

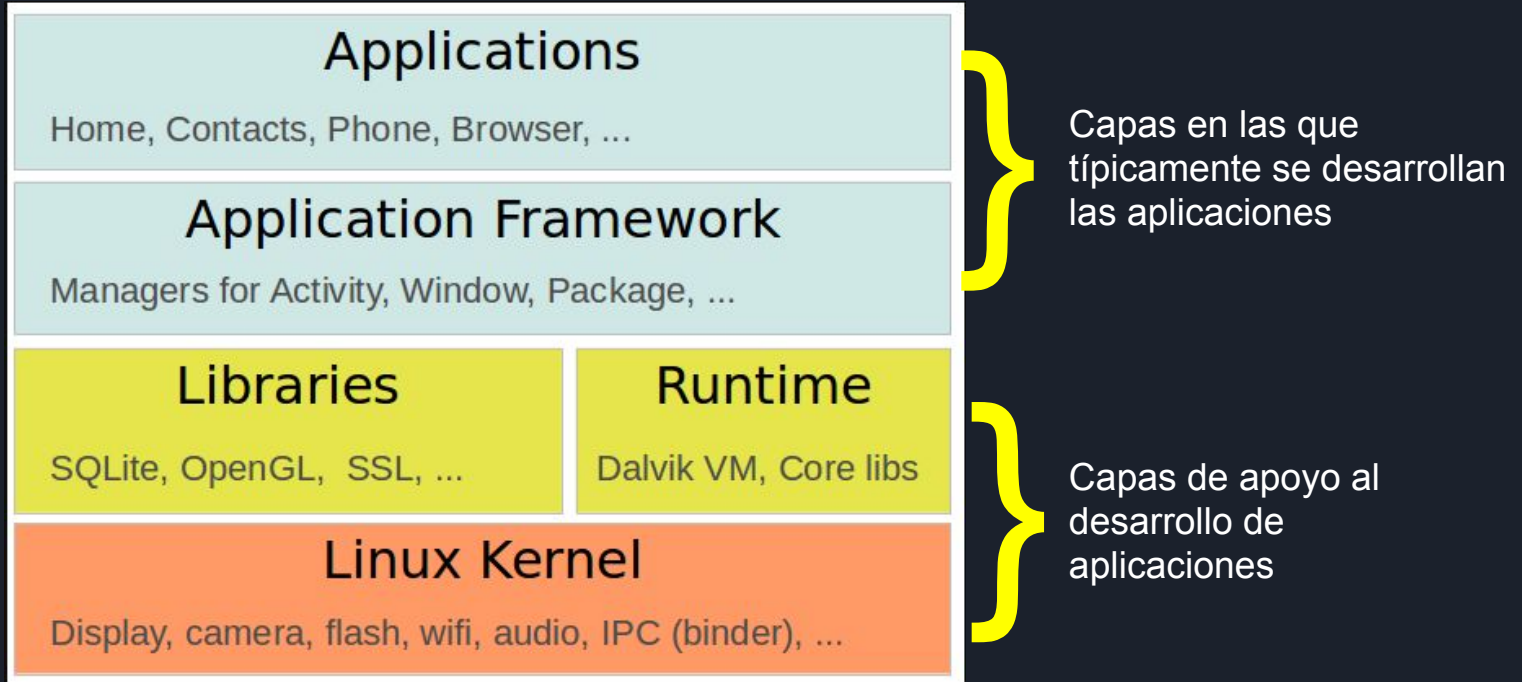


# Capacitación Android Nivel Inicial

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# Introducción a Android

Android es un sistema operativo basado en Linux





Code name	Version	API level
Oreo	8.0	26
Nougat	7.0 – 7.1.1	24 -25
Marshmallow	6.0	23
Lollipop	5.1	22
Lollipop	5.0	21
KitKat	4.4 - 4.4.4	19
Jelly Bean	4.1.x - 4.3.x	16 - 18
Ice Cream Sandwich	4.0.1 - 4.0.4	14 - 15
Honeycomb	3.2.x	13

Code name	Version	API level
Honeycomb	3.0 - 3.1	11 - 12
Gingerbread	2.3 - 2.3.7	9-10
Froyo	2.2.x	8
Eclair	2.1	7
Eclair	2.0 - 2.0.1	5 -6
Donut	1.6	4
Cupcake	1.5	3
(no code name)	1.1	2
(no code name)	1.0	1



# Razones de éxito de Android

- El desarrollador debe conocer poco o nada del hardware sobre los distintos dispositivos en que corre su aplicación, el solo programa Android.
- Android es un SO open source, por lo que su código está liberado, y distintos fabricantes pueden adaptarlo a sus dispositivos.
- Hay una gran comunidad de desarrolladores y recursos disponibles que dan soporte a los nuevos programadores.
- Provee un potente framework que permite controlar sensores de hardware, procesar videos e imagenes en distintos formatos y generar graficos 3D con relativa facilidad.
- El Android Play Store permite facilmente llegar a los consumidores finales y generar ganancias a los desarrolladores de aplicaciones.

Preparando el entorno  
de desarrollo





# Que necesito para desarrollar en Android?

## Android Studio

[Android Studio website](#)

## Sistema Operativo

- Windows XP o más nuevo
- Mac OS X 10.5.8 (con chip Intel) o más nuevo
- Linux kernel 2.7 o más nuevo

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

prueba2 app src main AndroidManifest.xml

Android res/.../activity\_main.xml debug/.../activity\_main.xml MainActivity.java StudentsProvider.java AndroidManifest.xml

1: Project

- java
  - com.example.jorge
    - MainActivity
    - MyService
    - StudentsProvider
  - com.example.jorge
  - com.example.jorge
- res
  - drawable
    - abc.jpg
    - achaga\_logo.jpg
    - img1.jpg
  - layout
    - activity\_main.xml
  - mipmap
  - values
    - colors.xml
    - strings.xml
    - styles.xml

2: Structure

3: Captures

4: Build Variants

5: Favorites

6: Android Monitor

7: Messages

8: Terminal

9: Event Log

10: Gradle Console

11: Platform and Plugin Updates: Android Studio is ready to update. (today 11:14)

12: Context: <no context>

Palette

- All
- Widgets
- Text
- Layouts
- Containers
- Images
- Date
- Transitions
- Advanced
- Google
- Design

Ab TextView

OK Button

Toggle

CheckE

RadioB

Checke

Spinne

Progre

Progre

SeekBar

SeekBar

Component Tree

- RelativeLayout
- Ab textView1 - "Con
- ImageButton
- button1 - "Add N

Design Text

Properties

ID button2

layout\_width wrap\_content

layout\_height wrap\_content

Button

style buttonStyle

background

background...

stateListAni...

elevation

visibility none

onClick onClickRetrieves

TextView

text Retrieve student

text

Run app

11/11 15:26:45: Launching app

\$ adb install-multiple -r /home/cpaterno/AndroidStudioProjects/prueba2/a

Split APKs installed

\$ adb shell am start -n "com.example.jorge.prueba2/com.example.jorge.pr

Client not ready yet..Waiting for process to come online

Connected to process 15159 on device lge-nexus\_5x-01e27h8e1cdfa001

Gradle Console

:app:packageDebug

:app:buildInfoGeneratorDebug

:app:compileDebugSources UP-TO-DATE

:app:assembleDebug

BUILD SUCCESSFUL

Primera app  
“Hola Mundo”







## New Project

Android Studio

### Configure your new project

Application name:

Company domain:

Package name:

[Edit](#)

☐ Include C++ support

Project location:



Previous

**Next**

Cancel

Finish



## Target Android Devices

## Select the form factors your app will run on

Different platforms may require separate SDKs

☒ Phone and Tablet

Minimum SDK API 22: Android 5.1 (Lollipop)

Lower API levels target more devices, but have fewer features available.

By targeting API 22 and later, your app will run on approximately **62,6%** of the devices that are active on the Google Play Store.

[Help me choose](#)

☐ Wear

Minimum SDK API 21: Android 5.0 (Lollipop)

☐ TV

Minimum SDK API 21: Android 5.0 (Lollipop)

☐ Android Auto

Previous

Next

Cancel

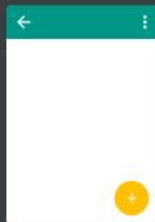
Finish



## Add an Activity to Mobile



Add No Activity



Basic Activity



Bottom Navigation Activity



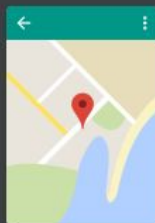
Empty Activity



Fullscreen Activity



Google AdMob Ads Activity



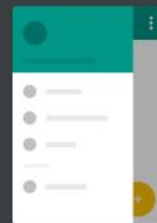
Google Maps Activity



Login Activity



Master/Detail Flow



Navigation Drawer Activity

Previous

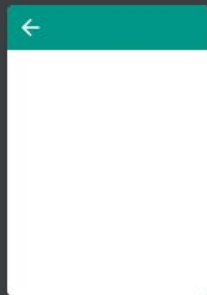
Next

Cancel

Finish



## Customize the Activity



Empty Activity

Creates a new empty activity

Activity Name: MainActivity

☒ Generate Layout File

Layout Name: activity\_main

☒ Backwards Compatibility (AppCompat)

The name of the activity class to create

Previous

Next

Cancel

Finish

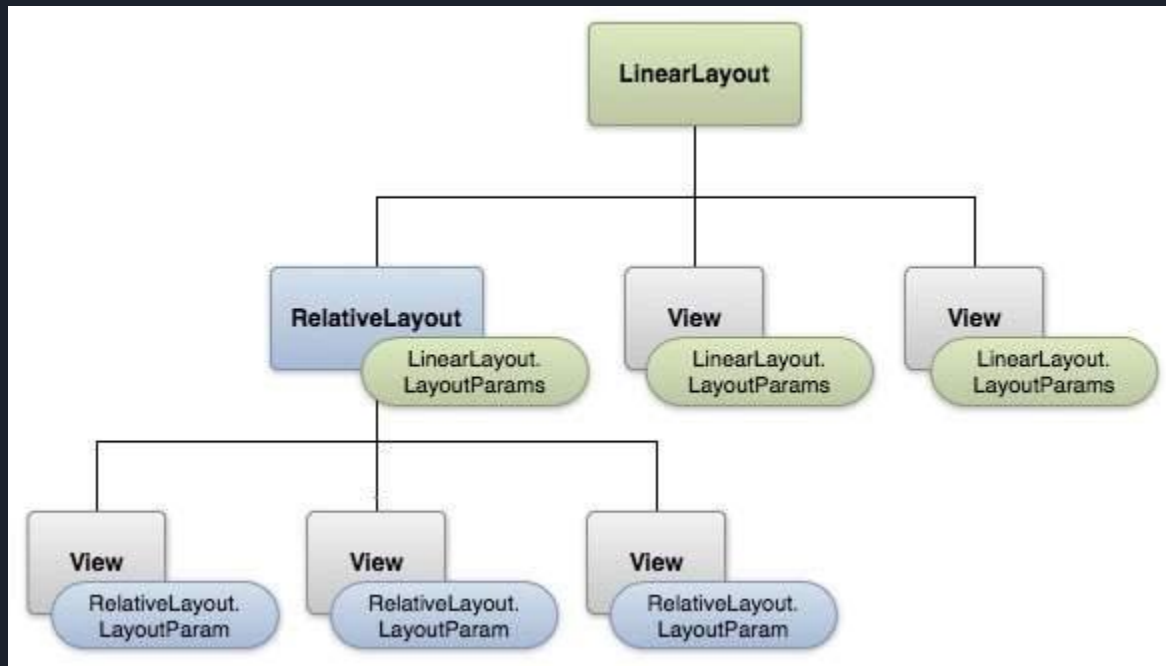
# Prueba en AVD o en dispositivo físico



# Views y Layouts



# Views



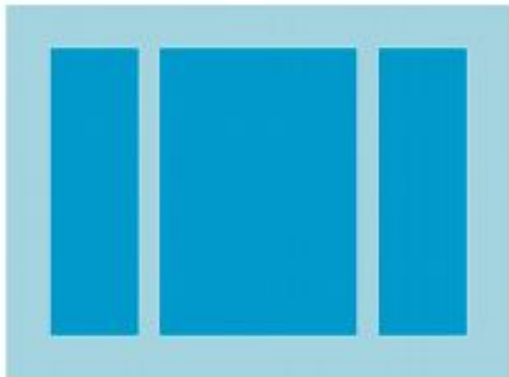


# Tipos de Layouts

- Linear Layout
- Relative Layout
- Table Layout
- Absolute Layout
- Frame Layout
- List View
- Grid View
- Web View



### Linear Layout



### Relative Layout



### Web View

```
<html>  
  <!-- web page -->  
</html>
```



# Linear Layout

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical" >
    <TextView android:id="@+id/text"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello, I am a TextView" />
    <Button android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello, I am a Button" />
</LinearLayout>
```

# Ejercicio 1 : LinearLayout Rainbow

