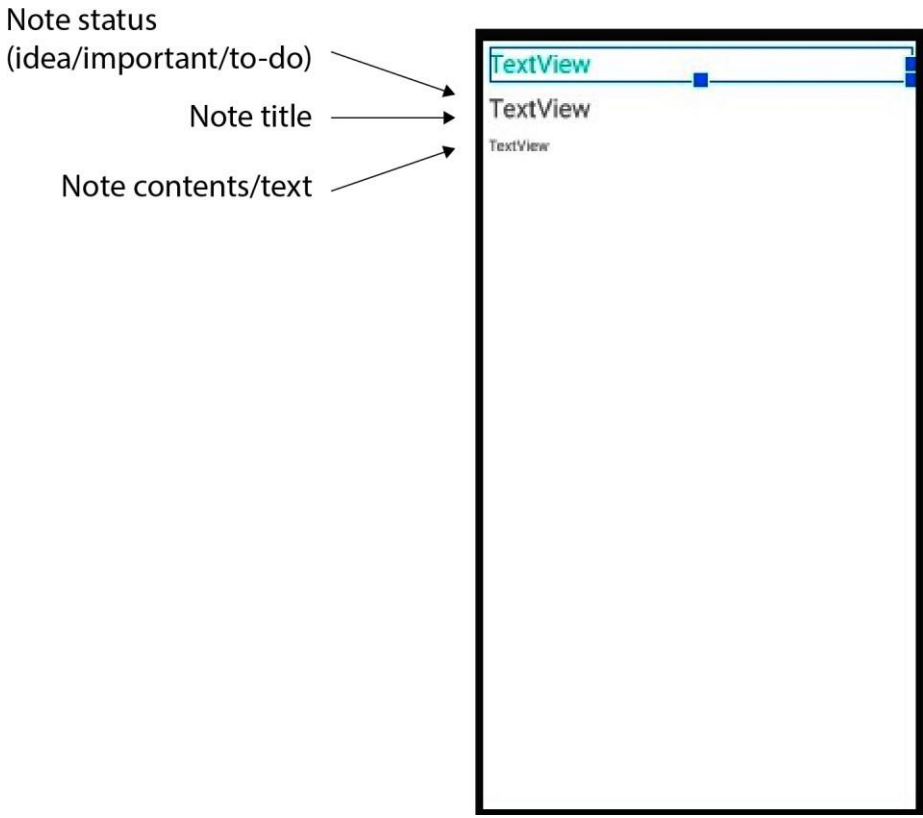
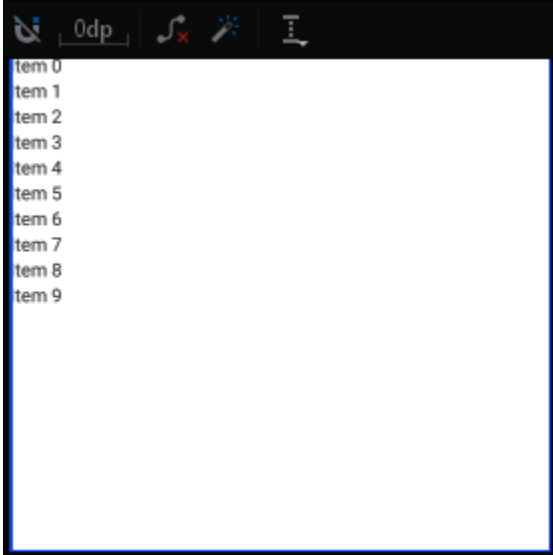
Idea

## A Java Poem

OK

Roses are red violets are blue,  
We make objects from classes,  
Including UIs too.

# Chapter 16: Adapters and Recyclers



Widget type	Property	Value to set to
LinearLayout	layout_height	wrap_contents
LinearLayout	Layout_Margin all	5dp
TextView (top)	Id	textViewStatus
TextView (top)	textSize	24sp
TextView (top)	textColor	@color/colorAccent
TextView (middle)	Id	textViewTitle
TextView (middle)	textSize	24sp
TextView (bottom)	Id	textViewDescription

The screenshot shows an IDE with a code editor. The code is as follows:

```
public class NoteAdapter extends
RecyclerView.Adapter<NoteAdapter.ListItemHolder> {
```

A context menu is open over the class declaration, with the following options:

- Implement methods
- Make 'NoteAdapter' abstract
- Create Test
- Create subclass
- Remove qualifier
- Unimplement Class

At the bottom of the menu, it says "Press Ctrl+Shift+I to open preview".

```
public class NoteAdapter extends
    RecyclerView.Adapter<NoteAdapter.ListItemHolder> {

    private List<Note> mNoteList;
    private MainActivity mMainActivity;

    @NonNull
    @Override
    public NoteAdapter.ListItemHolder onCreateViewHolder(@NonNull ViewGroup parent, int viewType) {
        return null;
    }

    @Override
    public void onBindViewHolder(@NonNull NoteAdapter.ListItemHolder holder, int position) {

    }

    @Override
    public int getItemCount() {
        return 0;
    }
}
```

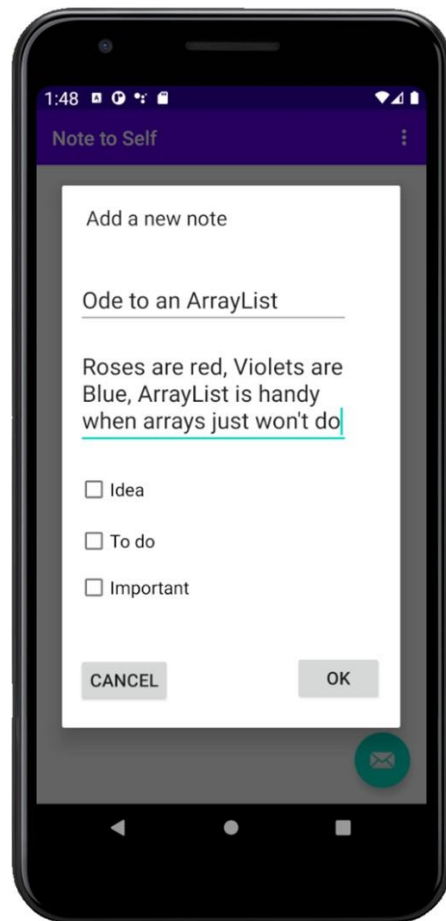
Three "Error" labels with arrows pointing to the generic type `NoteAdapter.ListItemHolder` in the class declaration, the `onCreateViewHolder` method signature, and the `onBindViewHolder` method signature.

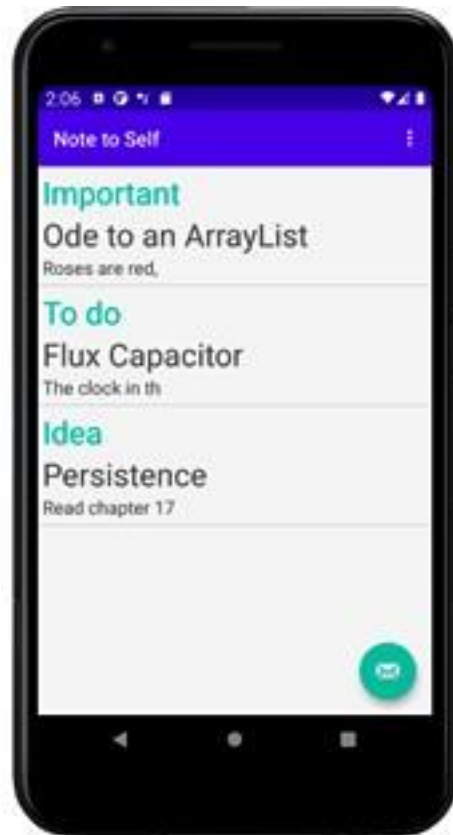
```
import androidx.annotation.NonNull;
import androidx.recyclerview.widget.RecyclerView;

public class NoteAdapter extends
    RecyclerView.Adapter<NoteAdapter.ListItemHolder> {
    Create class 'ListItemHolder'
    Create enum 'ListItemHolder'
    Create interface 'ListItemHolder'
    Create Test
    Create subclass
    Unimplement Class
    ListItemHolder onCreateViewHolder(@NonNull ViewGroup parent, int viewType) {
        return null;
    }
}
```

A context menu is open over the `NoteAdapter.ListItemHolder` type in the class declaration, showing options to create a class, enum, or interface, or to create a test, subclass, or unimplement class.

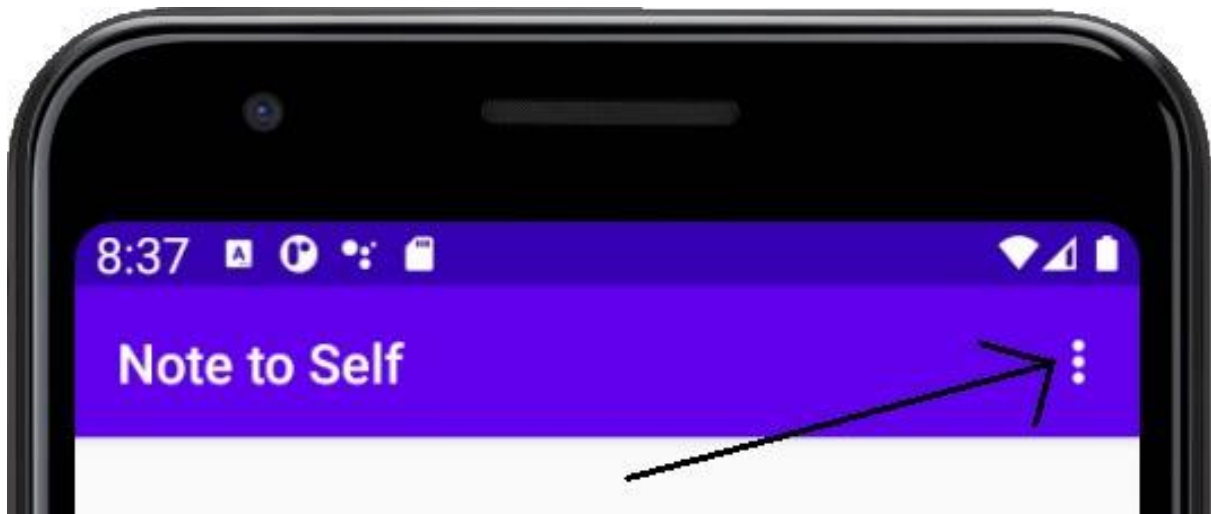
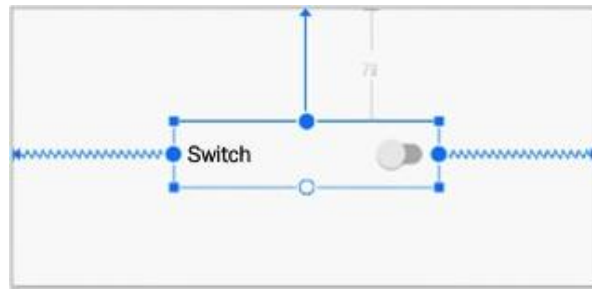
```
public class NoteAdapter extends  
    RecyclerView.Adapter<NoteAdapter.ListItemHolder> {
```

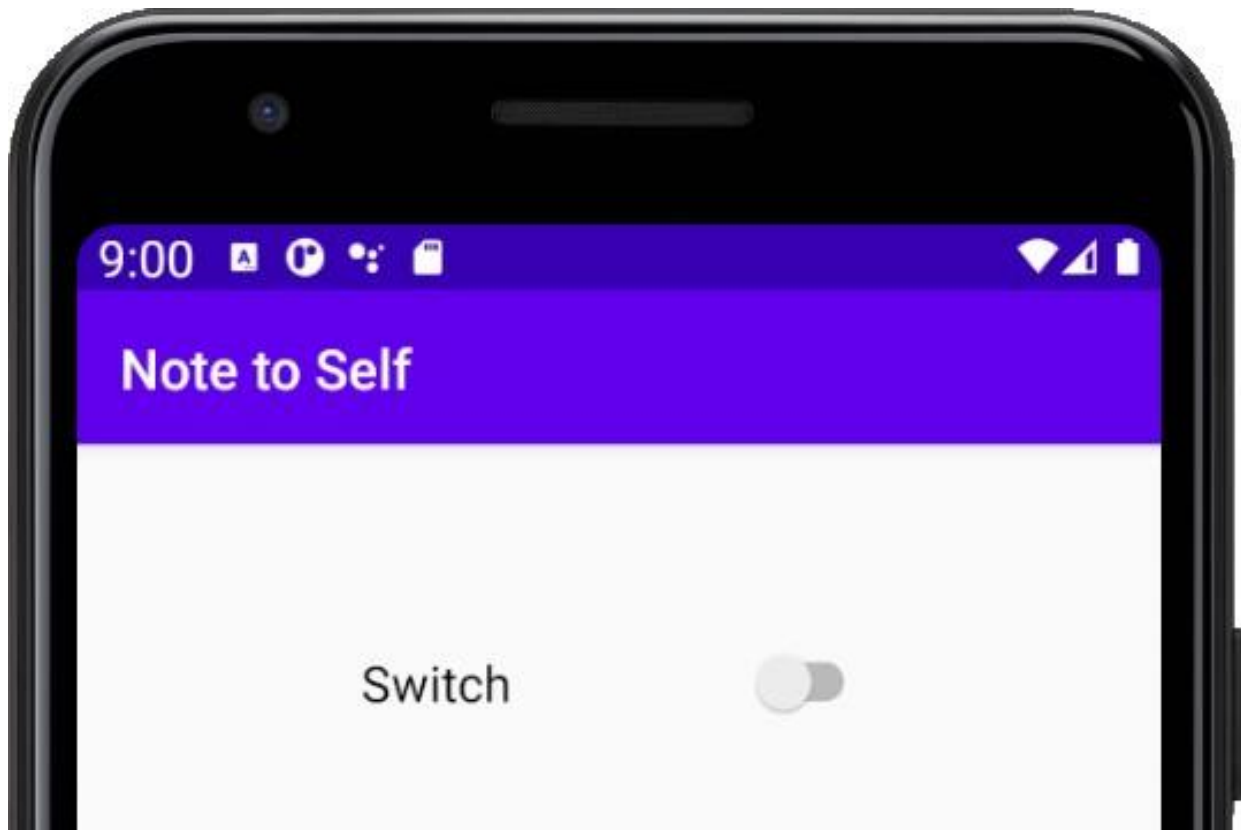
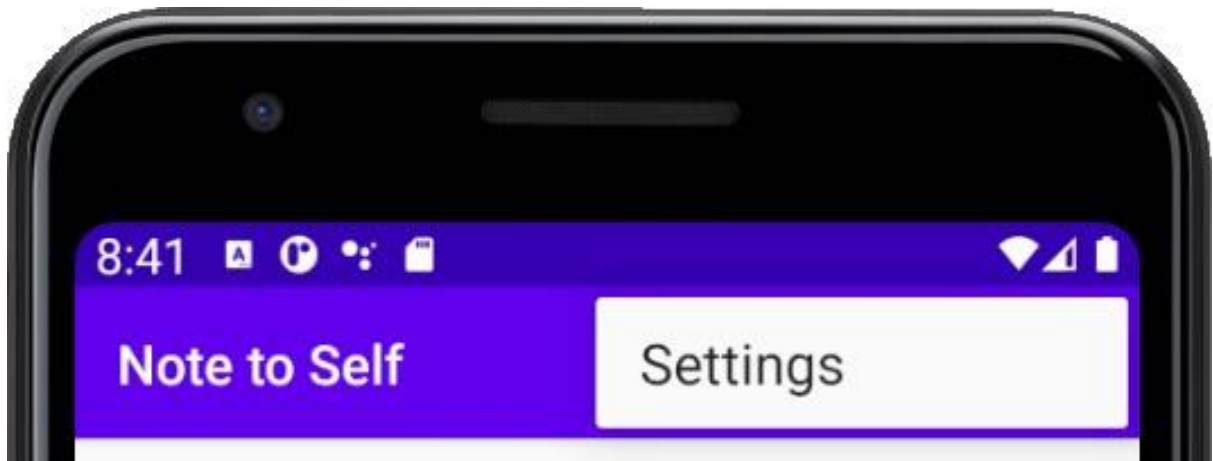


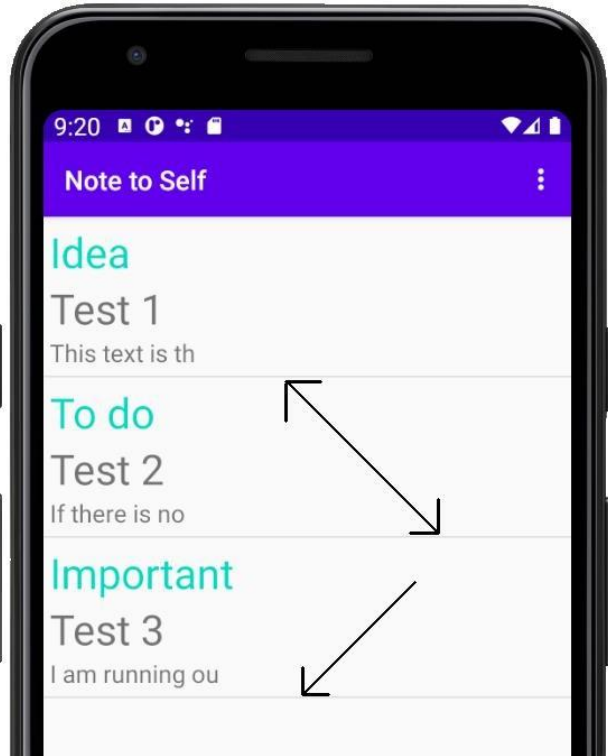
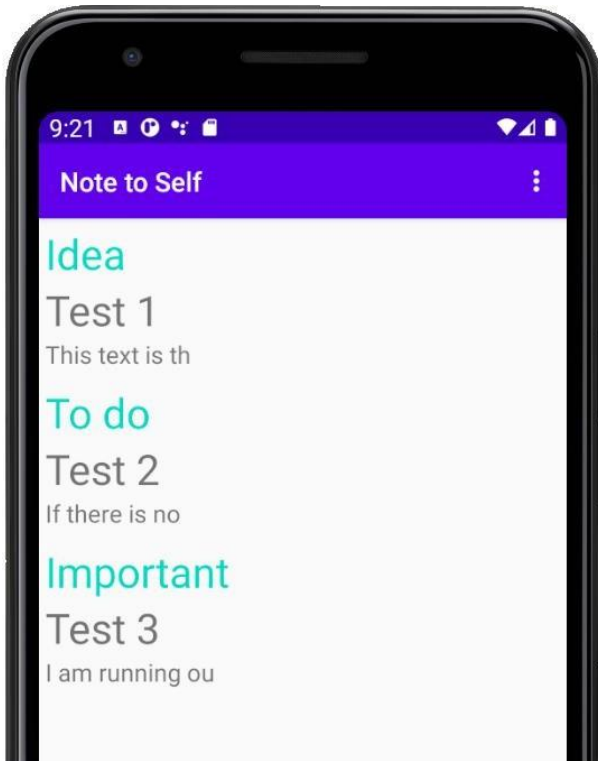




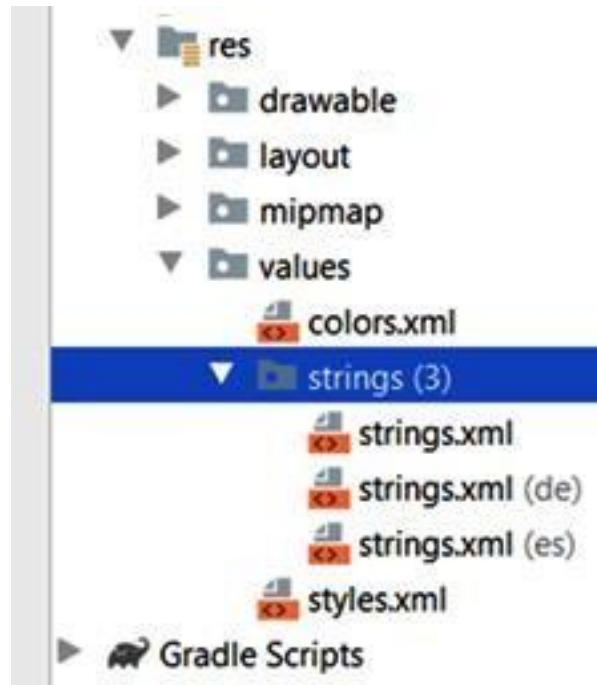
## Chapter 17: Data Persistence and Sharing







# Chapter 18: Localization





Agregar una nueva nota

Título

Description

# Chapter 19: Animations and Interpolations



TextView

FADE IN      FADE OUT      FADE IN OUT

ZOOM IN      ZOOM OUT

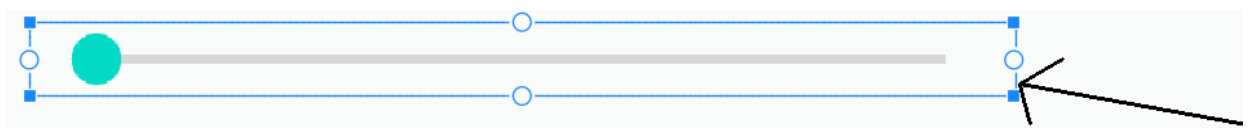
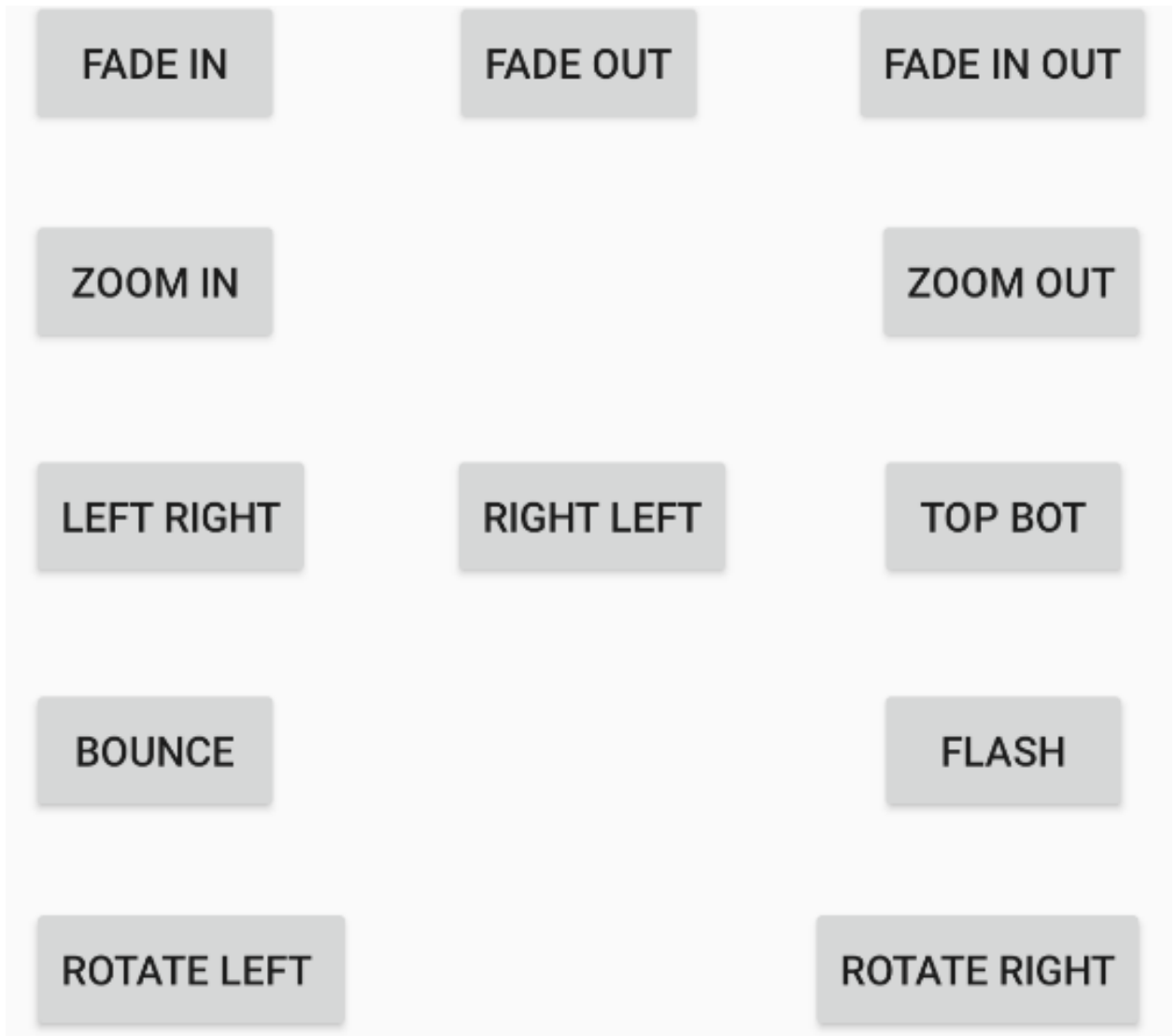
LEFT RIGHT      RIGHT LEFT      TOP BOT

BOUNCE      FLASH

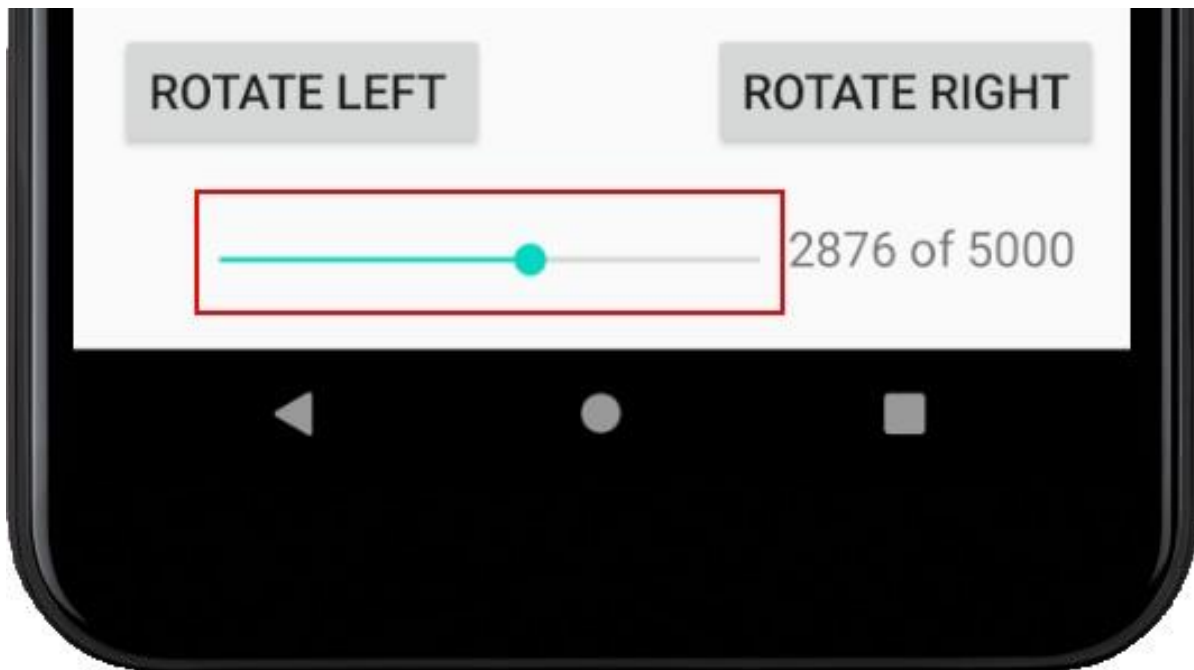
ROTATE LEFT      ROTATE RIGHT

● ————— TextView

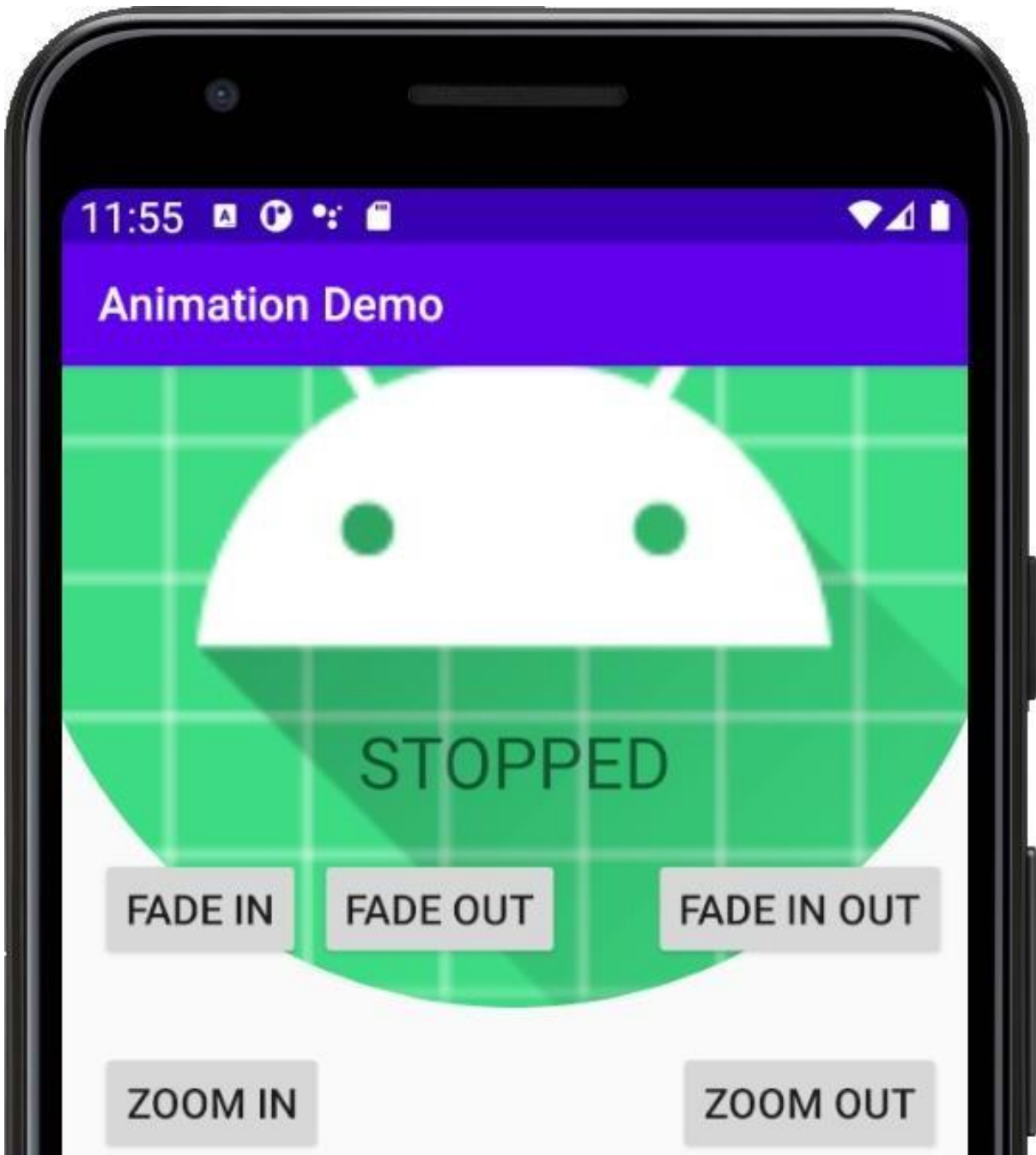
The image displays a collection of animation options for a TextView widget. At the top center is a green square icon with a white Android robot head. Below it, the word "TextView" is centered. The animation options are arranged in a grid of buttons: "FADE IN", "FADE OUT", and "FADE IN OUT" in the first row; "ZOOM IN" and "ZOOM OUT" in the second row; "LEFT RIGHT", "RIGHT LEFT", and "TOP BOT" in the third row; "BOUNCE" and "FLASH" in the fourth row; and "ROTATE LEFT" and "ROTATE RIGHT" in the fifth row. At the bottom left, there is a teal circle followed by a horizontal line, and at the bottom right, the word "TextView" is written.



Existing text property	Value of id property to set
Fade In	btnFadeIn
Fade Out	btnFadeOut
Fade In Out	btnFadeInOut
Zoom In	btnZoomIn
Zoom Out	btnZoomOut
Left Right	btnLeftRight
Right Left	btnRightLeft
Top Bot	btnTopBottom
Bounce	btnBounce
Flash	btnFlash
Rotate Left	btnRotateLeft
Rotate Right	btnRotateRight







11:55

# Animation Demo



STOPPED

FADE IN

FADE OUT

FADE IN OUT

ZOOM IN

ZOOM OUT

11:58



# Animation Demo







RUNNING

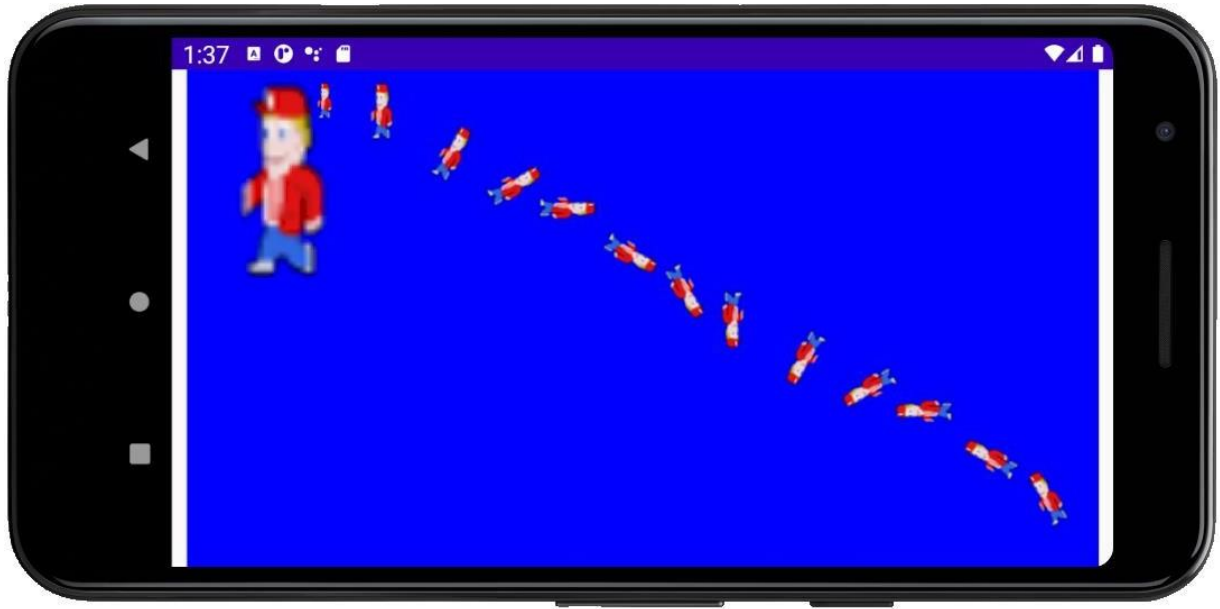
## Chapter 20: Drawing Graphics







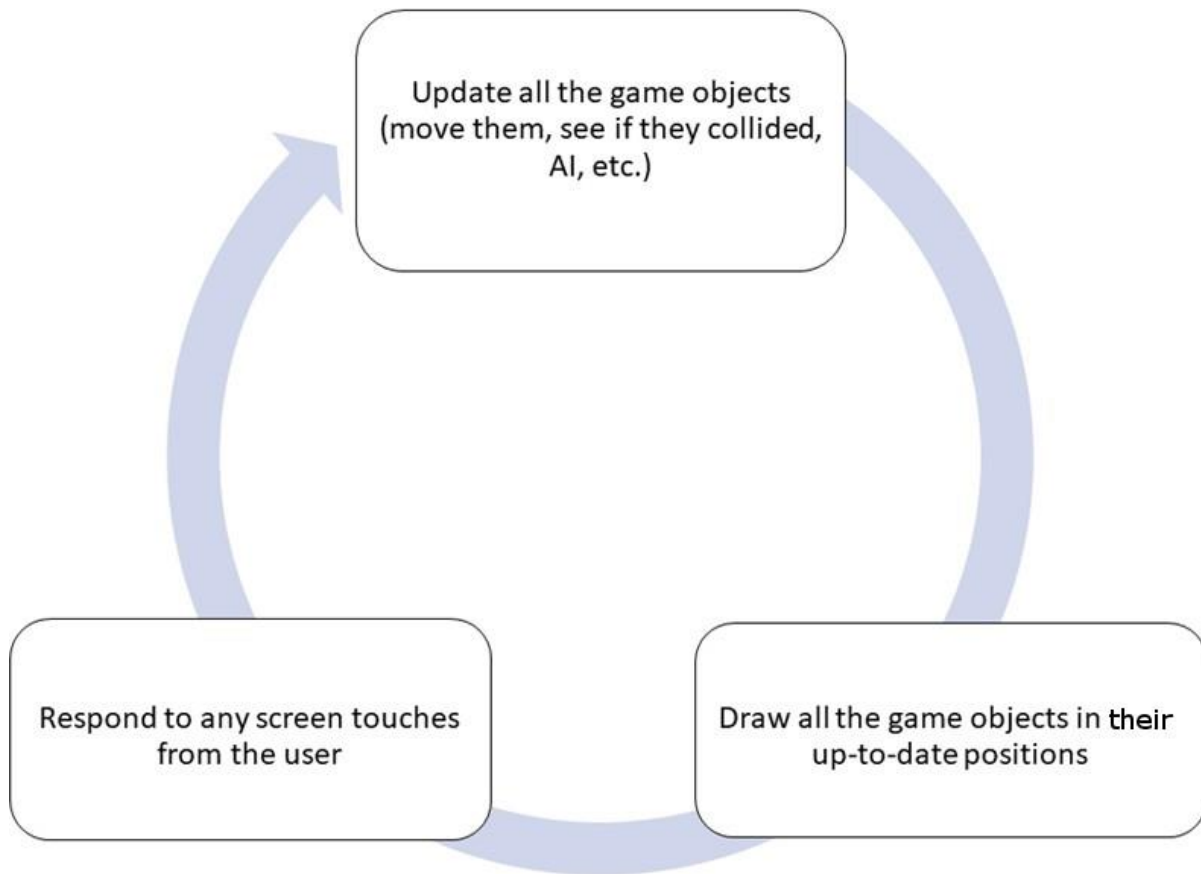
- ▼ **app**
  - > manifests
  - > java
  - ▼ res
    - ▼ **drawable**
      -  bob.png
      -  ic\_launcher\_background.xml
      -  ic\_launcher\_foreground.xml (v24)
    - > mipmap
    - > values
  - >  Gradle Scripts

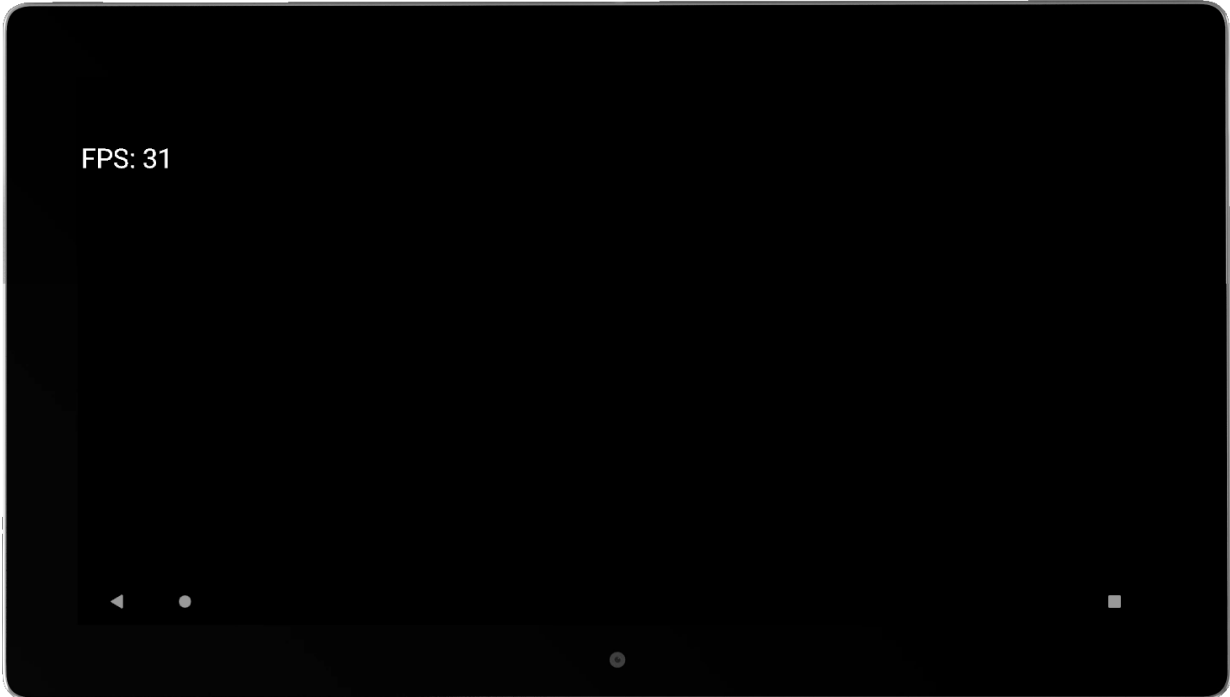
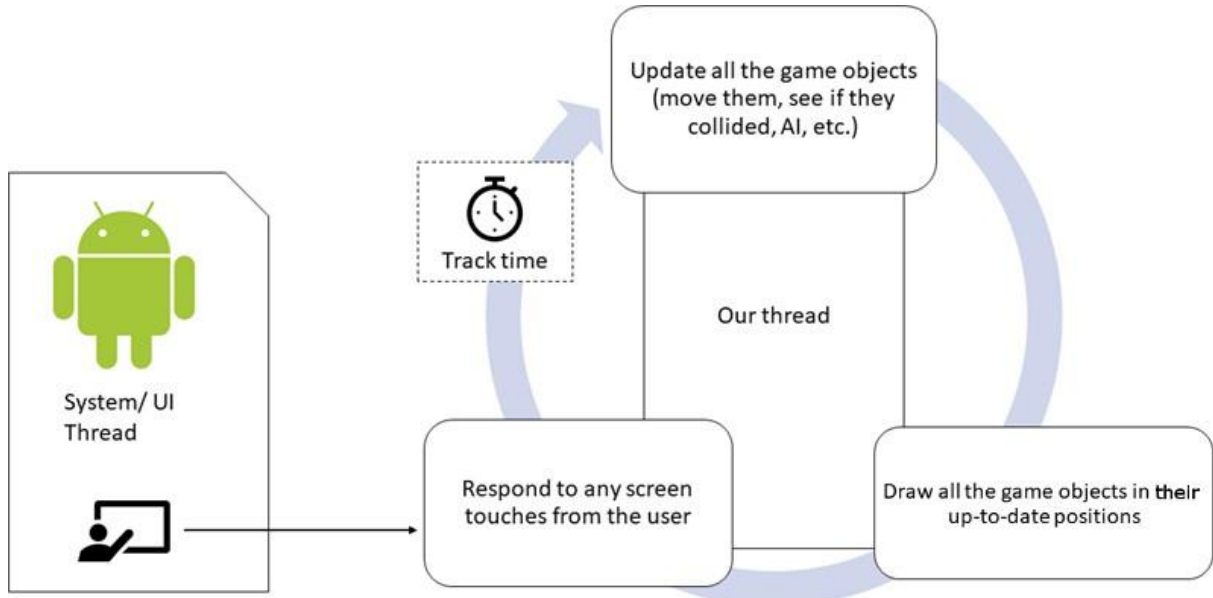


# Chapter 21: Threads and Starting the Live Drawing App

```
class LiveDrawingView extends SurfaceView {
```

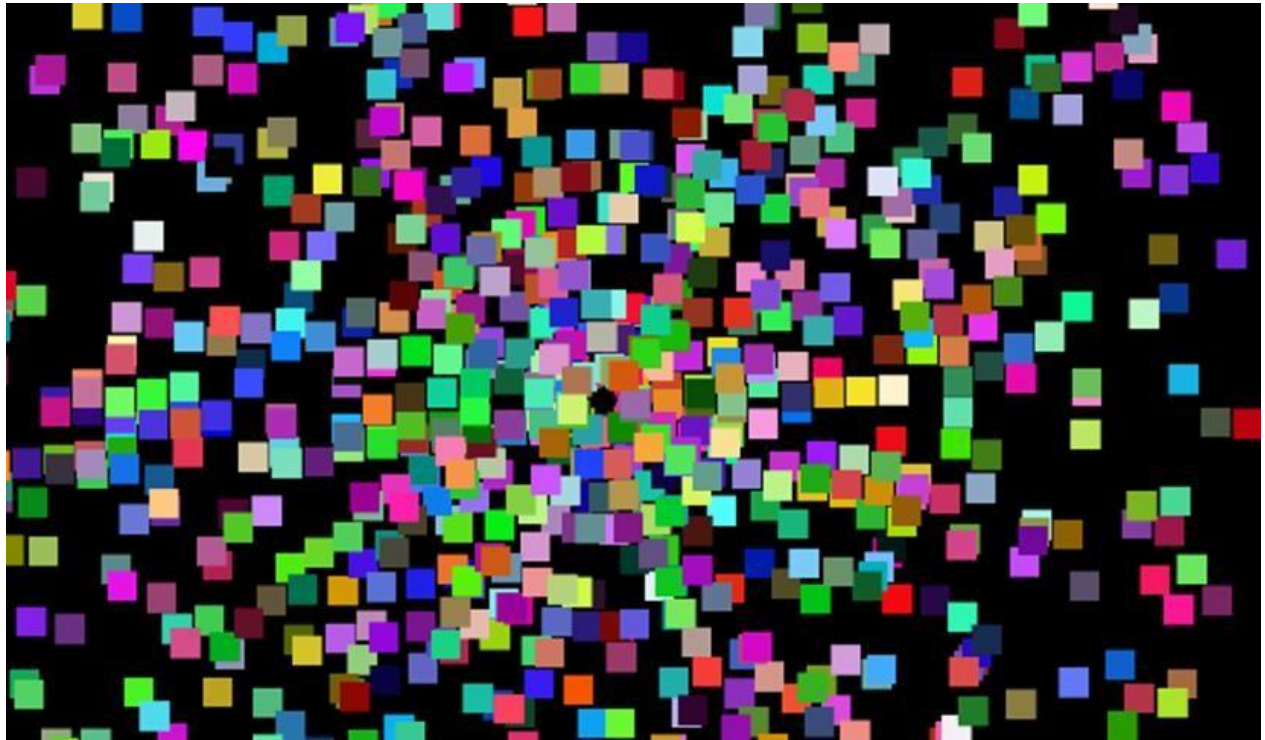
```
} There is no default constructor available in 'android.view.SurfaceView'
Create constructor matching super Alt+Shift+Enter More actions... Alt+Enter
```

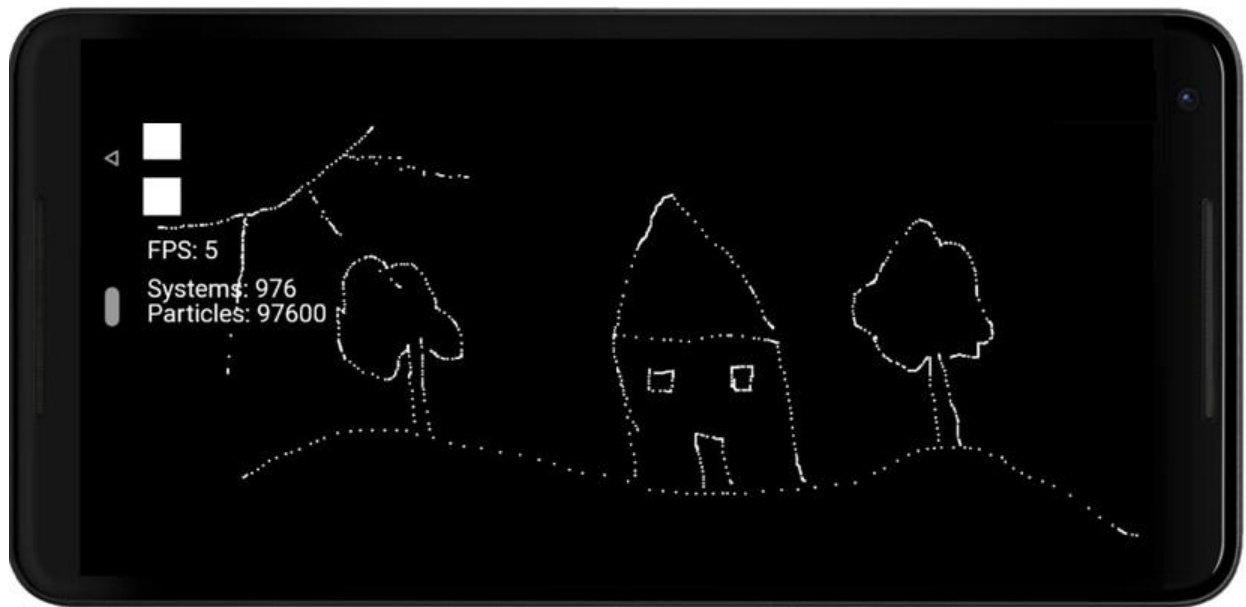
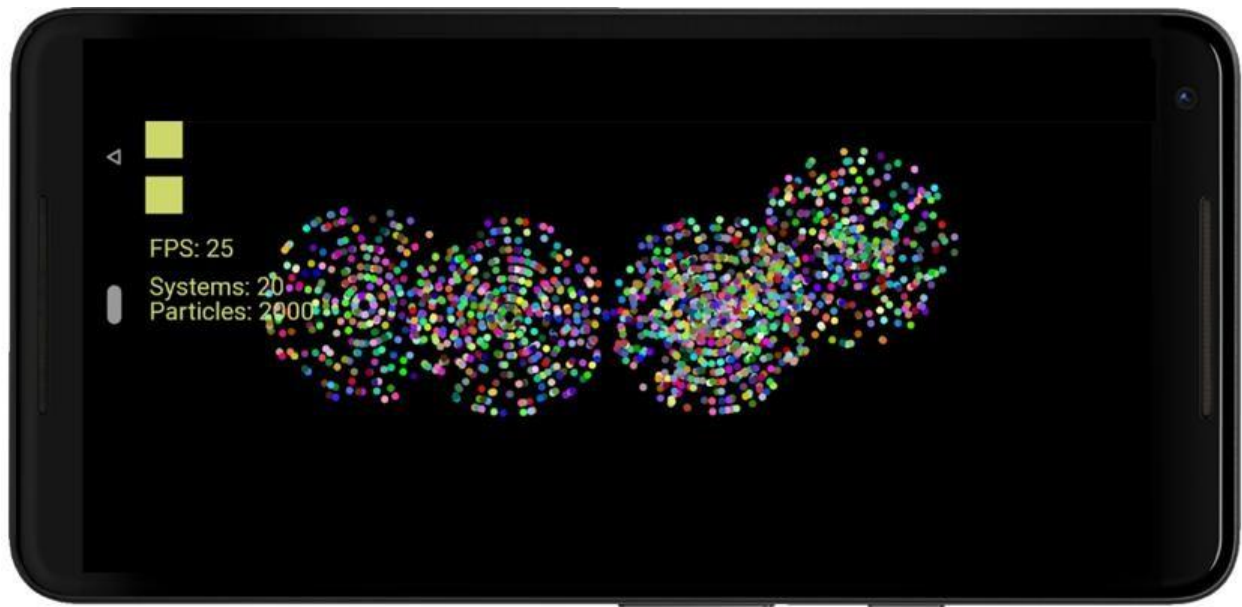


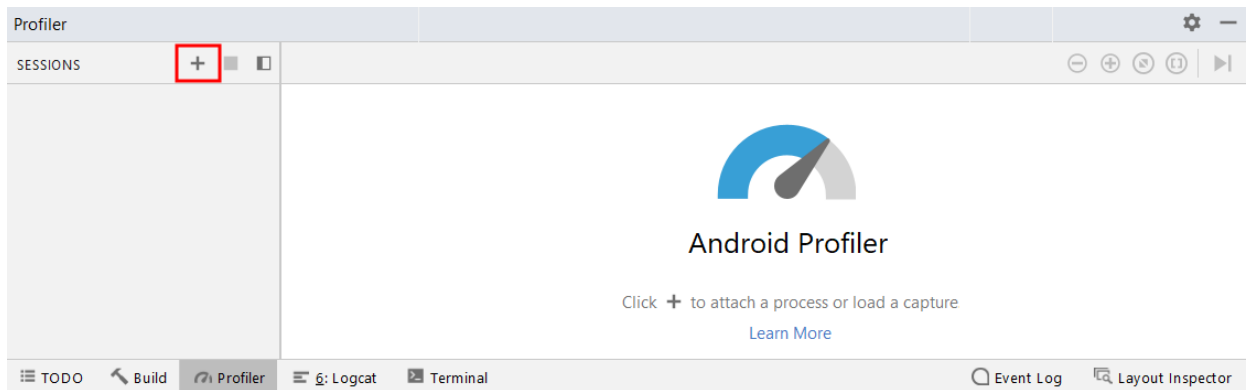
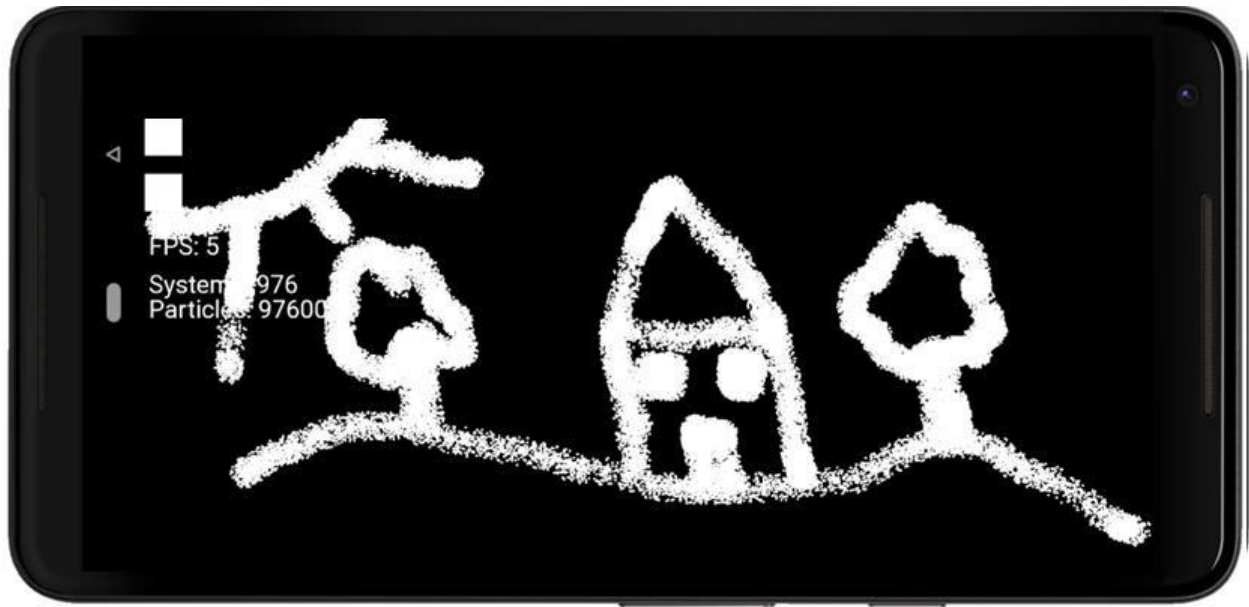


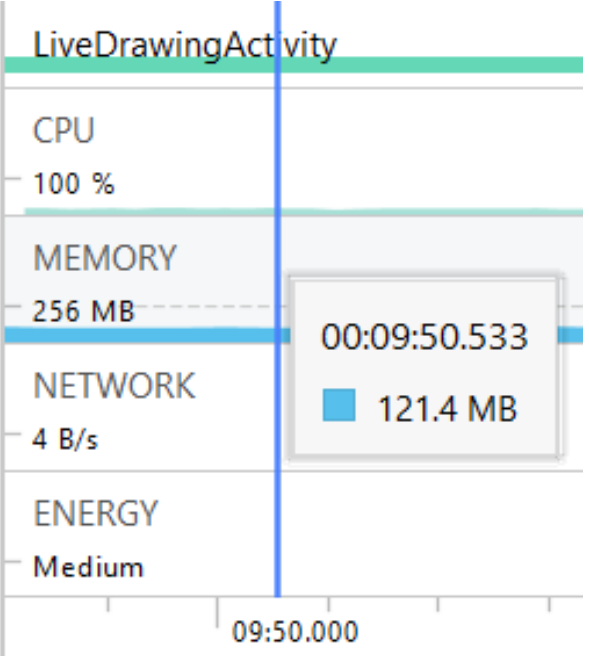
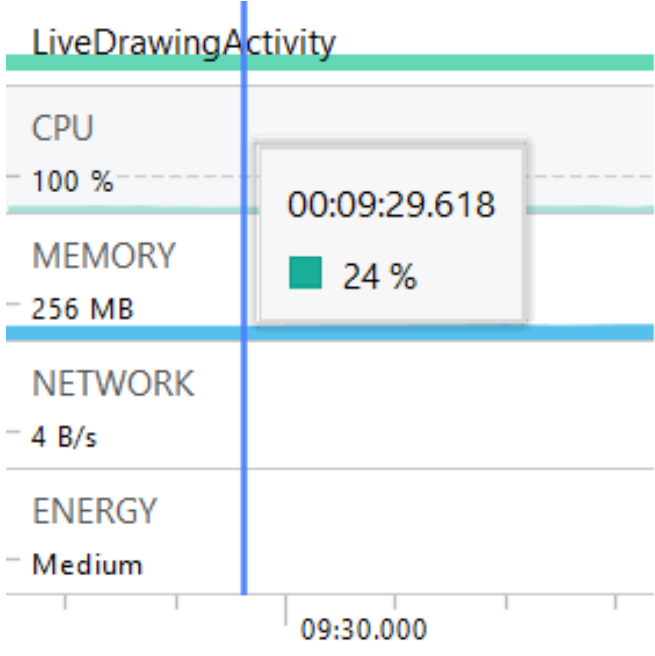
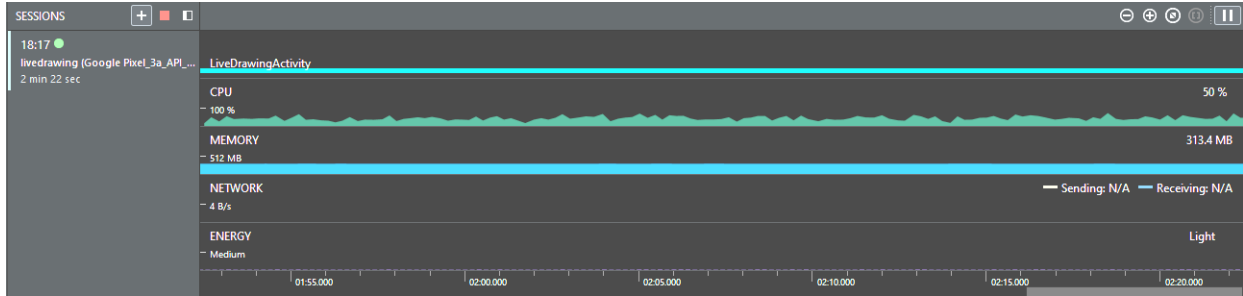


# Chapter 22: Particle Systems and Handling Screen Touches

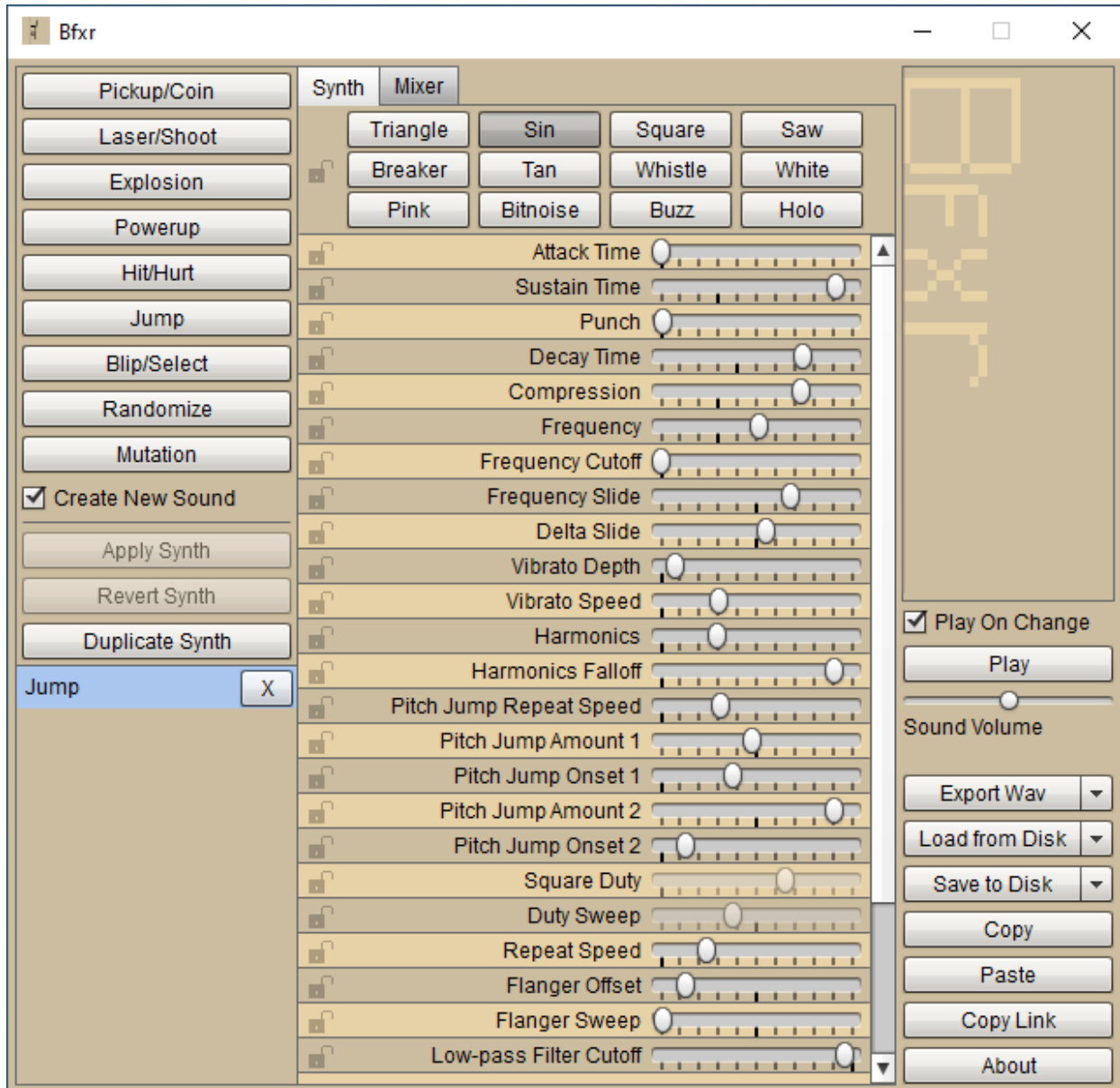








# Chapter 23: Supporting Different Versions of Android, Sound Effects, and Spinner Widget



Pickup/Coin

Laser/Shoot

Explosion

Powerup

Hit/Hurt

Jump

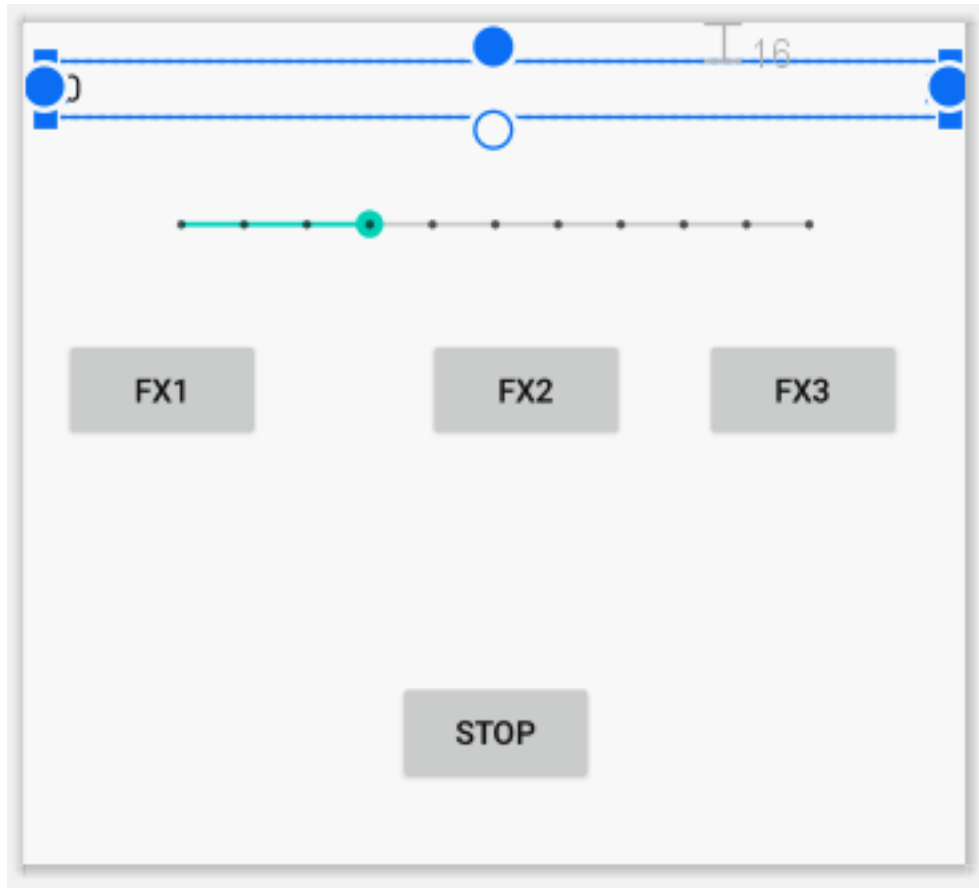
Blip/Select

Randomize

Mutation

A vertical stack of 30 audio effect sliders. Each slider consists of a horizontal bar with a white knob and a vertical tick mark. The labels for the sliders are: Attack Time, Sustain Time, Punch, Decay Time, Compression, Frequency, Frequency Cutoff, Frequency Slide, Delta Slide, Vibrato Depth, Vibrato Speed, Harmonics, Harmonics Falloff, Pitch Jump Repeat Speed, Pitch Jump Amount 1, Pitch Jump Onset 1, Pitch Jump Amount 2, Pitch Jump Onset 2, Square Duty, Duty Sweep, Repeat Speed, Flanger Offset, Flanger Sweep, Low-pass Filter Cutoff, Low-pass Filter Cutoff Sweep, Low-pass Filter Resonance, High-pass Filter Cutoff, High-pass Filter Cutoff Sweep, and Bit Crush. A vertical scrollbar is located on the right side of the stack, with an upward-pointing triangle at the top and a downward-pointing triangle at the bottom.

Export Wav 



Widget	Property to change	Value to set
Spinner	id	spinner
Spinner	spinnerMode	dropdown
Spinner	entries	@array/spinner_options
SeekBar	id	seekBar
SeekBar	max	10
Button (FX 1)	id	btnFX1
Button (FX 2)	id	btnFX2
Button (FX 3)	id	btnFX3
Button (STOP)	id	btnStop



7:10



## Sound Demo

0

1

3

5

10



# Chapter 24: Design Patterns, Multiple Layouts, and Fragments



Updated a moment ago

# Bushey Heath

Next hour

06:08 19:56



**25°**  
0%  
4

**Sunny and light winds**

M UV M Pollen L Pollution

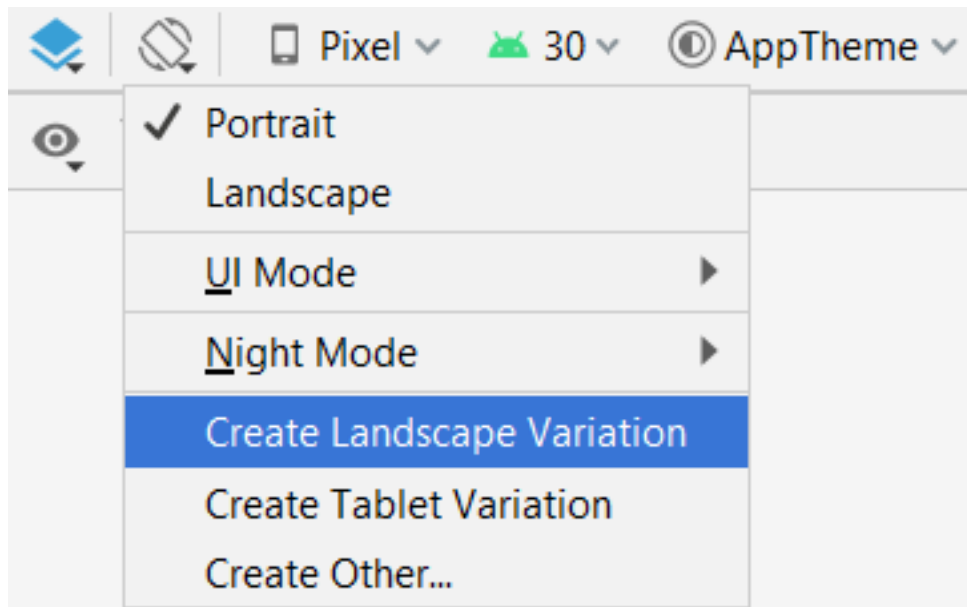
1500	Sunny and light winds	1600	1700	1800	1900
Humidity <b>54%</b>					
Visibility <b>Very Good</b>					
Pressure <b>1012 mb</b>					
<b>25°</b>	Temperature feels like <b>28°</b>	<b>24°</b>	<b>24°</b>	<b>22°</b>	<b>21°</b>
Precipitation is not expected					
0%		2%	11%	13%	13%
Light winds from the west north west					
4		6	7	8	9

Today	Wed	Thu	Fri	Sat	Sun	Mon	Tue 5th	Wed 6th	Thu 7th	Fri 8th
25° / 14°	17° / 10°	19° / 9°	19° / 9°	20° / 9°	20° / 10°	21° / 12°	21° / 13°	21° / 11°	19° / 11°	19° / 11°

**BUTTON**

TextView

TextView



- layout
  - activity\_main (2)
    - activity\_main.xml
    - activity\_main.xml (land)

# Component Tree



## ConstraintLayout

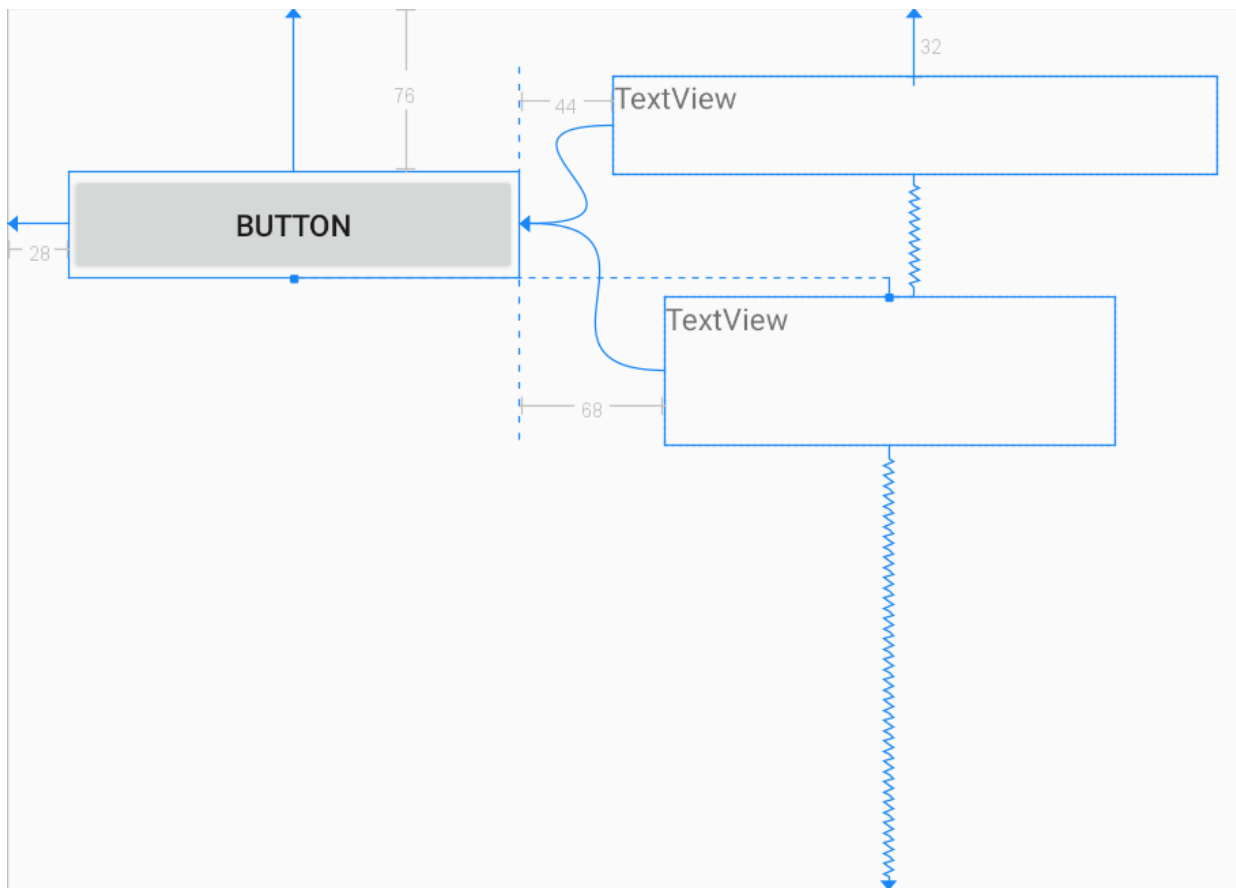
■ button- "Button"



Ab txtOrientation- "TextView"



Ab txtResolution- "TextView"





## Display



Brightness level

82%

Wallpaper

Sleep

After 1 minute of inactivity

Auto-rotate screen



Advanced

Font size, Display size, Screen saver

9:36



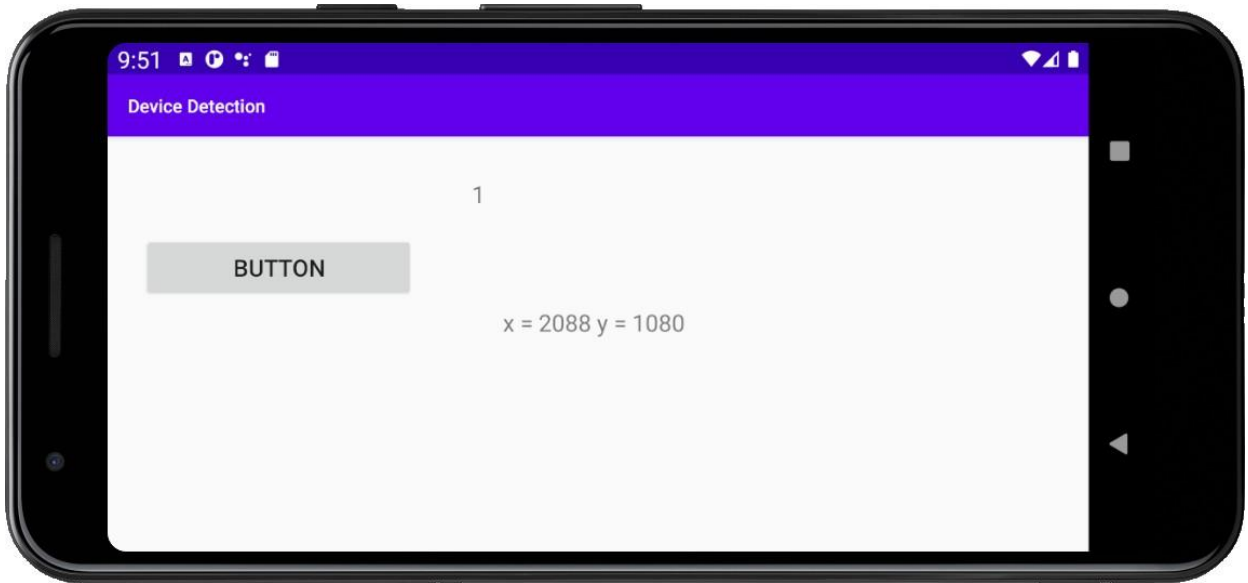
## Device Detection













BUTTON

0

x = 1080 y = 2088



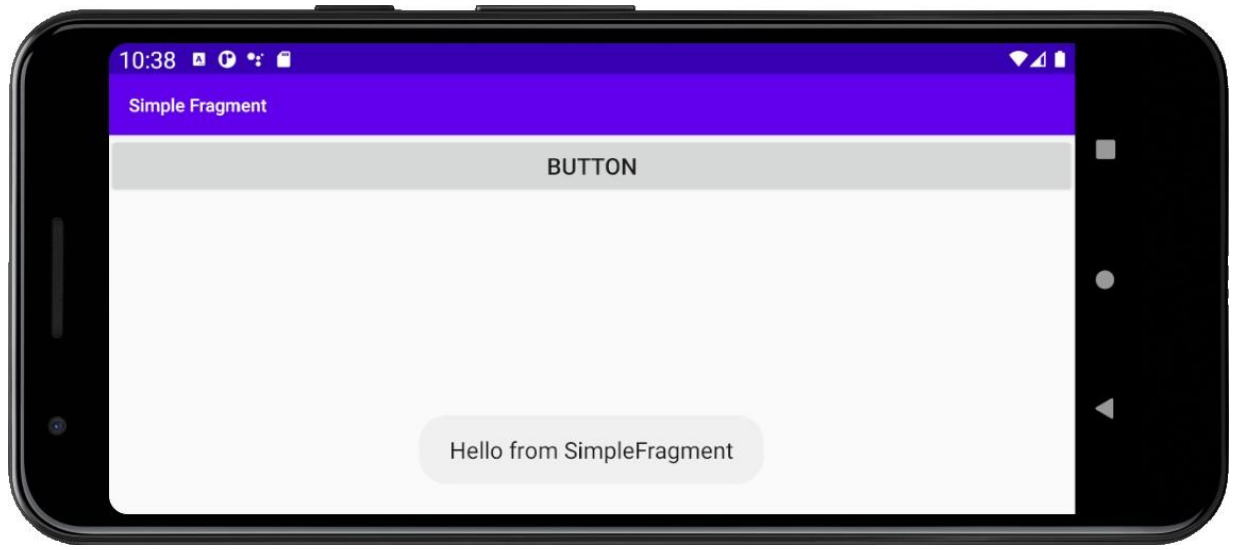


- ▼  res
  - >  drawable
  - >  drawable-v24
  - >  layout
  - >  layout-land
  - >  mipmap-anydpi-v26
  - >  mipmap-hdpi
  - >  mipmap-mdpi
  - >  mipmap-xhdpi
  - >  mipmap-xxhdpi
  - >  mipmap-xxxhdpi
  - >  values

```
public class SimpleFragment extends Fragment {  
}
```

- Fragment androidx.fragment.app
- Fragment android.app
- FragmentActivity androidx.fragment.app
- FragmentManager androidx.fragment.app
- FragmentController androidx.fragment.app
- FragmentFactory androidx.fragment.app
- FragmentHostCallback<E> androidx.fragment.app
- FragmentLifecycleCallbacks androidx.fragment.app.FragmentMana...
- FragmentManager androidx.fragment.app
- FragmentPagerAdapter androidx.fragment.app
- FragmentStatePagerAdapter androidx.fragment.app

Press Enter to insert, Tab to replace



# Chapter 25: Building a Simple Image Gallery app



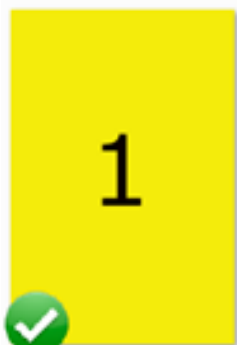


Image 1



Image 2



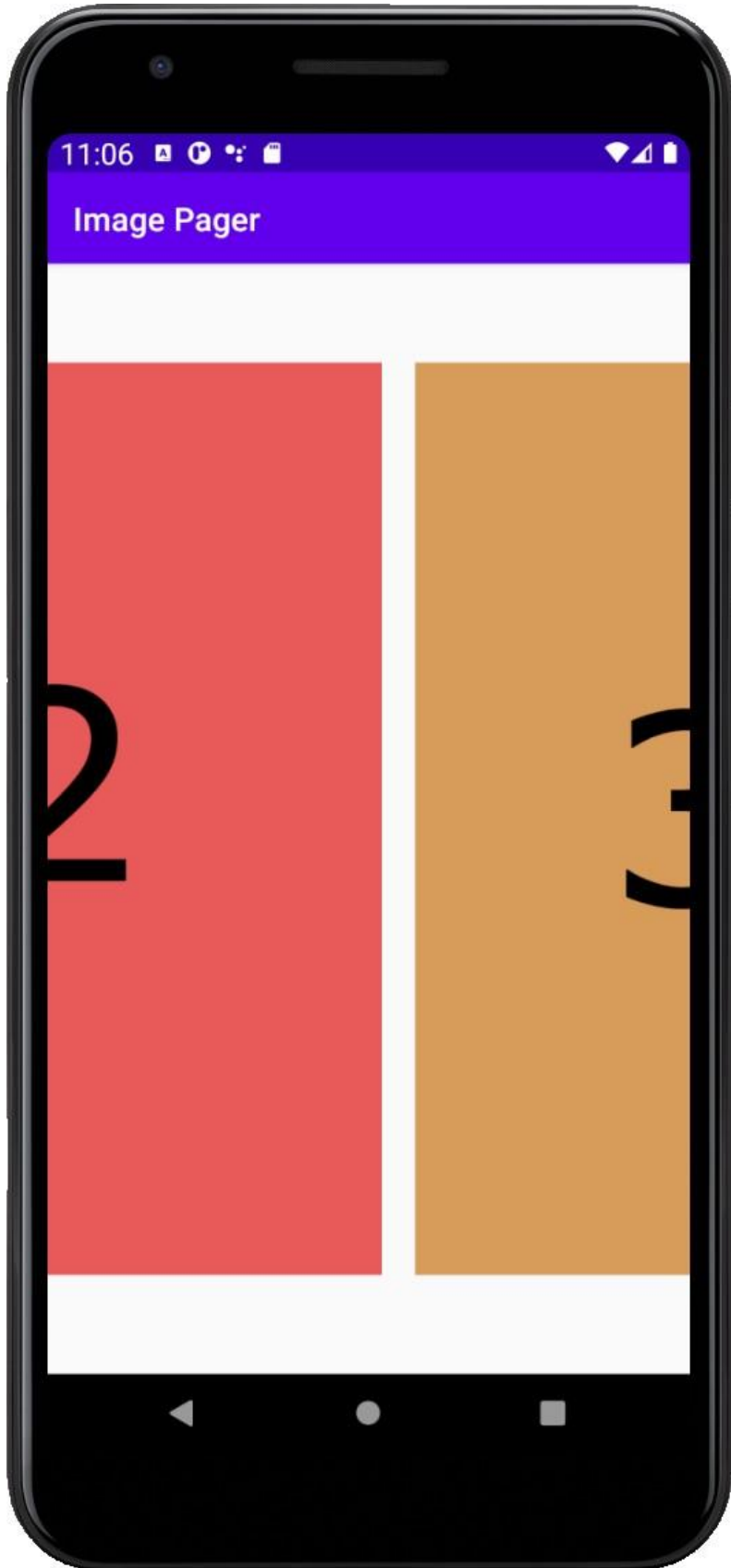
Image 3



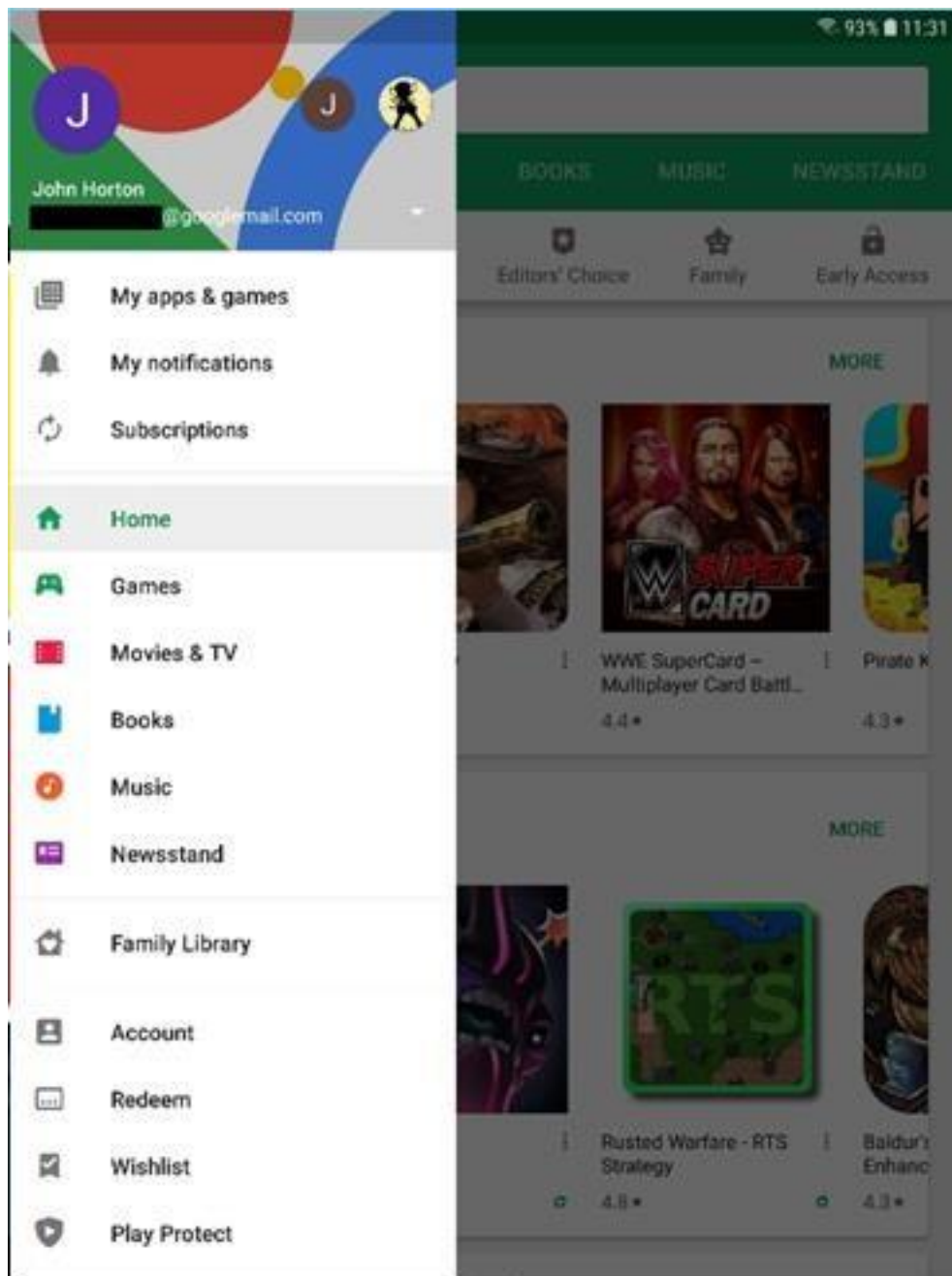
11:04

Image Pager

1



# Chapter 26: Advanced UI with Navigation Drawer and Fragment









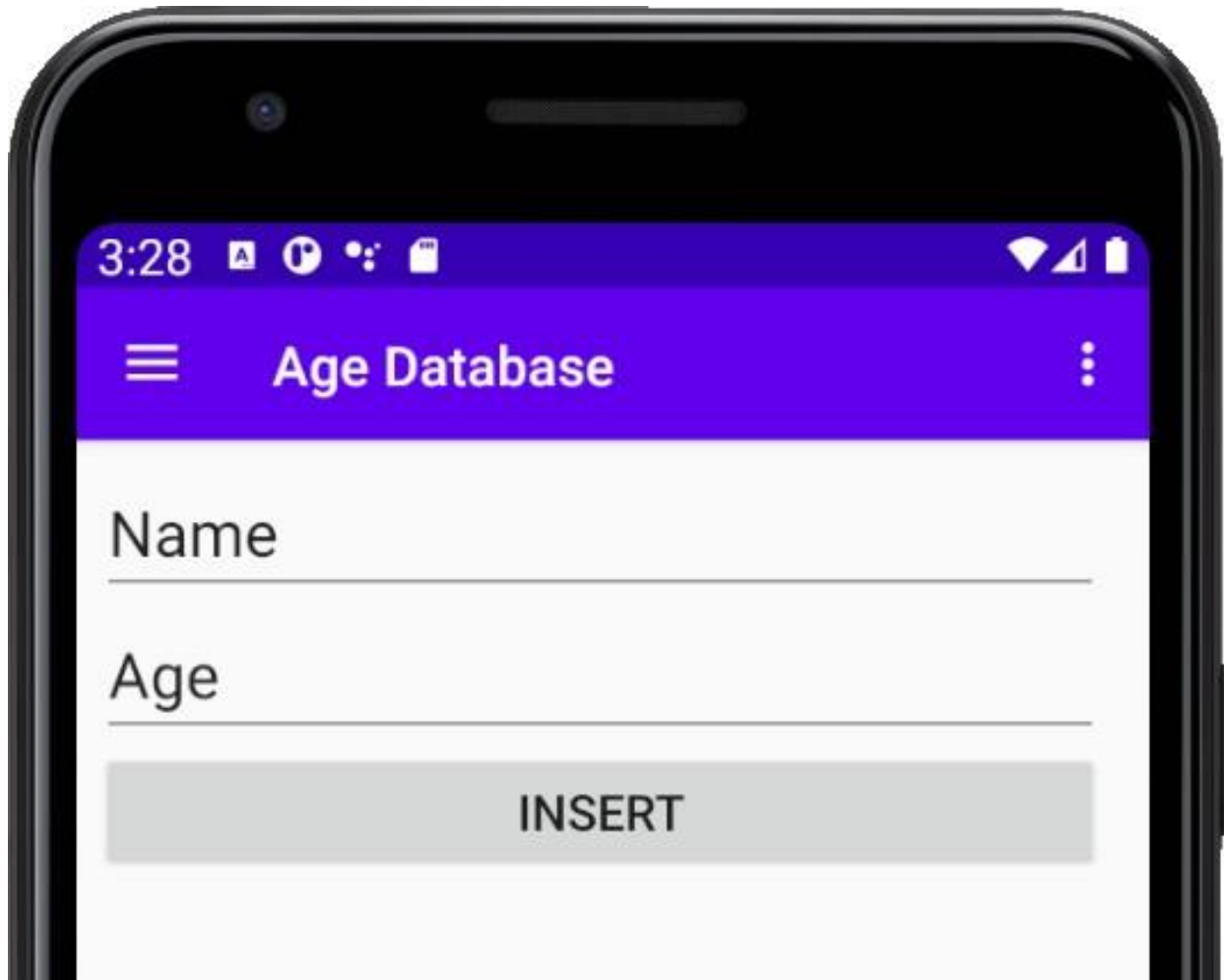
3:28

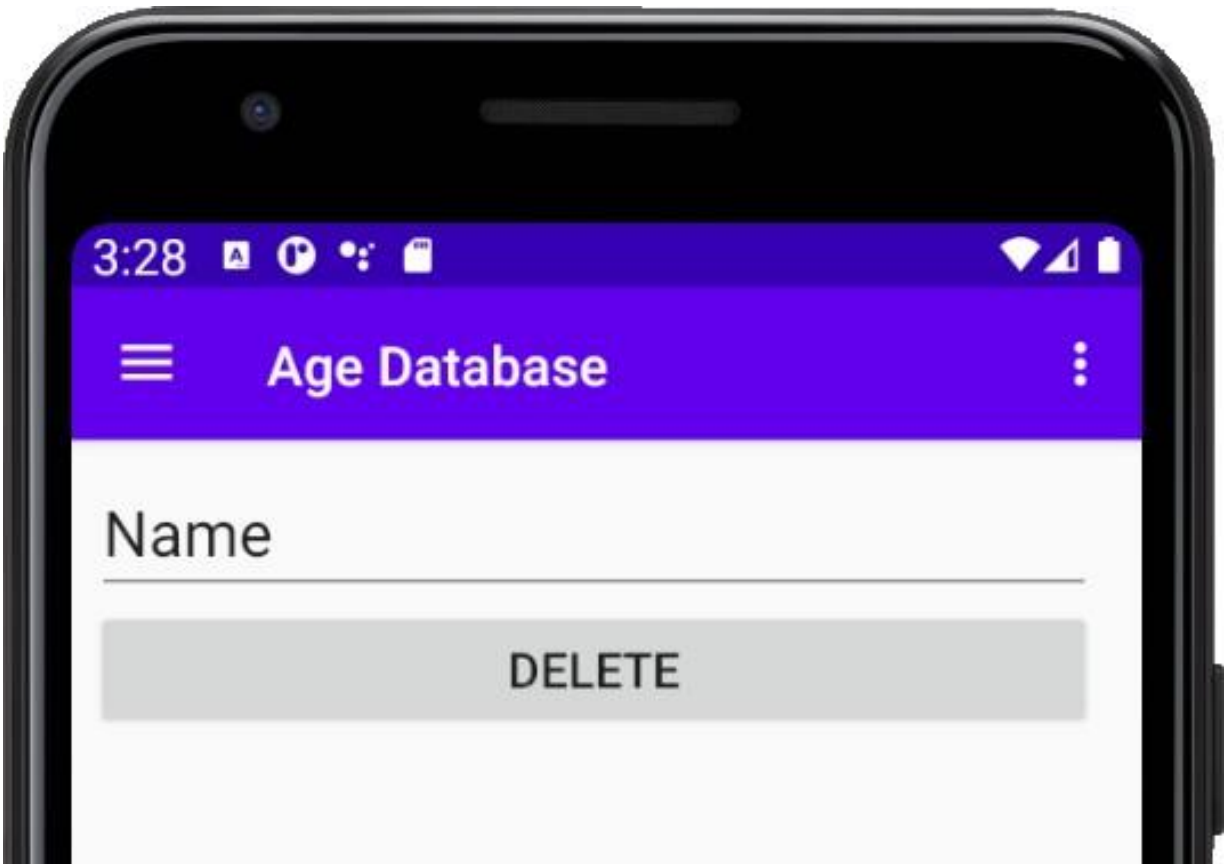


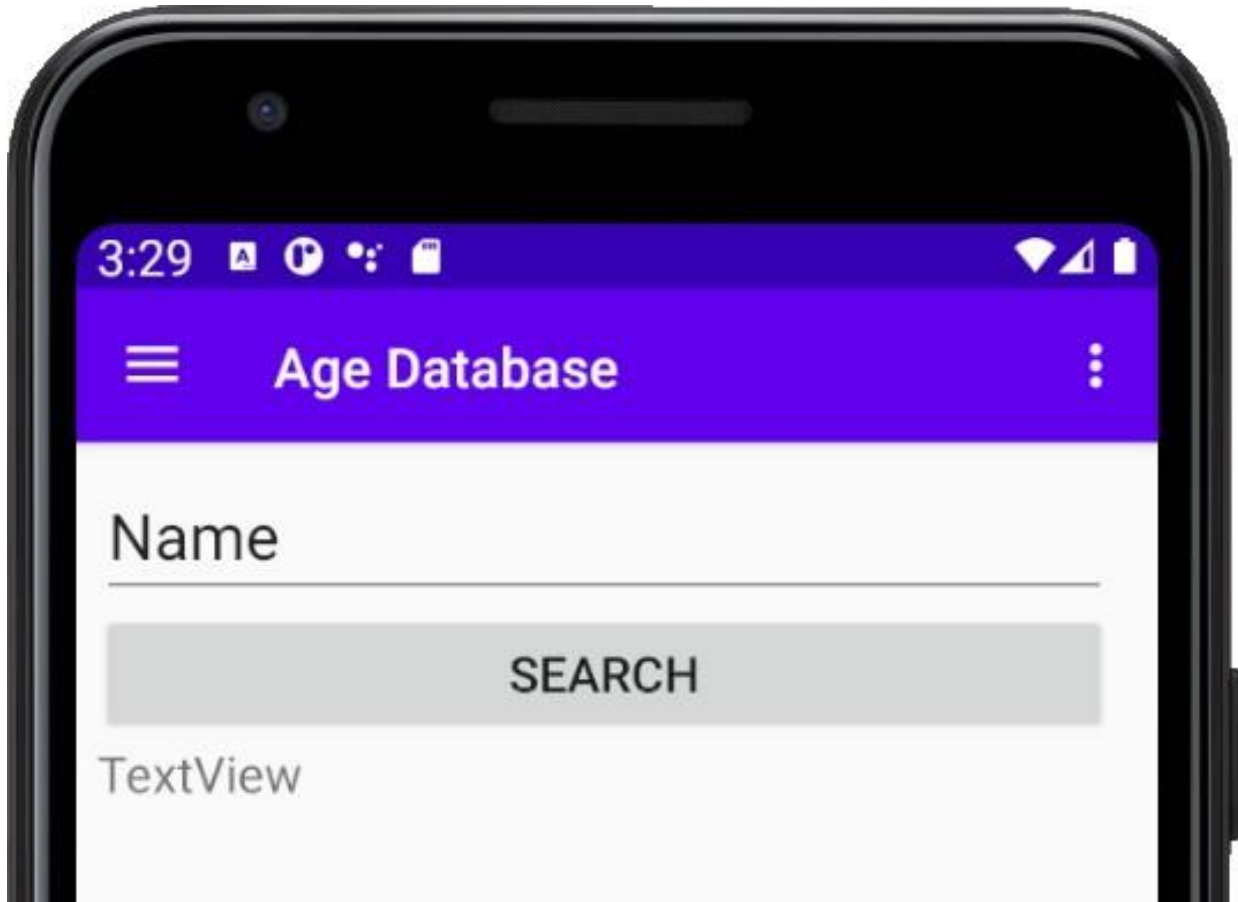
Android Studio  
android.studio@android.com

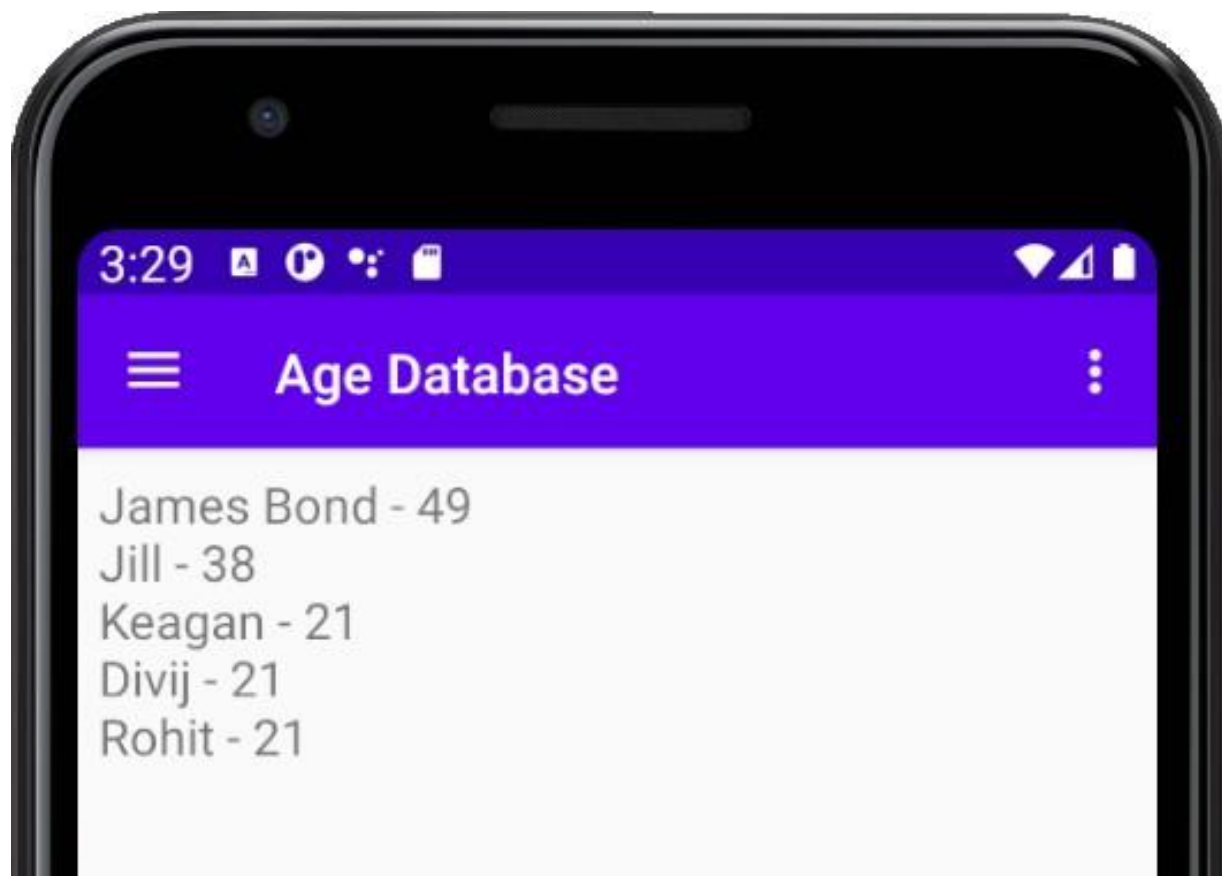
-  Insert
-  Delete
-  Search
-  Results













1:29

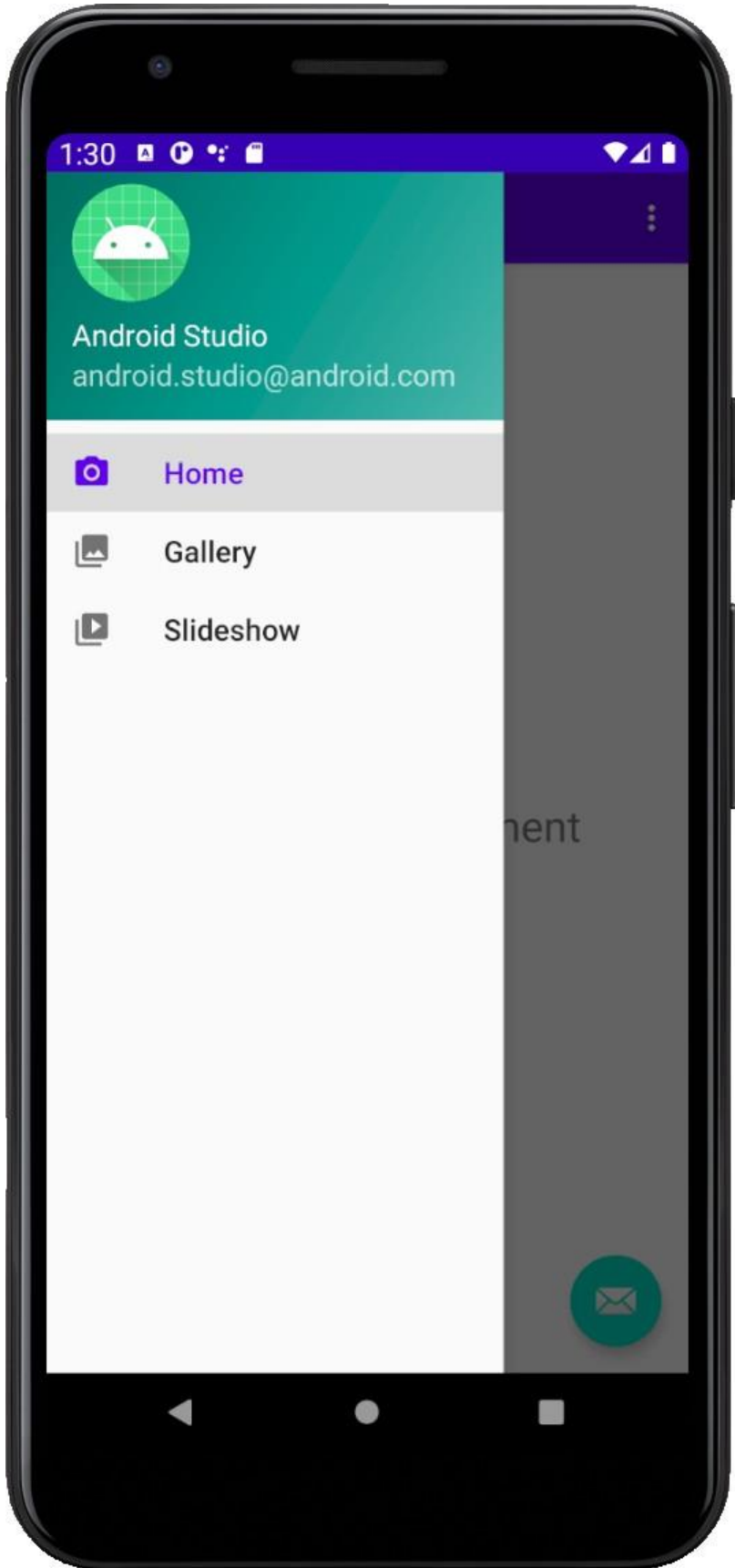


Home



This is home fragment








1:30



Android Studio  
android.studio@android.com

-  Home
-  Gallery
-  Slideshow

ment



Widget	Attribute and value
Top edit text	id = editName
Top edit text	text = Name
Second edit text	id = editAge
Second edit text	text = Age
Button	id = btnInsert
Button	text = Insert

**Name**

---

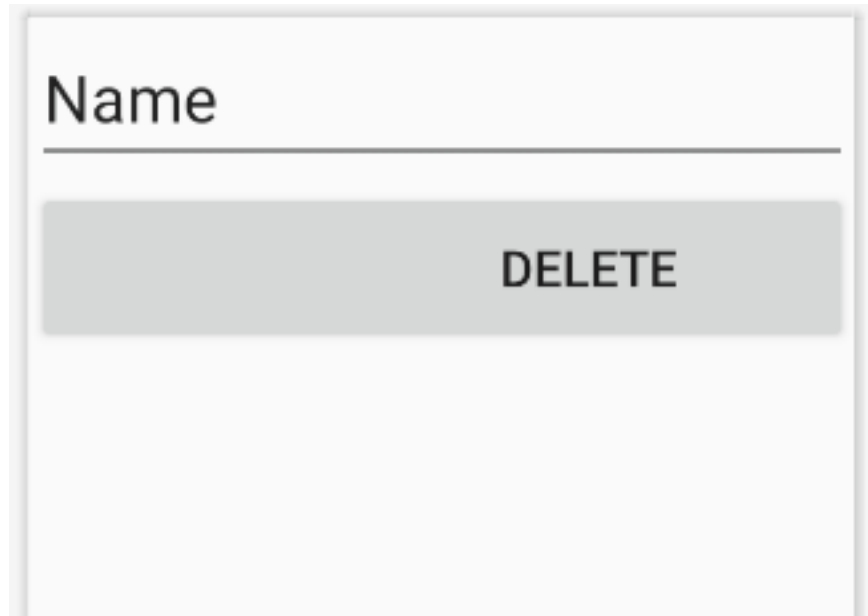
**Age**

---

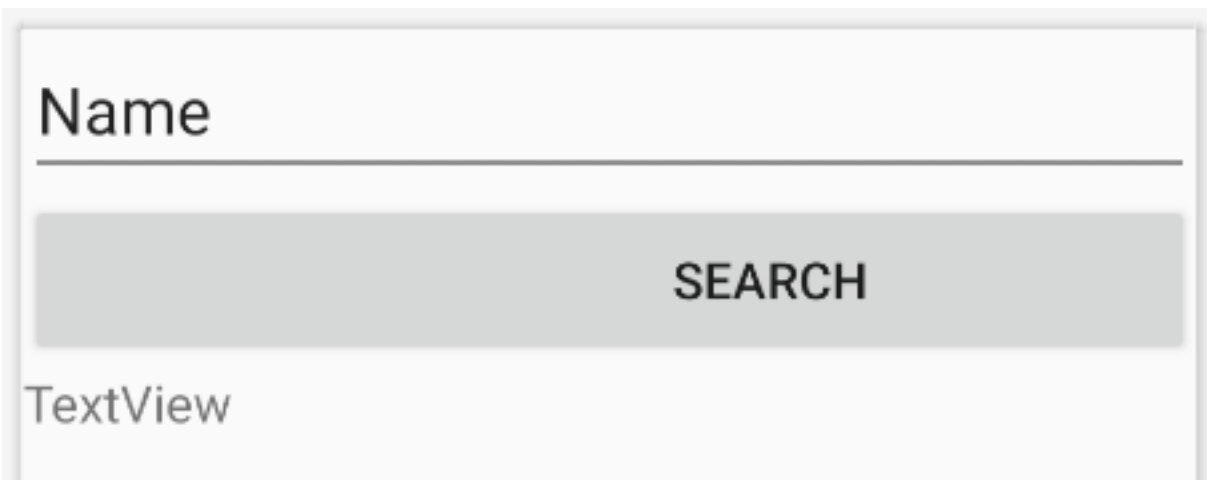
**INSERT**

Widget	Attribute value
EditText	id = editDelete
EditText	text = Name
Button	id = btnDelete
Button	text = Delete

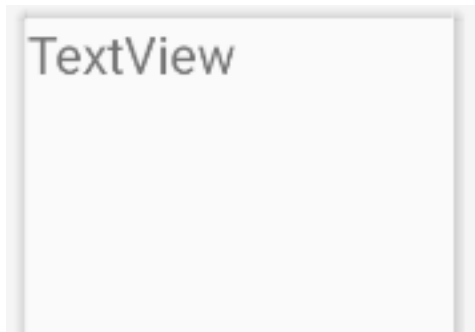




Widget	Attribute value
EditText	id = editSearch
EditText	text = Name
Button	id = btnSearch
Button	text = Search
TextView	id = textResult



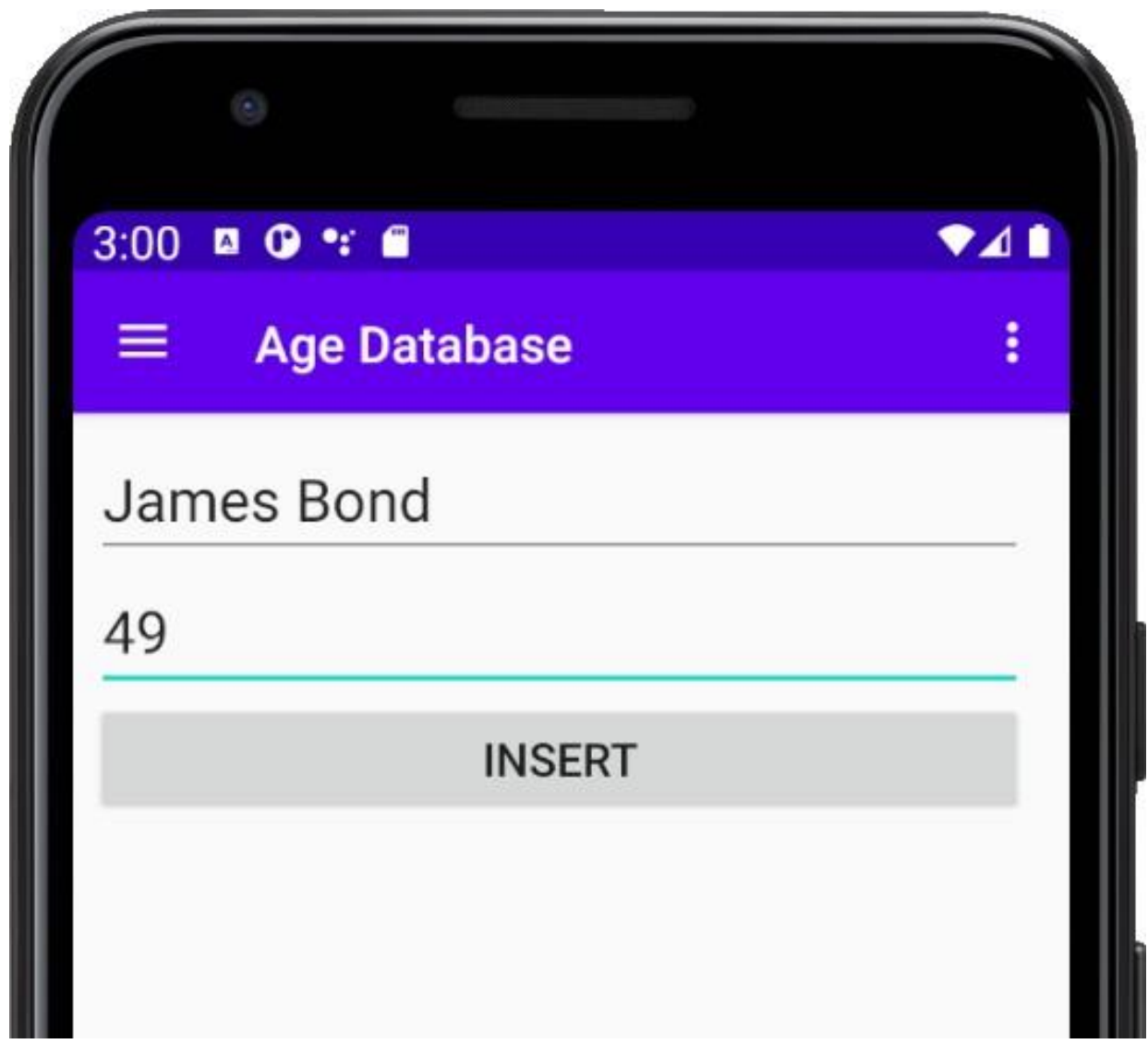
Widget	Attribute value
TextView	id = textResults



## Chapter 27: Android Databases

<b>_ID</b>	<b>name</b>	<b>score</b>
1	Bart	23
2	Lisa	100
3	Jim	66

<b>_ID</b>	<b>name</b>	<b>score</b>
1	Bart	23
2	Lisa	100



3:00



# Age Database



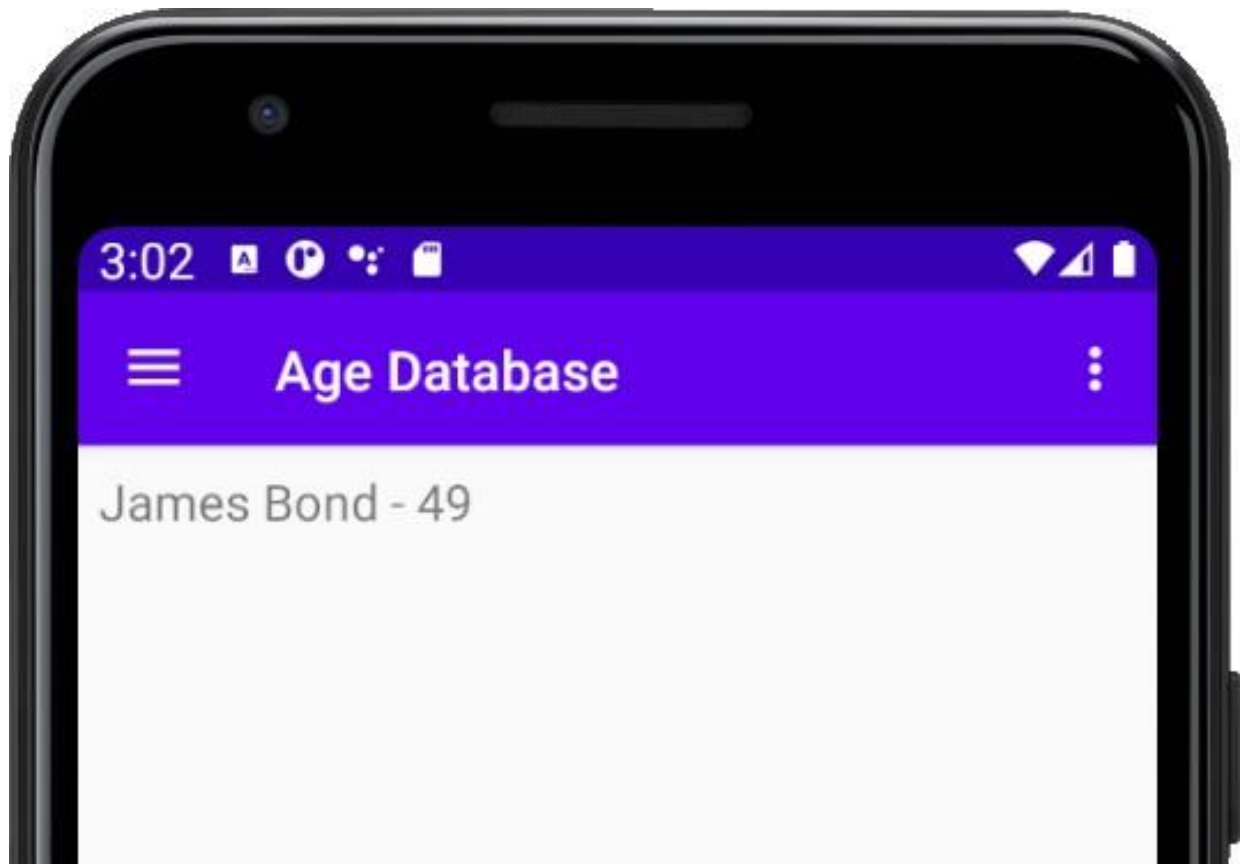
James Bond

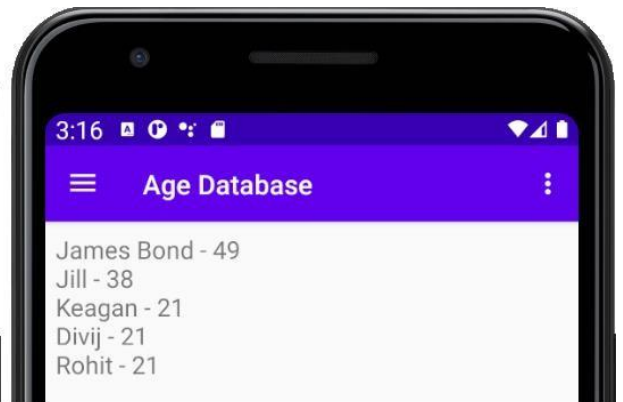
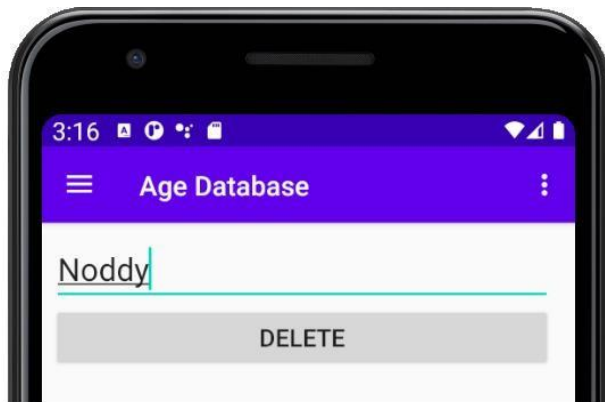
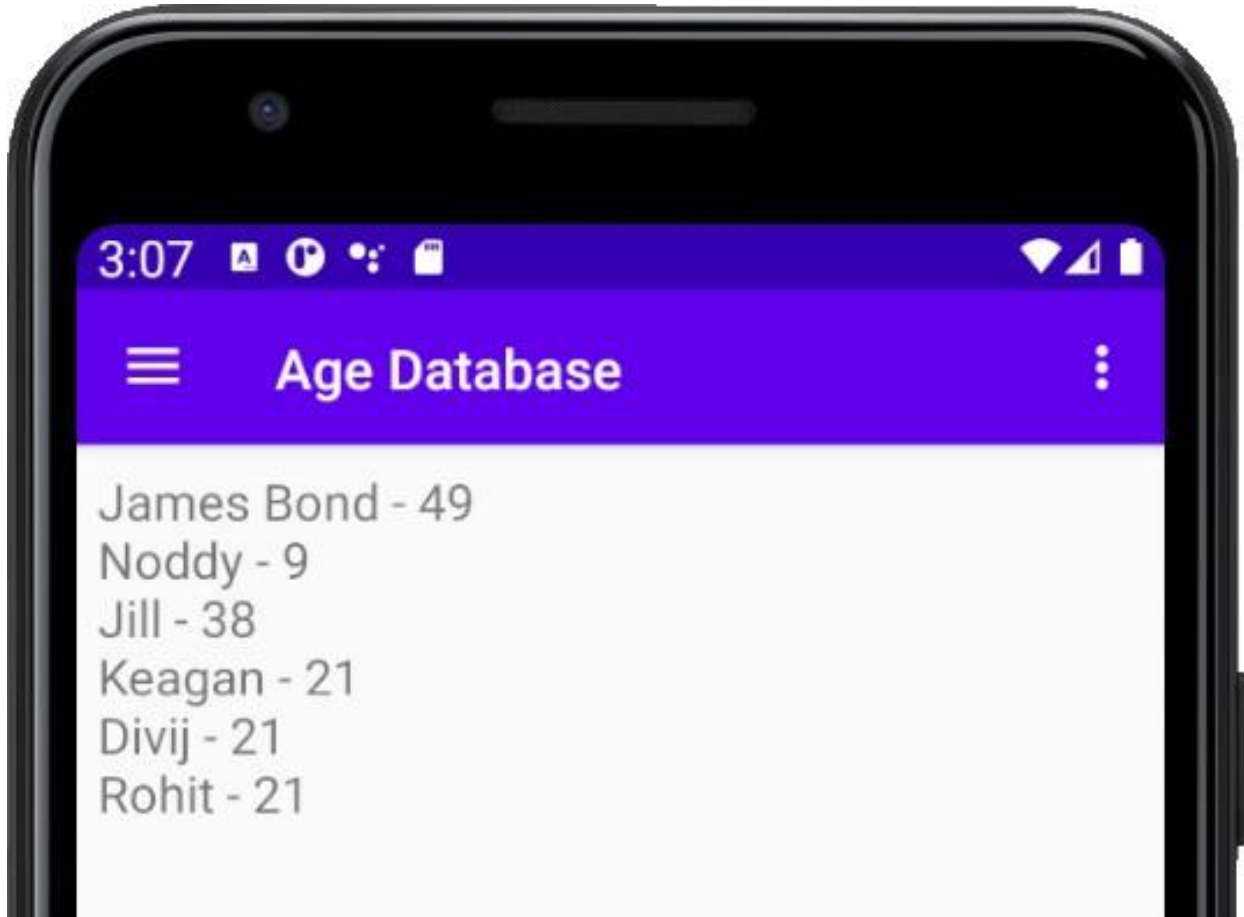
---

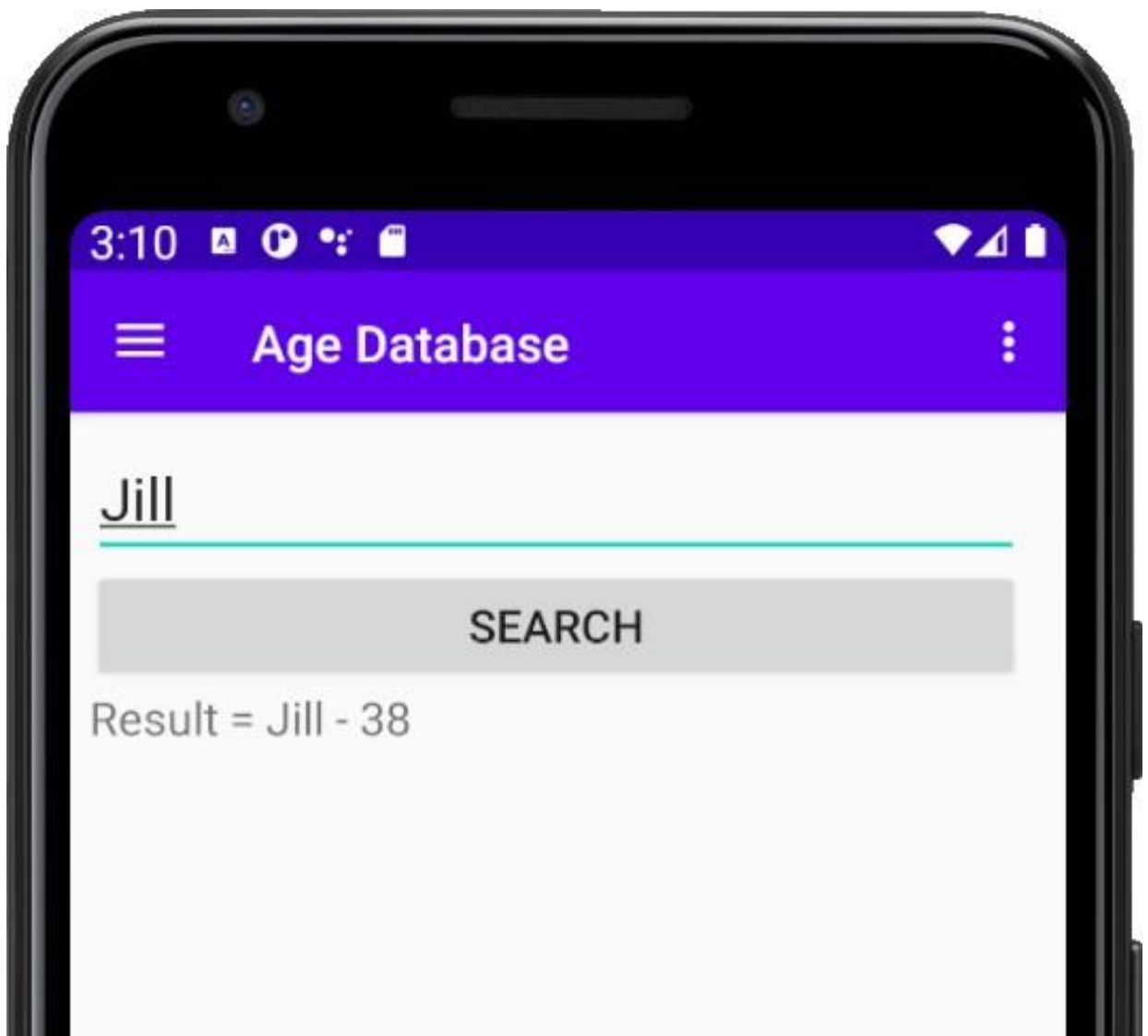
49

---

INSERT







# Chapter 28: A Quick Chat Before You Go

The screenshot shows a web browser window with the URL `github.com/search?q=android+fragment`. The page features a dark navigation bar with the GitHub logo, links for 'Why GitHub?', 'Team', 'Enterprise', 'Explore', 'Marketplace', and 'Pricing', and a search bar containing 'android fragment'. On the right side of the navigation bar are 'Sign in' and 'Sign up' buttons. Below the navigation bar, the page is divided into several sections. On the left, there is a sidebar with a list of repository categories: 'Repositories' (5K), 'Code' (?), 'Commits' (446K), 'Issues' (55K), 'Discussions' (Beta, 38), 'Packages' (11), 'Marketplace' (0), 'Topics' (6), 'Wikis' (9K), and 'Users' (2). Below this is a 'Languages' section showing 'Java' with 4,472 repositories. The main content area features a header for 'Android' with the Android logo, a description 'Android is an operating system built by Google designed for mobile devices.', and a 'Star' button. Below this, it displays '5,817 repository results' with a 'Sort: Best match' dropdown. The first two results are: 1. 'YoKeyword/Fragmentation' [DEPRECATED] A powerful library that manage Fragment for Android. It includes tags for 'fragment', 'swipeback', and 'activity-fragment', has 9.7k stars, is in Java, uses Apache-2.0 license, and was updated on Dec 21, 2020. 2. 'xxv/android-lifecycle' A diagram of the Android Activity / Fragment lifecycle. It has 5k stars, is in Java, and was updated 21 days ago.



0  
votes

### Attempt to invoke virtual method 'void androidx.appcompat.app.ActionBar.setTitle(java.lang.CharSequence)' on a null object reference

0  
answers

I was following this tutorial: <https://youtu.be/LyAmpfm4ndo> to build an Android mobile chat app using Java. But when I try to run the code, this error java.lang.NullPointerException: Attempt to ...

3 views

[java](#) [android](#) [nullpointerexception](#) [android-actionbar](#) [android-appbarlayout](#)

asked 5 mins ago



**ProudHKer**  
61 ● 8

0  
votes

### Not showing video, only sounds when play real android device in react-native-video

0  
answers

I using react-native-video: 5.1.1, react-native: 0.63.3 . Writing code works in emulator but not showing video, only sound in android real device.

2 views

[android](#) [react-native-video](#)

asked 14 mins ago



**HBK**  
11 ● 2

0  
votes

### Huawei Face detection with ML Kit won't work on some devices

0  
answers

I am trying to create a simple Android app that can recognize faces from a bitmap. First, I am trying to initialize VisionBase with the following lines of code: VisionBase.init(c, object : ...

6 views

[android](#) [face-detection](#) [huawei-mobile-services](#) [huawei-developers](#)

asked 23 mins ago



**Petar LjubicOfficial**  
21 ● 2