

# Análise e Reconhecimento de Formas

Configurações e observações gerais

# MAC0447 / MAC5749 — EPs - 2023


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14 de agosto de 2023

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# Android Studio

**developers**  Essentials ▾ Design & Plan ▾ **Develop** Google Play

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English ▾ Android Studio Sign in

ANDROID STUDIO

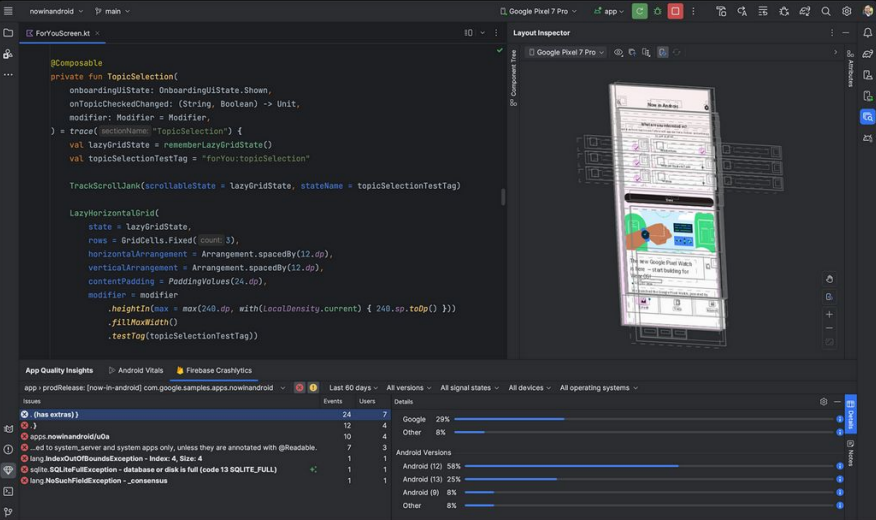
[Download](#) Android Studio editor Android Gradle Plugin SDK tools Preview

## Android Studio

Get the official Integrated Development Environment (IDE) for Android app development.

[Download Android Studio Giraffe](#)

[Read release notes](#)

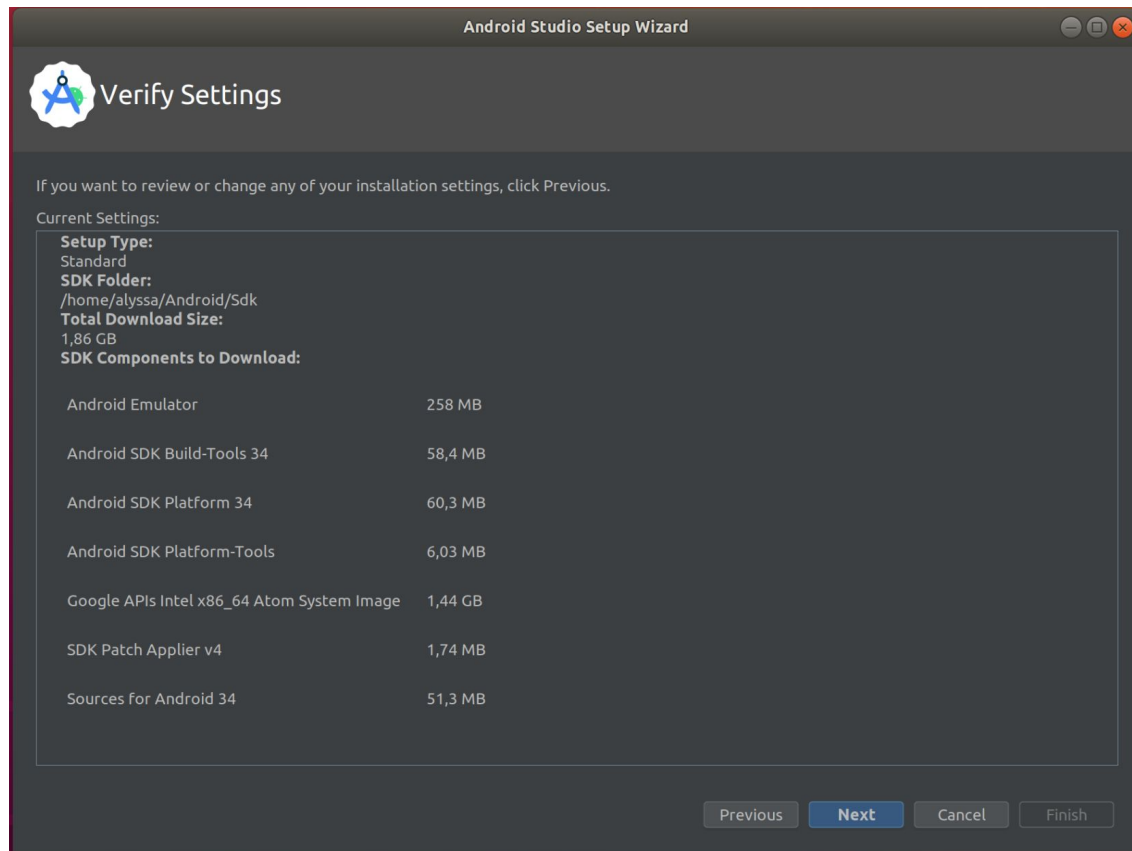


| Issues   | Events | Users | Details |
|--|--------|-------|---------|
| (has extras)   | 24     | 7     |         |
| app: proRelease [now-in-android] com.google.samples.apps.nowinandroid                | 12     | 4     |         |
| app: nowinandroid:layout   | 10     | 4     |         |
| add to system_server and system apps only, unless they are annotated with @Readable. | 7      | 3     |         |
| lang: IndexOutOfBoundsException - Index: 4, Size: 4                                  | 1      | 1     |         |
| lang: java.lang.RuntimeException: database or disk is full (code 13 SQLITE_FULL)     | 1      | 1     |         |
| lang: java.lang.RuntimeException: java.lang.OutOfMemoryError: Java heap space        | 1      | 1     |         |

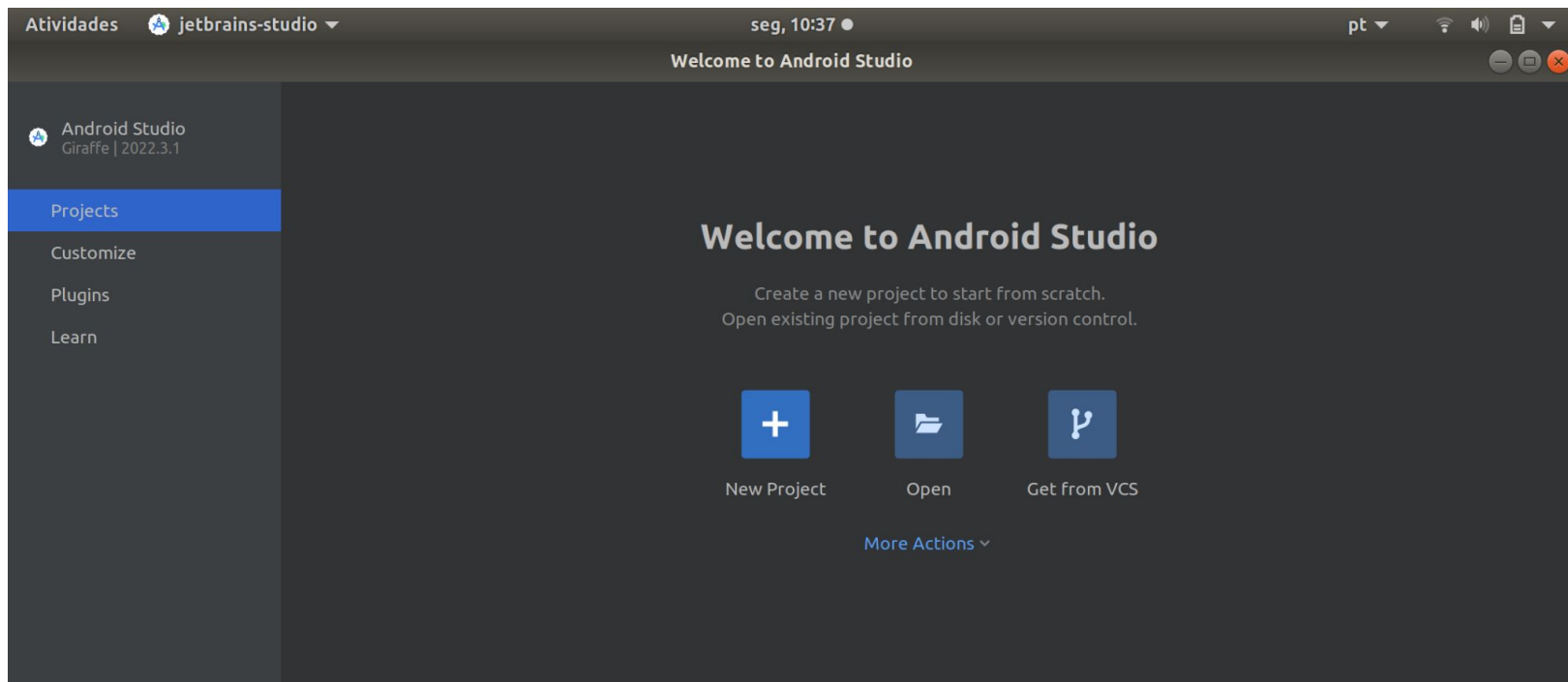
| Android Versions | Percentage |
|------------------|------------|
| Android (12)     | 54%        |
| Android (13)     | 25%        |
| Android (8)      | 8%         |
| Other            | 8%         |

<https://developer.android.com/studio>

# Passos iniciais



# Passos iniciais



Android Studio  
Giraffe | 2022.3.1

Projects

Customize

Plugins

Learn

Templates

Phone and Tablet

Wear OS

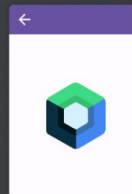
Television

Automotive

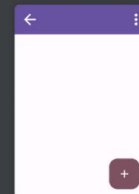
## New Project



No Activity



Empty Activity



Basic Views Activity



Bottom Navigation Views Acti...



Empty Views Activity



Navigation Drawer Views Acti...



Previous

Next

Cancel

Finish

Android Studio  
Giraffe | 2022.3.1

Projects

Customize

Plugins

Learn

## New Project

## Empty Activity

Create a new empty activity with Jetpack Compose

Name

My Application

Package name

com.example.myapplication

Save location

/home/alyssa/AndroidStudioProjects/MyApplication

Minimum SDK

API 24 ("Nougat"; Android 7.0)

Your app will run on approximately 95,4% of devices.

[Help me choose](#)

Build configuration language ⓘ

Kotlin DSL (build.gradle.kts) [Recommended]

Previous

Next

Cancel

Finish

## App1 – MainActivity.kt [App1.app.main]

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

example \ app1 \ MainActivity.kt MainActivity \ onCreate app Pixel\_3a\_API\_34\_extension\_levr..

Run 'app' Shift+F10

Code Split Design

Project

- Android
  - app
    - manifests
    - java
      - com.example.app1
        - ui.theme
        - MainActivity.kt
        - com.example.app1 (androidT)
        - com.example.app1 (test)
      - res
    - Gradle Scripts
      - build.gradle.kts (Project: App1)
      - build.gradle.kts (Module :app)
      - proguard-rules.pro (ProGuard R
      - gradle.properties (Project Prop
      - gradle-wrapper.properties (Gra
      - local.properties (SDK Location)
      - settings.gradle.kts (Project Sett

```
1 package com.example.app1
2
3 import ...
4
14
15 class MainActivity : AppCompatActivity() {
16     override fun onCreate(savedInstanceState: Bundle?) {
17         super.onCreate(savedInstanceState)
18         setContent {
19             App1Theme {
20                 // A surface container using the 'background' color from the theme
21                 Surface(modifier = Modifier.fillMaxSize(), color = MaterialTheme.colorScheme.background) {
22                     Greeting(name: "Android")
23                 }
24             }
25         }
26     }
27 }
28
29 @Composable
30 fun Greeting(name: String, modifier: Modifier = Modifier) {
31     Text(
32         text = "Hello $name!",
33         modifier = modifier
34     )
35 }
36
37 @Preview(showBackground = true)
38 @Composable
```

Version Control TODO Problems Terminal Services App Quality Insights App Inspection Logcat Build Profiler

Layout Inspector

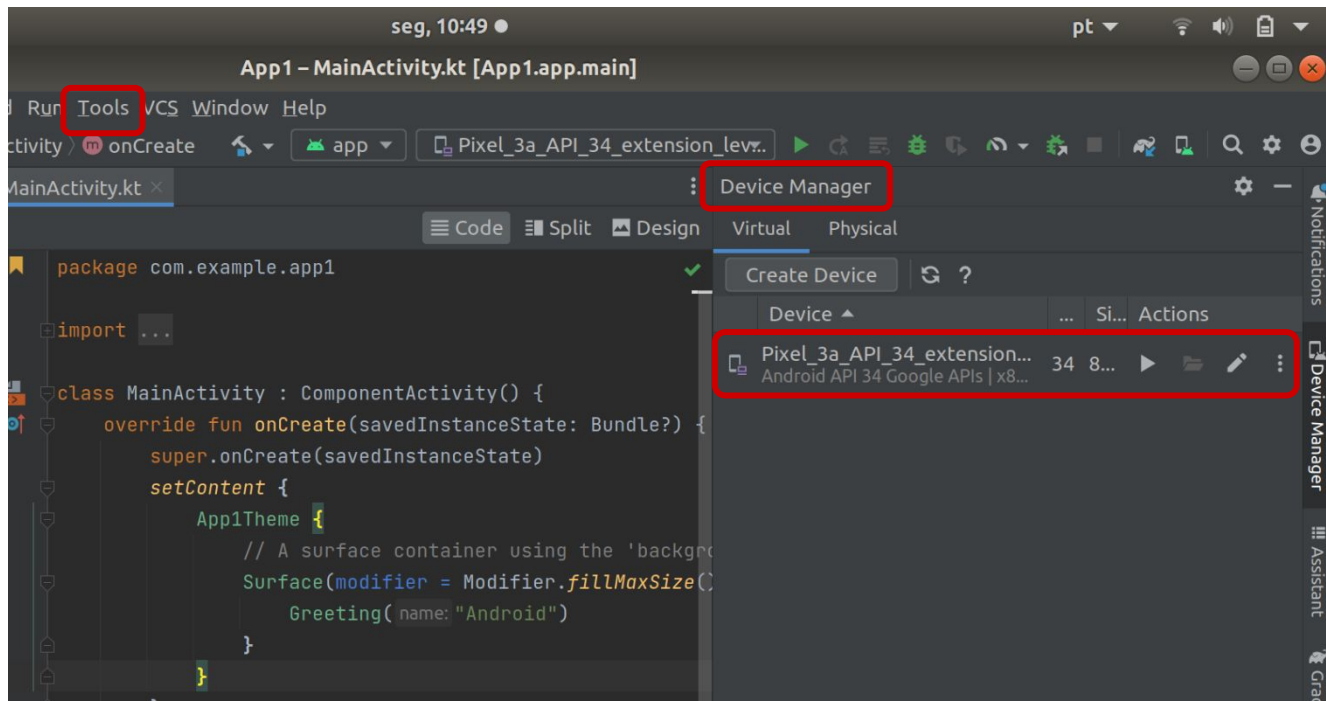
Run selected configuration

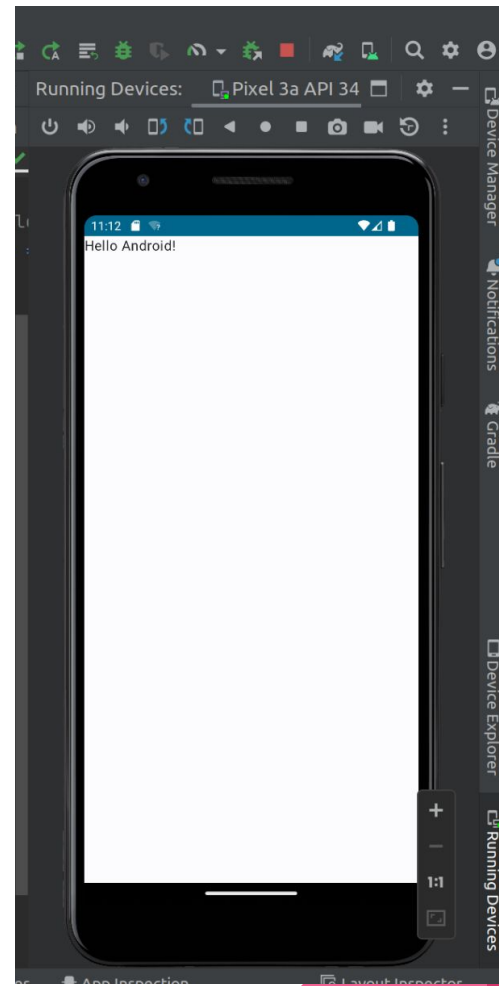
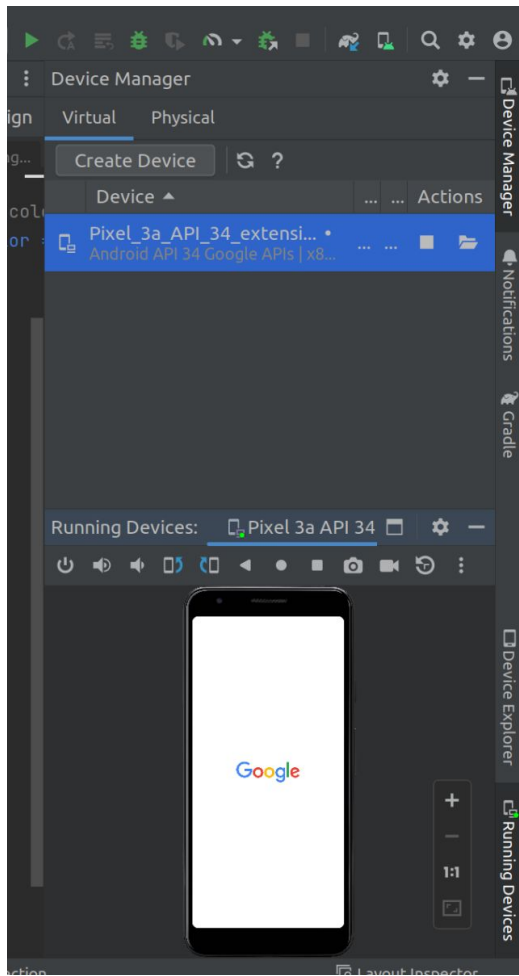
24:14 LF UTF-8 4 spaces



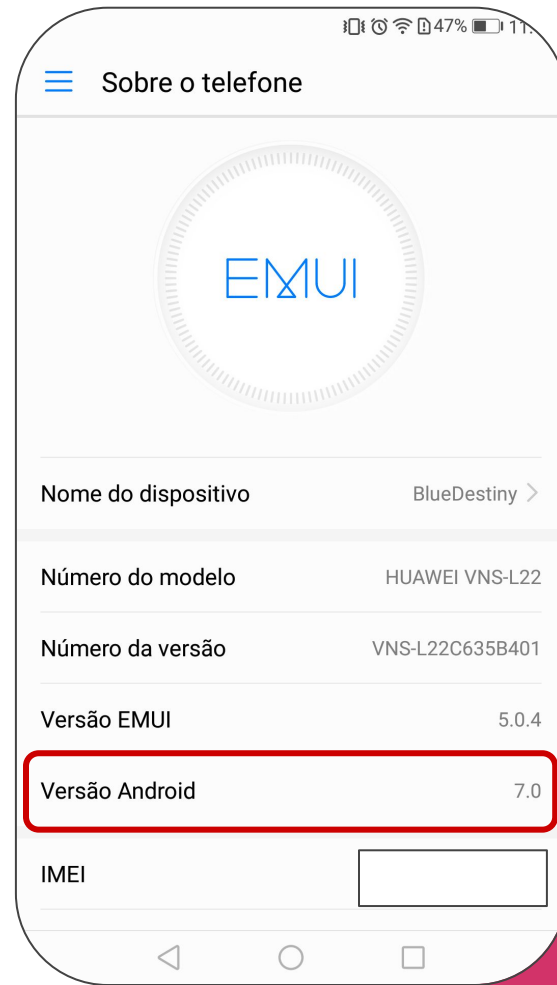
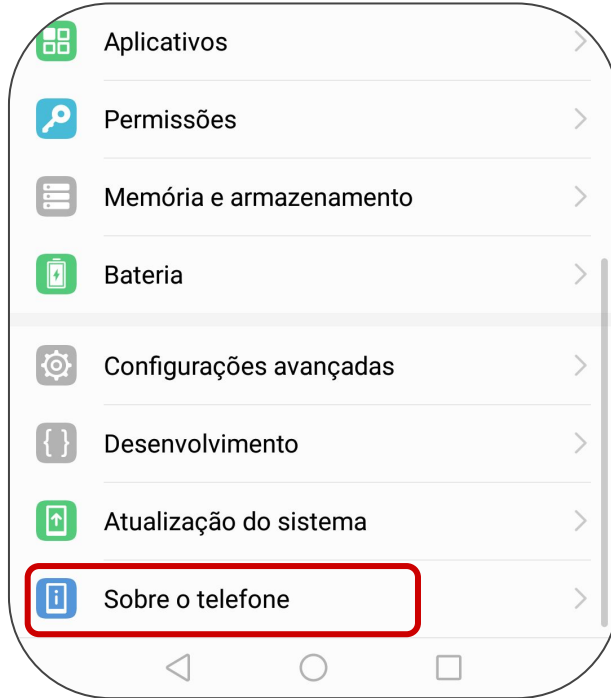
# App no Emulador ou Celular

- Tools
- Device Manager

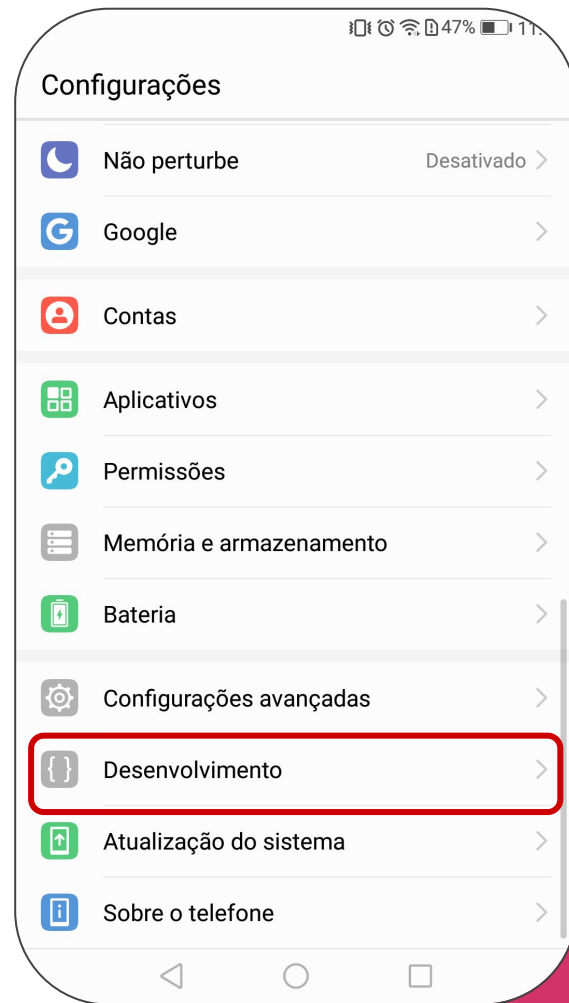
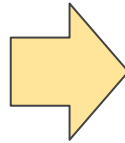


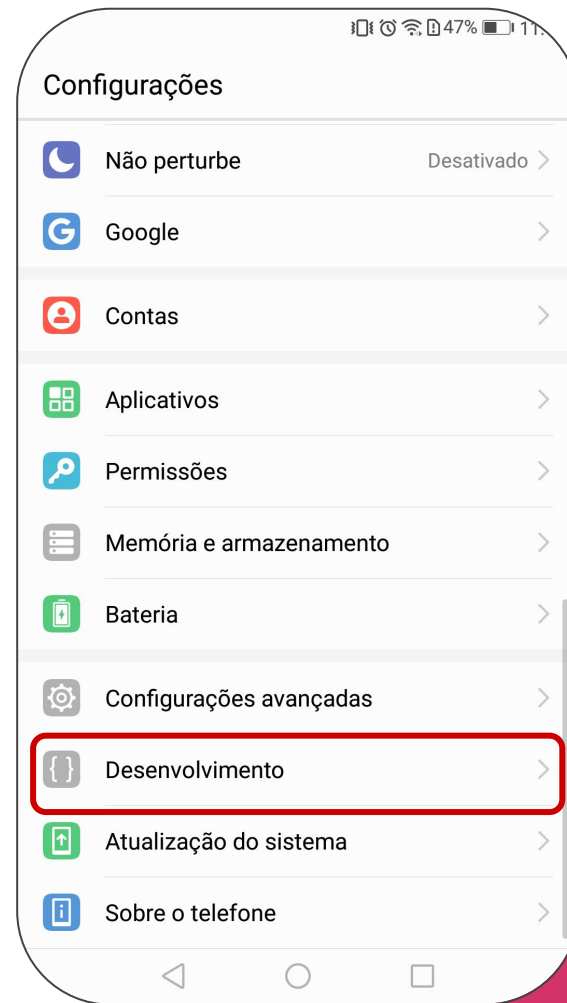
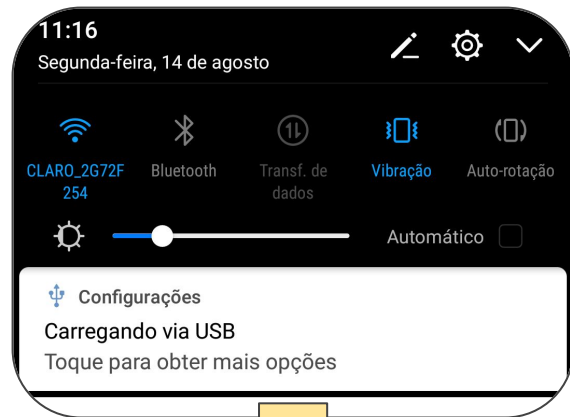


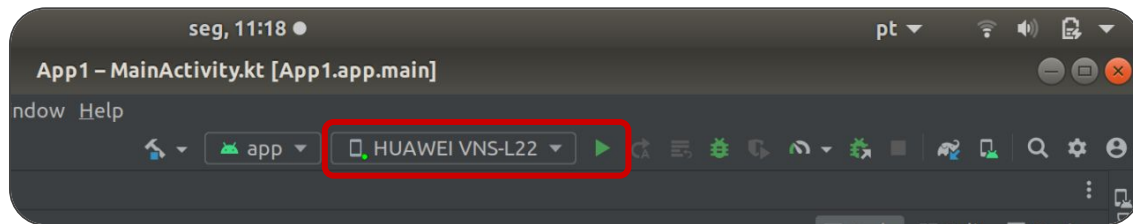
# App no Emulador ou Celular

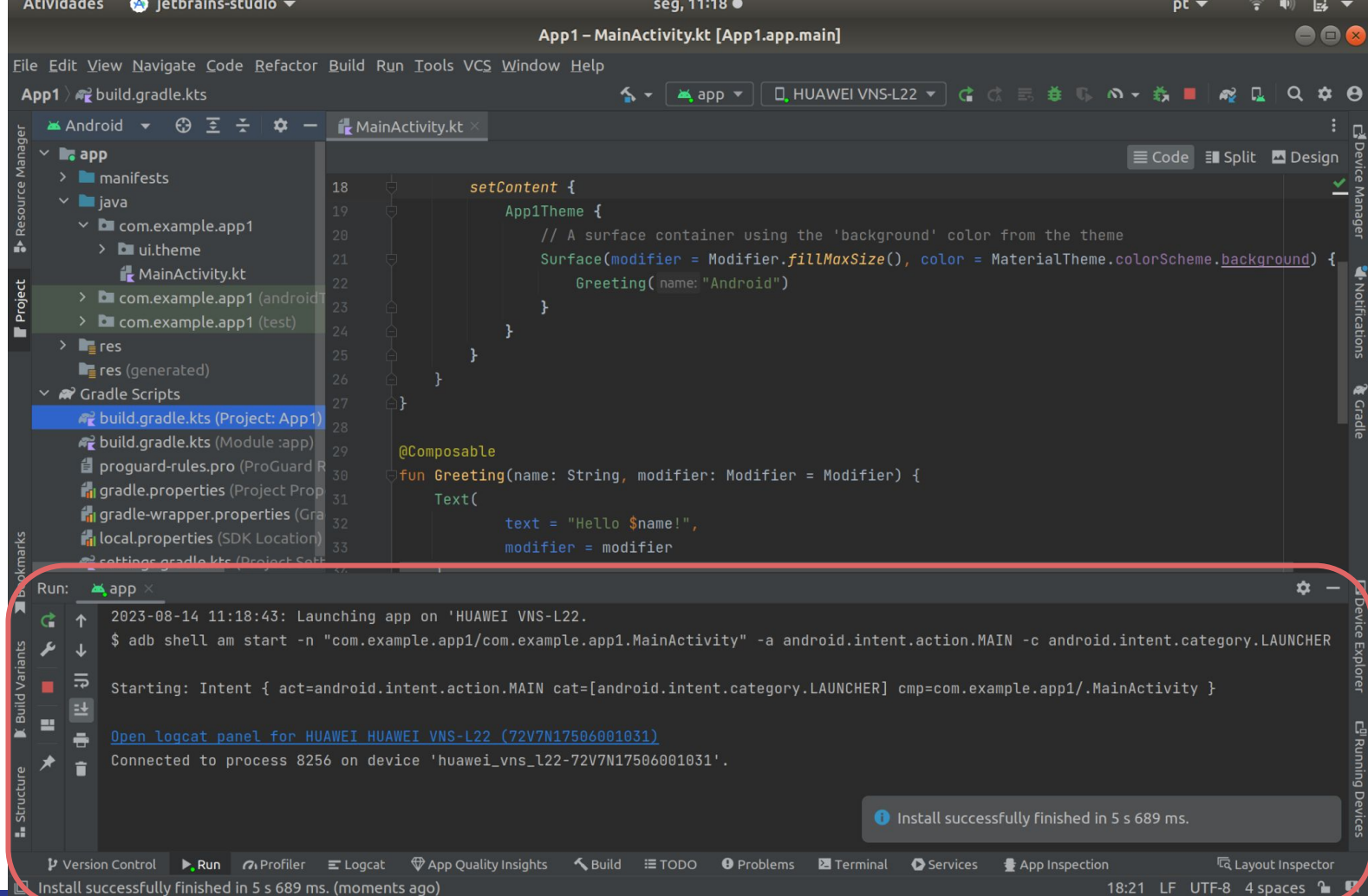


7~10 “clicks”

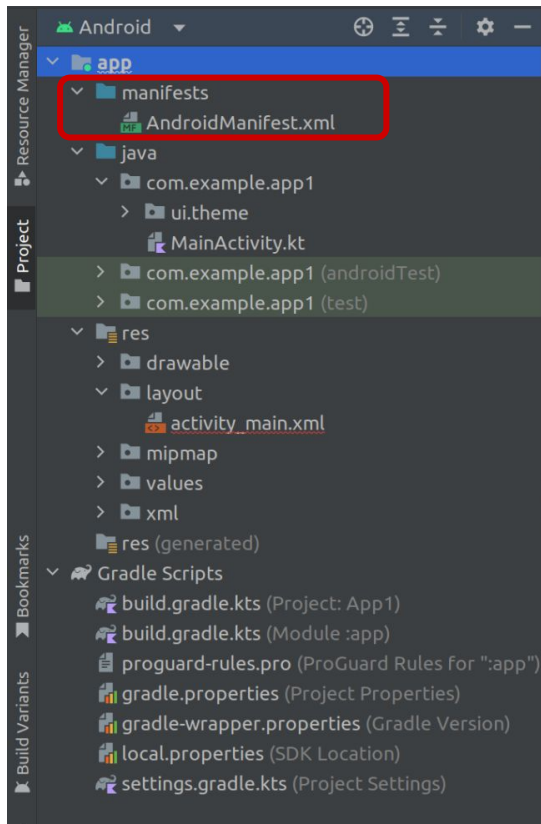








# Estrutura de um código app



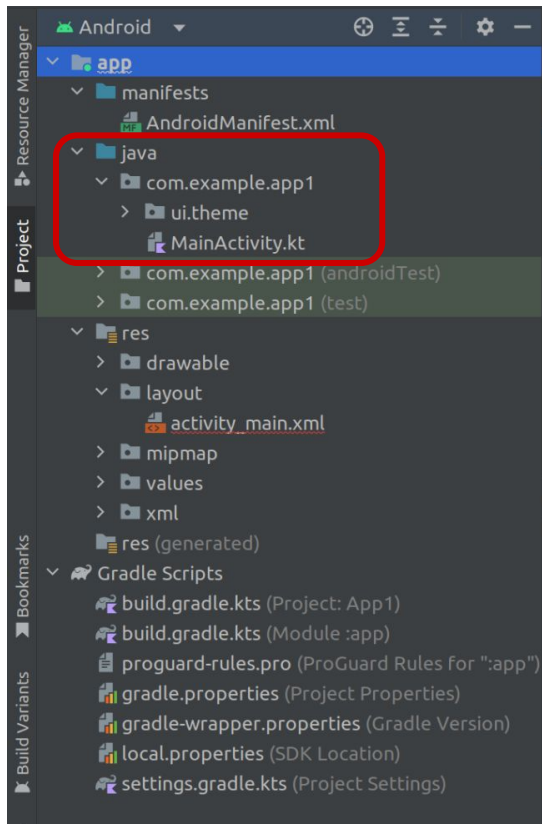
- AndroidManifest.xml
- Descreve informações essenciais do seu aplicativo

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">
    <uses-feature android:name="android.hardware.camera.any"/>
    <uses-permission android:name="android.permission.CAMERA"/>
```

```
<application
    android:name="com.chaquopython.android.PyApplication"
    android:allowBackup="true"
```



# Estrutura de um código app



- MainActivity.kt
- Implementação do código do aplicativo

```
package com.example.app1

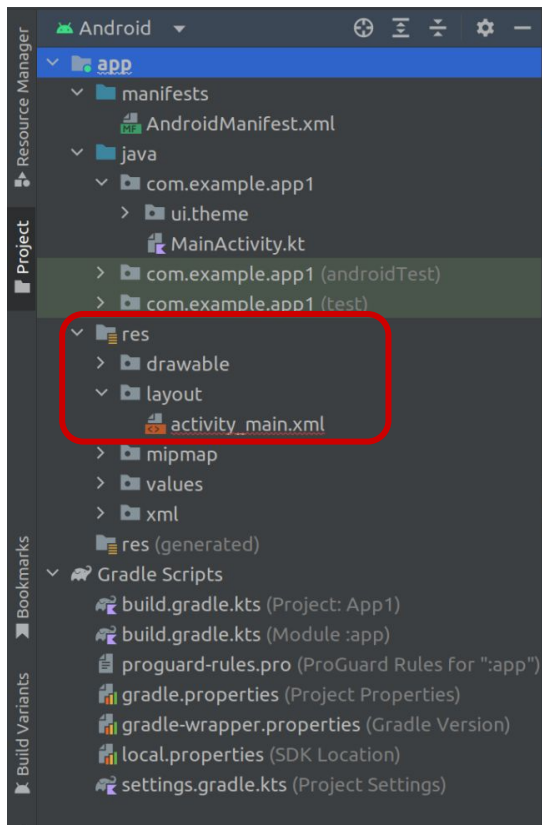
import ...

class MainActivity : ComponentActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContent {
            App1Theme {
                // A surface container using the 'background' color
                Surface(
                    modifier = Modifier.fillMaxSize(),
                    color = MaterialTheme.colorScheme.background
                ) {
                    Greeting( name: "Android")
                }
            }
        }
    }
}

@Composable
fun Greeting(name: String, modifier: Modifier = Modifier) {
    Text(
        text = "Hello $name!",
        modifier = modifier
    )
}

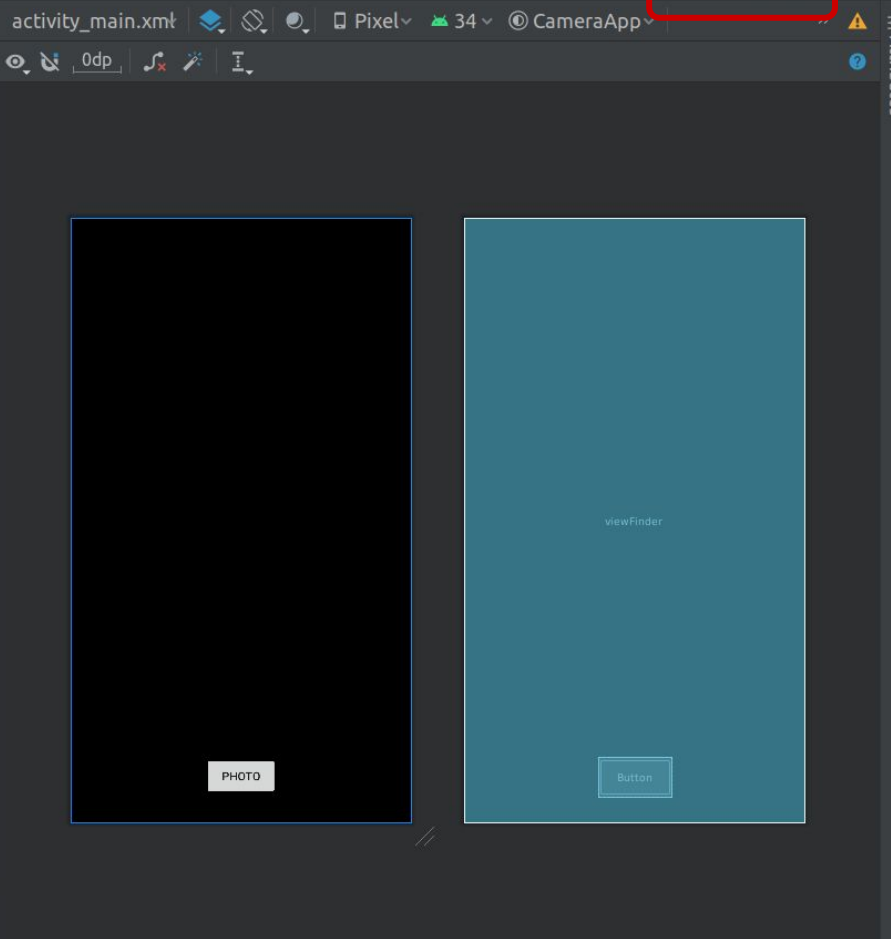
@Preview(showBackground = true)
@Composable
```

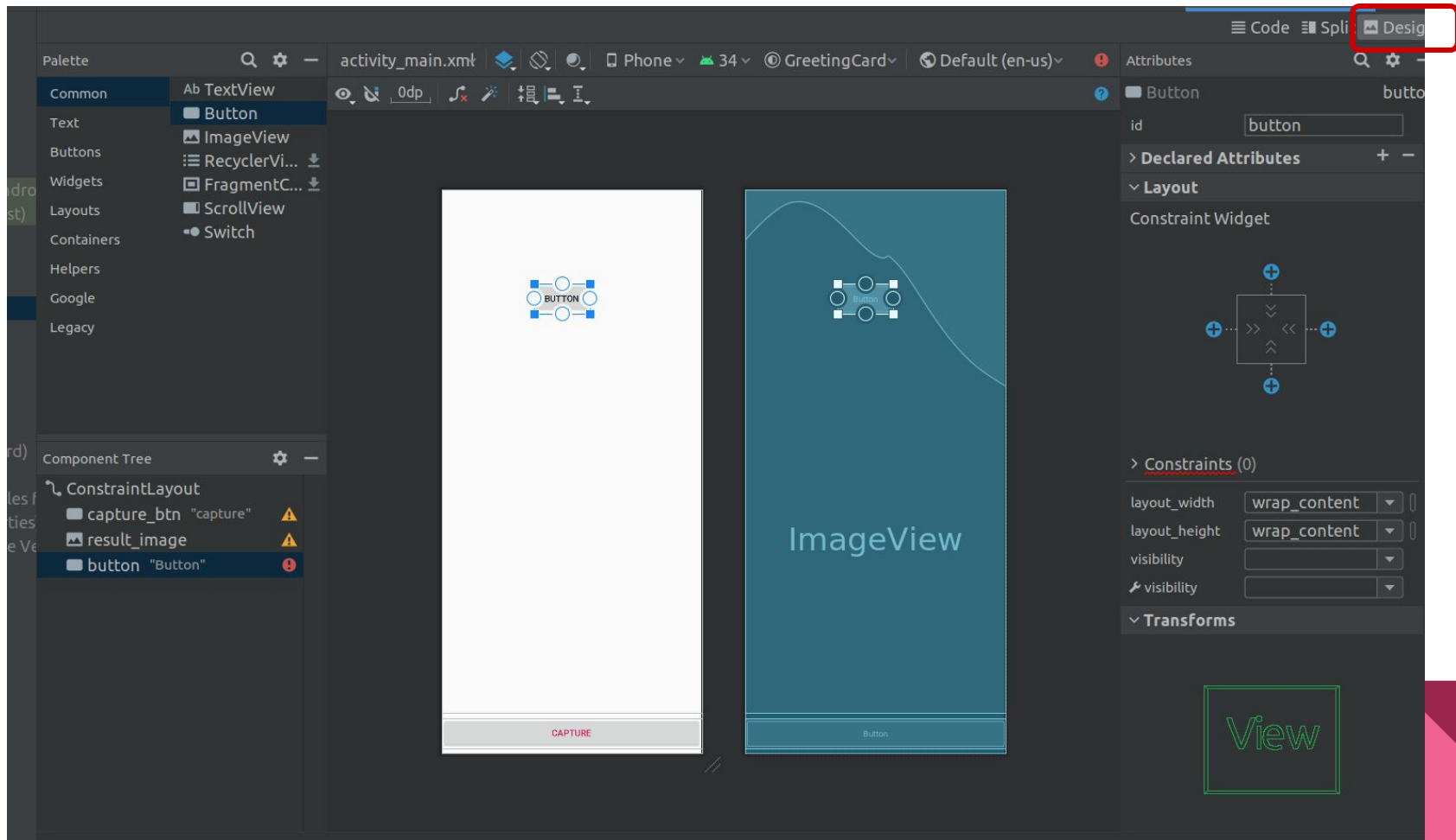
# Estrutura de um código app



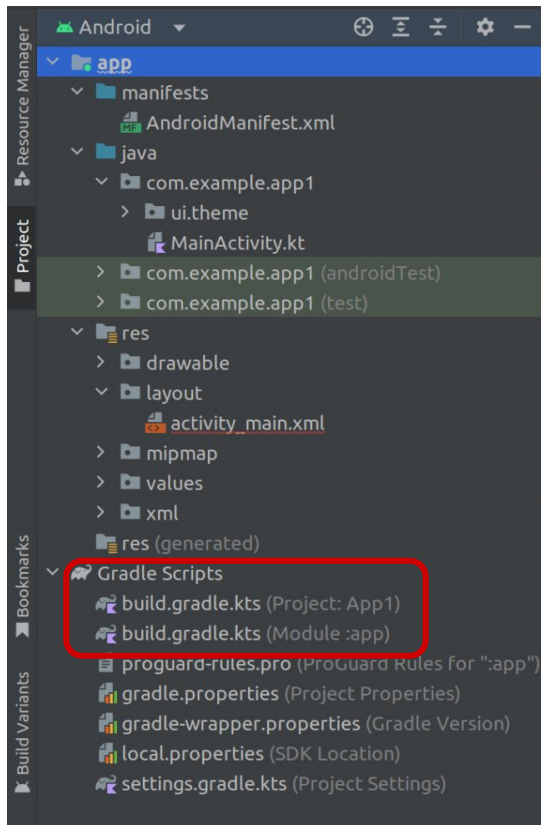
- activity\_main.xml
- Implementação do design do aplicativo

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res-auto"
3     xmlns:app="http://schemas.android.com/apk/res-auto"
4     xmlns:tools="http://schemas.android.com/tools"
5     android:layout_width="match_parent"
6     android:layout_height="match_parent"
7     tools:context=".MainActivity">
8
9     <Button
10         android:id="@+id/btnPhoto"
11         android:layout_width="wrap_content"
12         android:layout_height="wrap_content"
13         android:layout_marginBottom="32dp"
14         android:text="Photo"
15         app:layout_constraintBottom_toBottomOf="parent"
16         app:layout_constraintEnd_toEndOf="parent"
17         app:layout_constraintStart_toStartOf="parent" />
18
19     <androidx.camera.view.PreviewView
20         android:id="@+id/viewFinder"
21         android:layout_width="0dp"
22         android:layout_height="0dp"
23         app:layout_constraintBottom_toBottomOf="parent"
24         app:layout_constraintEnd_toEndOf="parent"
25         app:layout_constraintStart_toStartOf="parent"
26         app:layout_constraintTop_toTopOf="parent">
27     </androidx.camera.view.PreviewView>
28
29 </androidx.constraintlayout.widget.ConstraintLayout>
```





# Estrutura de um código app




- Gradle Scripts
- Configurações de build do projeto





```
// Top-level build file where you can add configuration options common to all sub-projects/modules.  
plugins {  
    id 'com.chaquo.python' version '14.0.2' apply false  
    id 'com.android.application' version '8.0.2' apply false  
    id 'com.android.library' version '8.0.2' apply false  
    id 'org.jetbrains.kotlin.android' version '1.7.20' apply false  
}
```




```
python {  
    version "3.8"  
    pip {  
        install "opencv-python"  
        install "numpy"  
        install "pillow"  
    }  
}
```




```
ndk {  
    abiFilters "armeabi-v7a", "x86"  
}
```


# Material de apoio




 **ReconhecimentoDeFormas** Public

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 main  1 branch  0 tags

 Go to file  Add file  Code

 **JoseLuiz432** Android git ignore 17dcc6 5 hours ago 6 commits

|   |                           |                        |              |
|---|---------------------------|------------------------|--------------|
|  | 00-setup-inicial-chaquopy | Inicial setup chaquopy | 5 hours ago  |
|  | .gitignore                | Android git ignore     | 5 hours ago  |
|  | README.md                 | Update README.md       | 2 months ago |

README.md

## Reconhecimento De Formas









Repositório de apoio às disciplinas do IME-USP:

- [MAC0447 - Análise e Reconhecimento de Formas](#)
- [MAC5749 - Análise e Reconhecimento de Formas](#)

O curso é baseado no livro [Shape Classification and Analysis](#).


Material de edições anteriores pode ser encontrado [aqui](#)


A disciplina faz parte das iniciativas do projeto [CVNLP PPI: Residência em TIC 13 - Heterogeneous Computing for Computational Vision and Natural Language Processing](#)





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<https://github.com/flassallyssa/ReconhecimentoDeFormas/>