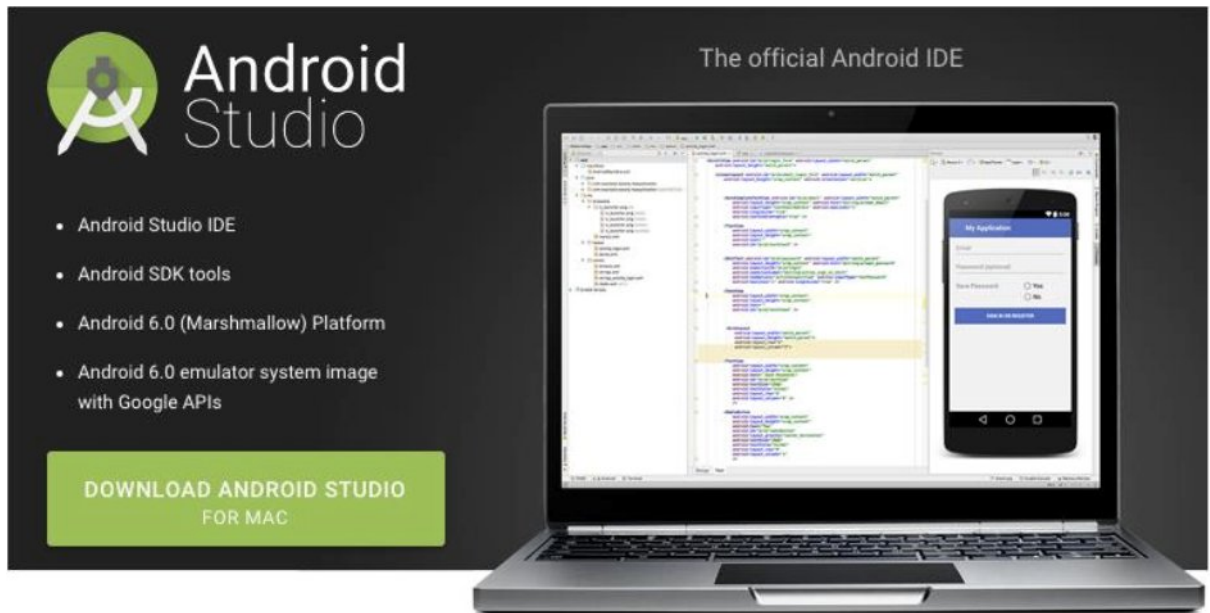


## Chapter 1: Installing and Configuring Android Studio






# Android Studio

Version 2.0

 Start a new Android Studio project

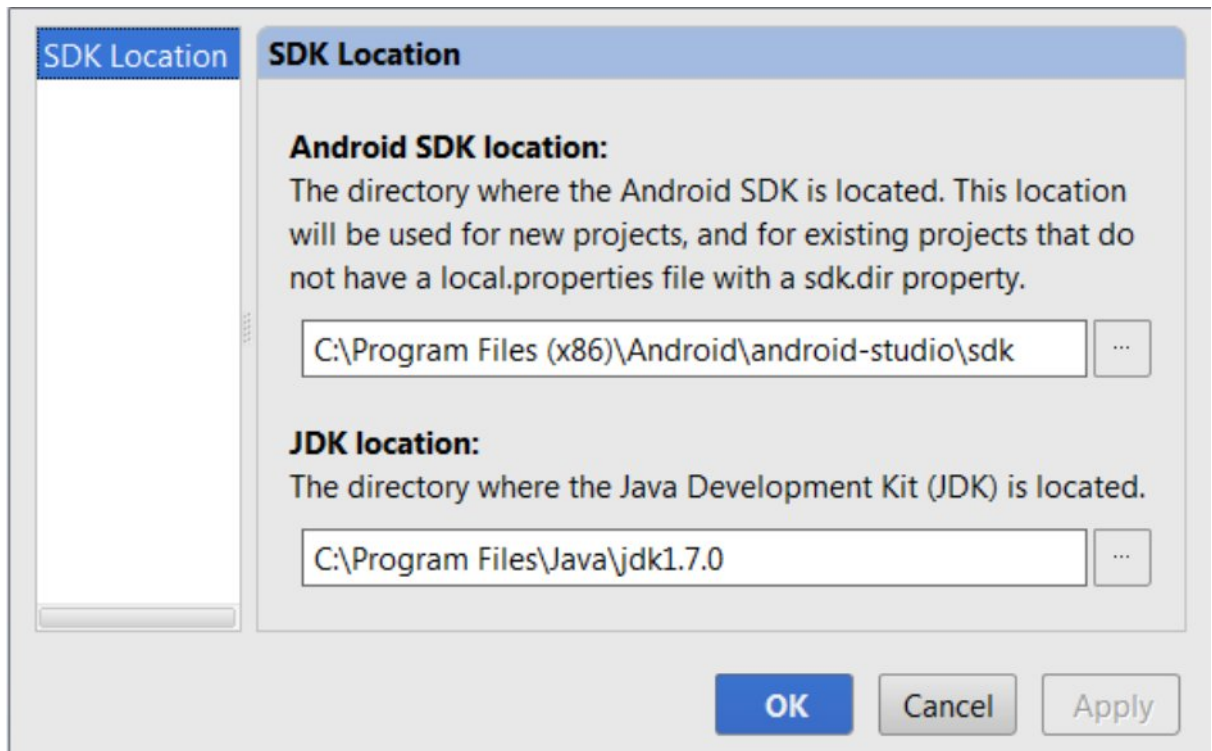
 Open an existing Android Studio project

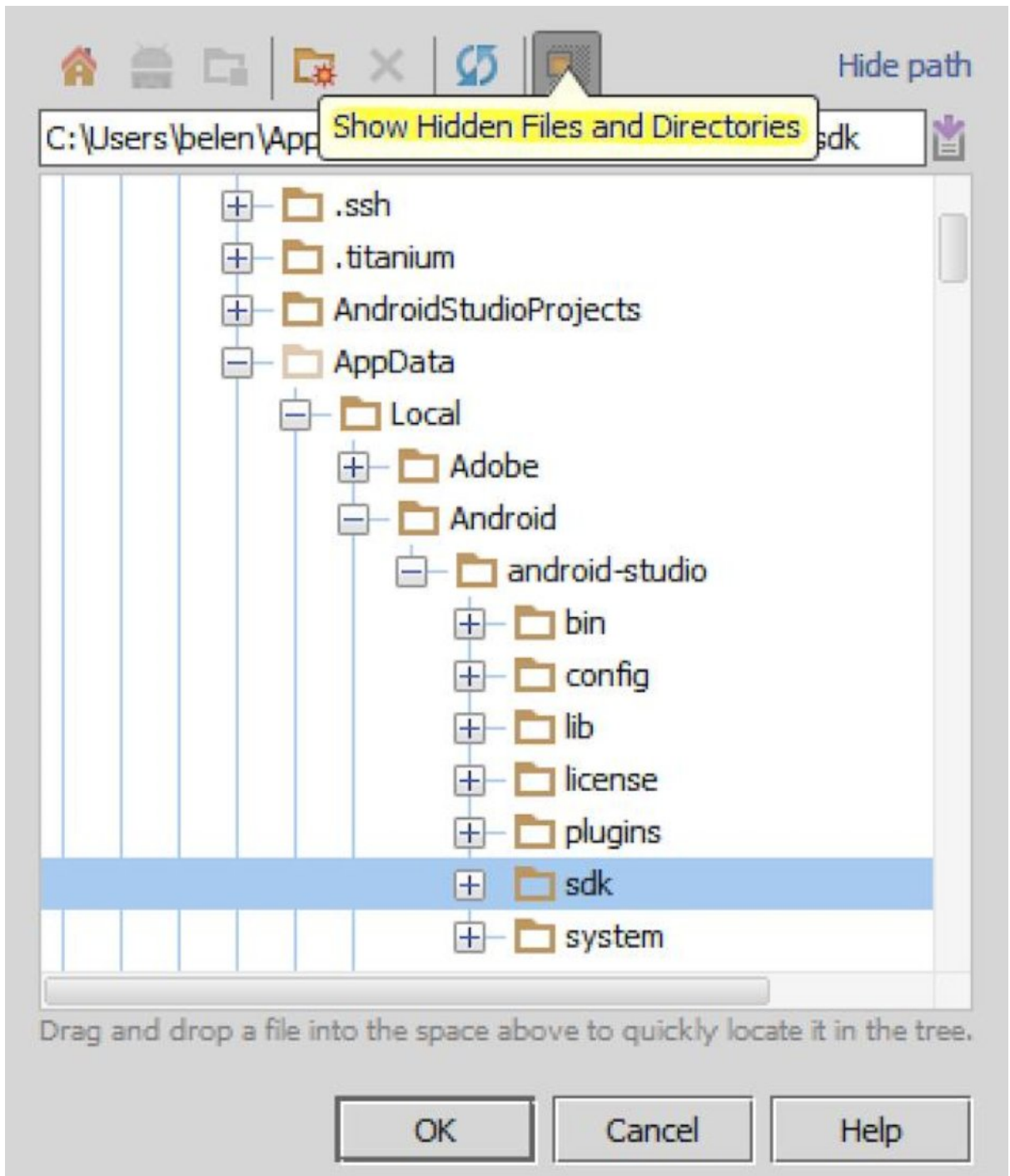
 Check out project from Version Control ▾

 Import project (Eclipse ADT, Gradle, etc.)

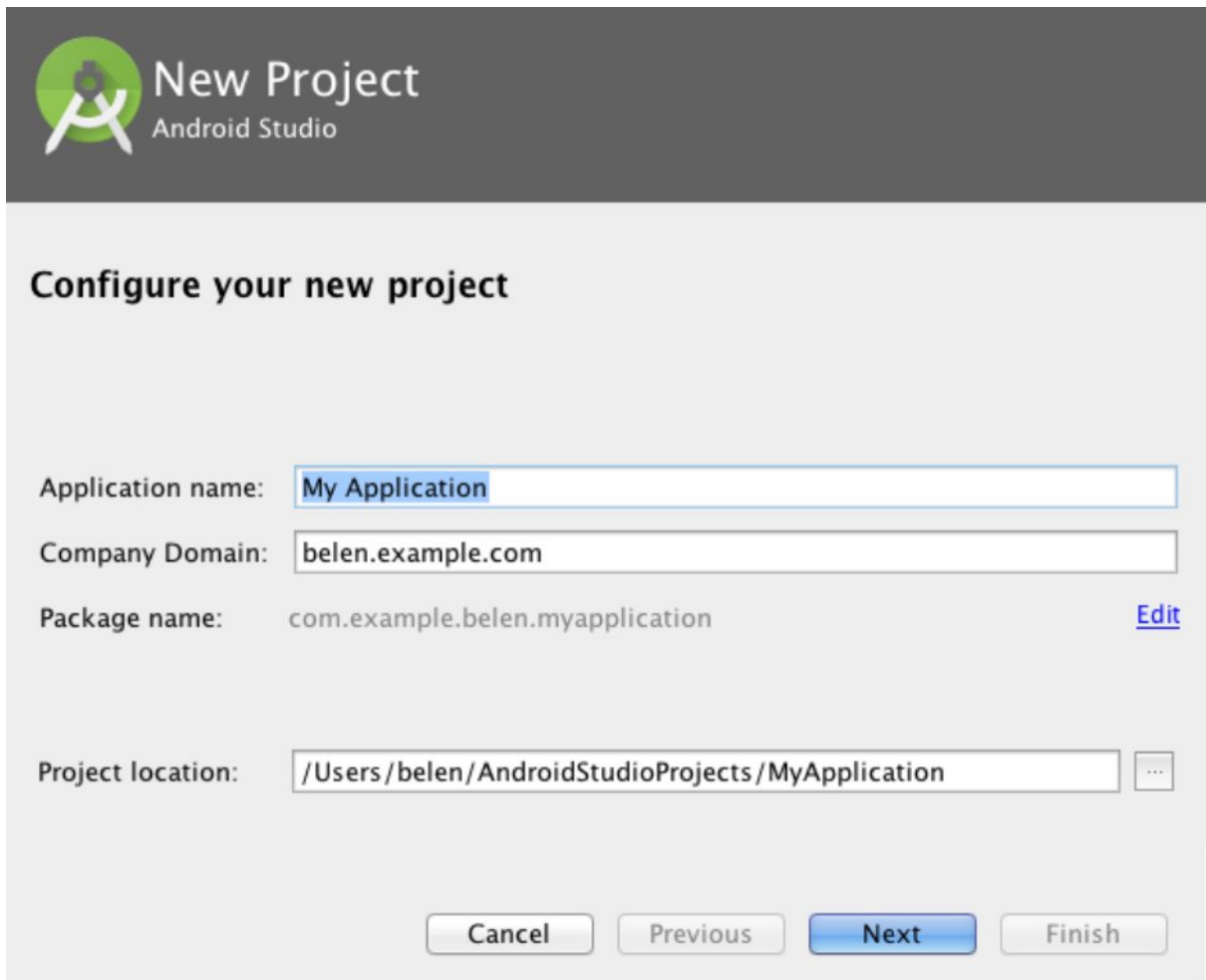
 Import an Android code sample

 Configure ▾  Get Help ▾





## Chapter 2: Starting a Project



**New Project**  
Android Studio

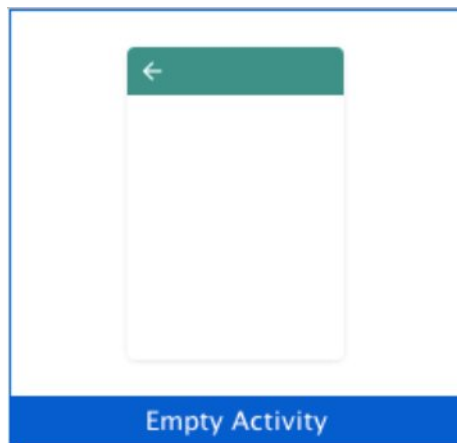
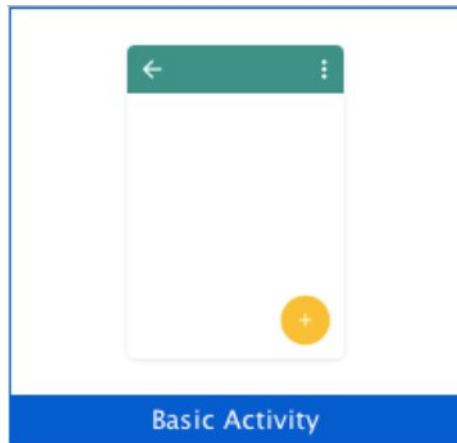
**Configure your new project**

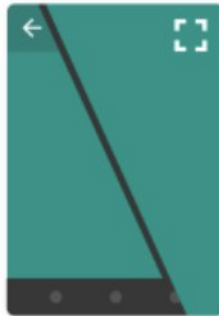
Application name:

Company Domain:

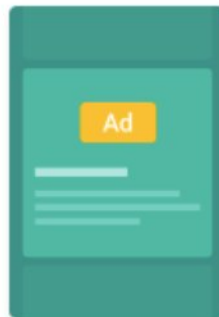
Package name:  [Edit](#)

Project location:  ...

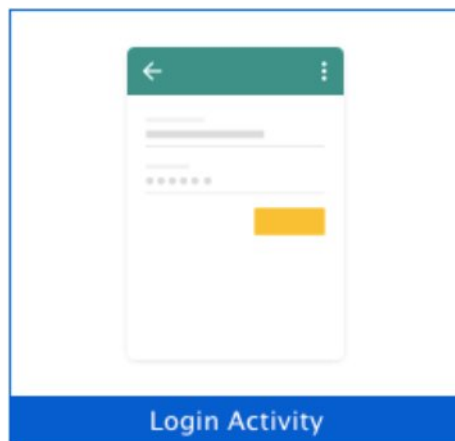
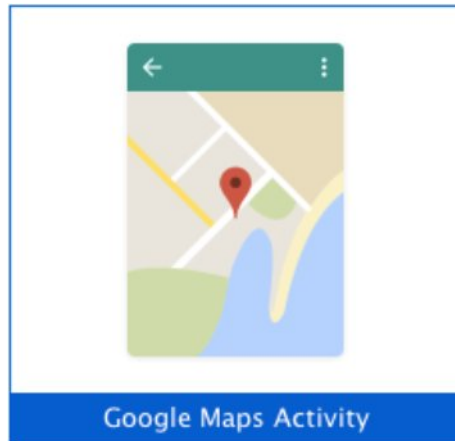




Fullscreen Activity



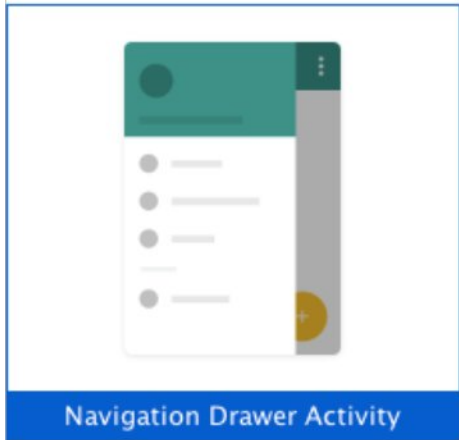
Google AdMob Ads Activity



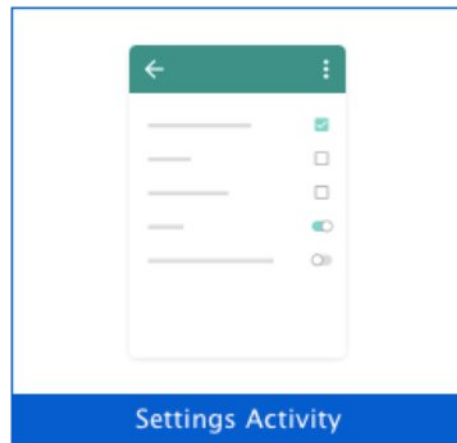
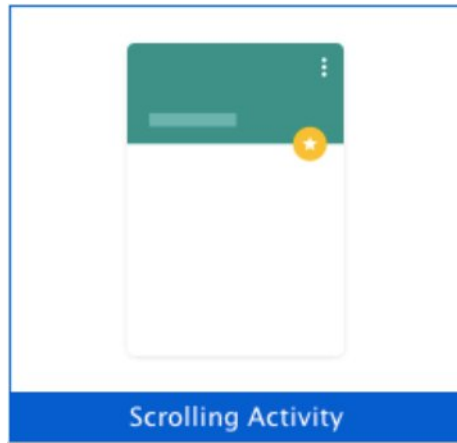


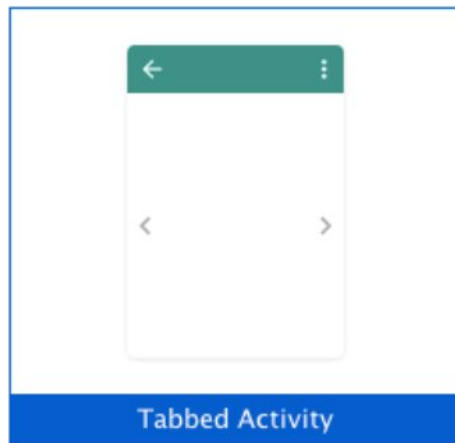


Master/Detail Flow

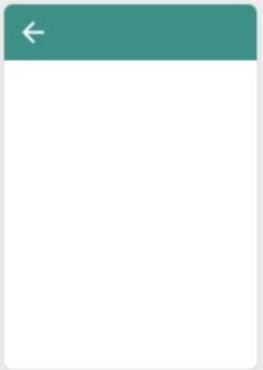


Navigation Drawer Activity





Creates a new empty activity



Empty Activity

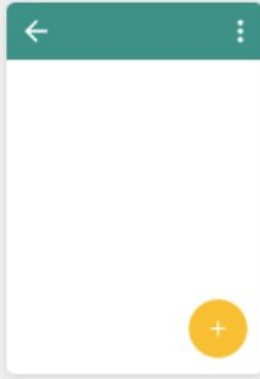
Activity Name:

Generate Layout File

Layout Name:

---

The name of the activity class to create



Basic Activity

Creates a new basic activity with an app bar.

Activity Name: MainActivity

Layout Name: activity\_main

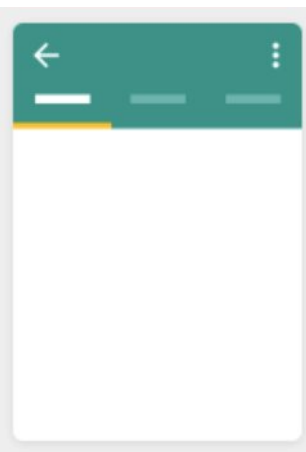
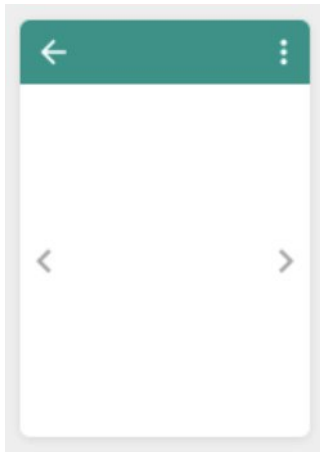
Title: MainActivity

Menu Resource Name: menu\_main

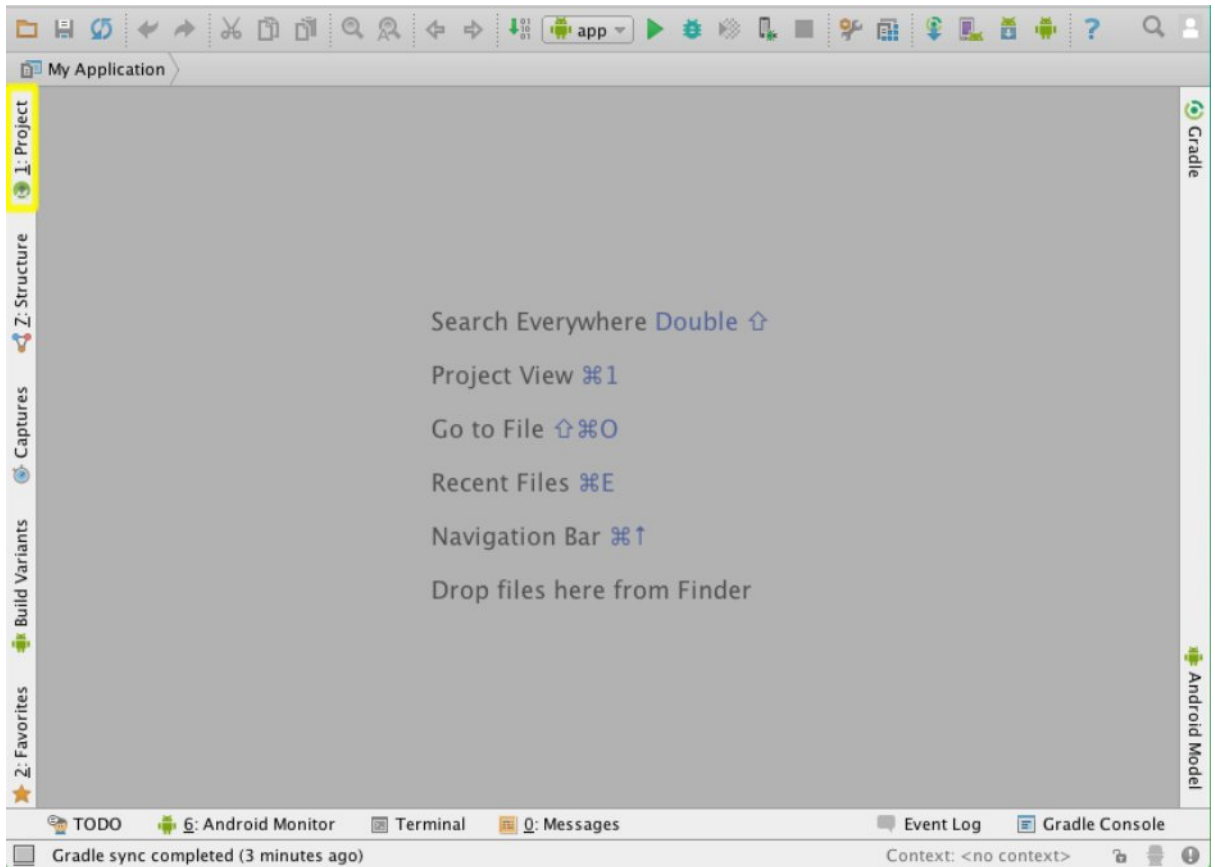
Use a Fragment

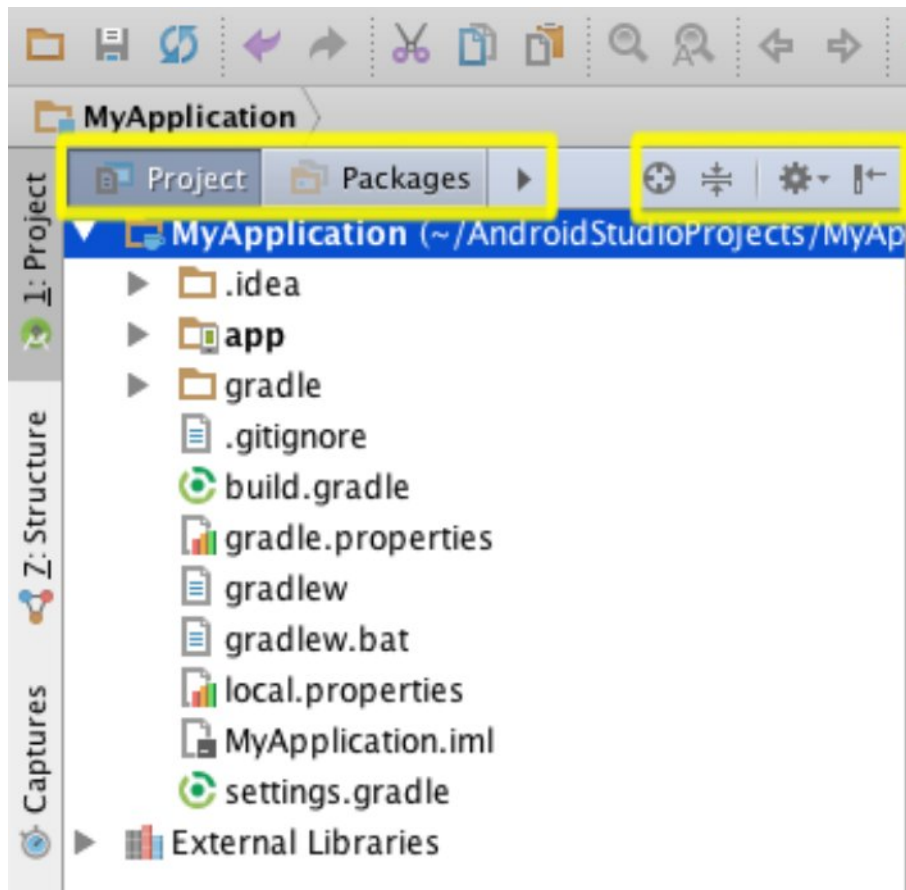
---

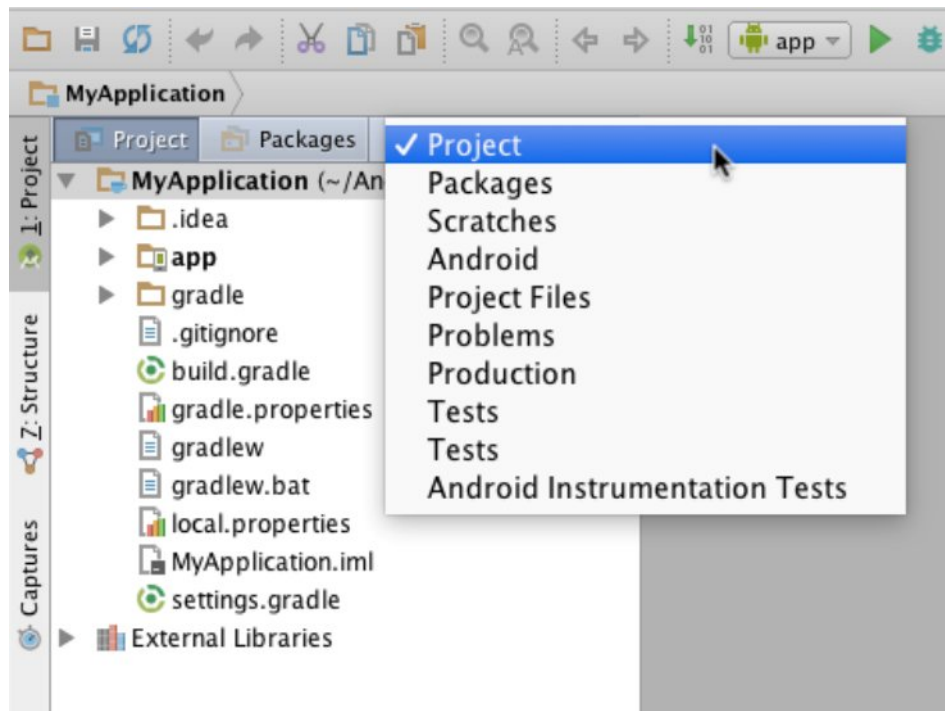
The name of the activity. For launcher activities, the application title.















## Chapter 3: Navigating a Project







New		▶
	Cut	⌘X
	Copy	⌘C
	Copy Path	⇧⌘C
	Copy as Plain Text	
	Copy Reference	⌘⇧C
	Paste	⌘V
	Jump to Source	⌘↓
Find Usages		⌘F7
Analyze		▶
Refactor		▶
Add to Favorites		▶
	Reformat Code	⌘⇧L
	Optimize Imports	⇧⌘O
	Delete...	⌘X
	Mark as Plain Text	
	Run 'build'	⇧⌘R
	Debug 'build'	⇧⌘D
	Run 'build' with Coverage	
	Create 'build'...	
Local History		▶
	Synchronize 'build.gradle'	
Reveal in Finder		
	Compare With...	⌘D
	Compare File with Editor	
	Create Gist...	



- ▼ **app**
  - ▶ build
  - ▶ libs
  - ▼ src
    - ▼ androidTest
      - ▼ java
        - ▼ com.example.myapplication
          - ApplicationTest
      - ▼ main
        - ▼ java
          - ▼ com.example.myapplication
            - MyActivity**
        - ▶ res
        - AndroidManifest.xml
      - .gitignore
      - app.iml
      - build.gradle
      - proguard-rules.pro



Appearance & Behavior > File Colors For current project

Enable File Colors  Use in Editor Tabs  Use in Project View

Local colors

Scope	Color
Non-Project Files	Yellow
Tests	Green

Shared colors

Scope	Color
No shared colors	

Scopes are processed from top to bottom with Local colors first. [Manage Scopes...](#)

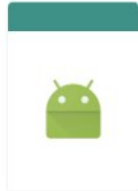


## New Module

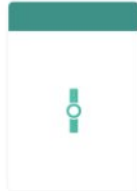
Android Studio



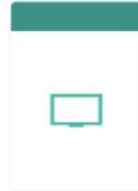
Phone & Tablet Module



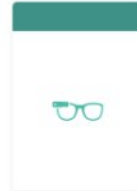
Android Library



Android Wear Module



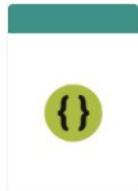
Android TV Module



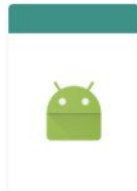
Glass Module



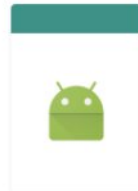
Import Gradle Project



Import Eclipse ADT Project



Import JAR/.AAR Package



Java Library



Google Cloud Module

Creates a new Android module.

## Chapter 4: Using the Code Editor

```
public class MainActivity extends AppCompatActivity {  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
    }  
}
```

Documentation for setContentView(int)

< Android API 23 Platform >

**public void setContentView (int layoutResID)**

Added in [API level 1](#)

Set the activity content from a layout resource. The resource will be inflated, adding all top-level views to the activity.

**Parameters**

**layoutResID** Resource ID to be inflated.

**See Also**

- [setContentView\(android.view.View\)](#)
- [setContentView\(android.view.View, android.view.ViewGroup.LayoutParams\)](#)

```
1 package com.example.myapplication;
2
3 import android.os.Bundle;
4 import android.app.Activity;
5 import android.view.Menu;
6
7 public class MainActivity extends Activity {
8
9     @Override
10    protected void onCreate(Bundle savedInstanceState) {
11        ? android.util.Log? Alt+Enter
12        setContentView(R.layout.activity_main);
13        Log.i("MainActivity", "Test");
14    }
```

```
1 package com.example.myapplication;
2
3 import ...
6
7 public class MainActivity extends Activity {
8
9     @Override
10    protected void onCreate(Bundle savedInstanceState) {
11        super.onCreate(savedInstanceState);
12        setContentView(R.layout.activity_main);
13    }
14
```

```

9      ... @Override
10     ... protected void onCreate(Bundle savedInstanceState) {
11         ...     super.onCreate(savedInstanceState);
12         ...     setContentView(R.layout.activity_main);
13     ...
14     ...     |
15     ...     LAYOUT_INFLATER_SERVICE      String
16     ...     LOCATION_SERVICE             String
17     ...     LinkageError (java.lang)
18     ...     Long (java.lang)
19     ...     databaseList ()              String[]
20     ...     fileList ()                 String[]
21     ...     getClassLoader ()           ClassLoader
22     ...     getLayoutInflater ()        LayoutInflater
23     ...     getLoaderManager ()        LoaderManager
24     ...     getLocalClassName ()       String
25     ...     }
26     ...

```

Press Ctrl+Punto to choose the selected (or first) suggestion and insert a dot afterwards >> π

```

... String ob1;
... int ob2;
... Log.i("MainActivity", ob1);

```

v	ob1	String
v	ob2	int
m	onCreate (Bundle savedInstanceState)	void
m	onCreateOptionsMenu (Menu menu)	boolean
m	obtainStyledAttributes (AttributeSet set, ...)	TypedArray

```

String ob1;
int ob2;
Log.i("MainActivity", ob);

```

v	ob1	String
i	ACCOUNT_SERVICE	String
i	AUDIO_SERVICE	String
i	CLIPBOARD_SERVICE	String
i	CONNECTIVITY_SERVICE	String

```
savedInstanceState.no
```

m	notify()	void
m	notifyAll()	void
	nonnull	if (expr != null)

Y

```
savedInstanceState.
```

nonnull	if (expr != null)
inst	expr instanceof Type ? ((Type) expr). : null
par	(expr)
synchronized	synchronized (expr)
cast	((SomeType) expr)
null	if (expr == null)
return	return expr
sout	System.out.println(expr)
try	try { exp } catch(Exception e)
field	myField = expr
var	T name = expr
instanceof	expr instanceof Type ? ((Type) expr). : null
nn	if (expr != null)

Description

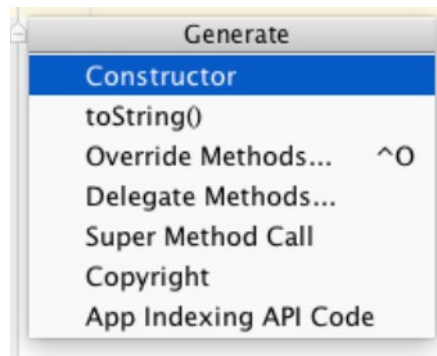
Iterates over enumerable collection.

Before

```
1 public class Foo {  
2     void m() {  
3         int[] values = {1, 2, 3};  
4         values.for  
5     }  
6 }
```

After

```
1 public class Foo {  
2     void m() {  
3         int[] values = {1, 2, 3};  
4         for (int value : values) {  
5  
6         }  
7     }  
8 }
```







```
6
7 public class MainActivity extends Activity {
8
9     ... @Override
10    ... Overrides method in 'android.app.Activity' (undle savedInstanceState) {
11        ... super.onCreate(savedInstanceState);
12        ... setContentView(R.layout.activity_main);
13    ... }
14
```

```
7 public class MainActivity
8     Go to Related Files
9     Layout Files
10 activity_main.xml (layout)
11 AndroidManifest.xml
12 setContentView(R.l
```

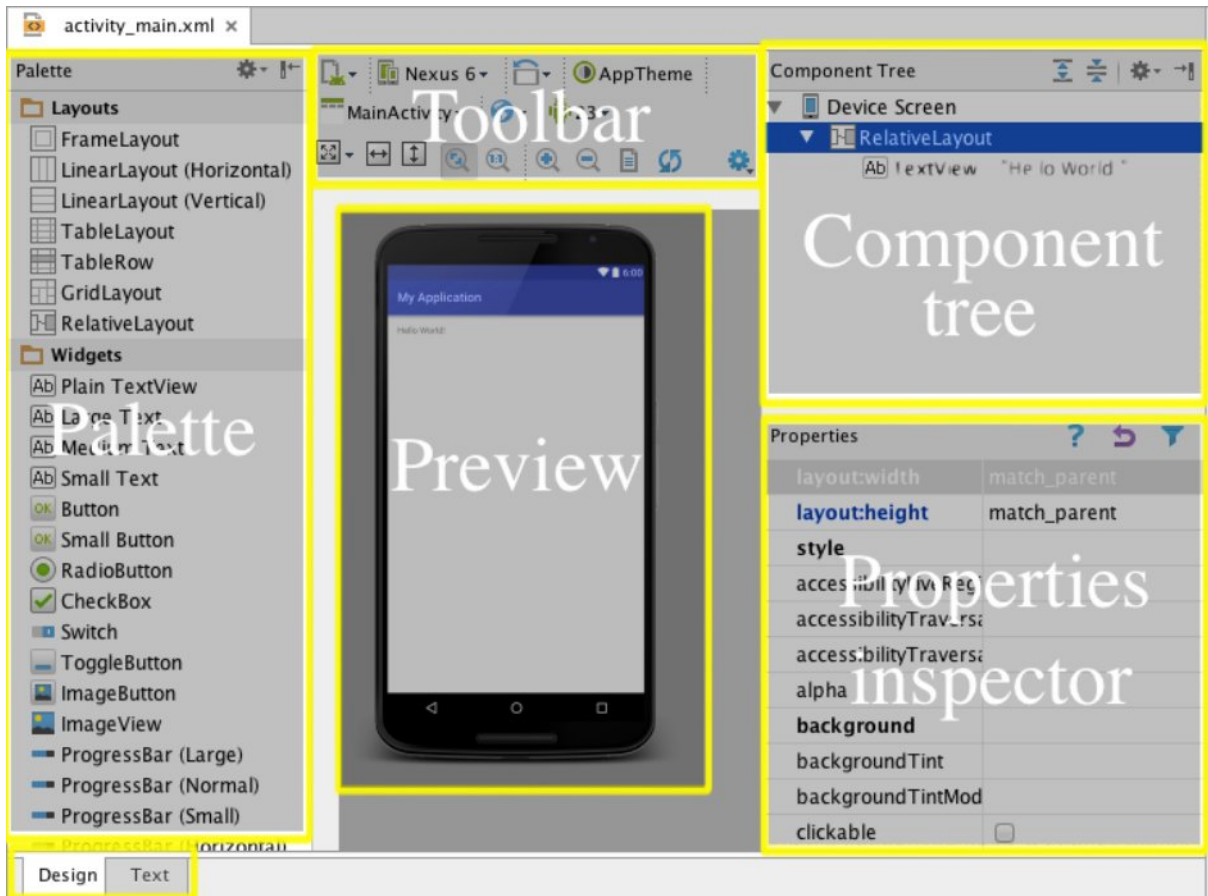
MainActivity.java

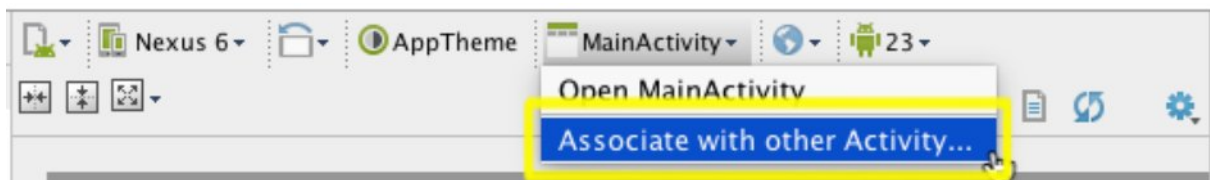
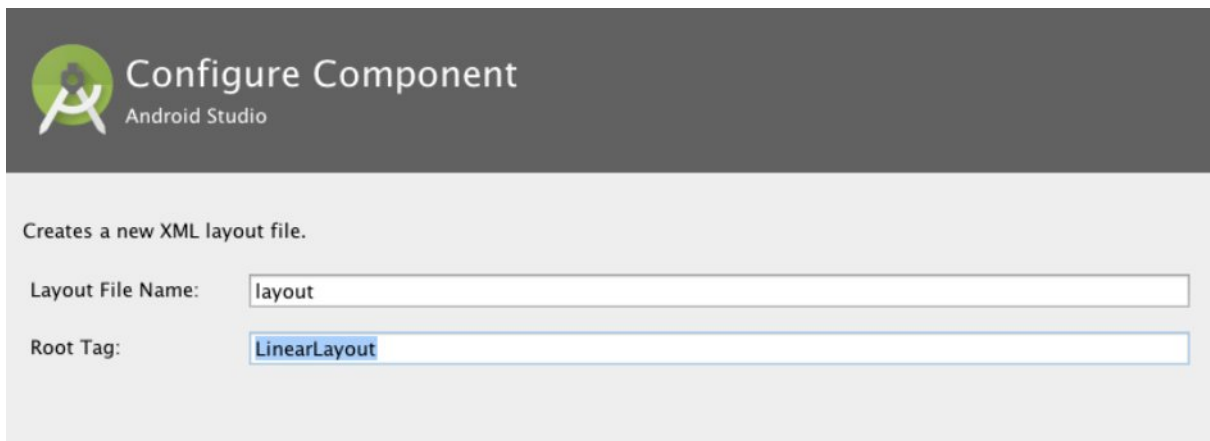
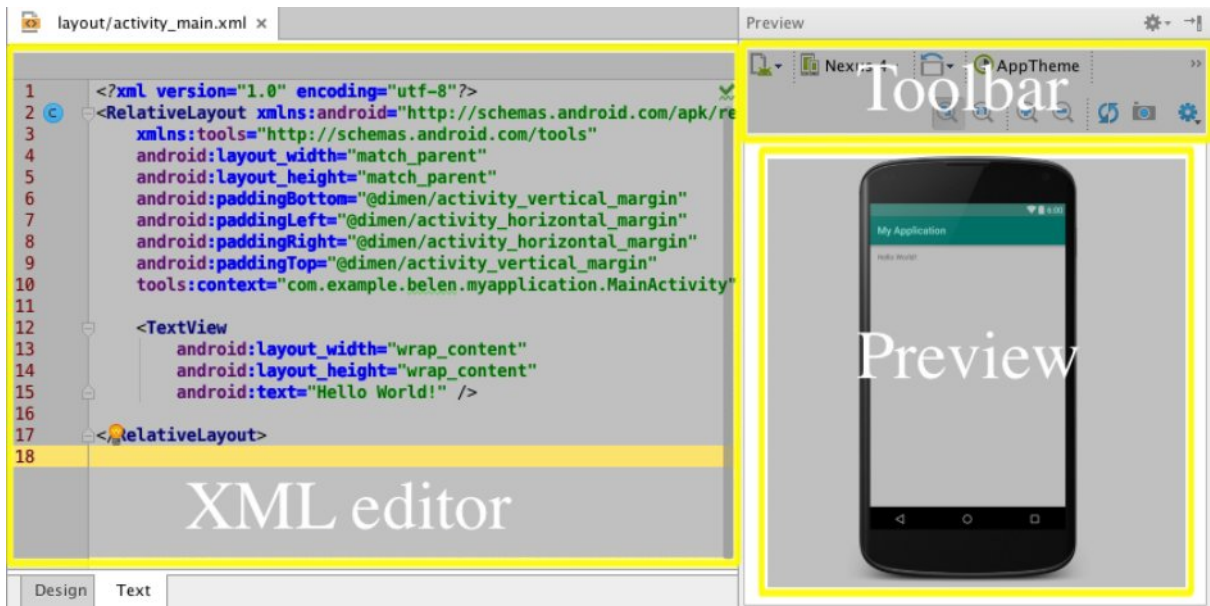
Show inherited members (Ctrl+F12)  Show Anonymous Classes (Ctrl+I)

- [-] MainActivity
  - [m] onCreate(Bundle): void Activity
  - [m] onCreateOptionsMenu(Menu): boolean Activity

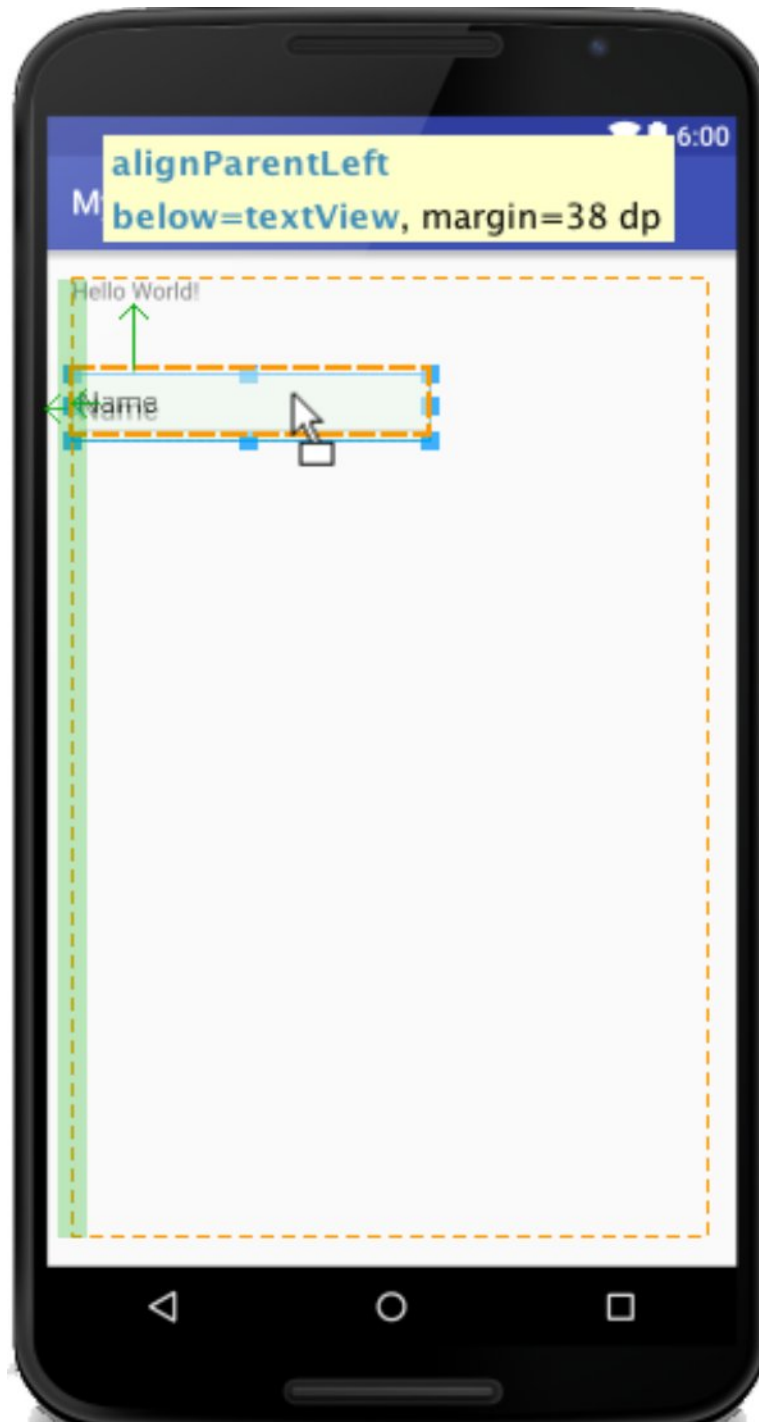
Narrow down on typing

## Chapter 5: Creating User Interfaces









**Component Tree**

- Device Screen
  - RelativeLayout
    - textView - @string/hello\_world
    - editText\_name - "Name"**

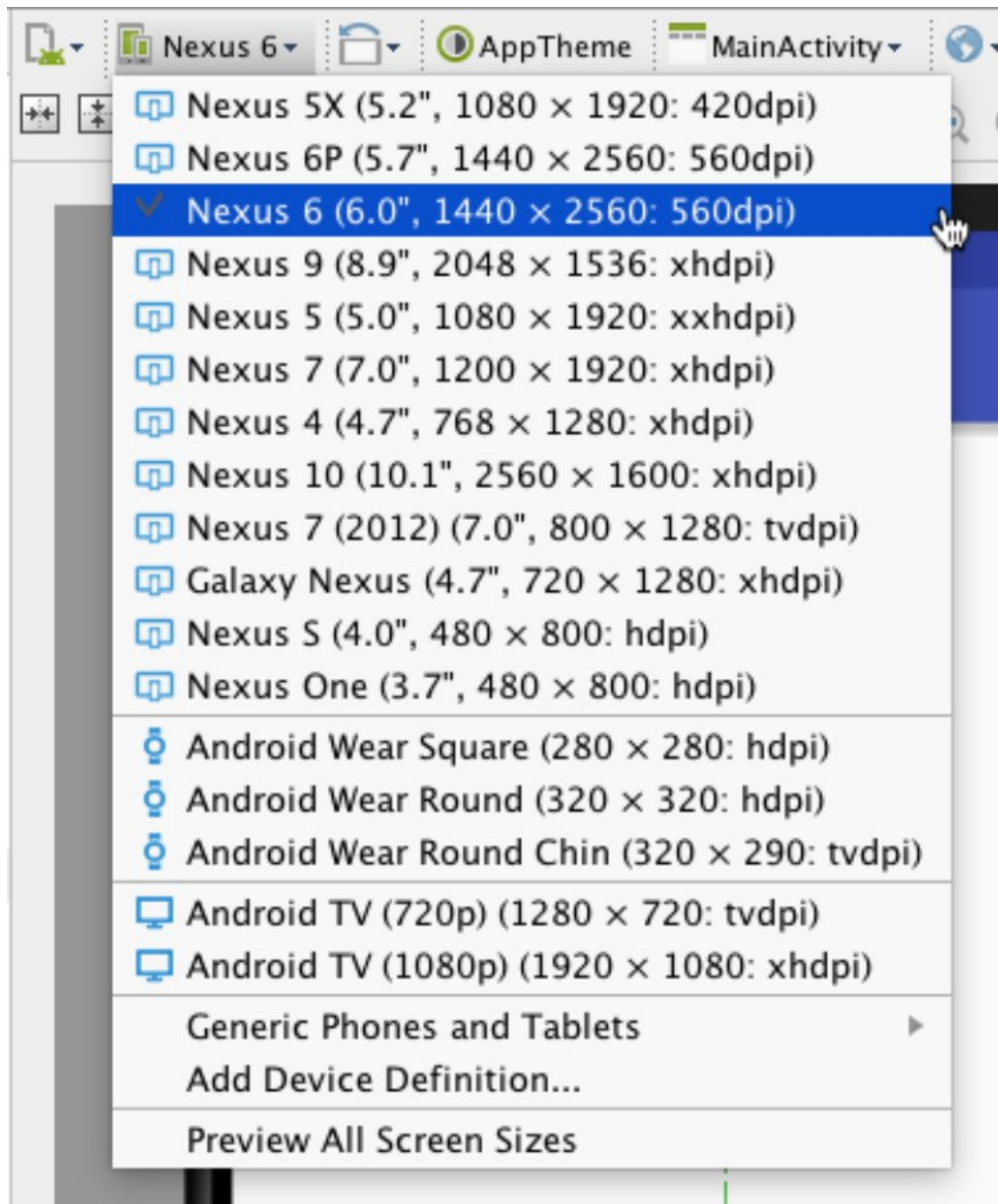
**Properties**

height	
hint	Enter your name
<b>id</b>	<b>editText_name</b>
importantForAccessibility	

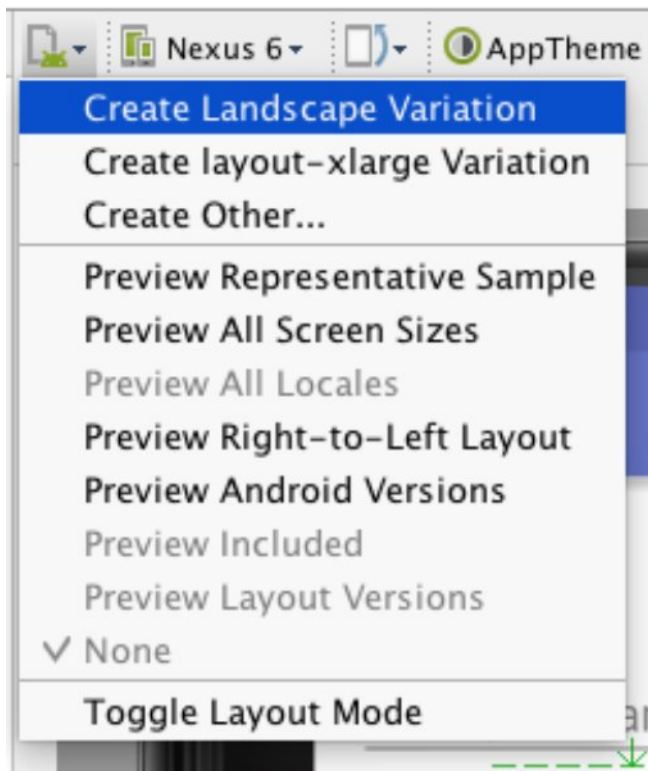
Nexus 6 | AppTheme | MainActivity | 23

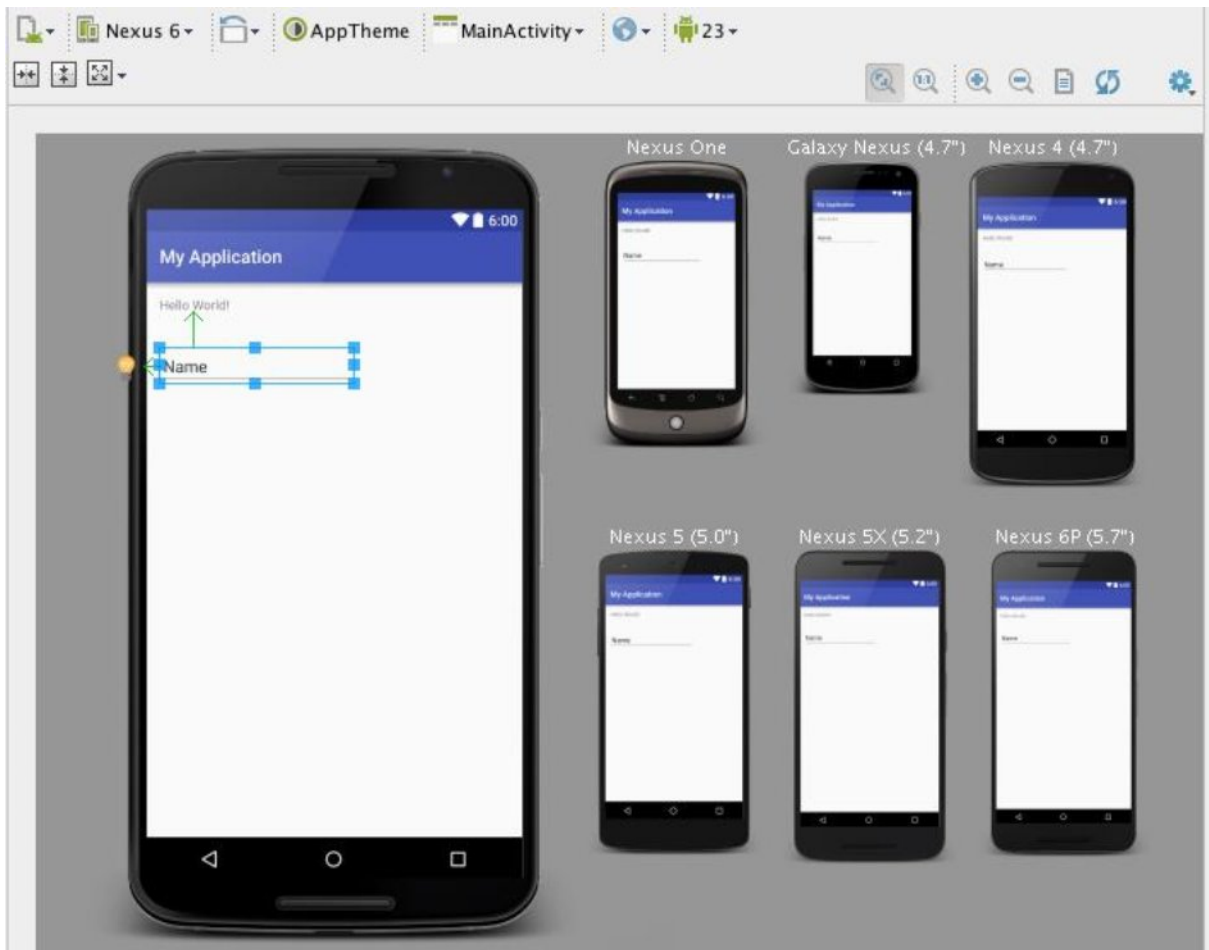
**Component Tree**

- Device Screen
  - RelativeLayout
    - textView - "Hello World!"
    - editText\_name
    - button\_accept - "Accept"**











layout/activity\_main.xml x styles.xml x Theme Editor x

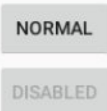
Nexus 6 23 Language




App bar




Radiobutton




Raised button



Checkbox



NORMAL  
DISABLED



**Module**

app

**Theme**

AppTheme - Default

**Theme parent** default

AppCompat Light [Theme.AppCompat.Lig]

**colorPrimary** default

@color/colorPrimary

**colorPrimaryDark** default

@color/colorPrimaryDark

**colorAccent** default

@color/colorAccent

**android:colorBackground** API 23

@android:color/background\_material\_...

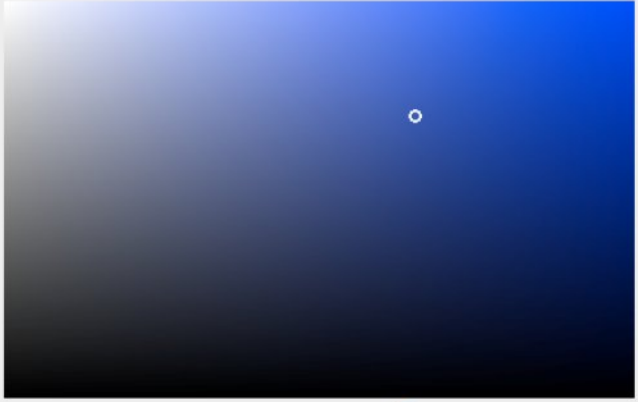
Color

- abc\_search\_url\_text\_selected
- abc\_secondary\_text\_material\_dark
- abc\_secondary\_text\_material\_light
- accent\_material\_dark
- accent\_material\_light
- background\_floating\_material\_dark
- background\_floating\_material\_light
- background\_material\_dark
- background\_material\_light
- bright\_foreground\_disabled\_material\_dark
- bright\_foreground\_disabled\_material\_light
- bright\_foreground\_inverse\_material\_dark
- bright\_foreground\_inverse\_material\_light
- bright\_foreground\_material\_dark
- bright\_foreground\_material\_light
- button\_material\_dark
- button\_material\_light
- colorAccent
- colorPrimary**

**Material Indigo 500**

Text Text

A: 255 R: 63 G: 81 B: 181 ARGB # FF3F51B5



Color selection tools including a rainbow gradient bar, a checkerboard pattern, and a grid of color swatches.

Name colorPrimary

Saving this color will override existing resource colorPrimary.

Device Configuration

🔍

- Recent
- Manifest Themes
- Project Themes
- Material Dark
- Material Light
- Holo Dark
- Holo Light
- Device Default
- Dialogs
- Light
- All

- Theme
- Black
- Black.NoTitleBar
- Black.NoTitleBar.Fullscreen
- DeviceDefault
- DeviceDefault.Dialog
- DeviceDefault.Dialog.Alert
- DeviceDefault.Dialog.MinWidth
- DeviceDefault.Dialog.NoActionBar
- DeviceDefault.Dialog.NoActionBar.MinWidth
- DeviceDefault.Dialog.WhenLarge
- DeviceDefault.Dialog.WhenLarge.NoActionBar
- DeviceDefault.InputMethod
- DeviceDefault.Light
- DeviceDefault.Light.DarkActionBar

# Chapter 6: Tools

Appearance & Behavior > System Settings > Android SDK

Manager for the Android SDK and Tools used by Android Studio

Android SDK Location:  [Edit](#)

SDK Platforms | SDK Tools | SDK Update Sites

Each Android SDK Platform package includes the Android platform and sources pertaining to an API level by default. Once installed, Android Studio will automatically check for updates. Check "show package details" to display individual SDK components.

Name	API Level	Revision	Status
<input type="checkbox"/> Android N Preview	N	1	Not installed
<input checked="" type="checkbox"/> Android 6.0 (Marshmallow)	23	2	Installed
<input type="checkbox"/> Android 5.1 (Lollipop)	22	2	Partially installed
<input type="checkbox"/> Android 5.0 (Lollipop)	21	2	Not installed
<input type="checkbox"/> Android 4.4 (KitKat Wear)	20	2	Not installed
<input type="checkbox"/> Android 4.4 (KitKat)	19	4	Partially installed
<input type="checkbox"/> Android 4.3 (Jelly Bean)	18	3	Not installed
<input type="checkbox"/> Android 4.2 (Jelly Bean)	17	3	Not installed
<input checked="" type="checkbox"/> Android 4.1 (Jelly Bean)	16	5	Installed
<input type="checkbox"/> Android 4.0.3 (IceCreamSandwich)	15	5	Not installed
<input type="checkbox"/> Android 2.3.3 (Gingerbread)	10	2	Not installed
<input type="checkbox"/> Android 2.2 (Froyo)	8	3	Not installed






Show Package Details


[Launch Standalone SDK Manager](#)

Packages

Name	API	Rev.	Status
<input type="checkbox"/> Tools			
<input checked="" type="checkbox"/> Android SDK Tools		24.1.2	Update available: rev. 24.4.
<input checked="" type="checkbox"/> Android SDK Platform-tools		21	Update available: rev. 23.0.
<input type="checkbox"/> Android SDK Build-tools		23.0.1	<input type="checkbox"/> Not installed
<input type="checkbox"/> Android SDK Build-tools		22.0.1	<input type="checkbox"/> Not installed

Packages

 Name	API	Rev.	Status
<input type="checkbox"/> ▶ Tools			
<input type="checkbox"/> ▶ Tools (Preview Channel)			
<input checked="" type="checkbox"/> ▼ Android N (API 23, N preview)			
<input checked="" type="checkbox"/>  SDK Platform Android N Preview	N	1	<input type="checkbox"/> Not installed
<input checked="" type="checkbox"/>  Android TV Intel x86 Atom System Image	N	1	<input type="checkbox"/> Not installed
<input checked="" type="checkbox"/>  Intel x86 Atom_64 System Image	N	1	<input type="checkbox"/> Not installed
<input checked="" type="checkbox"/>  Intel x86 Atom System Image	N	1	<input type="checkbox"/> Not installed

 **Select Hardware**  
Choose a device definition

Category	Name	Size	Resolution	Density
Phone	Nexus S	4,0"	480x800	hdpi
Tablet	Nexus One	3,7"	480x800	hdpi
Wear	Nexus 6P	5,7"	1440x2560	560dpi
TV	<b>Nexus 6</b>	<b>5,96"</b>	<b>1440x2560</b>	<b>560dpi</b>
	Nexus 5X	5,2"	1080x1920	420dpi
	Nexus 5	4,95"	1080x1920	xxhdpi
	Nexus 4	4,7"	768x1280	xhdpi
	My Device	4,7"	800x1280	xhdpi
	My Device	4,7"	800x1280	xhdpi

**Nexus 6**

Size: normal  
Ratio: notlong  
Density: 560dpi

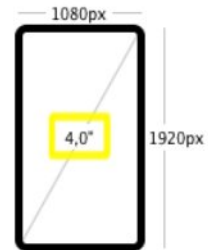
Device Name:

Device Type:

Screen: Screensize:  inch  
Resolution:  x  px  
 Round

Memory: RAM:

 **New Device**



Size:   
Ratio:   
Density:

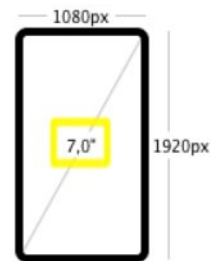
Device Name:

Device Type:

Screen: Screensize:  inch  
Resolution:  x  px  
 Round

Memory: RAM:

 **New Device**



Size:   
Ratio:   
Density:



## Marshmallow



API Level

**23**

Android

**6.0**

**Google Inc.**

System Image


**armeabi-v7a**






### Recommendation


Consider using an x86 system image on a x86 host for better emulation performance.

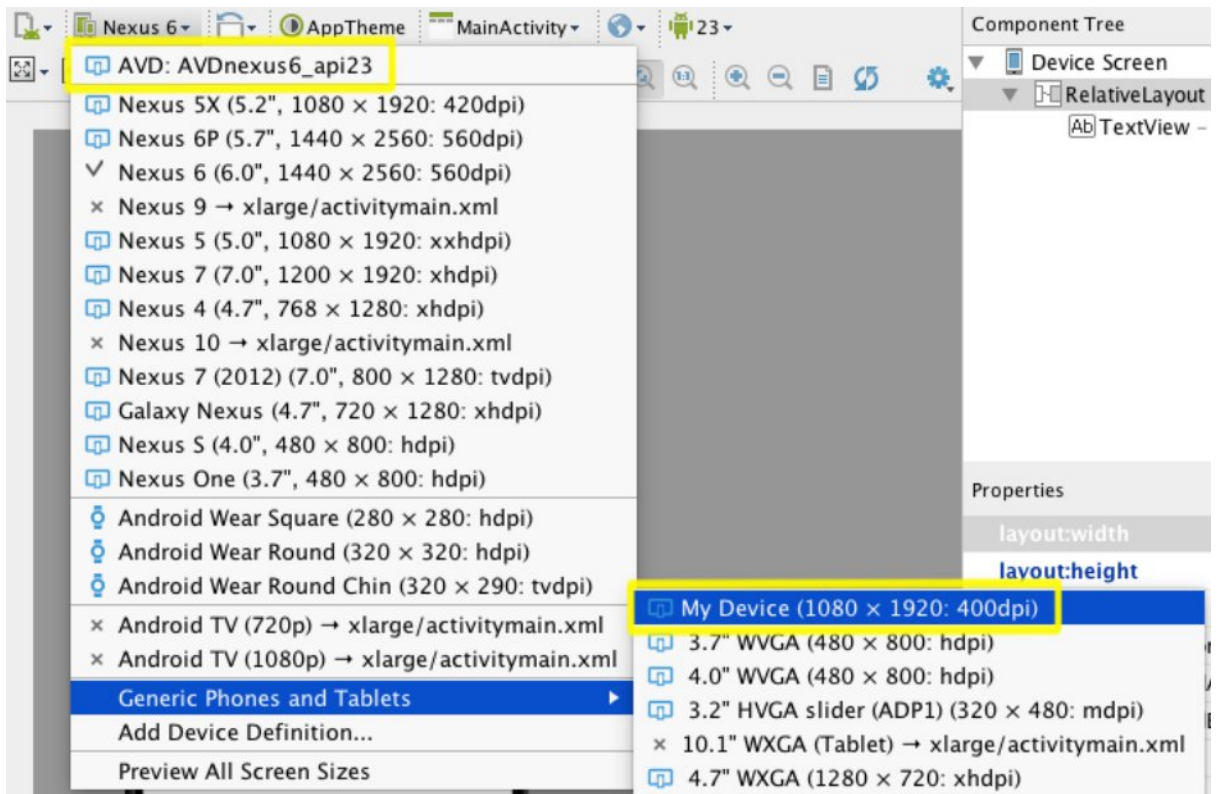
Questions on API level?

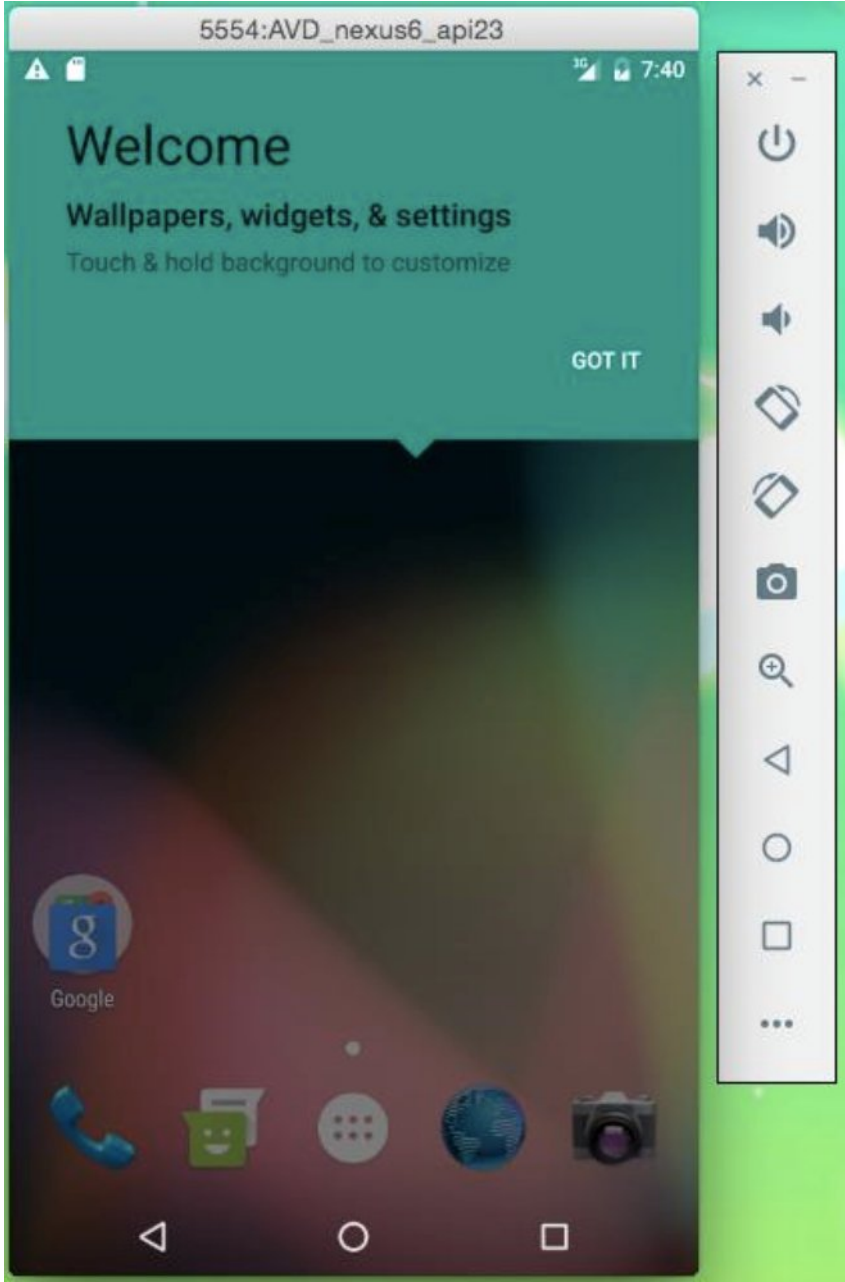
See the [API level distribution chart](#)

 **Your Virtual Devices**  
Android Studio

Type	Name	Resolution	API	Target	CPU/ABI	Size on Disk	Actions
	AVD_nexus5_api21	1080 × 1920: x...	21	Android 5.0 (Goo...	x86	650 MB	 <b>Download</b> ▼   ▼
	AVD_nexus6_api23	1080 × 1920: 4...	23	Android 6.0 (Goo...	x86...	650 MB	

[+ Create Virtual Device...](#) 





**Extended controls**

GPS data point

Decimal  
 Sexagesimal

Latitude: 37.422

Longitude: -122.084

Altitude (meters): 0.0

SEND

GPS data playback

Delay (sec)	Latitude	Longitude	Elevation	Name	Description

Speed 1X

LOAD GPX/XML

5554:AVD\_nexus6\_api23

Google

**Extended controls**

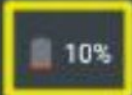
Network type: **EDGE**

Data status: Home

Voice status: Home

5554:AVD\_nexus6\_api23

10:05



10:16 PM

Thursday, April 28



Wi-Fi ▼



Do not disturb



Android



Airplane mode



Auto-rotate



Location



Cast

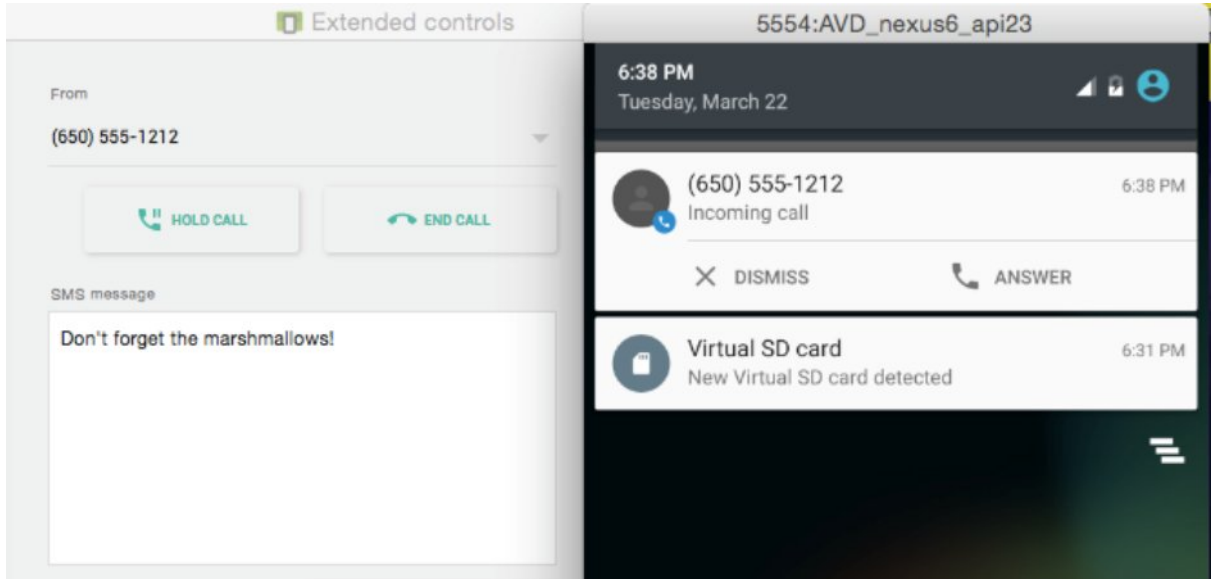


Battery is low

10% remaining

TURN ON BATTERY SAVER





## Let's start!

Put your finger on the sensor and lift after you feel a vibration



5554:AVD\_nexus6\_api23

3G 6:43

Let's start!

Put your finger on the sensor and lift after you  
feel a vibration





5554:AVD\_nexus6\_api23

3G 6:43

## Fingerprint added!

Whenever you see this icon, you can use your fingerprint for identification or to authorize a purchase.



ADD ANOTHER

DONE

5554:AVD\_nexus6\_api23

3G 6:43

## Fingerprint added!

Whenever you see this icon, you can use your fingerprint for identification or to authorize a purchase.

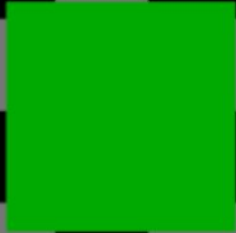


ADD ANOTHER

DONE

5554:AVD\_nexus6\_api23

SCN



5554:AVD\_nexus6\_api23

SCN



Documentation for `onAcceptClick(View)`

[com.example.myapplication.MyActivity](#)

```
public void onAcceptClick(View v)
```

Method executed when the user clicks on the Accept button. Change the greeting message to include the name introduced by the user in the editText box.

**Parameters:**

- `v` - View the user clicked

All Classes

MainActivity

Package **Class** Tree Deprecated Index Help

Prev Class Next Class Frames No Frames

Summary: Nested | Field | Constr | Method Detail: Field | Constr | Method

com.example.myapplication

### Class MainActivity

```

java.lang.Object
  android.content.Context
    android.content.ContextWrapper
      android.view.ContextThemeWrapper
        android.app.Activity
          android.support.v4.app.FragmentActivity
            android.support.v7.app.AppCompatActivity
              com.example.myapplication.MainActivity

```

**All Implemented Interfaces:**

```

android.content.ComponentCallbacks, android.content.ComponentCallbacks2,
android.support.v4.app.ActivityCompat.OnRequestPermissionsResultCallback,
android.support.v4.app.ActivityCompatApi23.RequestPermissionsRequestCodeValidator,
android.support.v4.app.TaskStackBuilder.SupportParentable, android.support.v7.app.ActionBarDrawerToggle.DelegateProvider,
android.support.v7.app.AppCompatActivity.Callback, android.view.KeyEvent.Callback, android.view.LayoutInflater.Factory,
android.view.LayoutInflater.Factory2, android.view.View.OnClickListener, android.view.View.OnCreateContextMenuListener,
android.view.Window.Callback, android.view.Window.OnWindowDismissedCallback

```

---

```

public class MainActivity
extends AppCompatActivity
implements View.OnClickListener

```

Open task: ? My first task

Clear current context

VCS operations

Create branch My-first from [dropdown]

Create changelist My first task

My first task ▾

+ Open Task...

? Default task ▶

```
4 minutes ago - MainActivity.java (Read-only)
MainActivity.java
8 minutes ago - MainActivity.java
MainActivity.java
10 minutes ago - MainActivity.java
13 minutes ago - MainActivity.java
14 minutes ago - MainActivity.java
16 minutes ago - MainActivity.java
Older
19/4/16 21:56 - MainActivity.java

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

    if (savedInstanceState != null) {
        System.out.println("savedInstanceState = " + savedInstanceState);
    }
}

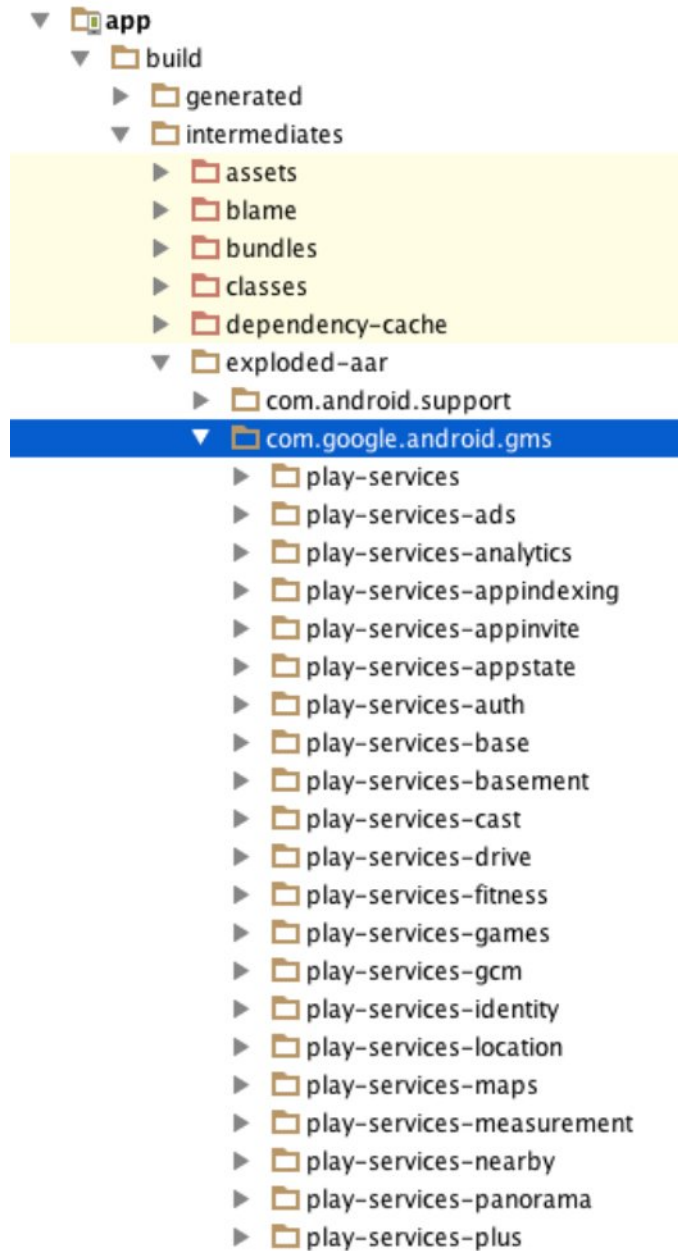
9 Current
10
11
12
13
14
15
16
17
18
19
20
21 X
22
23
24
25
26
27
28
29
30
31
















if (savedInstanceState != null) {
    System.out.println("savedInstanceState = " + savedInstanceState);
}

public void onClick(View v) {
    TextView tvGreeting = (TextView) findViewById(R.id.textView_greeting);
    EditText etName = (EditText) findViewById(R.id.editText_name);

    if (etName.getText() != null && 0 < etName.getText().length()) {
        tvGreeting.setText("Hello " + etName.getText());
    }
}
```






















## Chapter 7: Google Play Services



- ▼  **app**
- ▼  build
  - ▶  generated
  - ▼  intermediates
    - ▶  assets
    - ▶  blame
    - ▶  bundles
  - ▼  exploded-aar
    - ▶  com.android.support
    - ▼  com.google.android.gms
      - ▶  play-services-base
      - ▶  play-services-basement
      - ▶  play-services-location
      - ▶  play-services-maps
  - ▶  incremental





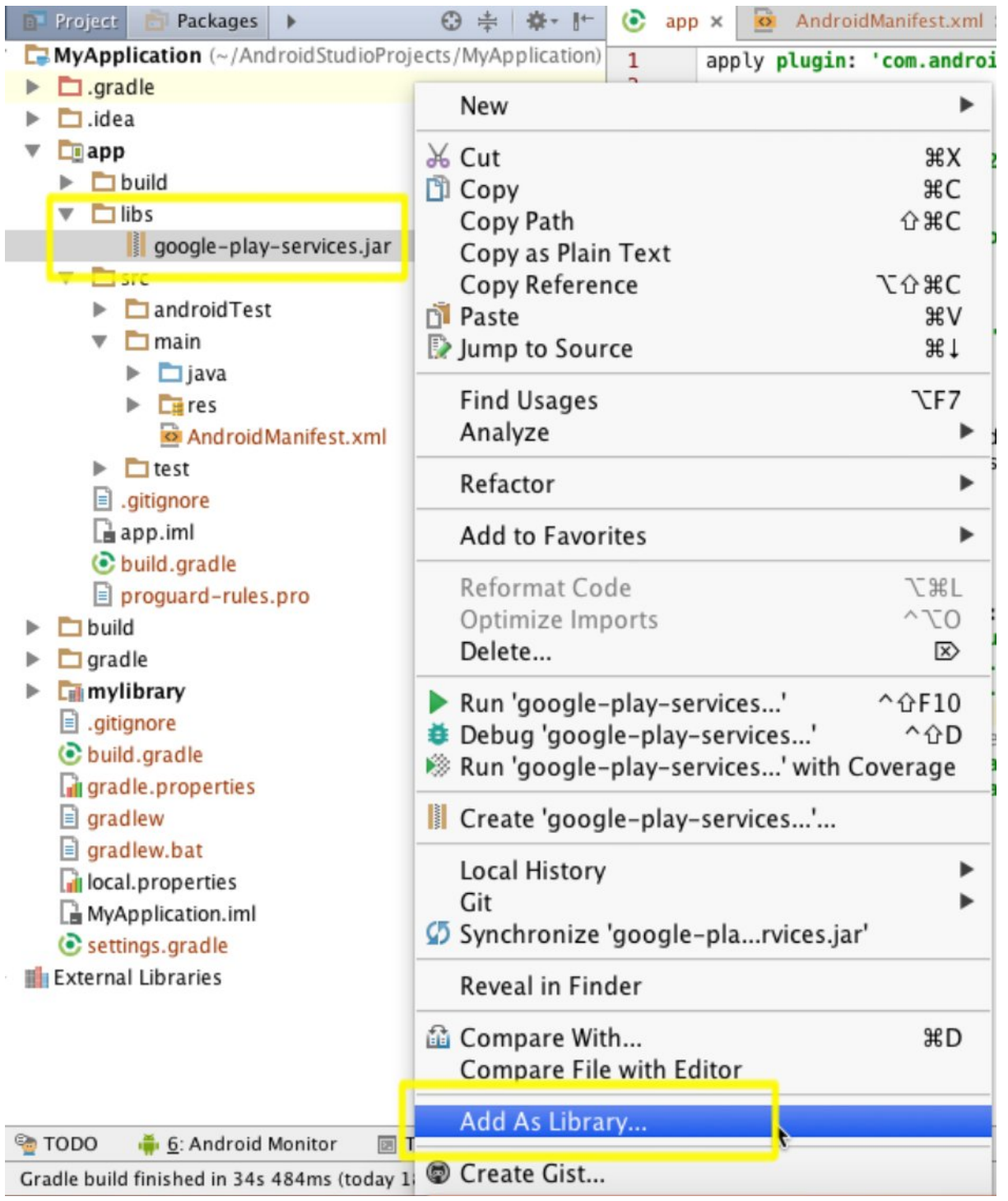
Packages

 Name	API	Rev.	Status
<input type="checkbox"/>  Extras			
<input type="checkbox"/>  Glass Development Kit Preview by Google Inc.		0	 Installed
<input type="checkbox"/>  Broken Intel x86 Atom_64 google_apis [Google		12	 Installed
<input type="checkbox"/>  GPU Debugging tools		1.0.3	<input type="checkbox"/> Not installed
<input type="checkbox"/>  Android Support Repository		28	 Installed
<input type="checkbox"/>  Android Support Library		23.2.1	 Installed
<input type="checkbox"/>  Android Auto Desktop Head Unit emulator		1.1	<input type="checkbox"/> Not installed
<input checked="" type="checkbox"/>  Google Play services		29	<input type="checkbox"/> Not installed
<input type="checkbox"/>  Google Repository		24	 Installed
<input type="checkbox"/>  Google Play APK Expansion Library		3	<input type="checkbox"/> Not installed
<input type="checkbox"/>  Google Play Billing Library		5	<input type="checkbox"/> Not installed
<input type="checkbox"/>  Google Play Licensing Library		2	<input type="checkbox"/> Not installed
<input type="checkbox"/>  Android Auto API Simulators		1	<input type="checkbox"/> Not installed
<input type="checkbox"/>  Google USB Driver		11	<input checked="" type="checkbox"/> Not compatible with
<input type="checkbox"/>  Google Web Driver		2	<input type="checkbox"/> Not installed

Show:  Updates/New  Installed Select [New](#) or [Updates](#) Install 13 packages...

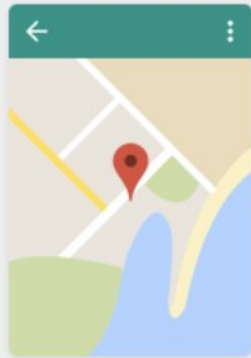
Obsolete [Deselect All](#) Delete 1 package...

Done loading packages.  





## Customize the Activity



Google Maps Activity

Creates a new activity with a Google Map

Activity Name:

Layout Name:

Title:

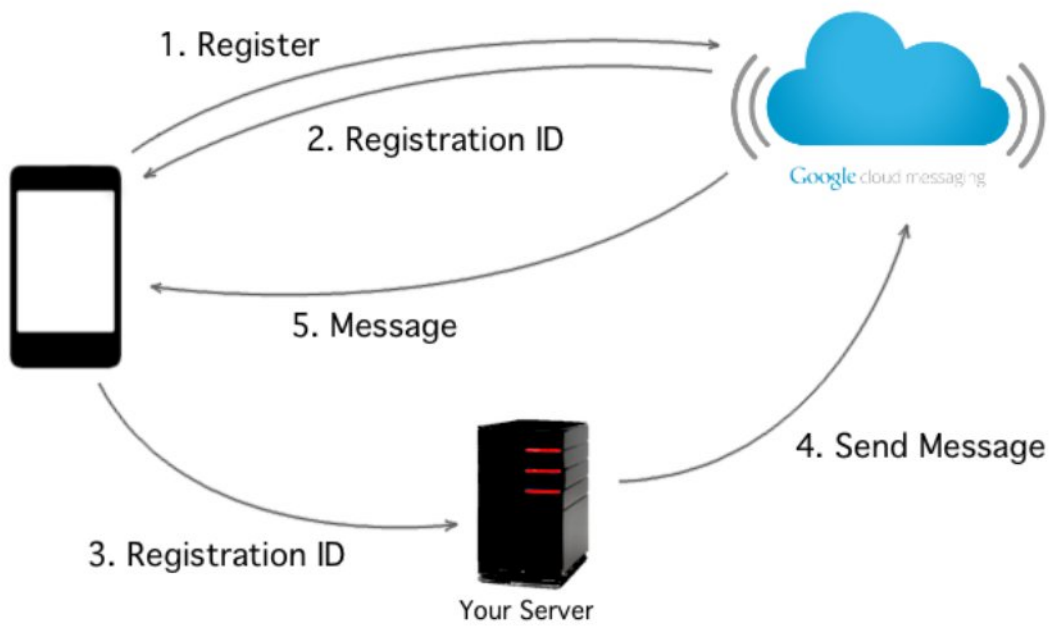
Launcher Activity

Hierarchical Parent:

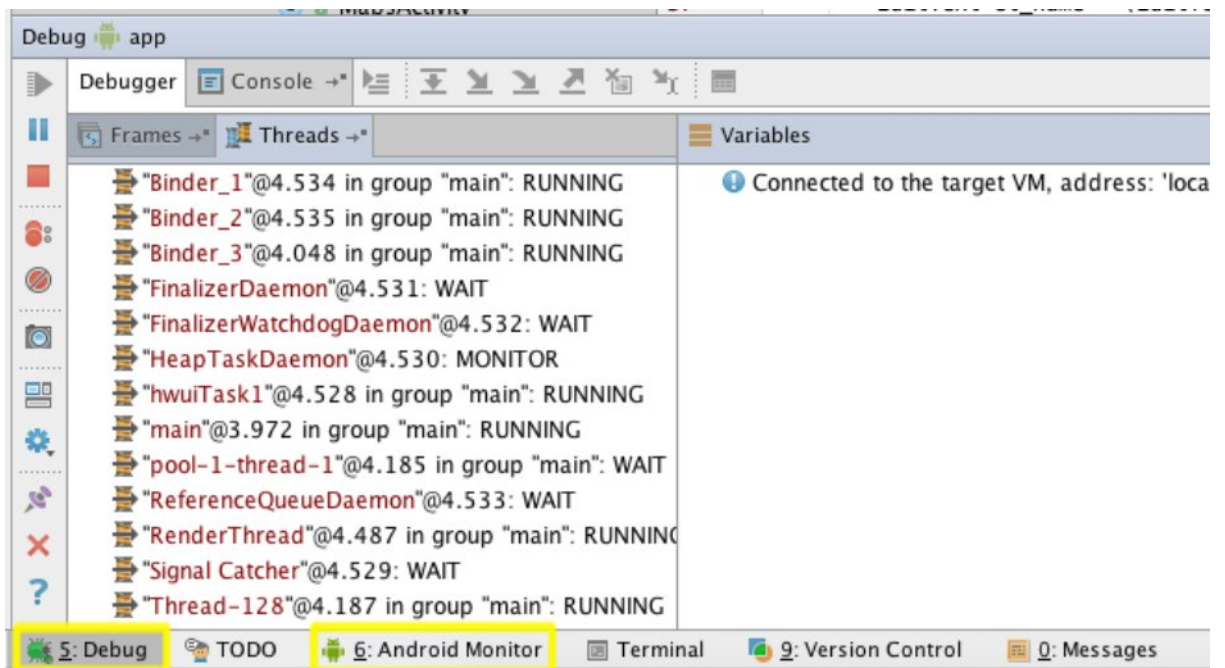
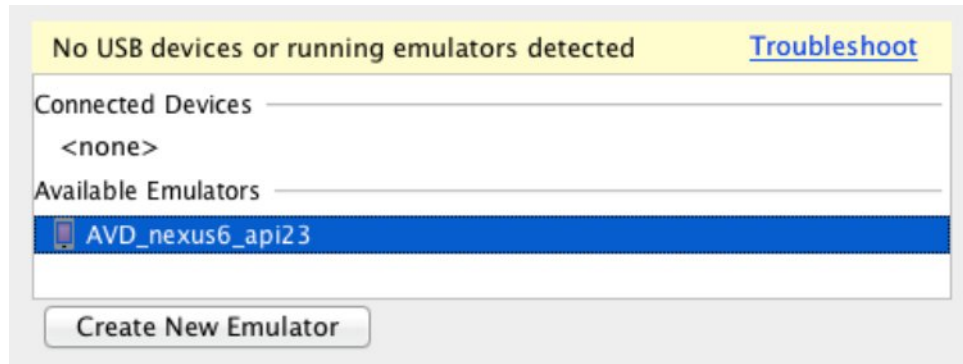
Package name:

Target Source Set:





## Chapter 8: Debugging



Line 42 in MainActivity.java

Enabled

Suspend  All  Thread Make Default

Condition:

Log message to console

Log evaluated expression:

Remove once hit

Disabled until selected breakpoint is hit:

After breakpoint was hit  Disable again  Leave enabled

Filters

Instance filters:

Class filters:

Pass count:

```
40     EditText etName = (EditText) findViewById(R.id.editText_name);
41
42     if(etName.getText().length() > 0) {
43         tvGreeting.setText("Hello " + etName.getText());
44     }
45 }
46
```

MainActivity.java x

```
34     /**...*/
38     public void onAcceptClick(View v) {
39         TextView tvGreeting = (TextView) findViewById(R.id.textView);
40         EditText etName = (EditText) findViewById(R.id.editText_name);
41
42         if(etName.getText().length() > 0) {
43             tvGreeting.setText("Hello " + etName.getText());
44         }
45     }
46
```

Variables

- mSpacingMult = 1.0
- mSpannableFactory = {android.text.Spannable\$Factory@4511}
- mTempRect = {android.graphics.Rect@4512} "Rect(157, 325 - 161, 438)"
- mTemporaryDetach = false
- mText = {android.text.SpannableStringBuilder@4513} "belen"**
- mTextColor = {android.content.res.ColorStateList@4514} "ColorStateList{mThemeAttrs=nullmChar ... View
- mTextDir = {android.text.TextDirectionHeuristics\$TextDirectionHeuristicInternal@4515}
- mTextEditSuggestionItemLayout = 17367277
- mTextPaint = {android.text.TextPaint@4516}
- mTextSelectHandleLeftRes = 17303277

etName.getText()

Use Control+Shift+Enter to add to Watches

Result:

- result = {android.text.SpannableStringBuilder@4588} "belen"**
  - mFilters = {android.text.InputFilter[1]@4619}
  - mGapLength = 5
  - mGapStart = 5
  - mIndexOfSpan = {java.util.IdentityHashMap@4620} size = 11
  - mLowWaterMark = 2147483647
  - mSpanCount = 11
  - mSpanEnds = {int[21]@4621}
  - mSpanFlags = {int[21]@4622}
  - mSpanMax = {int[15]@4623}
  - mSpanStarts = {int[21]@4624}
  - mSpans = {java.lang.Object[21]@4625}

Variables

- mTemporaryDetach = false
- mText = "Hello belen"**
  - count = 11
  - hashCode = 0
  - shadow\$\_class\_ = {java.lang.Class@3795} "class java.lang.String"
  - shadow\$\_monitor\_ = -2093752512

Line 39 in MainActivity.java

Enabled

Suspend    All    Thread

Condition:

Log message to console

Log evaluated expression:

Remove once hit

Disabled until selected breakpoint is hit:

After breakpoint was hit    Disable again    Leave enabled

Filters

Instance filters:  ...

Class filters:  ...

Pass count:

```
36
37     if (etName.getText() != null && 0 < etName.getText().length()) {
38         Log.i("MainActivity", "Name read: " + etName.getText());
39         tvGreeting.setText("Hello " + etName.getText());
40     }
41     else {
42         Log.w("MainActivity", "No name typed, greeting didn't change");
```





+ -

Filter Name:

Specify one or several filtering parameters:

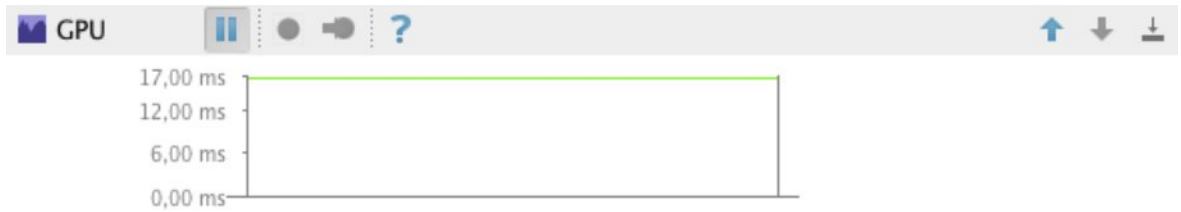
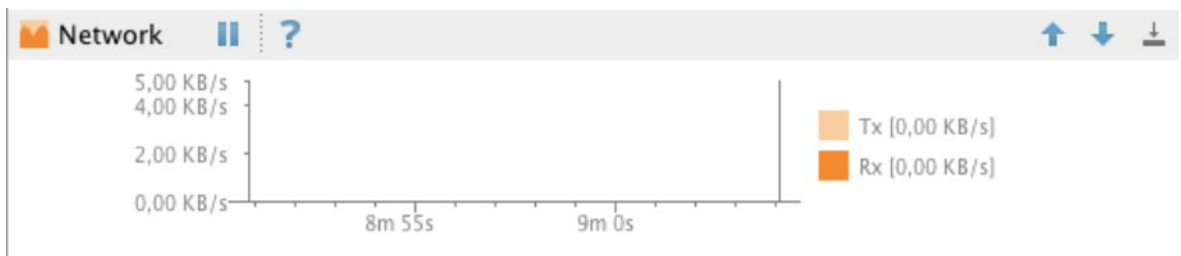
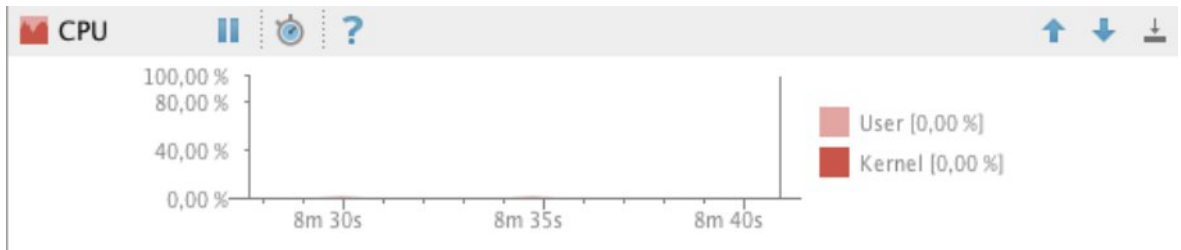
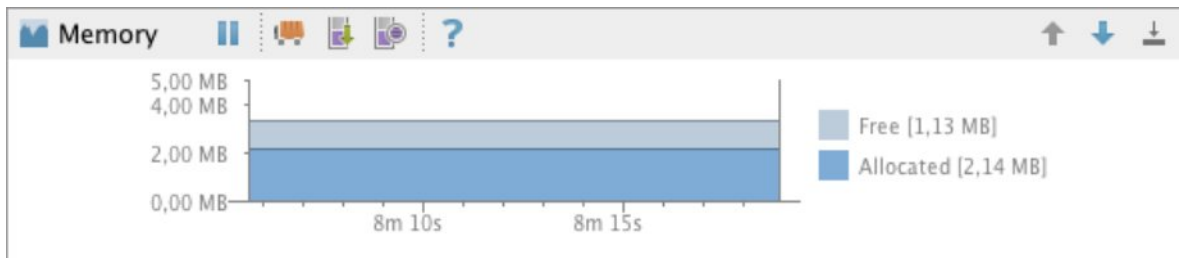
Log Tag:   Regex

Log Message:   Regex

Package Name:   Regex

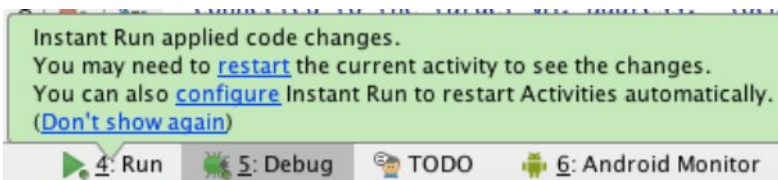
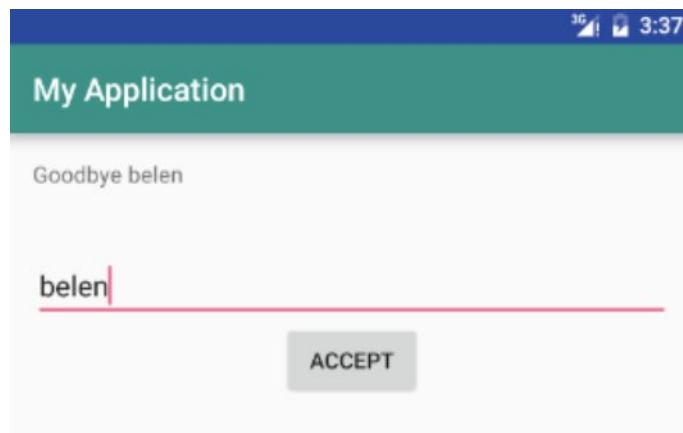
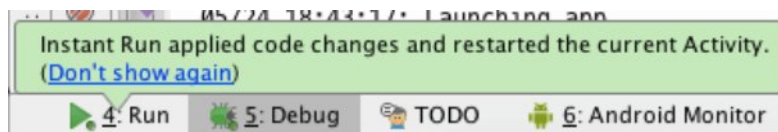
PID:

Log Level:



## Build, Execution, Deployment > Instant Run

- Enable Instant Run to hot swap code/resource changes on deploy (default enabled)
- Restart activity on code changes
- Show toasts in the running app when changes are applied
- Show Instant Run status notifications



## My Application

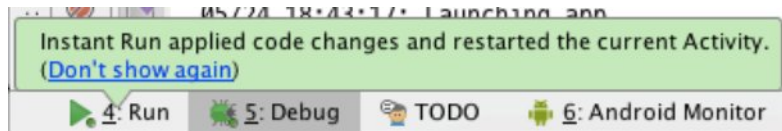
Goodbye belen

Enter your name

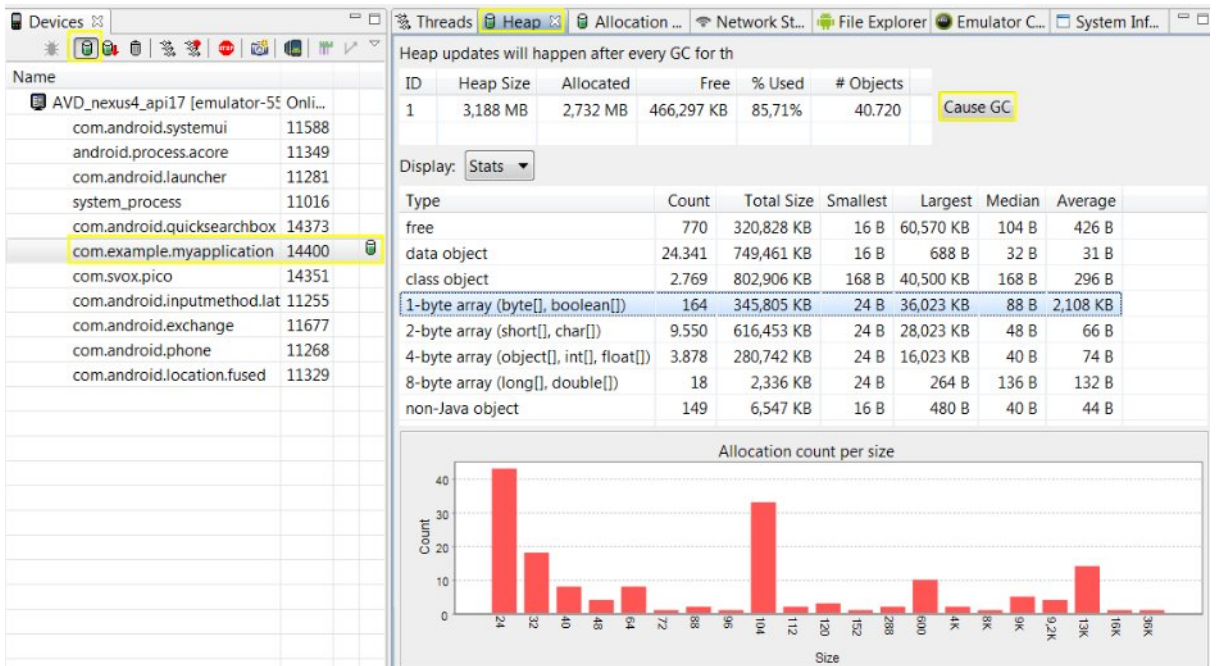
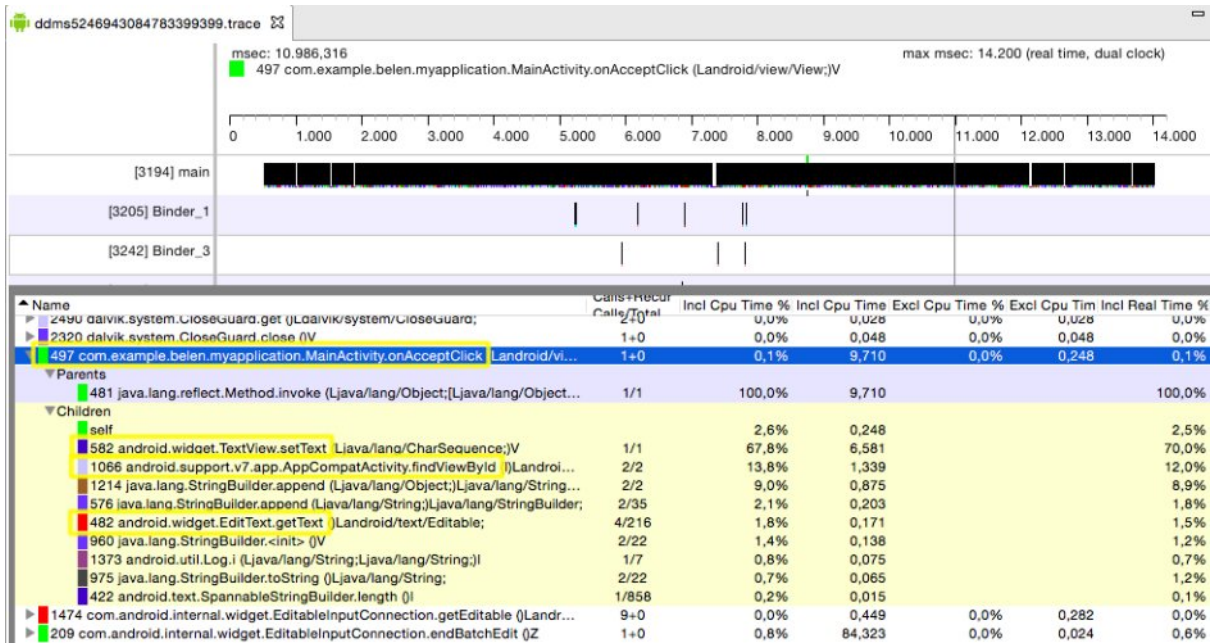
---

ACCEPT

Applied code changes without activity  
restart



Devices		Threads	Heap	Allocation Tracker	Network Statistics	F	
Name		ID	Tid	Status	utime	stime	Name
AVD_nexus4_api17 [emulator-55 Onli...		1	14400	Native	3625	205	main
com.android.systemui	11588	*2	14402	VmWait	2	2	GC
android.process.acore	11349	*3	14404	VmWait	0	0	Signal Catcher
com.android.launcher	11281	*4	14406	Runnable	3	1	JDWP
system_process	11016	*5	14407	VmWait	29	13	Compiler
com.android.keychain	14337	*6	14408	Wait	0	0	ReferenceQueueDaemon
com.android.quicksearchbox	14373	*7	14409	Wait	1	1	FinalizerDaemon
com.example.myapplication	14400	*8	14410	Wait	0	0	FinalizerWatchdogDaemon
com.svox.pico	14351	9	14411	Native	1	0	Binder_1
com.android.inputmethod.la	11255	10	14412	Native	0	0	Binder_2



Threads Heap Allocation Tra... Network Stati... File Explorer Emulator Con... System Infor...

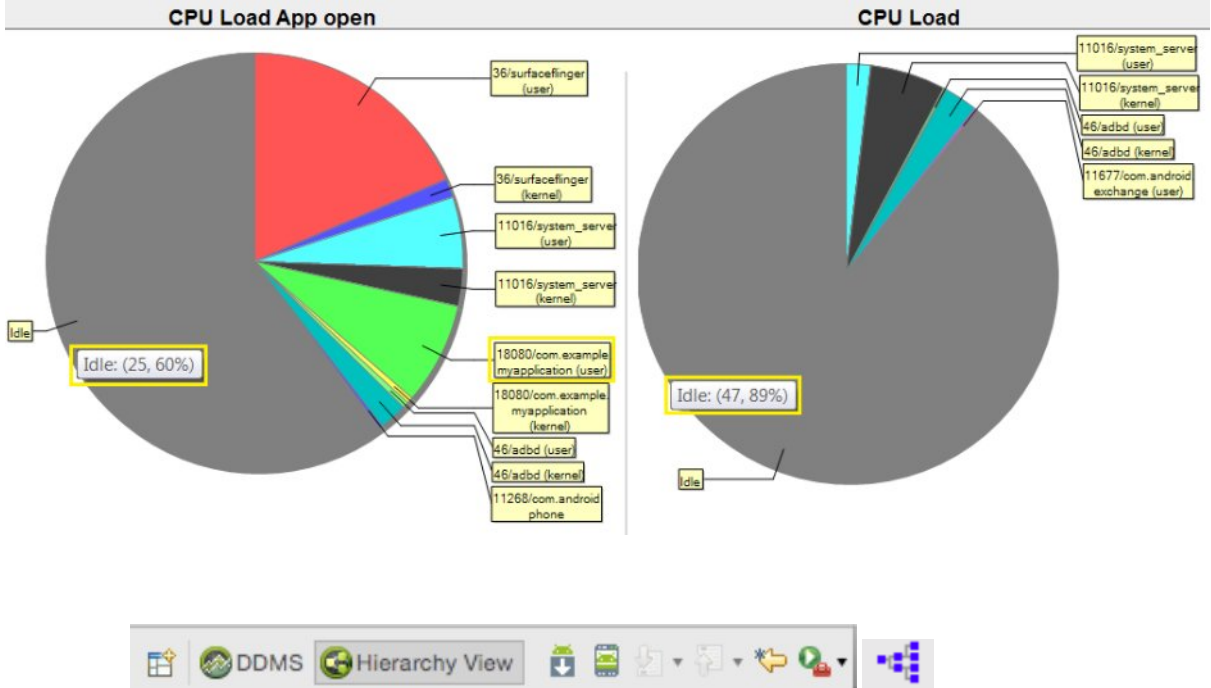
Stop Tracking Get Allocations Filter: com.example Inc. trace

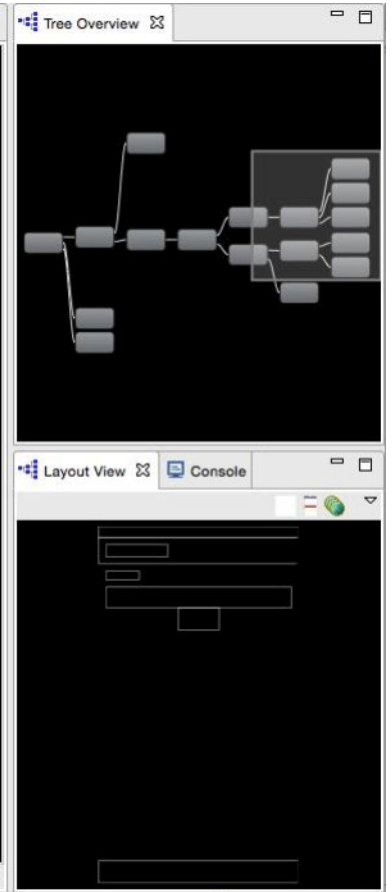
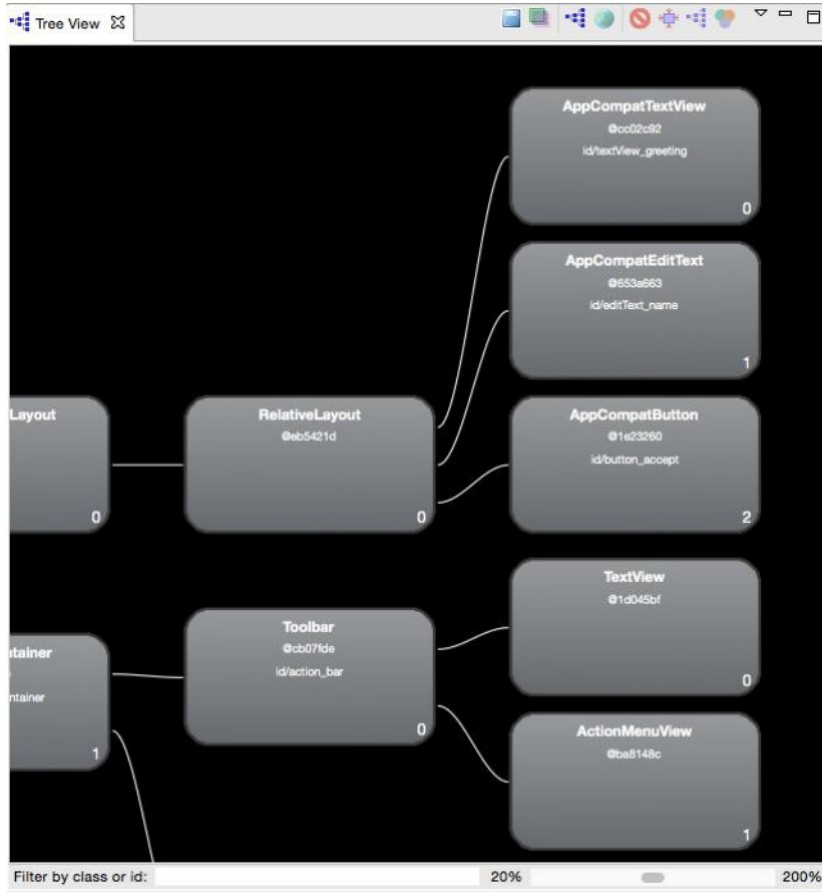
Alloc Order	Allocation Size	Allocated Class	Thread	Allocated in	Allocated in
570	32	java.lang.StringBuilder	1	com.example.belen.myapplication.MainActivity	onAcceptClick
565	32	java.lang.StringBuilder	1	com.example.belen.myapplication.MainActivity	onAcceptClick

```

at com.example.belen.myapplication.MainActivity.onAcceptClick(MainActivity.java:43)
at java.lang.reflect.Method.invoke(Native Method)
at android.support.v7.app.AppCompatActivity$DeclaredOnClickListener.onClick(AppCo...
at android.view.View.performClick(View.java:5198)
at android.view.View$PerformClick.run(View.java:21147)
at android.os.Handler.handleCallback(Handler.java:739)
at android.os.Handler.dispatchMessage(Handler.java:95)
at android.os.Looper.loop(Looper.java:148)
at android.app.ActivityThread.main(ActivityThread.java:5417)
at java.lang.reflect.Method.invoke(Native Method)
at com.android.internal.os.ZygoteInit$MethodAndArgsCaller.run(ZygoteInit.java:726)
at com.android.internal.os.ZygoteInit.main(ZygoteInit.java:616)

```









## Chapter 9: Preparing for Release

Key store path:  ...

Password:  Confirm:

Key

Alias:

Password:  Confirm:

Validity (years):  ▲▼

Certificate

First and Last Name:

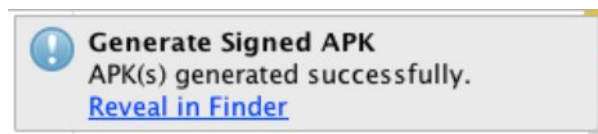
Organizational Unit:

Organization:

City or Locality:

State or Province:

Country Code (XX):



Properties Signing Flavors Build Types Dependencies

releaseConfig

Name: releaseConfig

Key Alias releaseKey

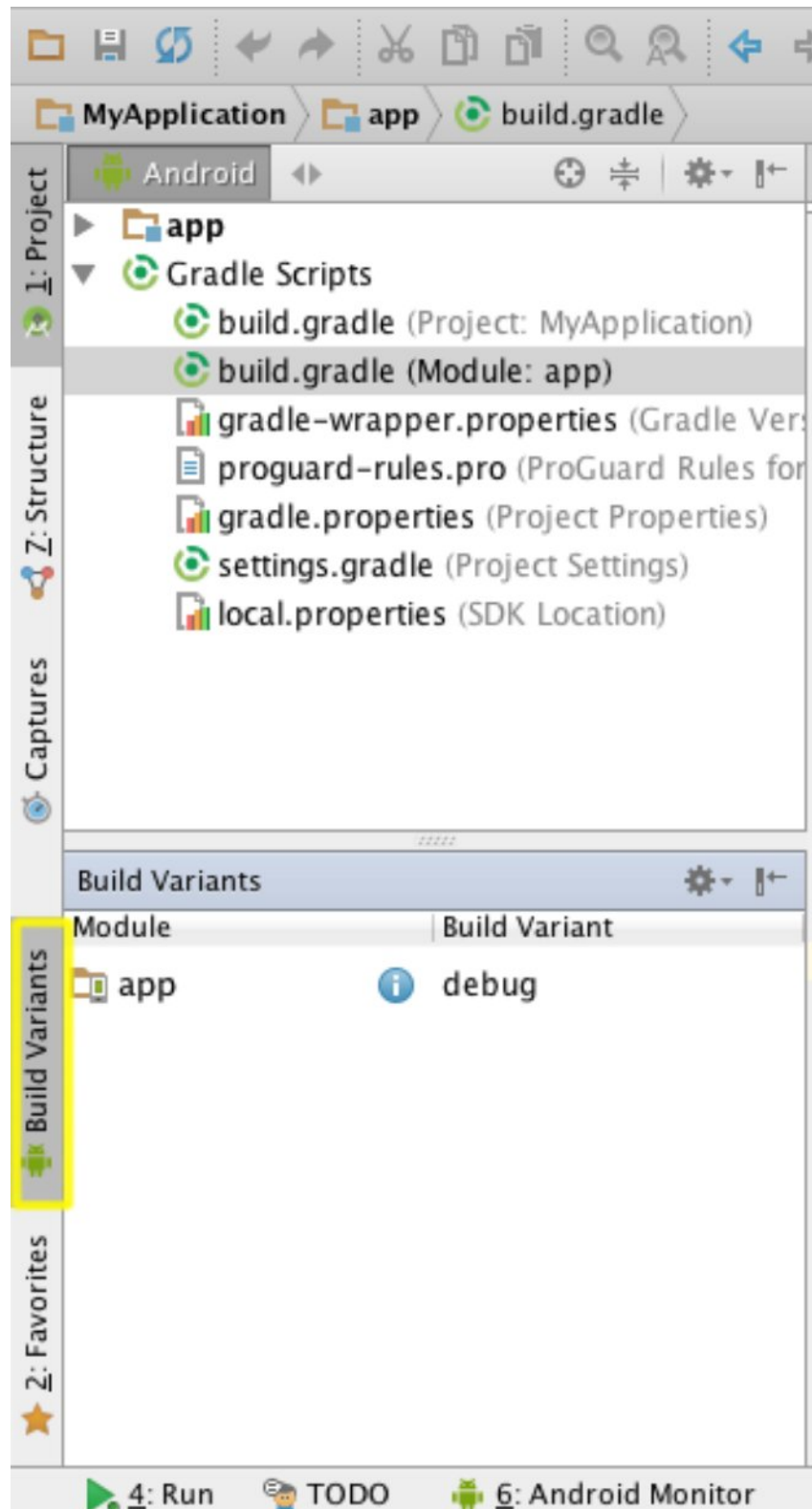
Key Password password

Store File /Users/belen/release\_keystore.jks ...

Store Password password

Properties | Signing | Flavors | **Build Types** | Dependencies

debug	Name: release
release	Debuggable (false) ▾
	Jni Debuggable (false) ▾
	Signing Config releaseConfig ▾
	Renderscript Debuggable (false) ▾
	Renderscript Optim Level (3)
	Minify Enabled false ▾
	Pseudo Locales Enabled ▾
	Proguard File <input type="text"/> ...
	Application Id Suffix <input type="text"/>
	Version Name Suffix <input type="text"/>
	Zip Align Enabled (true) ▾



app-release.apk x

**com.example.myapplication** (version 1.0)

Raw File Size: 3,8 MB, Download Size: 1,6 MB

File	Raw File Size	Download Size	% of Total Download size
classes.dex	2,6 MB	1 MB	61%
res	634,3 KB	514,5 KB	30,4%
resources.arsc	437,8 KB	111,4 KB	6,6%
META-INF	121,5 KB	33,6 KB	2%
AndroidManifest.xml	3,1 KB	1 KB	0,1%

app-release.apk x AndroidManifest.xml x

**com.example.myapplication** (version 1.0)

Raw File Size: 3,8 MB, Download Size: 1,6 MB

File	Raw File Size	Download Size	% of Total Download size
classes.dex	2,6 MB	1 MB	61%
res	634,3 KB	514,5 KB	30,4%
resources.arsc	437,8 KB	111,4 KB	6,6%
META-INF	121,5 KB	33,6 KB	2%
AndroidManifest.xml	3,1 KB	1 KB	0,1%

.....

This dex file defines 2619 classes with 19190 methods, and reference

Class	Defined Methods	Referenced Methods
android	13333	16092
com	7706	7708
java	0	579
org	0	35
byte[]	0	1
double[]	0	1
float[]	0	1
int[]	0	1
long[]	0	1
boolean[]	0	1

## Chapter 10: Getting Help

Enter action or option name:

Q auto

Auto Import: Java: Optimize imports on the fl...	OFF
Auto Import: C/C++: Show import popup	ON
Git: Commit automatically on cherry-pick	OFF
Git: Auto-update if push of the current branc...	OFF
Auto-import	OFF
Auto-Indent Lines ^\I	Code Formatting Actions
Paste Simple \u%V	Cut/Copy/Paste Actions
<b>Auto Import</b>	<b>Preferences</b>
Auto-boxing	Preferences
Auto-unboxing	Preferences
Automatic update	Preferences
Autopopup in (ms):	Preferences
Automatically download:	Preferences
Autoreparse delay (ms):	Preferences
...	

Press ^↑ or ^↓ to navigate through the history



## Did you know ... ?

### Try Live Templates

Live Templates allow you to generate many typical code constructs in seconds! For example, type

```
String[] array1, array2;  
itar~
```

in a method and press the **Tab** key to see what happens.

```
String[] array1, array2;  
for (int i = 0; i < array1.length; i++) {  
    = array1[  
        v ◦ array1 String[]  
        v ◦ array2 String[]  
}
```

Use the **Tab** key to move between the template fields. See [File | Settings | Live Templates](#) for more details.

Show Tips on Startup

A new [Android Studio](#) 2.1.1 is available in the stable channel.

**Please update to Android Studio v2.1.1.** This fixes a serious security vulnerability in all older versions of Android Studio.

If you are still using v1.x and for various reasons not able to switch to v2.x immediately, we have also released Android Studio v1.5.2 which you can download manually from <http://tools.android.com/download/studio/builds/1.5.2/>.

Current version: 1.2.1.1 (build 141.1903250)

New version: 2.1.1 (build 143.2821654)

To configure automatic update settings, see the [Updates](#) dialog of your IDE Preferences.

Remind Me Later

Download

Release Notes

Ignore This Update



Automatically check updates for Stable Channel

Use secure connection

Last checked: Moments ago

Current version: Android Studio 2.1

Build number: AI-143.2821654

Android SDK Tools: 25.1.6

Android Platform Version: API 23: Android 6.0 (Marshmallow) revision 3