

DISEÑO Y DESARROLLO DE GUI (ACTIVITY)

LAYOUTS - LIENZOS

CONTENEDORES DE COMPONENTES

CREAR UN NUEVO PROYECTO ANDROID

CAMBIAR EL CONTENEDOR

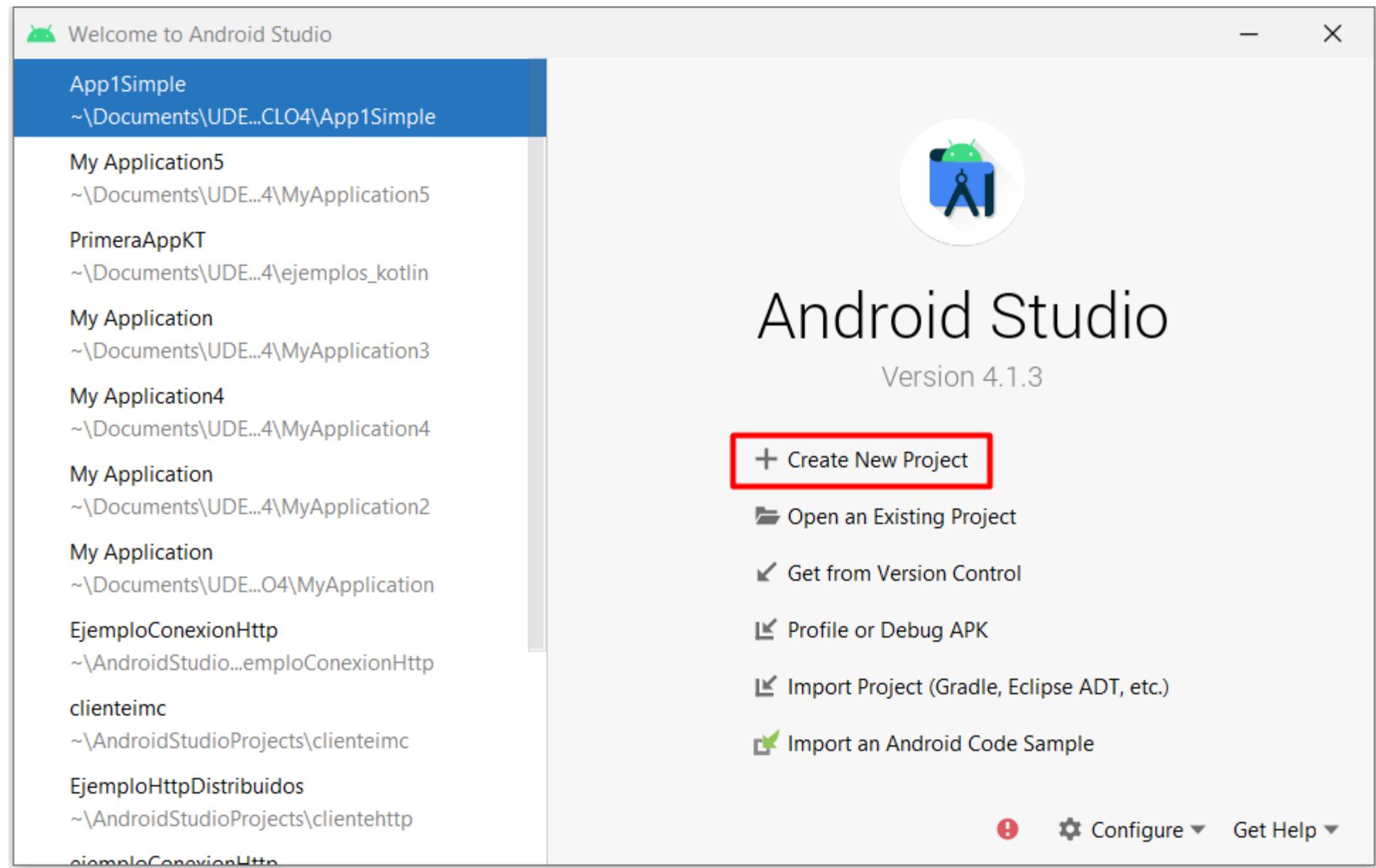
SELECCIONAR LAYOUT LINEARLAYOUT

DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout

No puede ejecutar la App en el emulador

Al instalar el APK en el Emulador

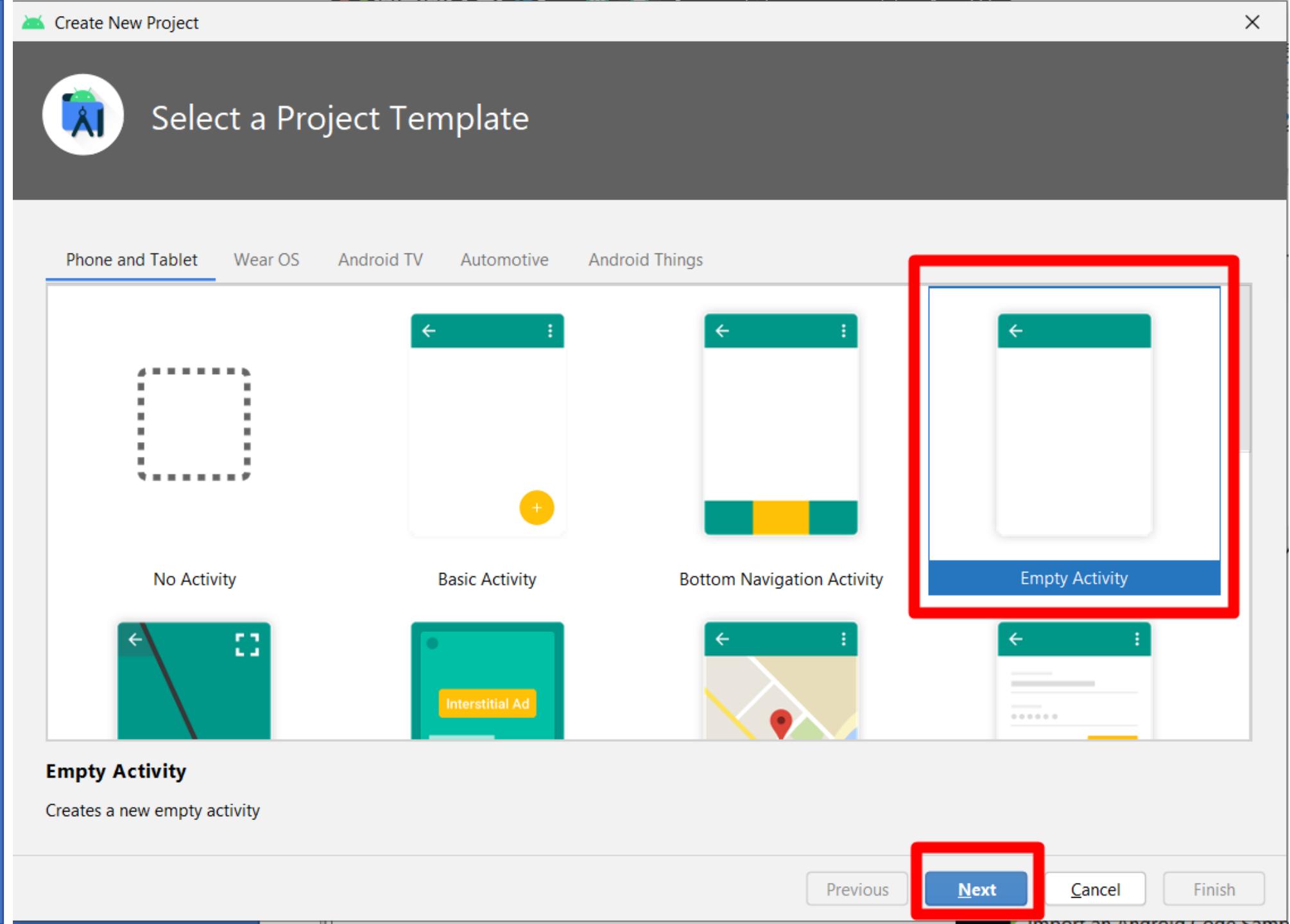


DISEÑO DE GUI EN ANDROID

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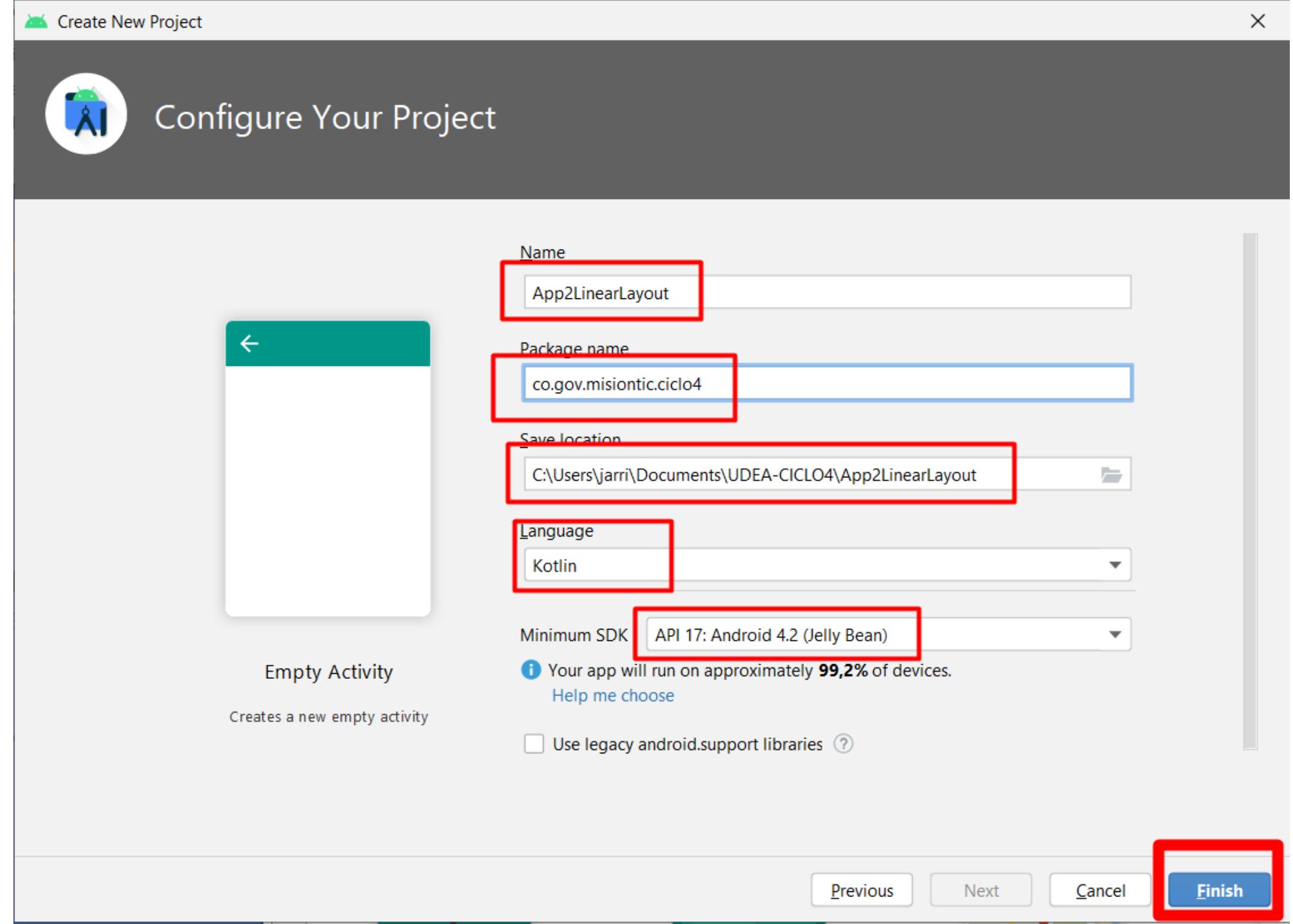


DISEÑO DE GUI EN ANDROID

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DISEÑO DE GUI EN ANDROID

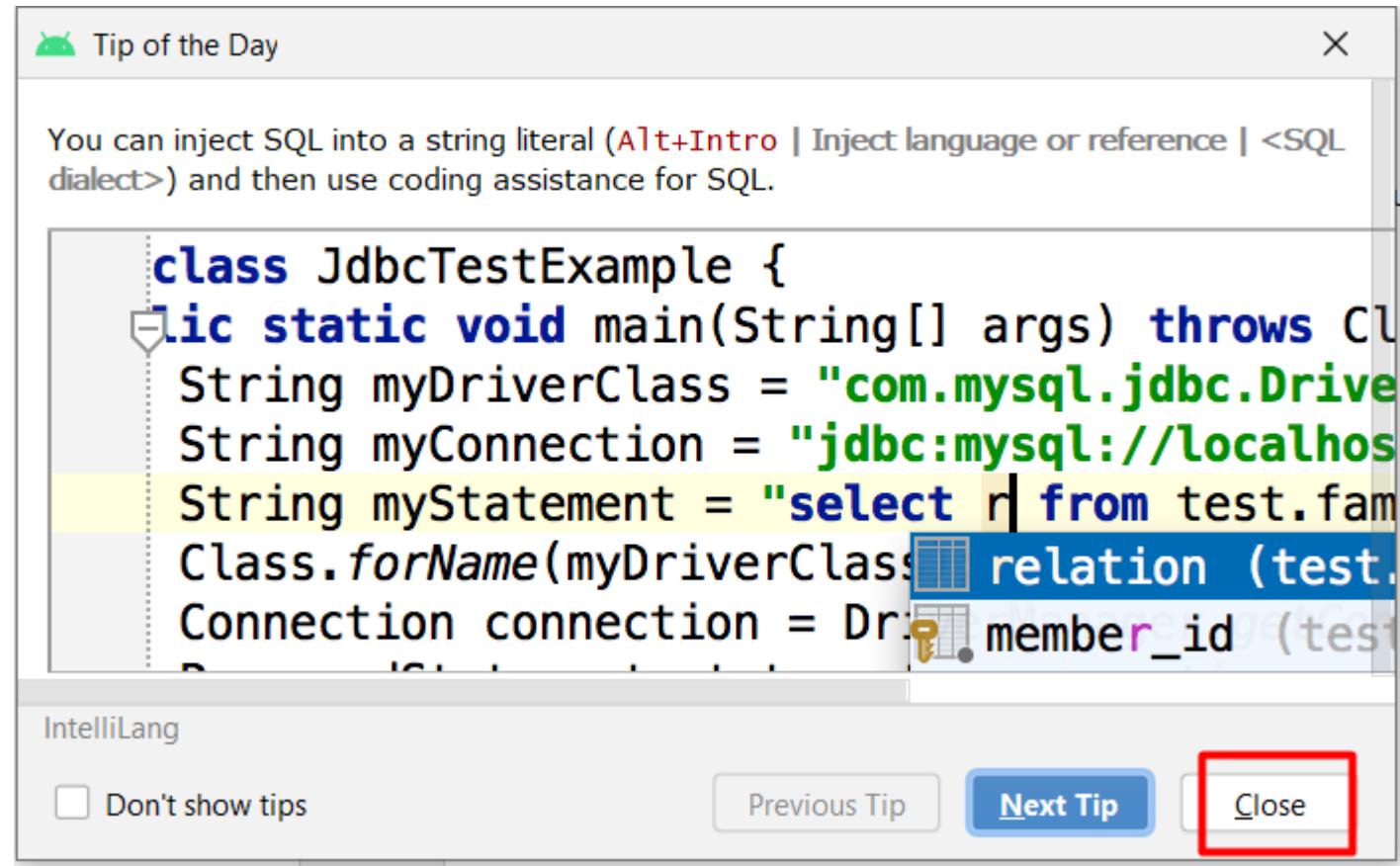
EJEMPLO 2

USO DE

LinearLayout

No puede ejecutar
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emulador

Al instalar el APK en el Emulador



DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout

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Al instalar el APK en el Emulador

The screenshot shows the Android Studio interface with the following details:

- File Bar:** File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, Help, App2LinearLayout.
- Toolbar:** Includes icons for file operations, navigation, and device selection (Genymobile Google Pixel 3).
- Project Structure:** Shows the project tree with app, manifests, Java (co.gov.misiontic.ciclo4), MainActivity, and resources (res, layout).
- Main Activity (MainActivity.kt):** Contains the following code:

```
package co.gov.misiontic.ciclo4

import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
    }
}
```

A red box highlights the tab bar for MainActivity.kt, and a red arrow points from the error in the code to the corresponding line in the XML layout file.
- Layout File (activity_main.xml):** Contains the following code:

```
<?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">
```

A red box highlights the tab bar for activity_main.xml, and a red arrow points from the error in the XML to the corresponding line in the Java code.
- Bottom Navigation:** TODO, Terminal, Build, Logcat, Profiler, Database Inspector, Event Log, Layout Inspector.
- Status Bar:** Gradle sync finished in 26 s 420 ms (8 minutes ago), 3:8 CRLF, UTF-8, 4 spaces.

DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout

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The screenshot shows the Android Studio interface with the project 'App2LinearLayout' open. The 'AndroidManifest.xml' file is selected in the top navigation bar and the main editor area. The code in the manifest is highlighted with red boxes:

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="co.gov.misiontic.ciclo4">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="App2LinearLayout"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.App2LinearLayout">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
```

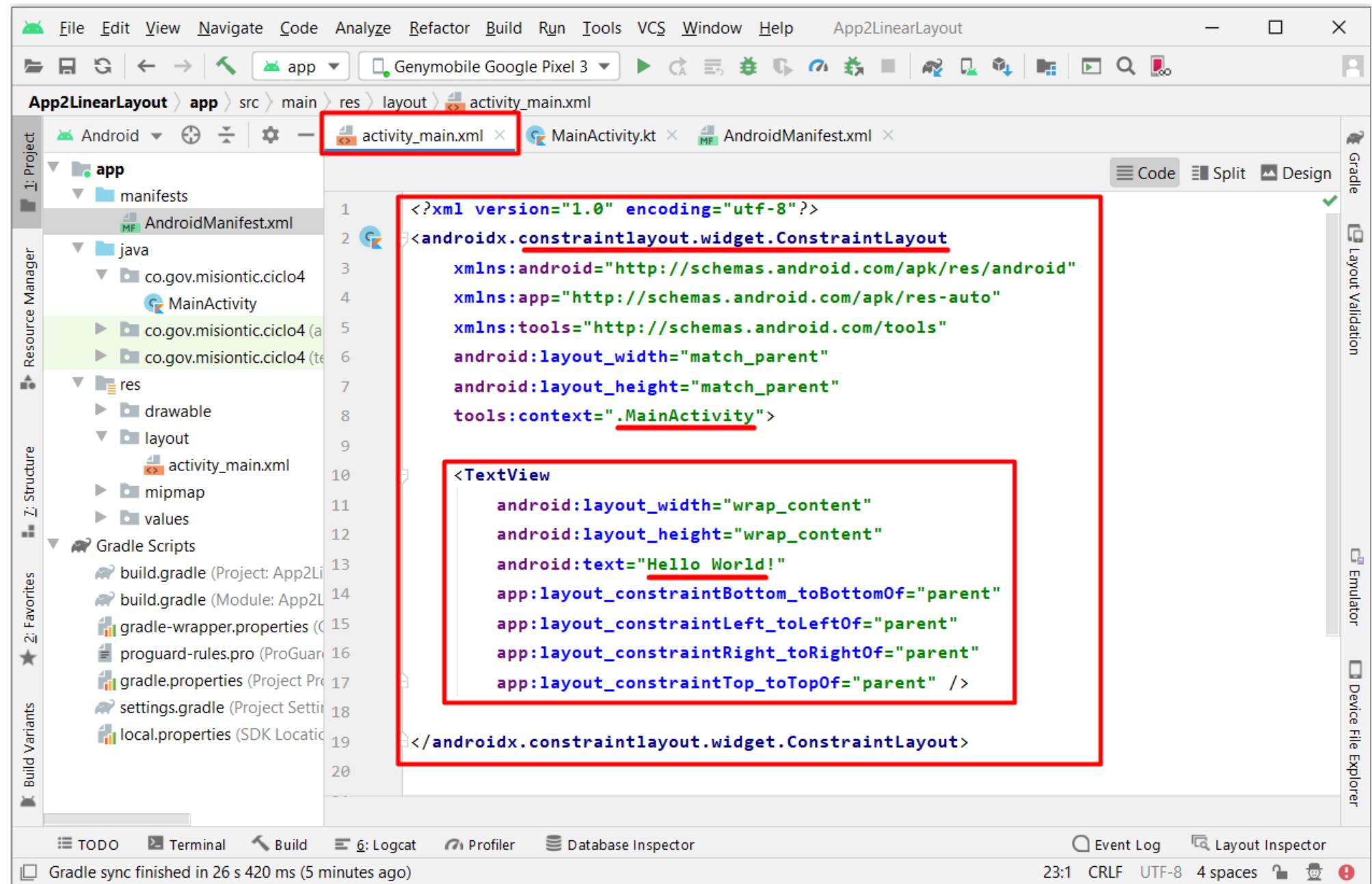
The highlighted sections include the package declaration, the application element with its attributes, and the activity element with its intent filter. The code editor shows syntax highlighting for XML tags and attributes.

DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout

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The screenshot shows the Android Studio interface with the following details:

- Project Structure:** The project is named "App2LinearLayout". The "app" module contains "AndroidManifest.xml", "MainActivity.kt", and "activity_main.xml".
- Code Editor:** The "activity_main.xml" file is open. The XML code is highlighted with syntax coloring.
- XML Content:**

```
<?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=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

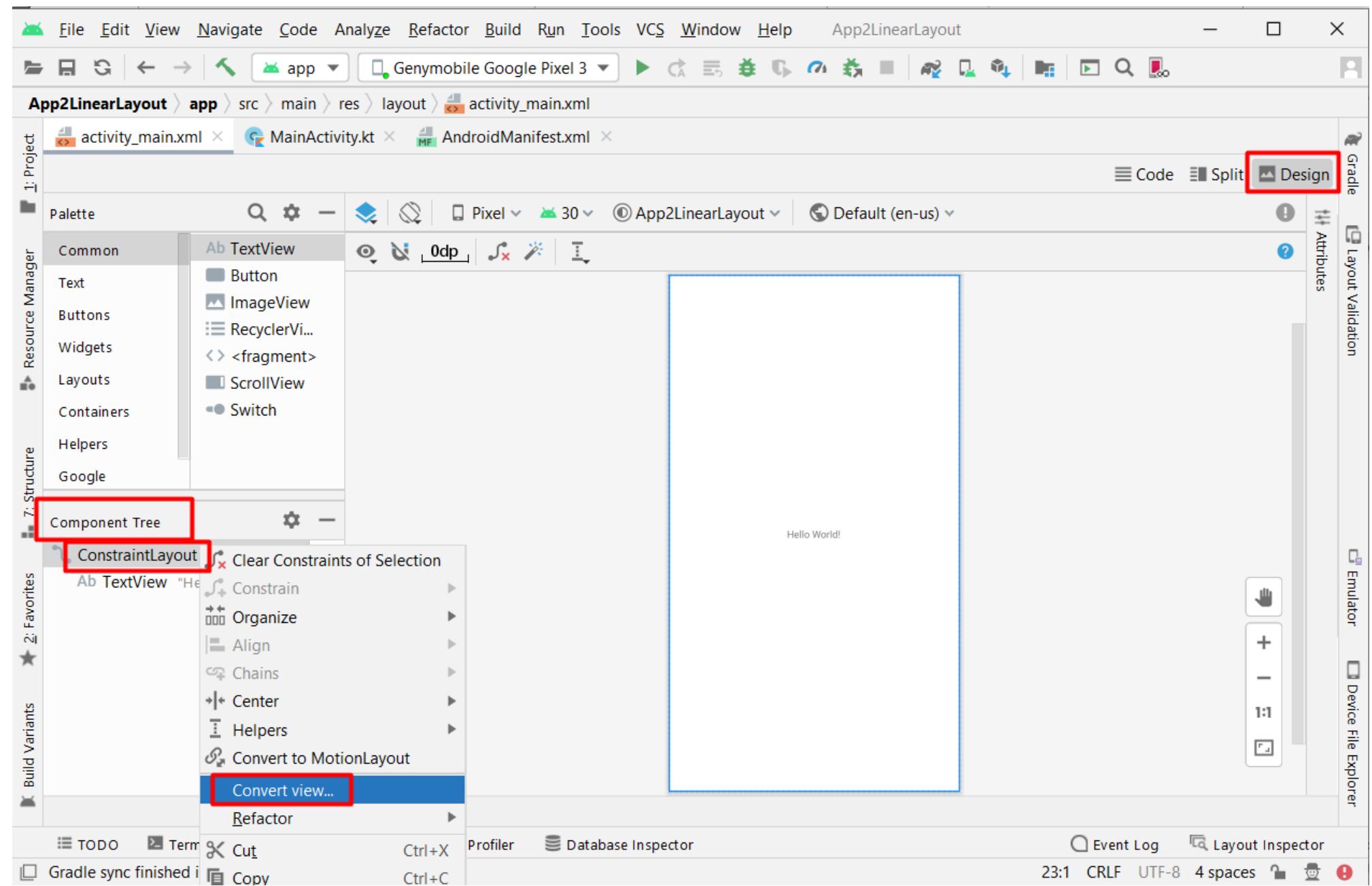
</androidx.constraintlayout.widget.ConstraintLayout>
```
- Toolbars and Panels:** The top bar includes File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, Help, and App2LinearLayout. The bottom bar includes TODO, Terminal, Build, Logcat, Profiler, Database Inspector, Event Log, Layout Inspector, and other developer tools.
- Status Bar:** The status bar at the bottom indicates "Gradle sync finished in 26 s 420 ms (5 minutes ago)" and "23:1 CRLF UTF-8 4 spaces".

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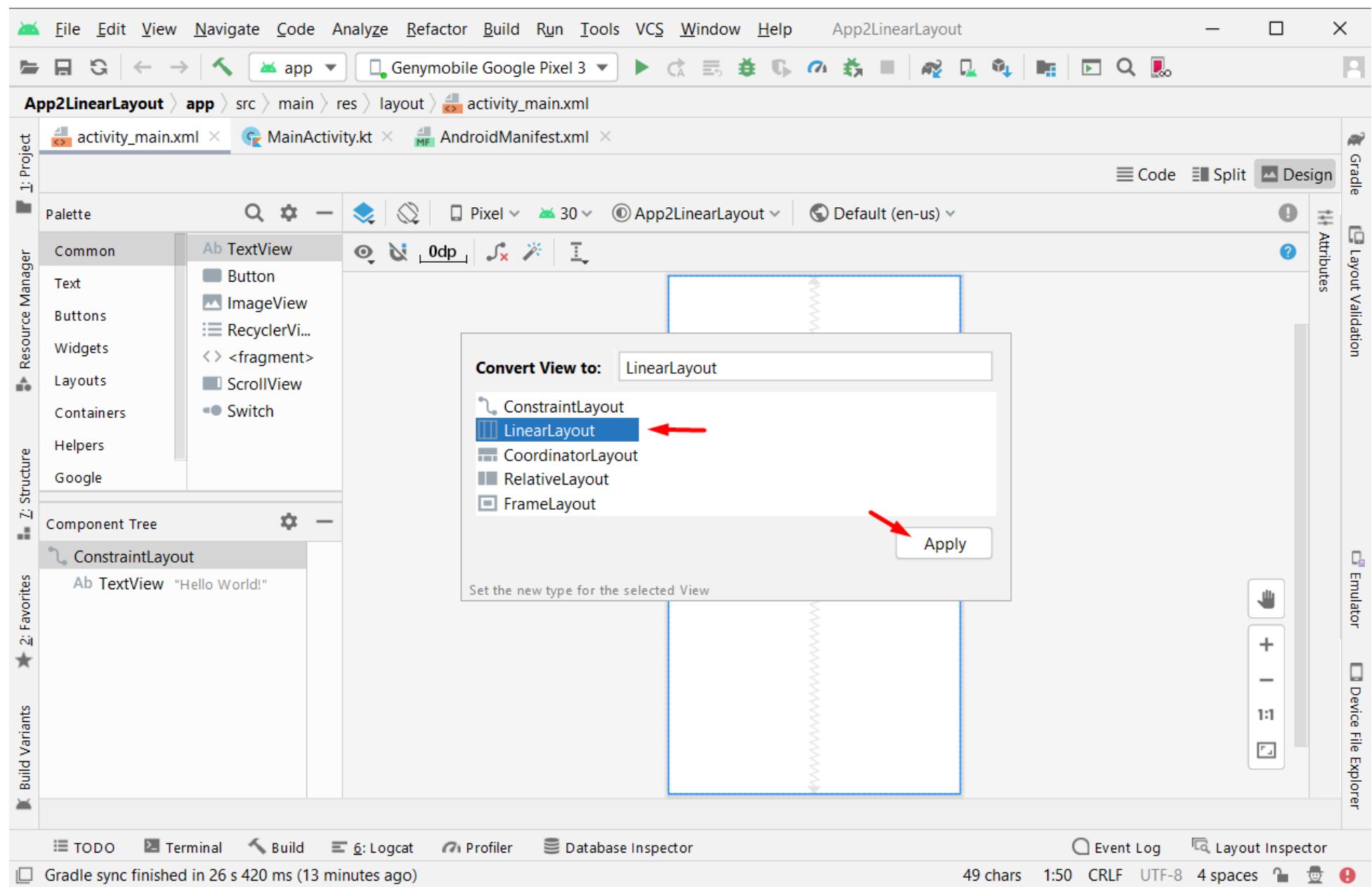


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The screenshot shows the Android Studio interface with the following details:

- Top Bar:** File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, Help, App2LinearLayout.
- Toolbar:** Includes icons for file operations like Open, Save, Find, and Run, along with device and emulator selection.
- Project Tab:** Shows the project structure with files: activity_main.xml, MainActivity.kt, and AndroidManifest.xml.
- Code Editor:** Displays the XML code for activity_main.xml. The root element <LinearLayout> and its closing tag </LinearLayout> are highlighted with red boxes.
- Design Tab:** Shows a preview of the layout with a single TextView containing the text "Hello World!". This preview area is also highlighted with a red box.
- Toolbars:** On the right side, there are several toolbars: Palette, Attributes, Layout Validation, Emulator, and Device File Explorer.
- Bottom Navigation:** Includes tabs for TODO, Terminal, Build, Logcat, Profiler, Database Inspector, Event Log, and Layout Inspector.
- Status Bar:** Shows the message "Gradle sync finished in 26 s 420 ms (15 minutes ago)" and system information like "3:5 CRLF UTF-8 4 spaces".

Annotations:

- A red box highlights the "Split" tab in the top right corner of the interface.
- A red box highlights the <LinearLayout> tag in the code editor.
- A red box highlights the "Hello World!" text in the design preview.
- A red box highlights the </LinearLayout> tag in the code editor.
- A red box highlights the "Component Tree" button in the bottom right of the design tab.

Text in the code editor:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    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=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!" />

</LinearLayout>
```

Text in the design preview:

Hello World!

Text in the bottom note:

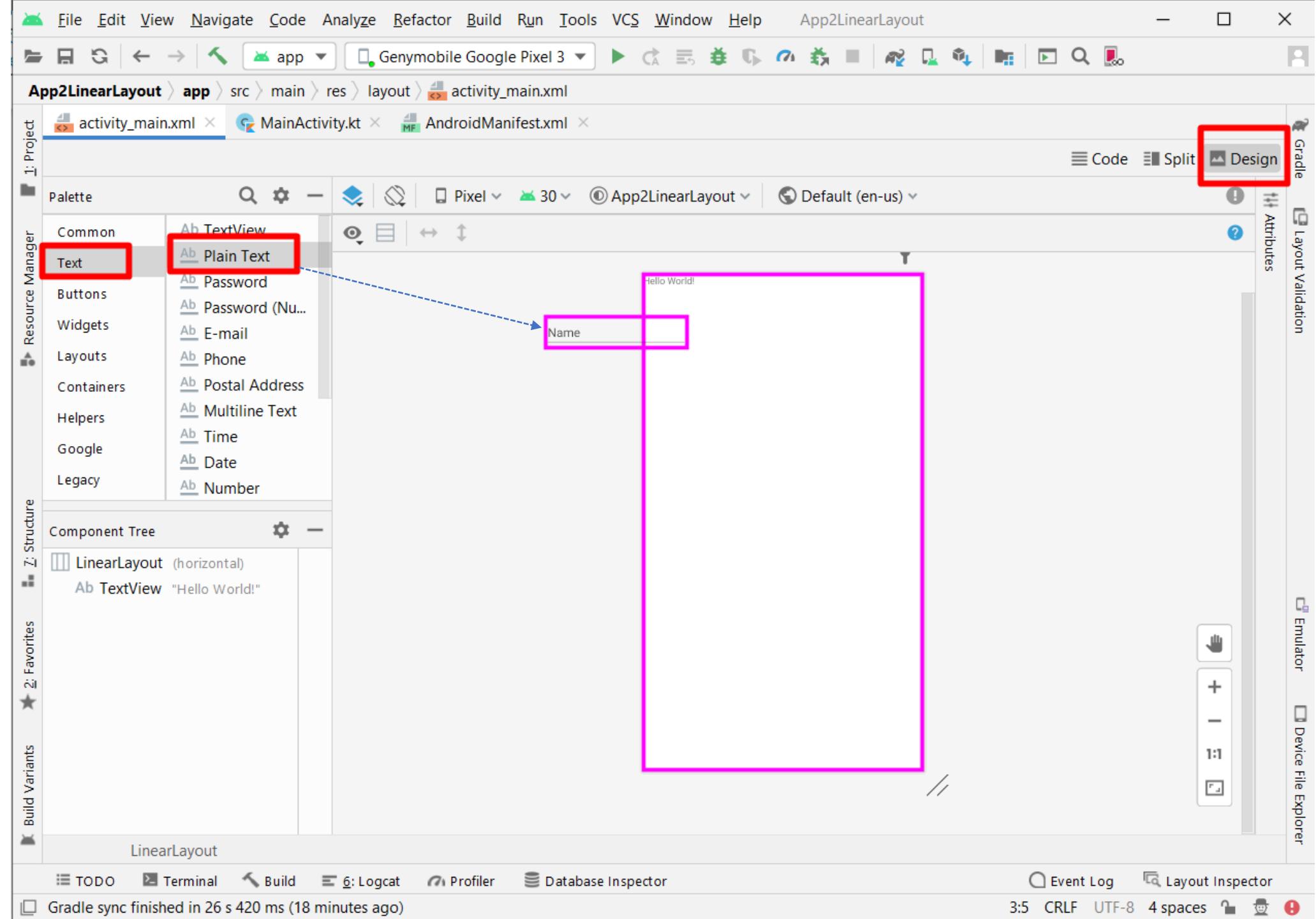
Este Layout tiene un comportamiento horizontal, es decir, cada componente que agregamos a él, este se coloca justo al lado del anterior

DISEÑO DE GUI EN ANDROID

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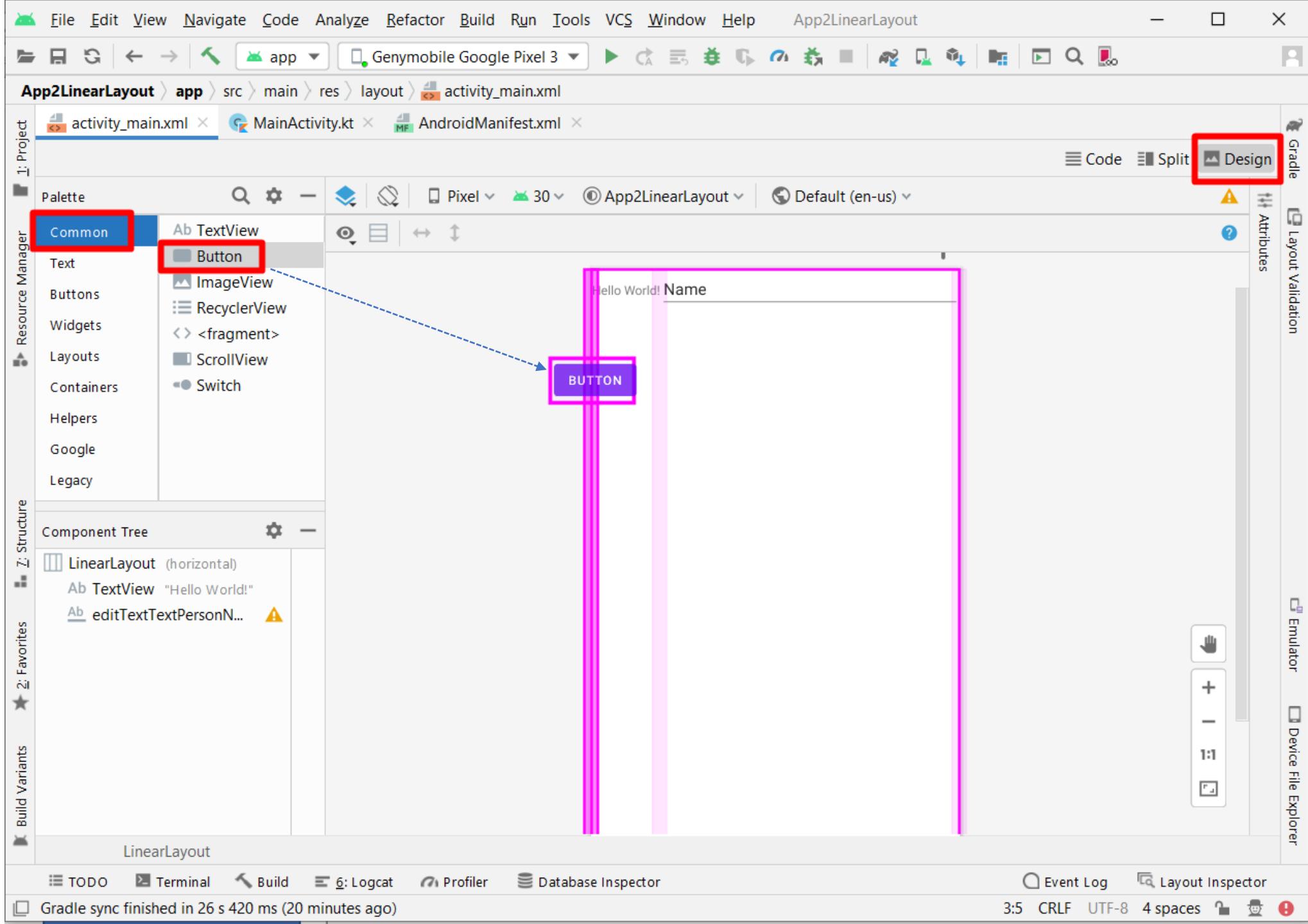


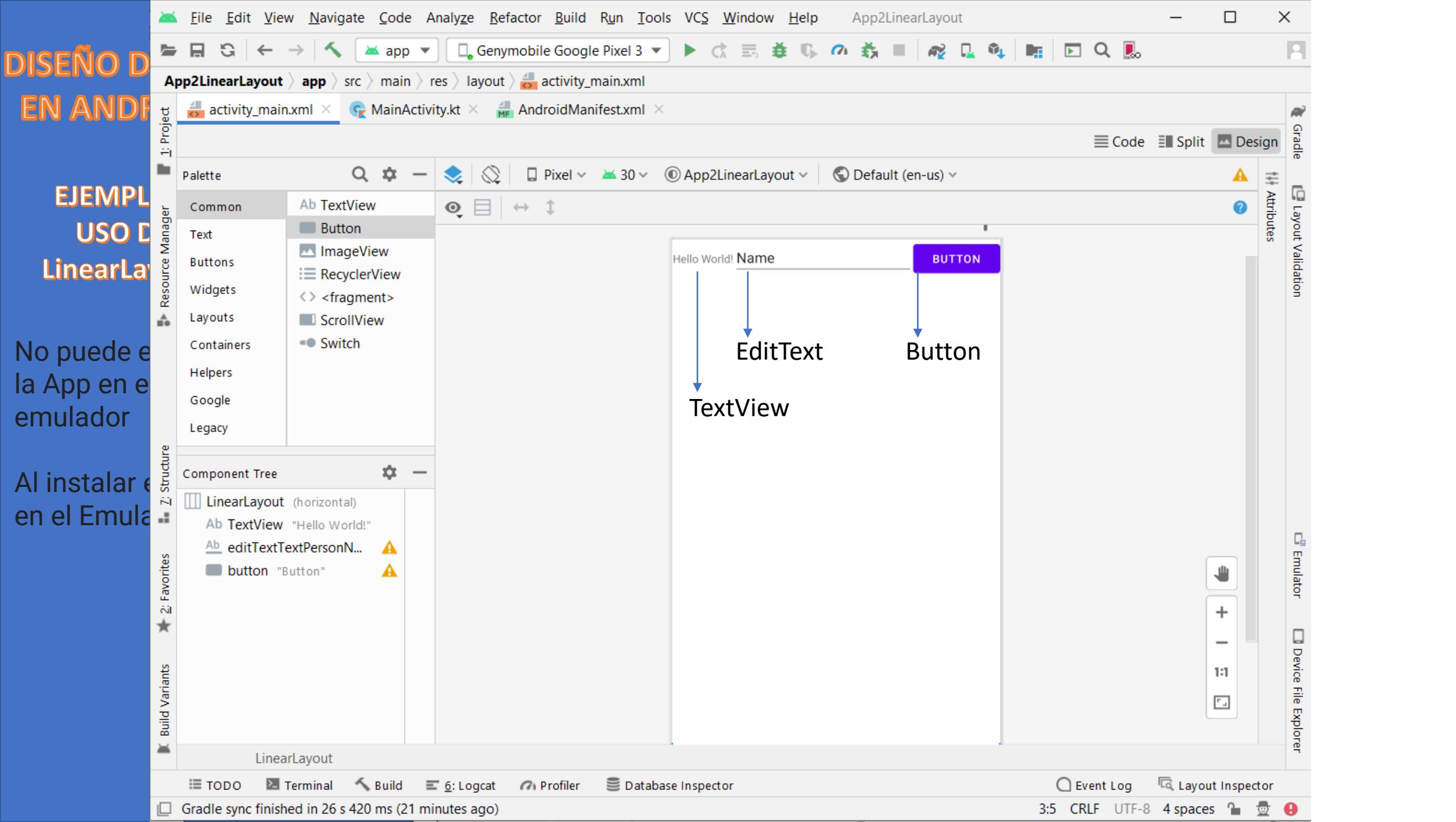
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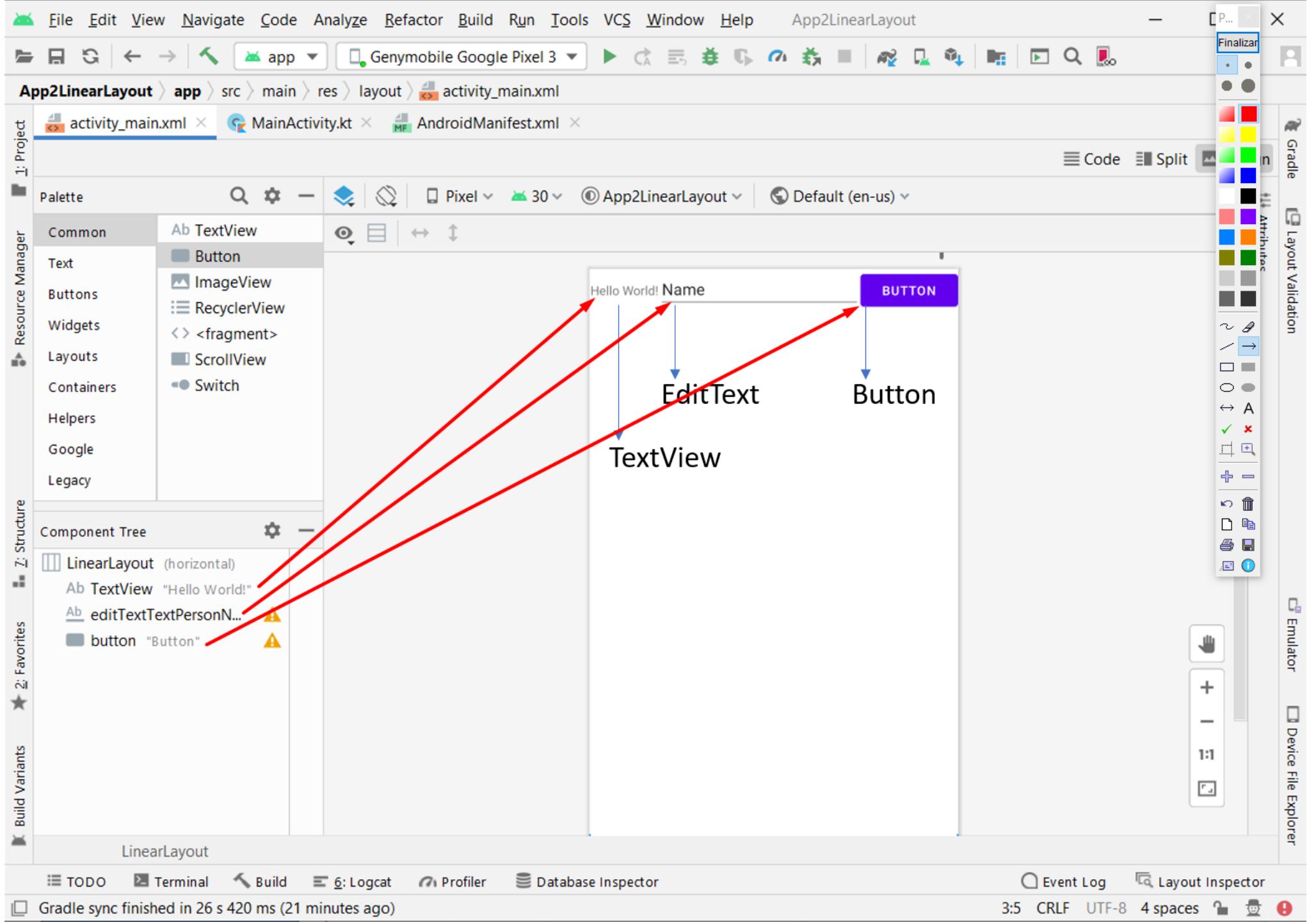


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EJEMPLO 2 USO DE LinearLayout

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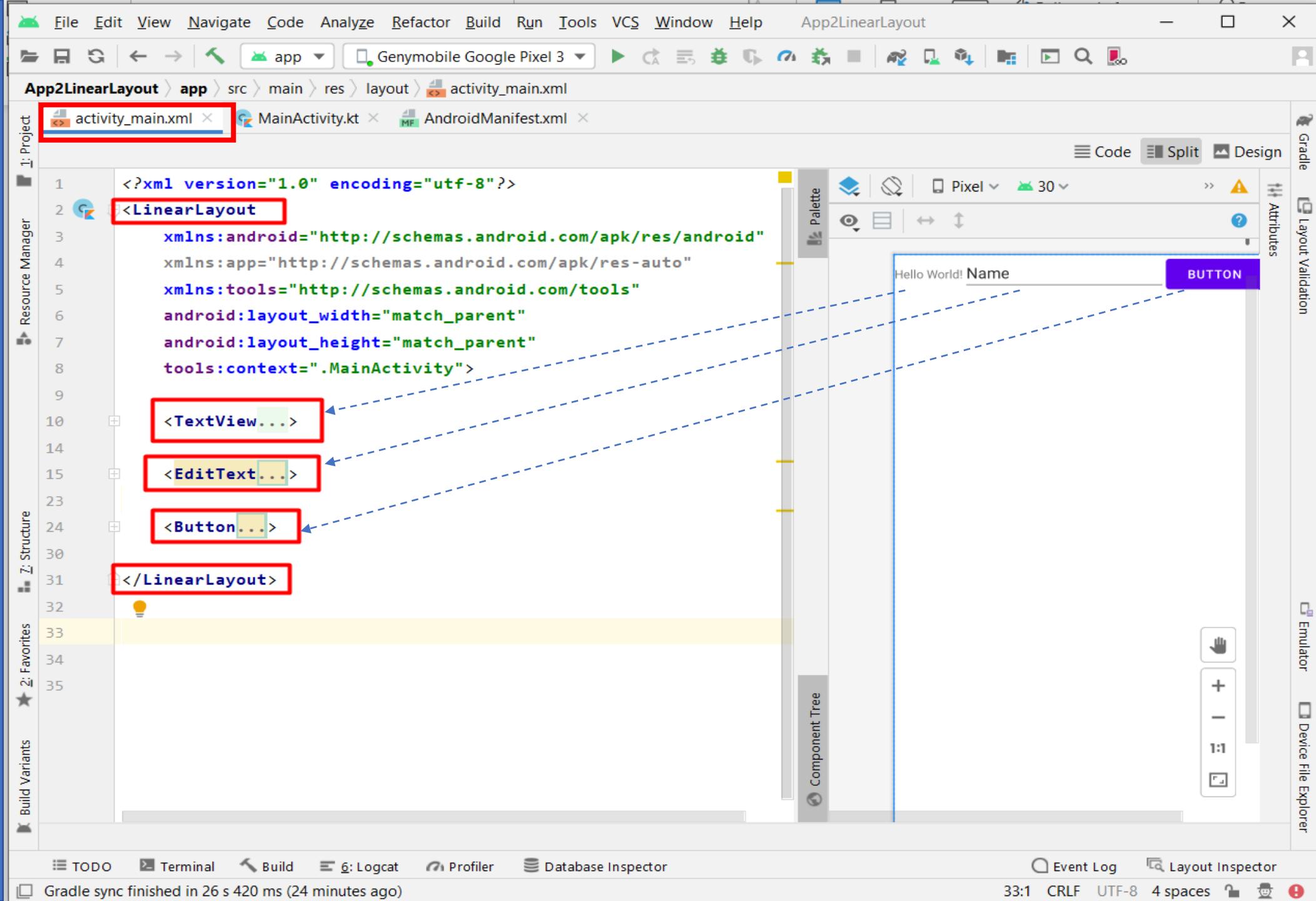


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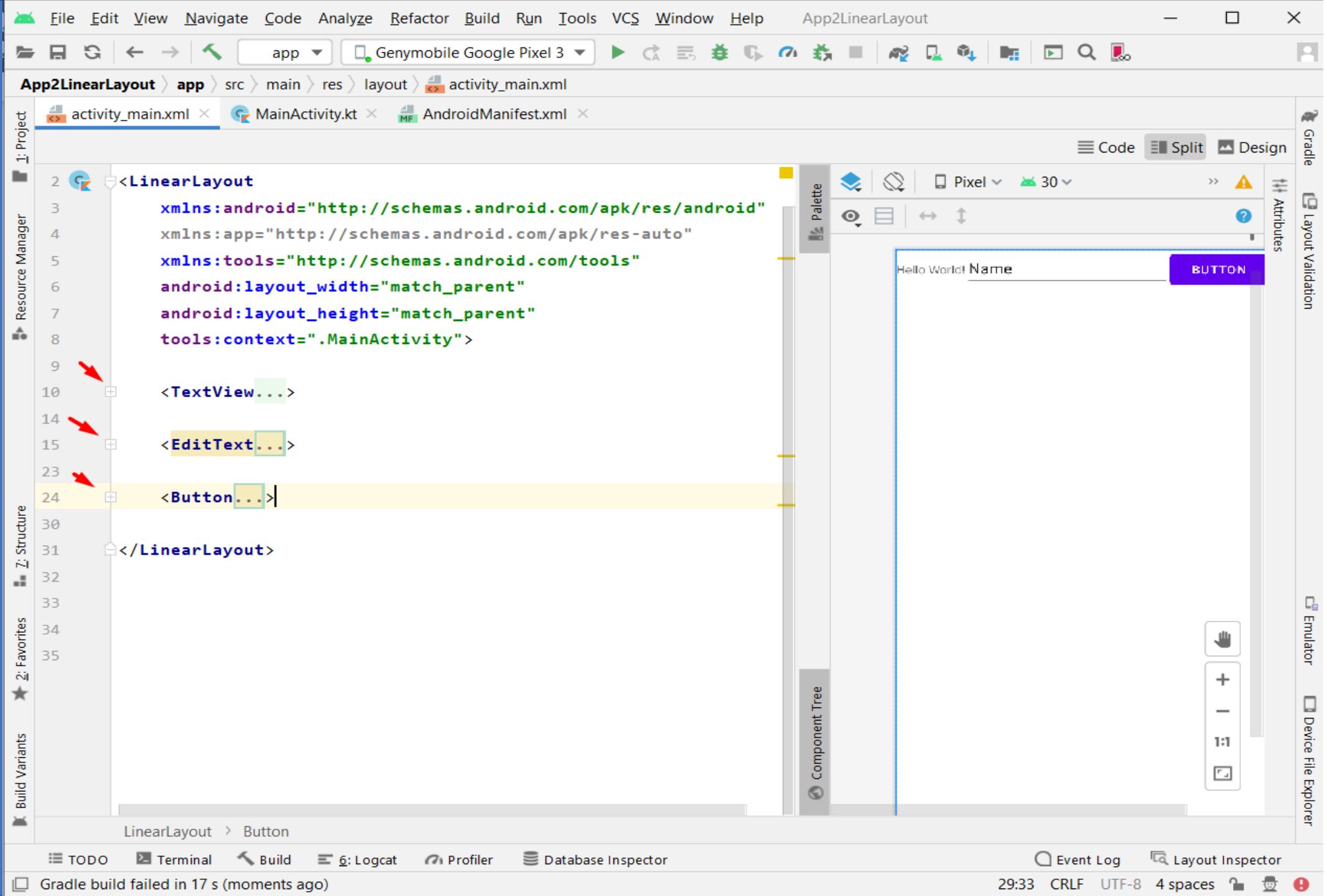


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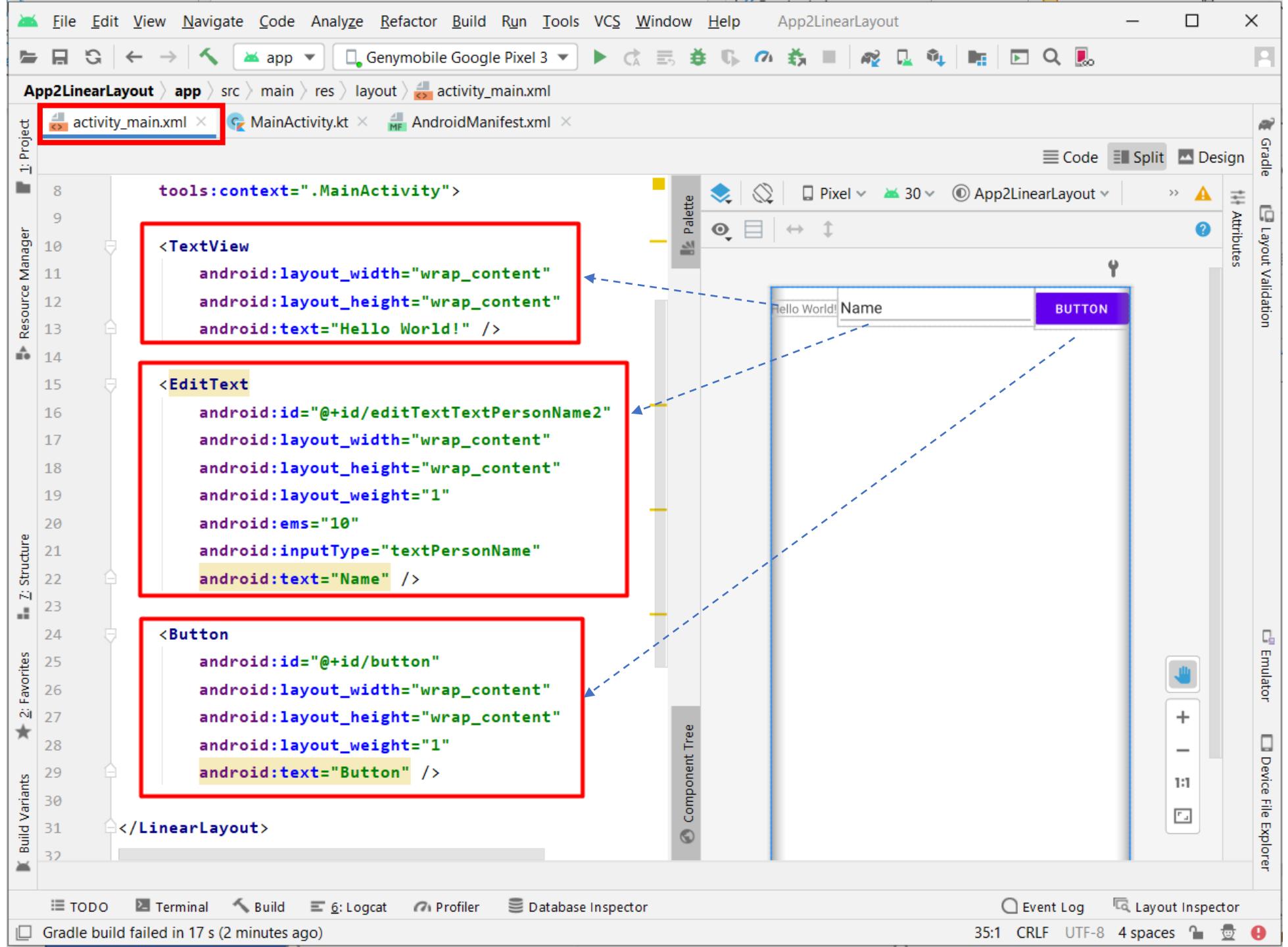


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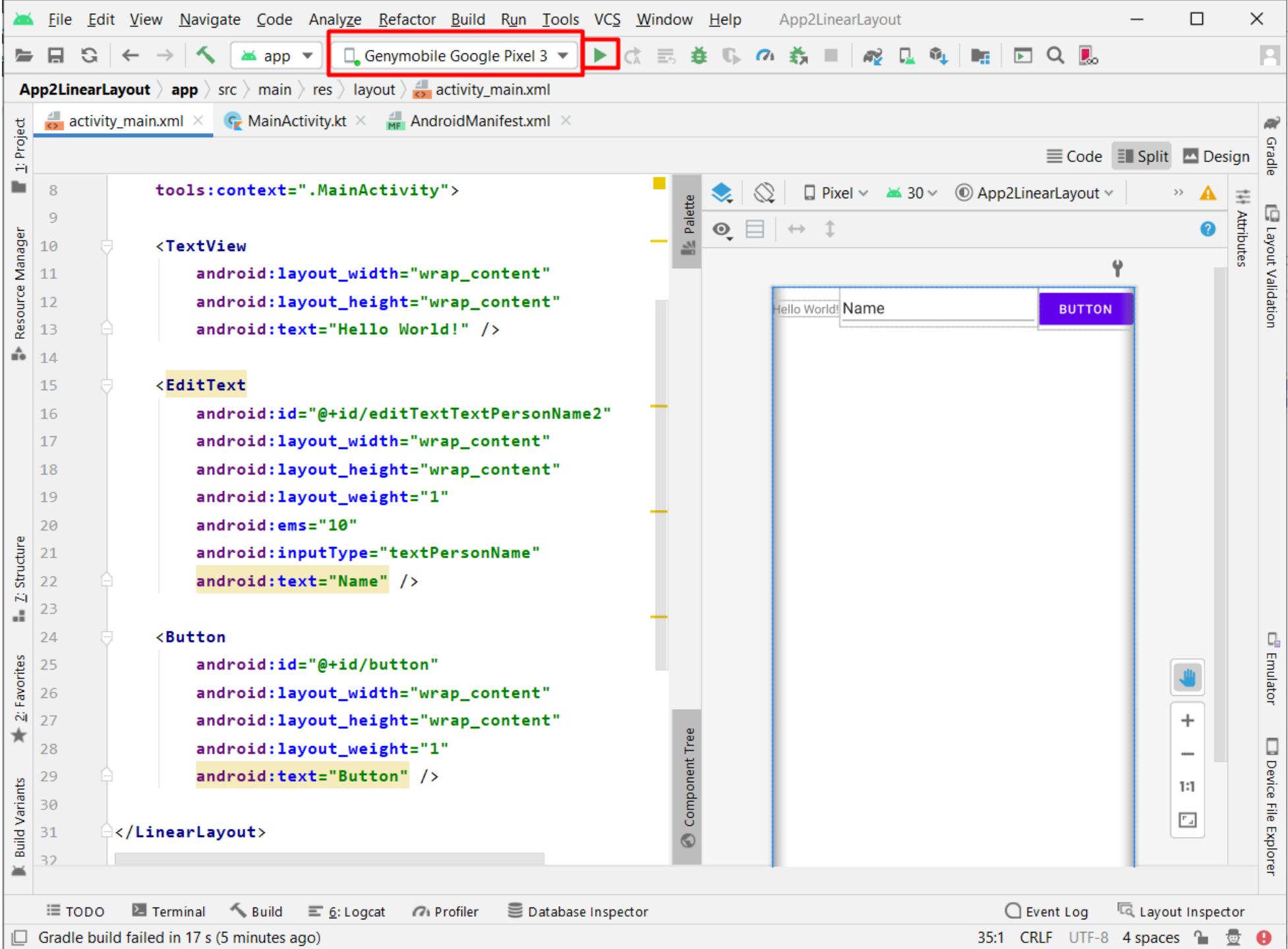


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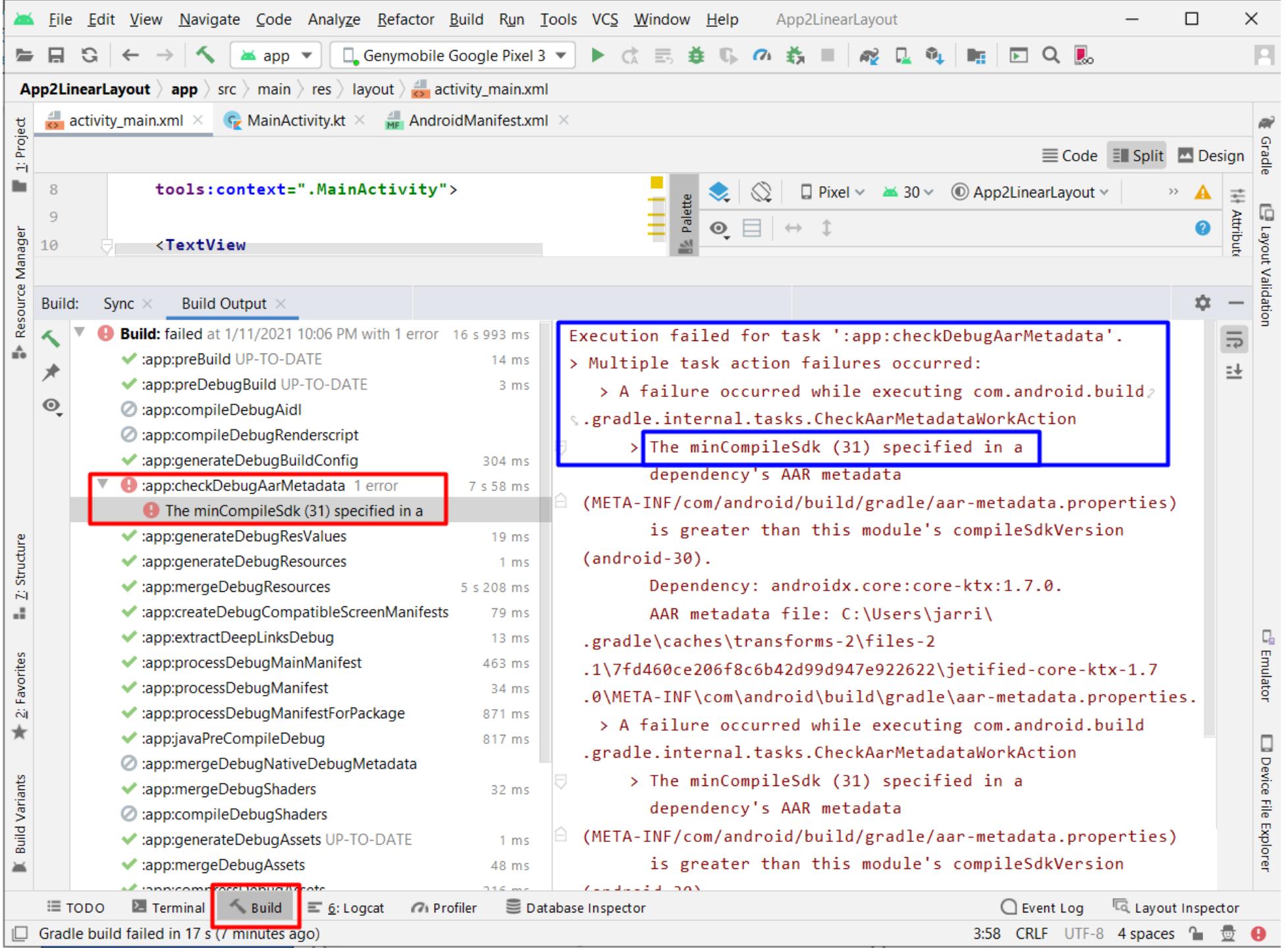


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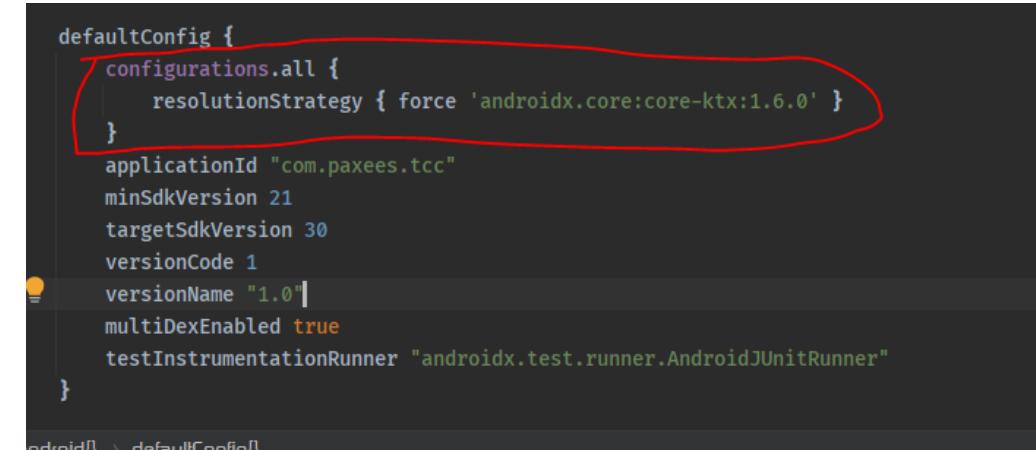
PROBLEMAS

No puede ejecutar la App en el emulador

- ERROR DE minCompileSdk (31)

```
configurations.all {
    resolutionStrategy { force 'androidx.core:core-ktx:1.6.0' }
}

7   android {
8       compileSdkVersion 30
9       buildToolsVersion "30.0.3"
10
11      defaultConfig {
12          configurations.all {
13              resolutionStrategy { force 'androidx.core:core-ktx:1.6.0' }
14          }
15          applicationId "co.gov.misiontic.ciclo4"
16          minSdkVersion 17
17          targetSdkVersion 30
18          versionCode 1
19          versionName "1.0"
20
21          testInstrumentationRunner "androidx.test.runner.AndroidJUnitRunner"
22      }
23  }
```



A screenshot of the Android Studio code editor showing the build.gradle file. The code is identical to the one above, but specific sections are highlighted with red boxes. The first red box highlights the entire configurations.all block. The second red box highlights the nested resolutionStrategy block within the defaultConfig block. A yellow warning icon is visible on the left margin next to the second red box.

```
defaultConfig {
    configurations.all {
        resolutionStrategy { force 'androidx.core:core-ktx:1.6.0' }
    }
    applicationId "com.paxees.tcc"
    minSdkVersion 21
    targetSdkVersion 30
    versionCode 1
    versionName "1.0"
    multiDexEnabled true
    testInstrumentationRunner "androidx.test.runner.AndroidJUnitRunner"
}
```

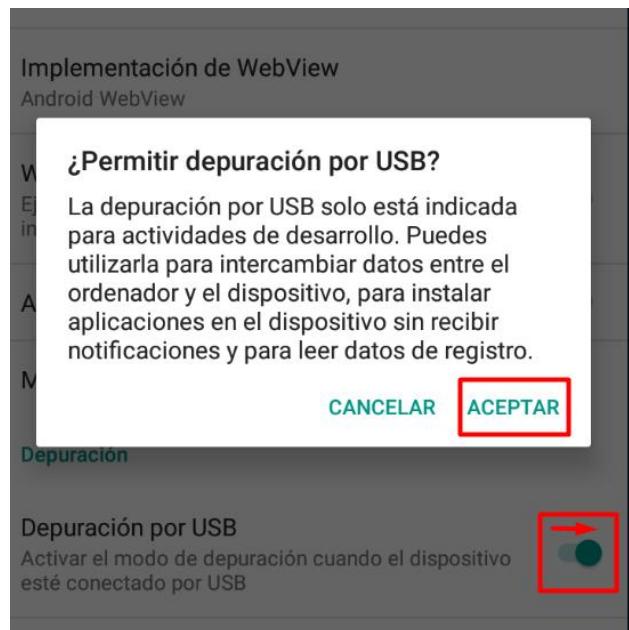
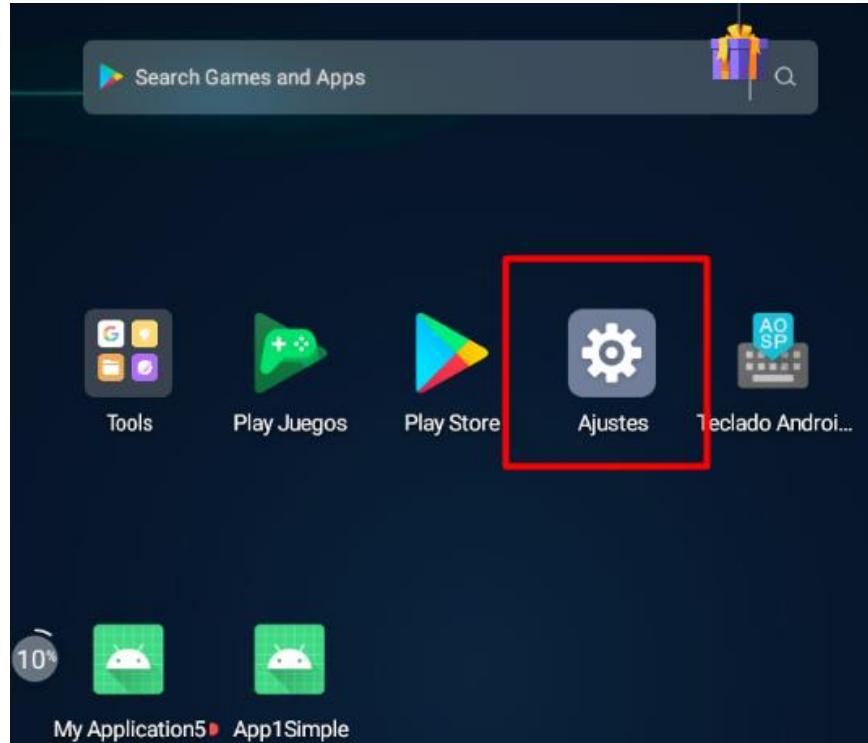
build.gradle

DISEÑO DE GUI EN ANDROID

PROBLEMAS

No puede ejecutar la App en el emulador

Al instalar el APK en el Emulador



Información del tablet
Android 7.1.2

Versión del kernel
4.0.9
cjw@mv-dev1 #1634
Tue May 25 11:20:57 CST 2021

Número de compilación
samsung-user 7.1.2 20171130.276299 release-keys

Opciones de desarrollo

Verificar aplicaciones por USB
Comprueba las aplicaciones instaladas mediante ADB/ADT para detectar comportamientos dañinos

A toggle switch is shown in the 'on' position, indicated by a green circle, and is enclosed in a red box.

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The screenshot shows the Android Studio interface with the following details:

- Project Structure:** The project is named "App2LinearLayout". The "app" module is selected.
- Resource Manager:** Shows the app module structure: manifests, java (containing co.gov.misiontic.ciclo4), res (containing drawable, layout, mipmap, values), and res (generated).
- Gradle Scripts:** The build.gradle file for the module is open.
- Code Editor:** The build.gradle file contains configuration code. A red box highlights the following section:

```
defaultConfig {
    configurations.all {
        resolutionStrategy { force 'androidx.core:core-ktx:1.6.0' }
    }
}
```
- Toolbars and Status Bar:** The top bar shows the menu (File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, Help) and the title "App2LinearLayout - build.gradle (:app)". The status bar at the bottom shows "Gradle build failed in 17 s (12 minutes ago)" and "51:1 CRLF UTF-8 4 spaces".
- Bottom Navigation:** Includes tabs for TODO, Terminal, Build, Logcat, Profiler, Database Inspector, Event Log, and Layout Inspector.

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The screenshot shows the Android Studio interface with the following details:

- File Bar:** File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, Help.
- Toolbar:** Includes icons for file operations like Open, Save, and Build, along with navigation and search tools.
- Project Structure:** Shows the project tree under "app".
- Build Variants:** Shows "Favorites" selected.
- Code Editor:** Displays the `build.gradle` file for the app module. A message at the top says: "Gradle files have changed since last project sync. A project sync may be necessary for Sync Now or Ignore these changes". The code includes:

```
plugins {
    id 'com.android.application'
    id 'kotlin-android'

}

android {
    compileSdkVersion 30
    buildToolsVersion "30.0.3"
}

applicationId "co.gov.misiontic.ciclo4"
minSdkVersion 17
targetSdkVersion 30
versionCode 1
versionName "1.0"

testInstrumentationRunner "androidx.test.runner.AndroidJUnitRunner"

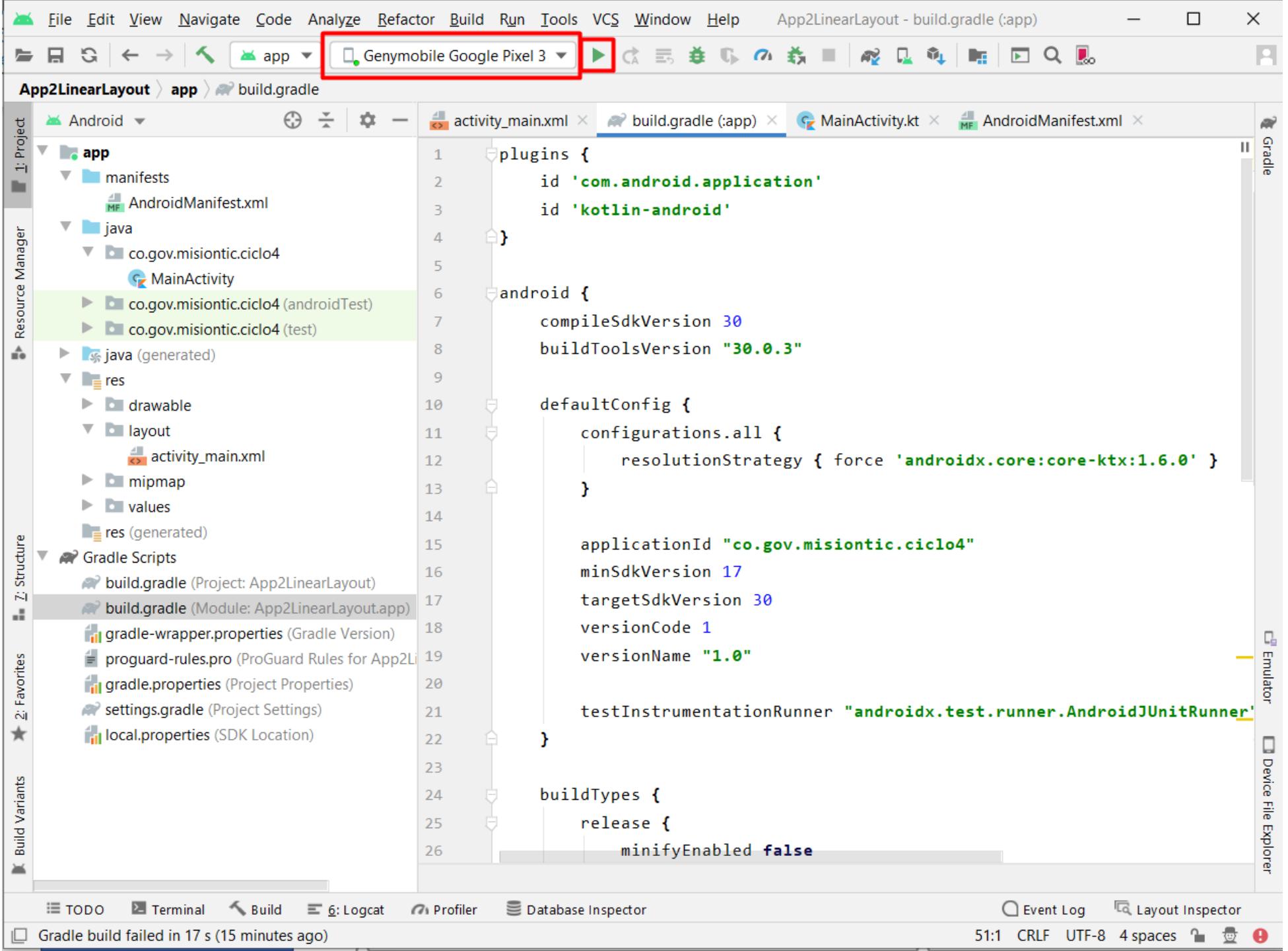
buildTypes {
    release {
        ...
    }
}
```
- Progress Dialog:** A modal dialog titled "Importing 'App2LinearLayout' Gradle project" with "Gradle: Build model..." and "Background" buttons, highlighted with a red box.
- Bottom Navigation:** TODO, Terminal, Build, Logcat, Profiler, Database Inspector.
- Bottom Status:** Event Log, Layout Inspector.
- Bottom Footer:** Gradle build failed in 17 s (14 minutes ago), 51:1 CRLF, UTF-8, 4 spaces.

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- Toolbar:** Includes icons for file operations like Open, Save, Find, and Run, along with device and emulator selection.
- Project Structure:** Shows the project tree under "app": manifests (AndroidManifest.xml), java (co.gov.misiontic.ciclo4, MainActivity), and resources (activity_main.xml).
- Build Output:** Displays the build log with the message "BUILD SUCCESSFUL in 1m 26s".
- Bottom Status:** Success: Operation succeeded (moments ago).
- Bottom Right:** Event Log and Layout Inspector tabs.

```
plugins {
    id 'com.android.application'
    id 'kotlin-android'
```

The build log shows the following tasks:

- > Task :app:mergeDebugJniLibFolders UP-TO-DATE
- > Task :app:checkDebugDuplicateClasses
- > Task :app:validateSigningDebug
- > Task :app:checkDebugAarMetadata
- > Task :app:processDebugResources
- > Task :app:mergeDebugNativeLibs
- > Task :app:mergeExtDexDebug
- > Task :app:compileDebugKotlin
- > Task :app:compileDebugJavaWithJavac
- > Task :app:compileDebugSources
- > Task :app:dexBuilderDebug
- > Task :app:stripDebugDebugSymbols NO-SOURCE
- > Task :app:mergeDebugJavaResource
- > Task :app:mergeDexDebug
- > Task :app:packageDebug
- > Task :app:assembleDebug

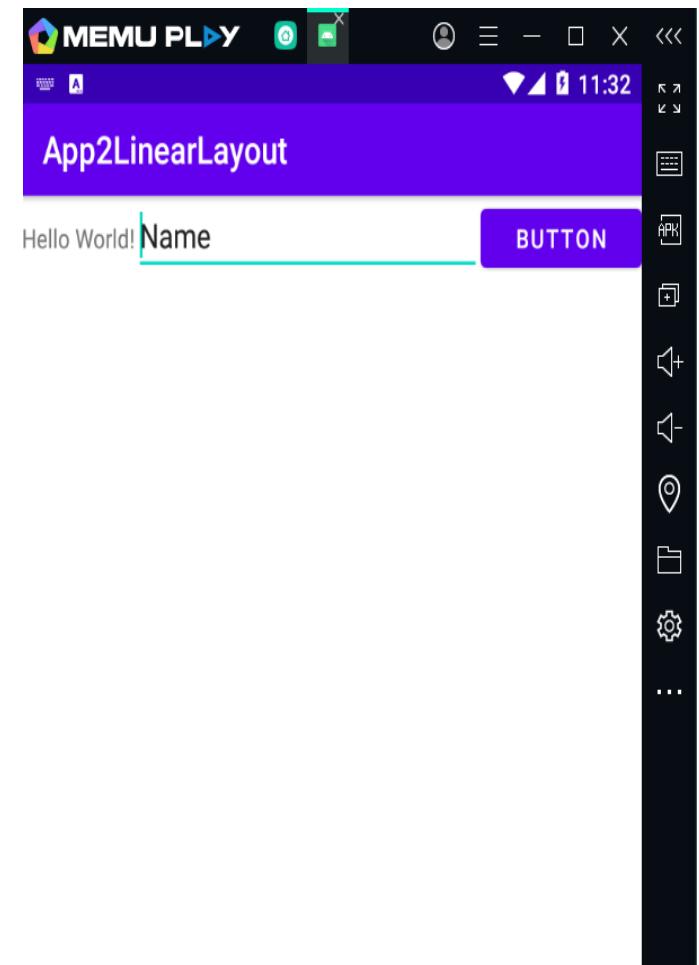
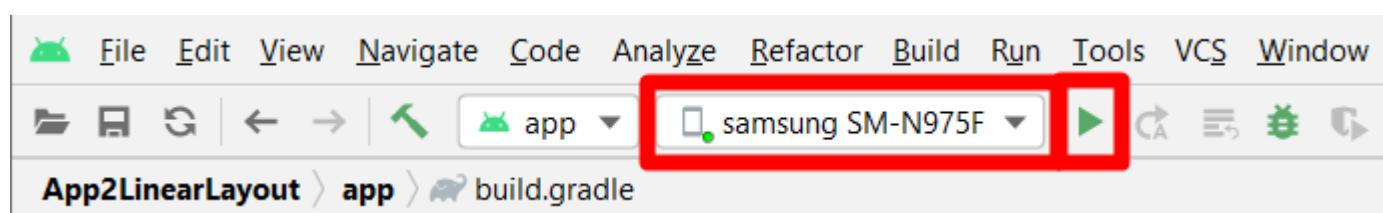
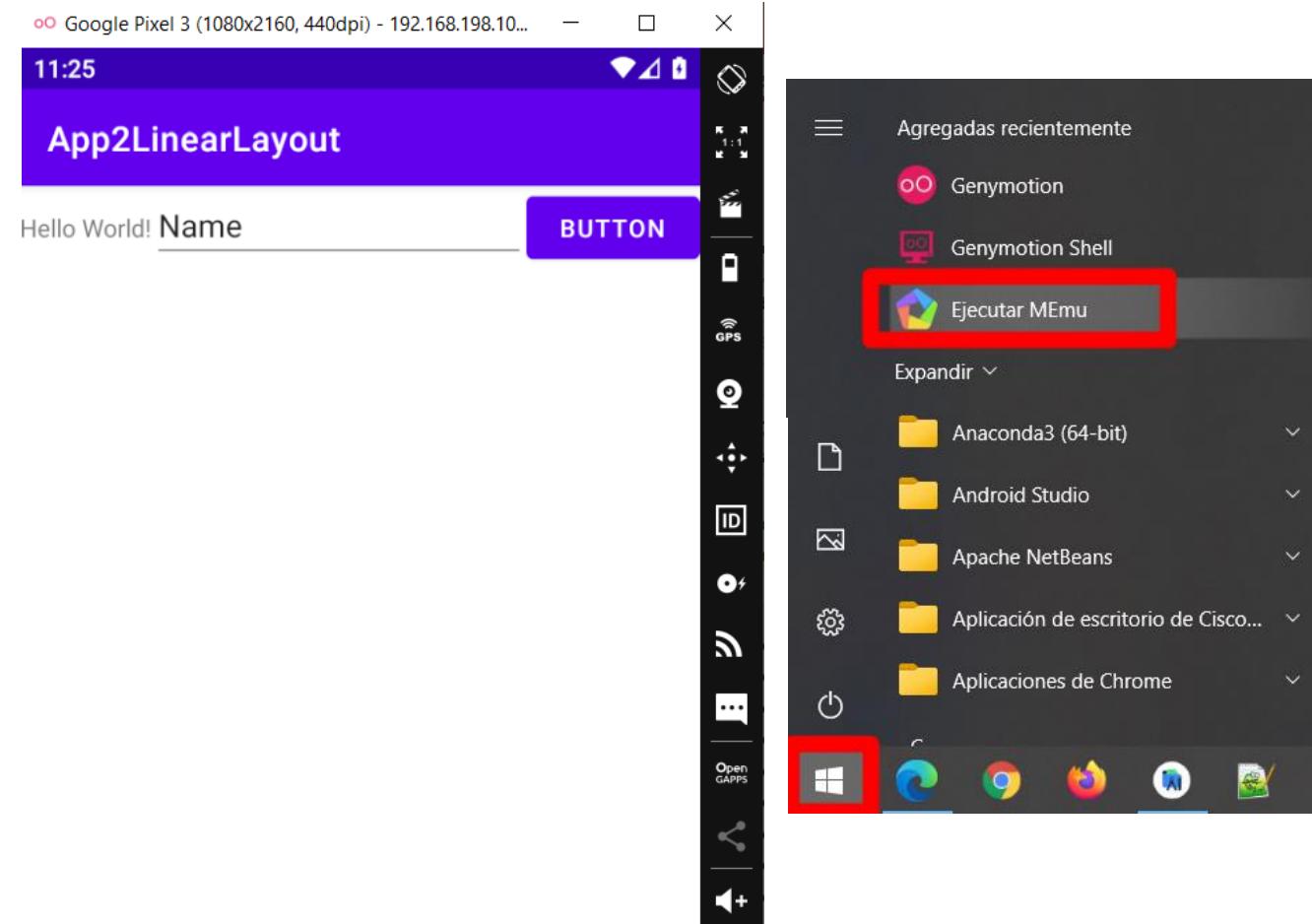
A green box highlights the message "BUILD SUCCESSFUL in 1m 26s". A red box highlights the message "26 actionable tasks: 15 executed, 11 up-to-date". A blue box highlights the message "Gradle build finished in 1 m 28 s 280 ms".

DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout

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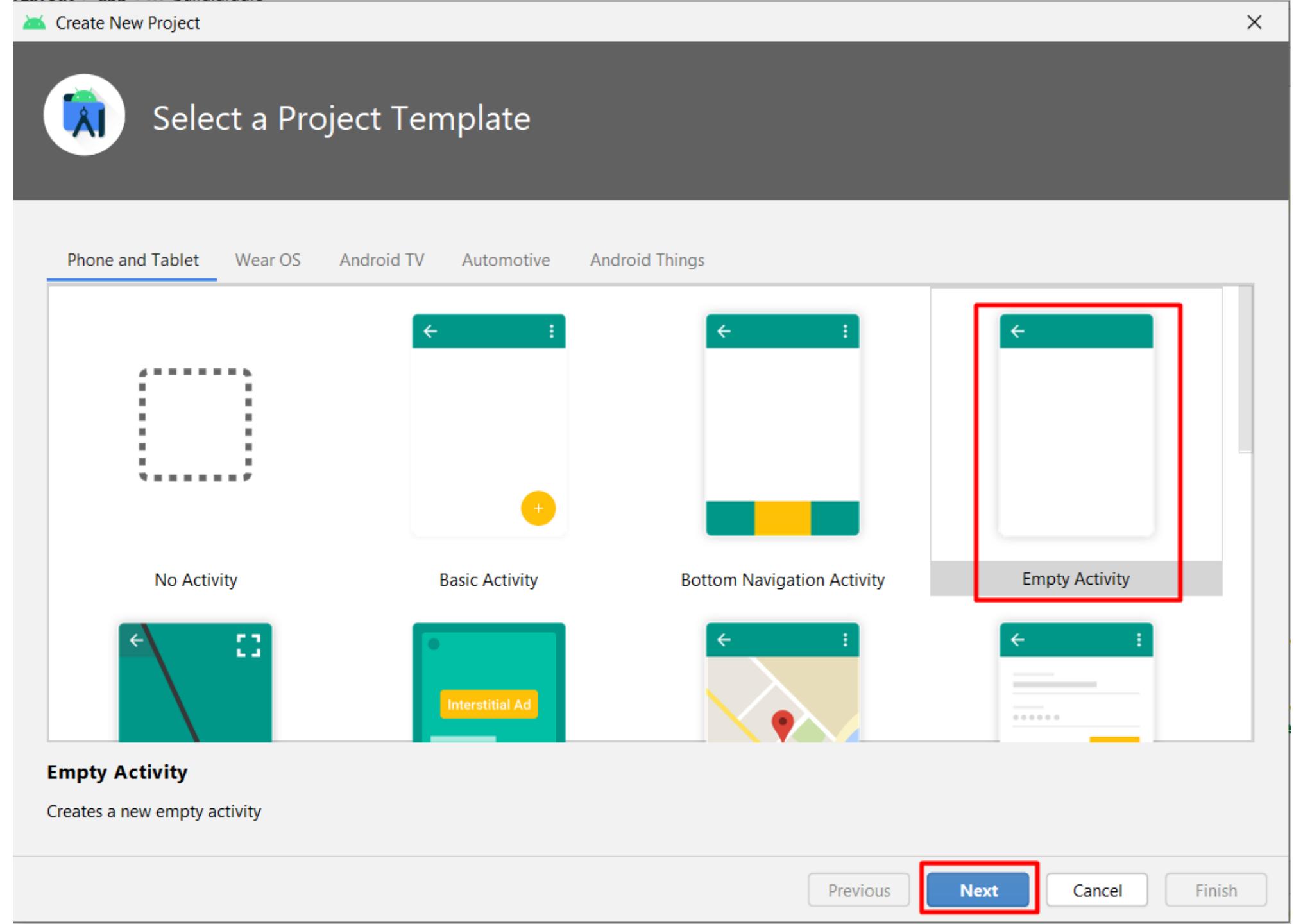


DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout

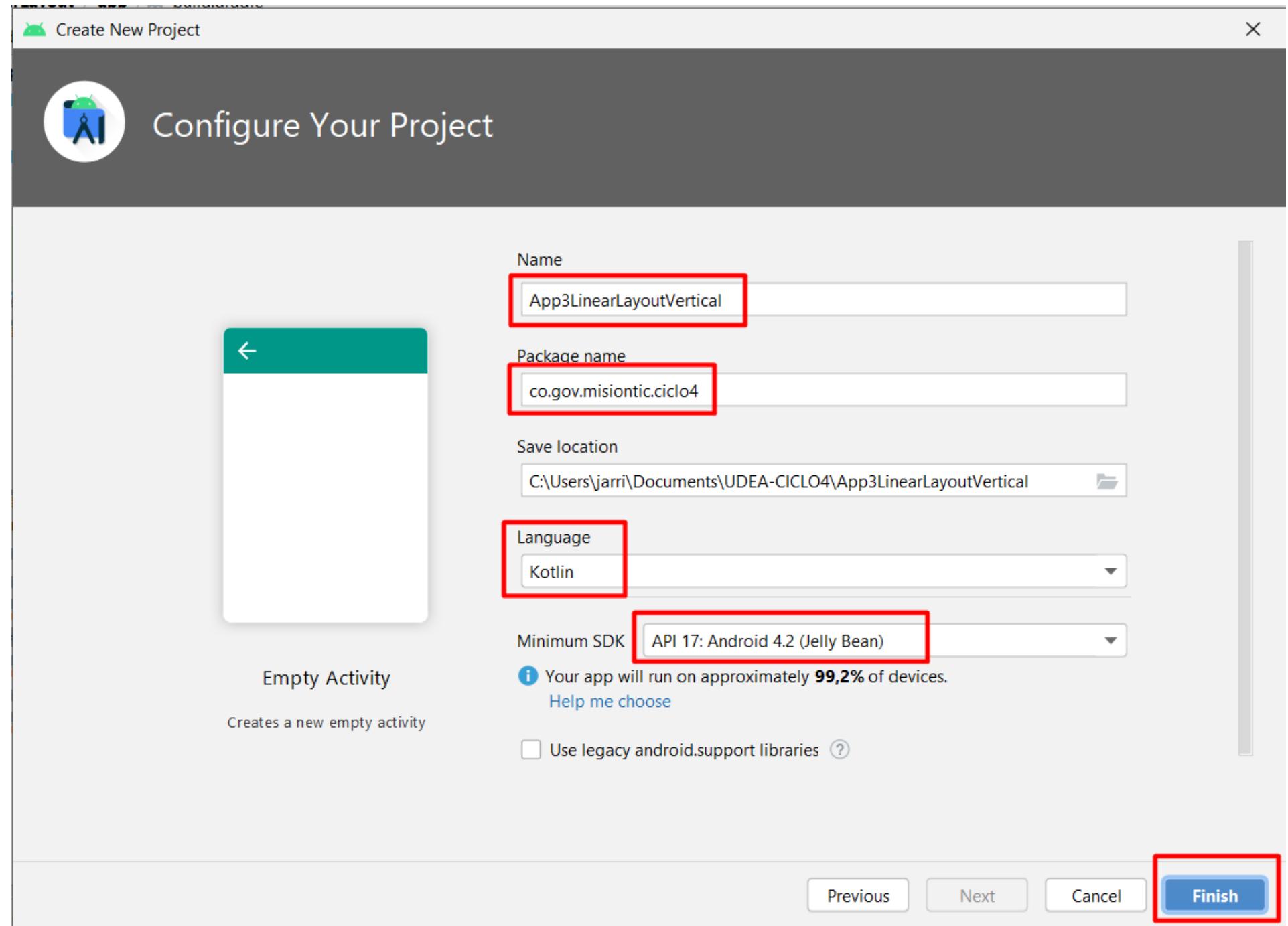
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DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical

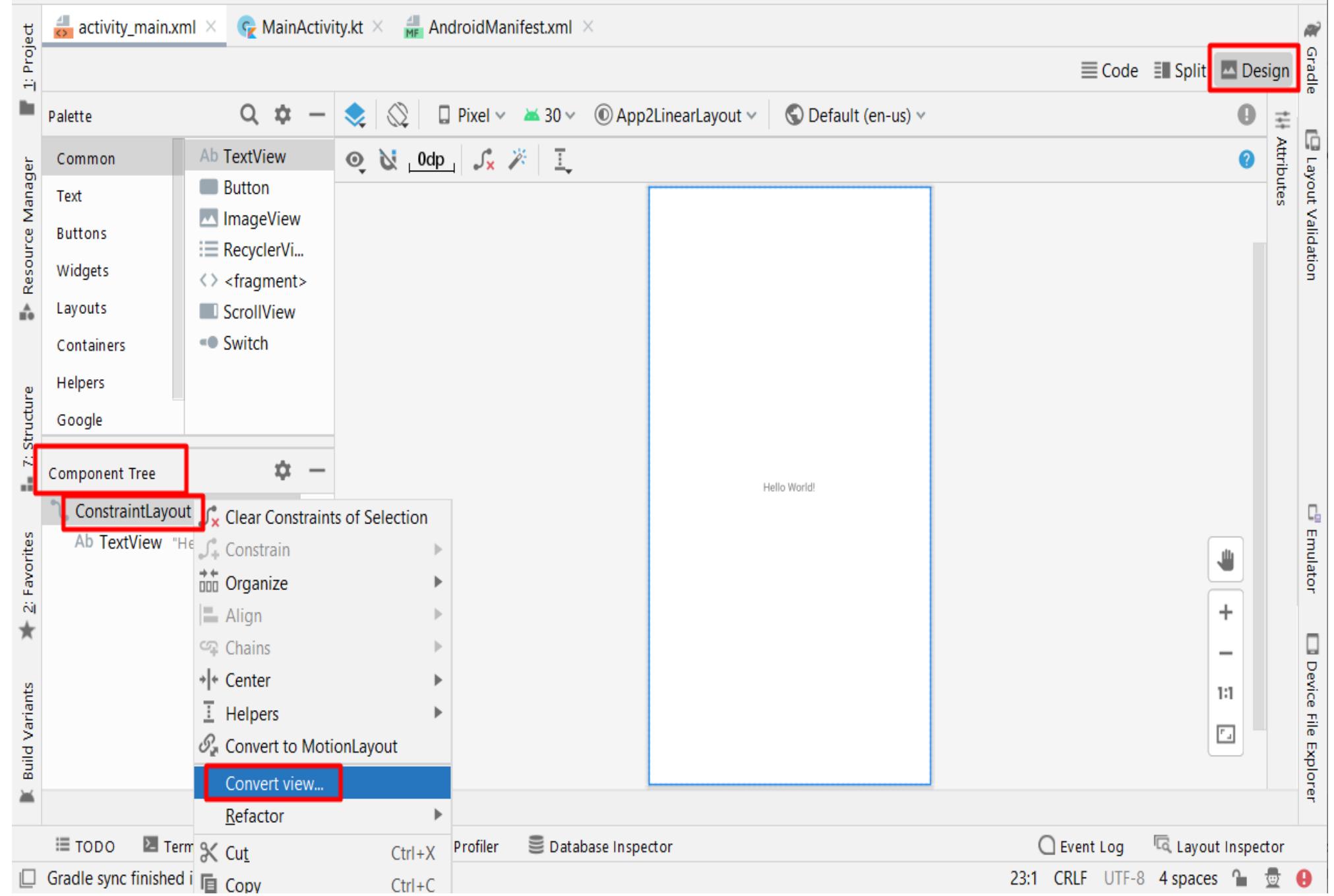


DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout

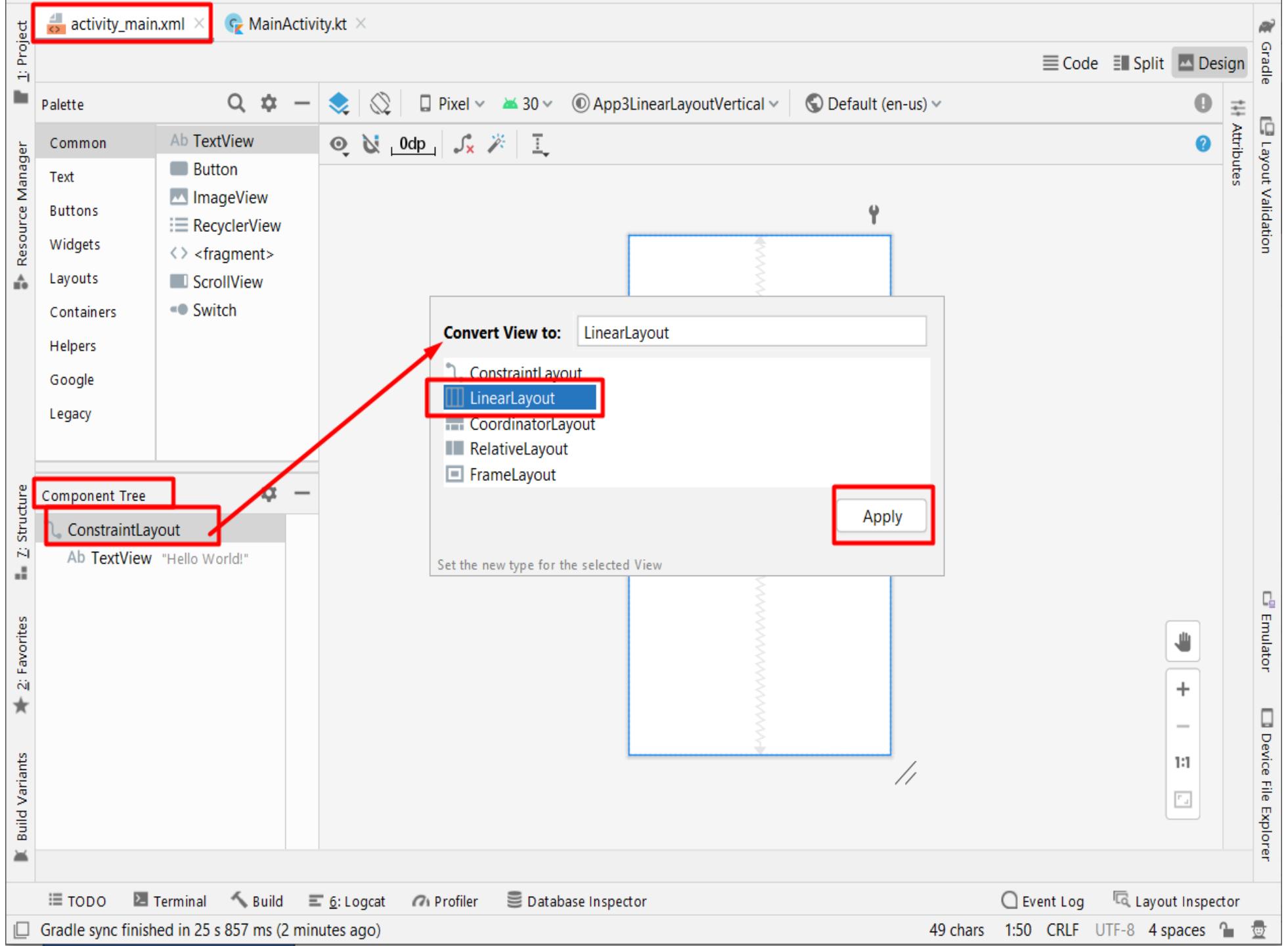
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DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical

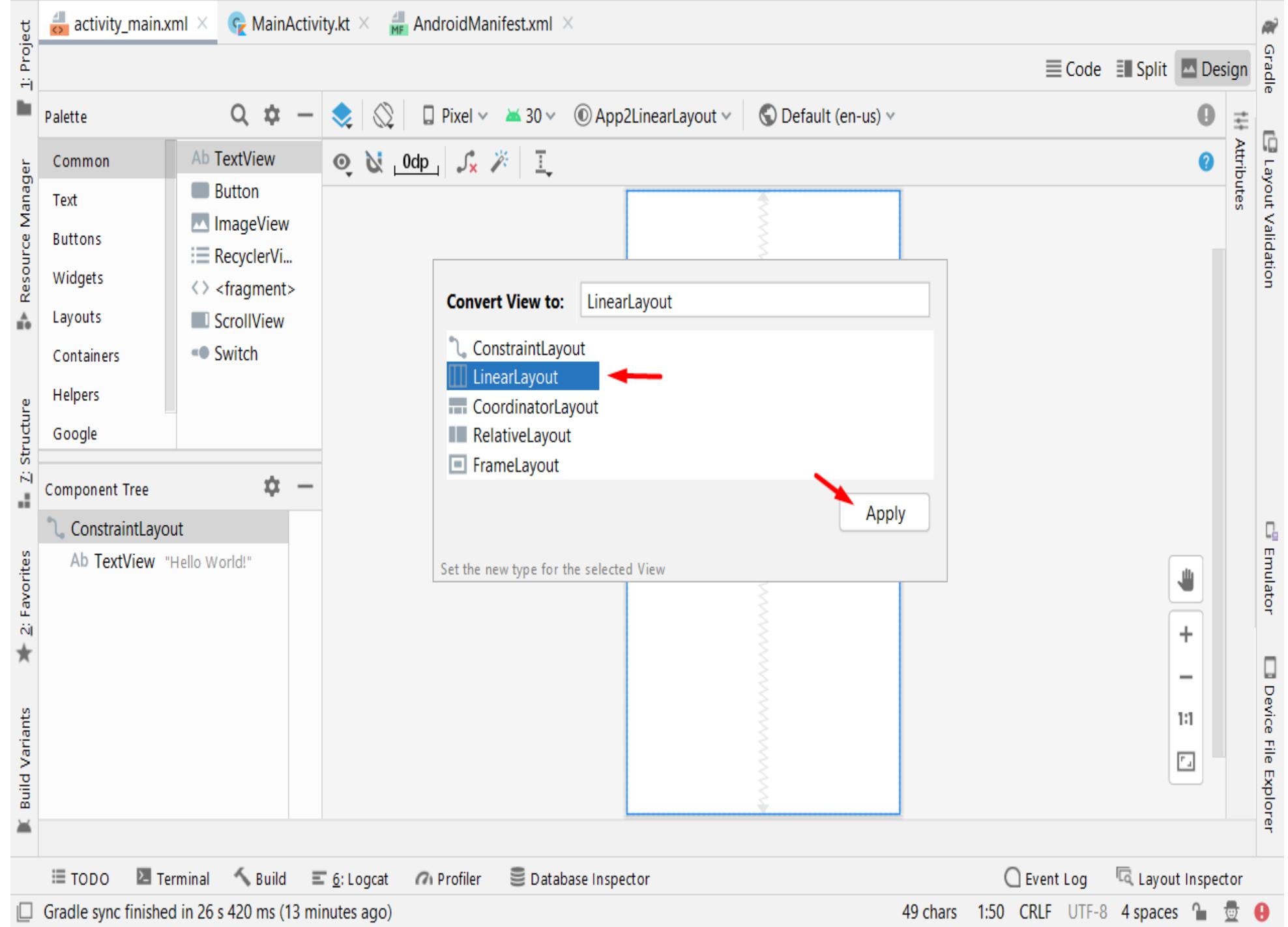


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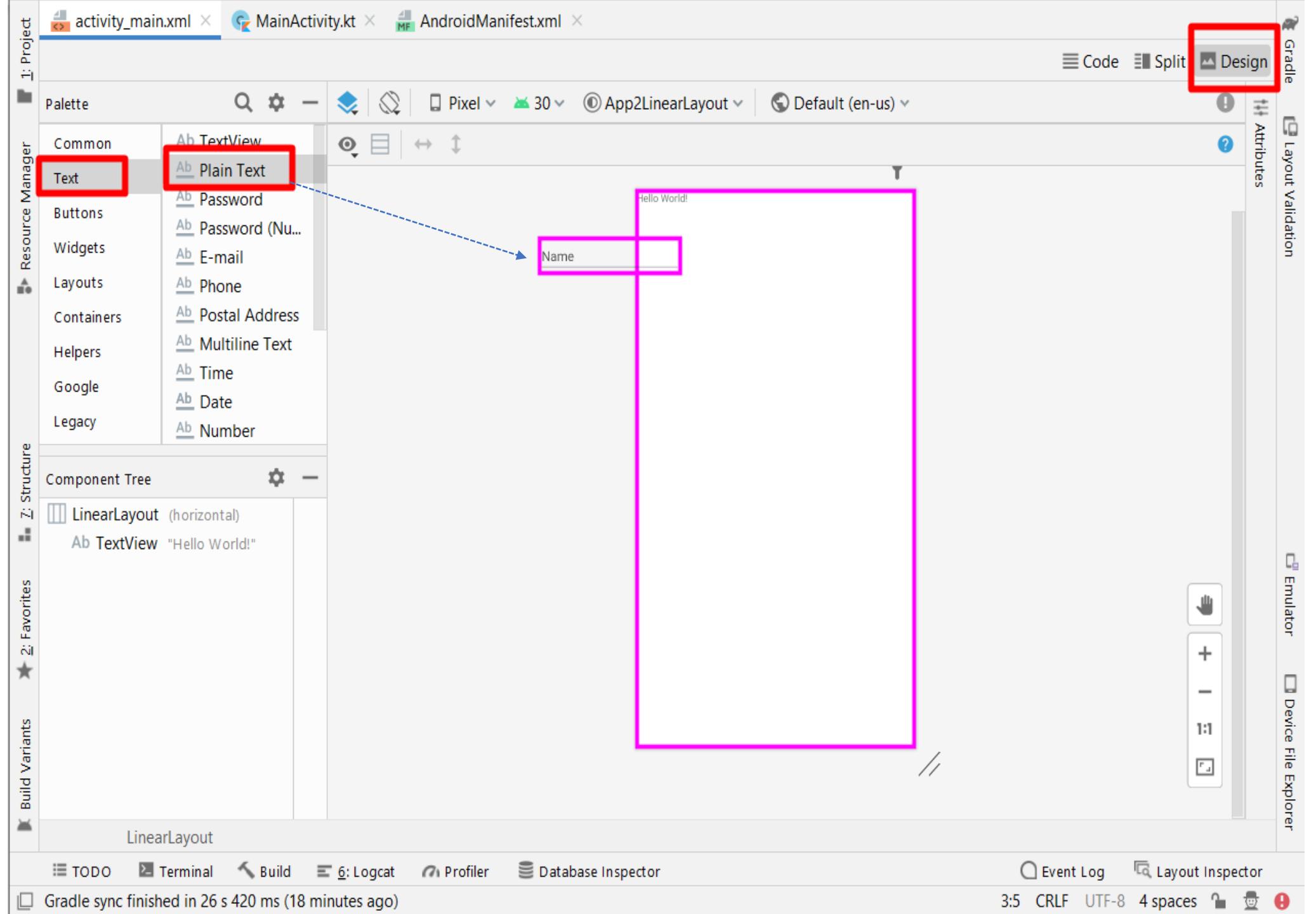


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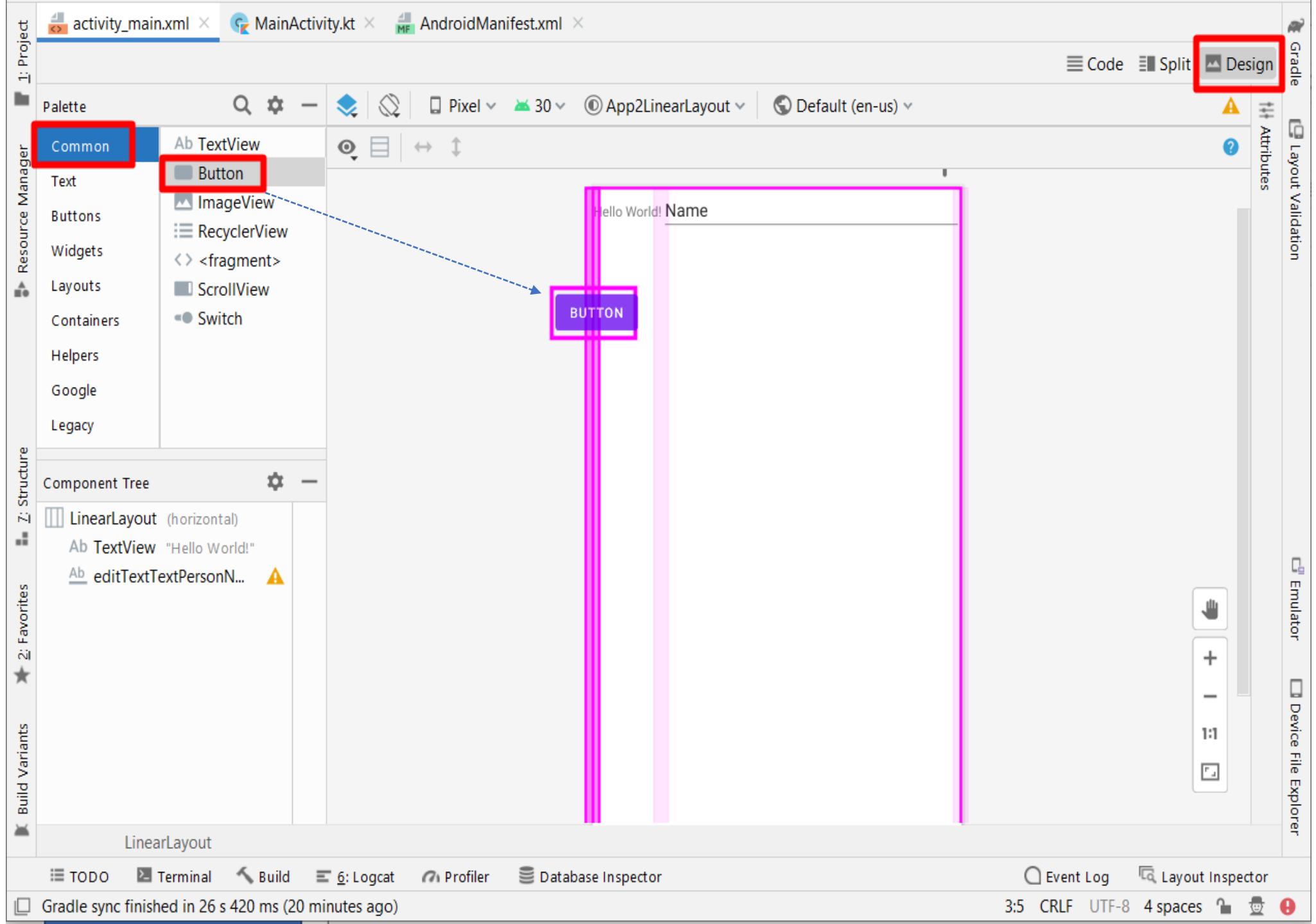


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EJEMPLO 2 USO DE LinearLayout

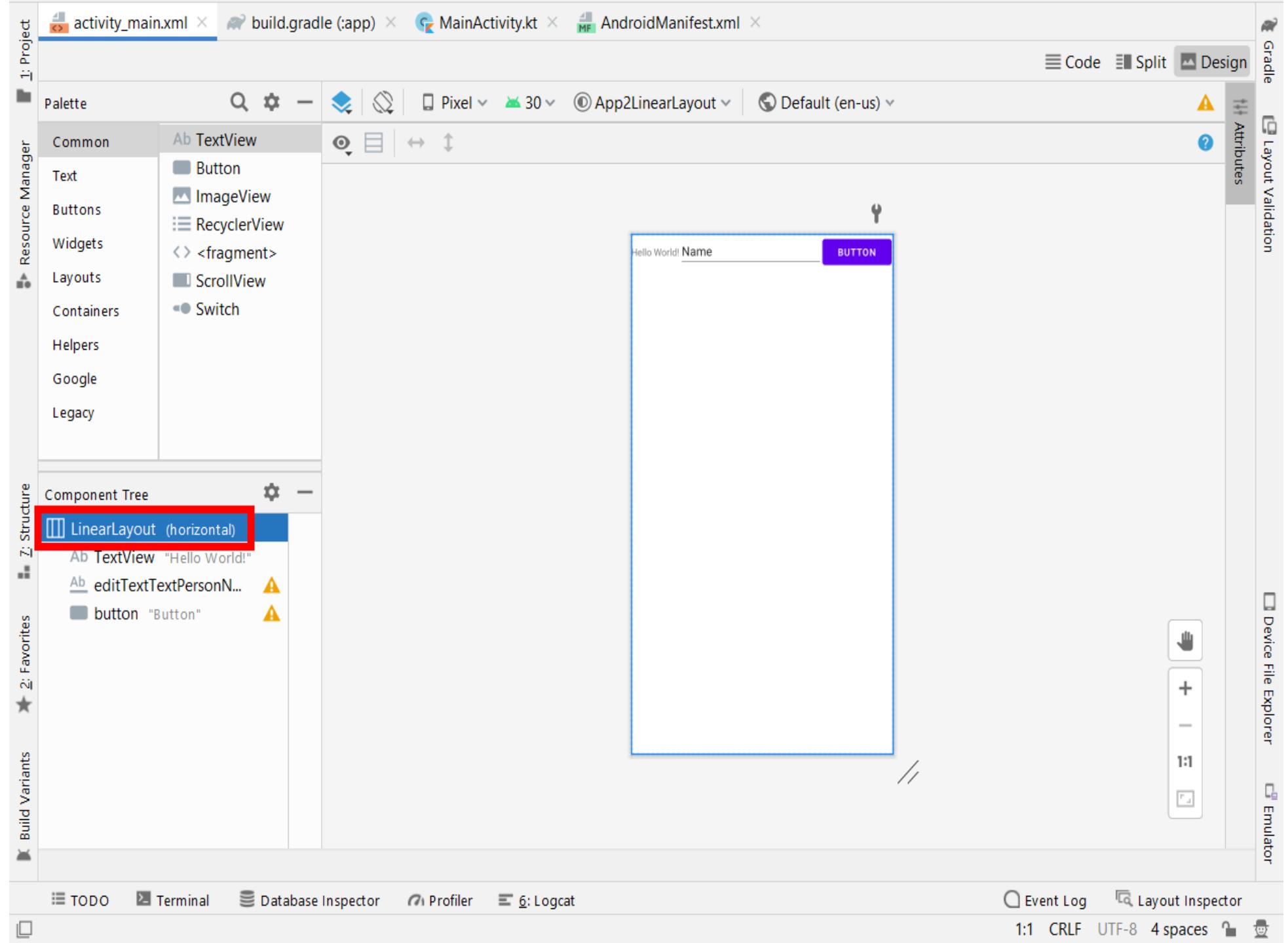
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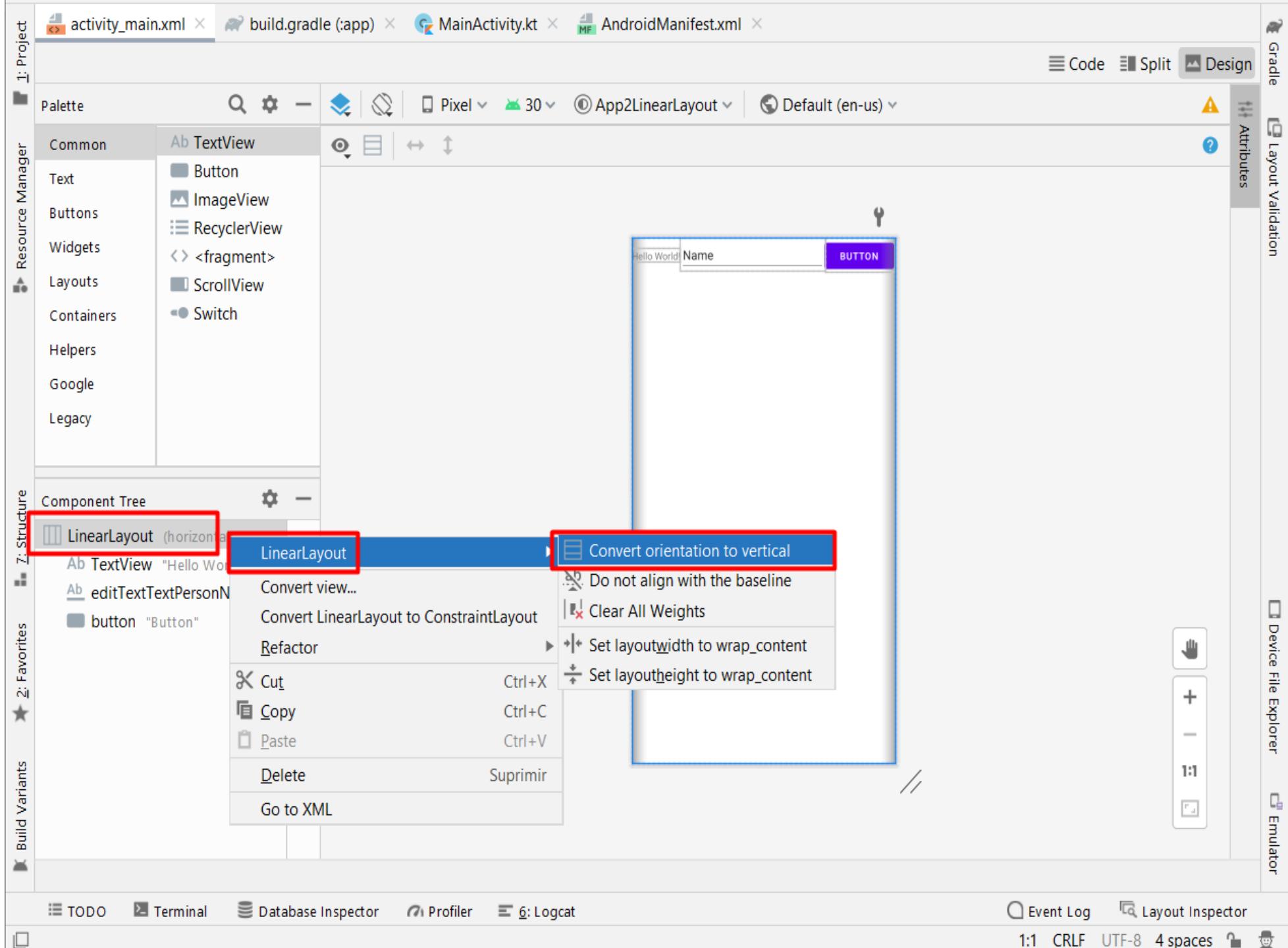
DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical



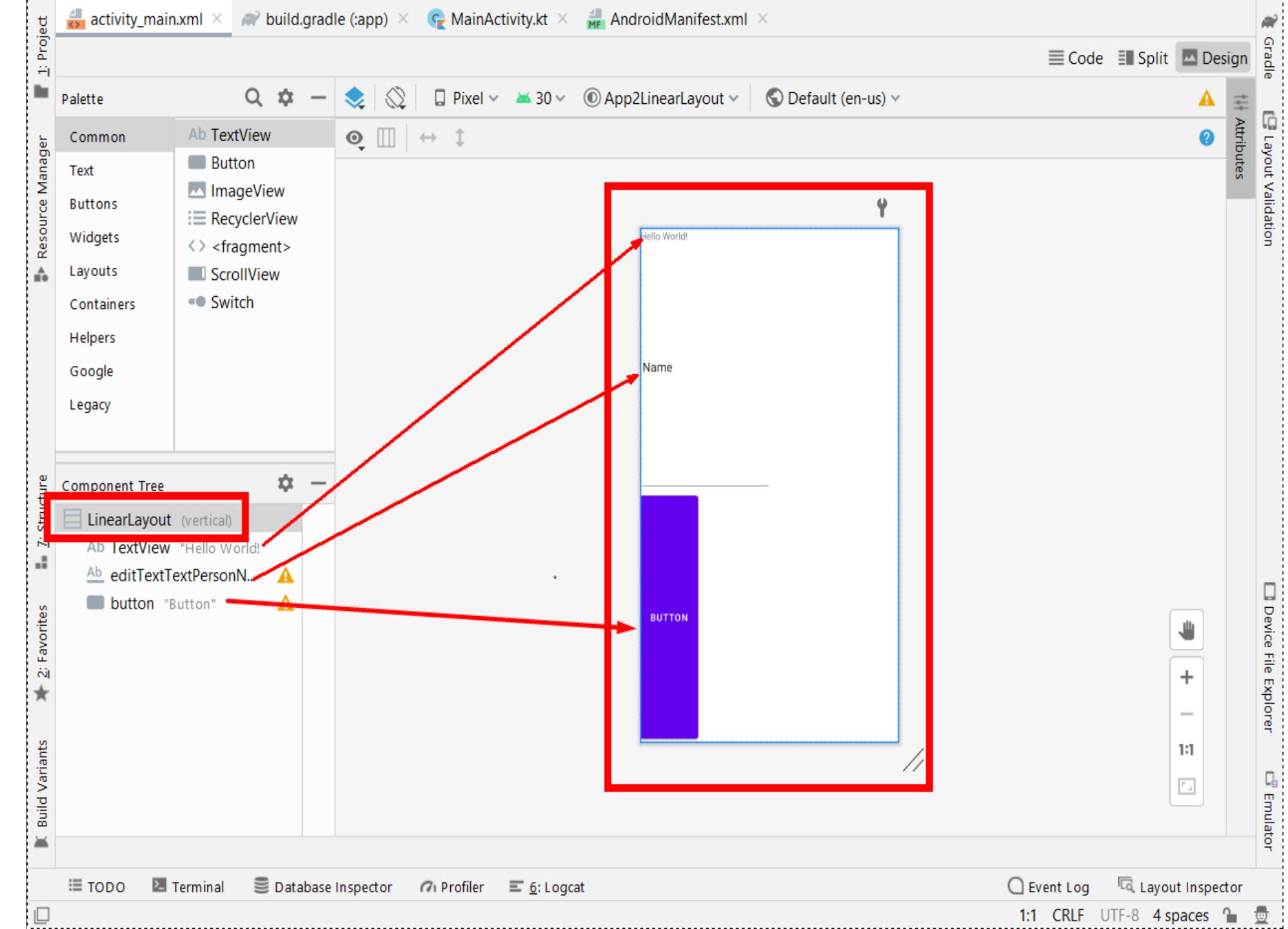
DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical



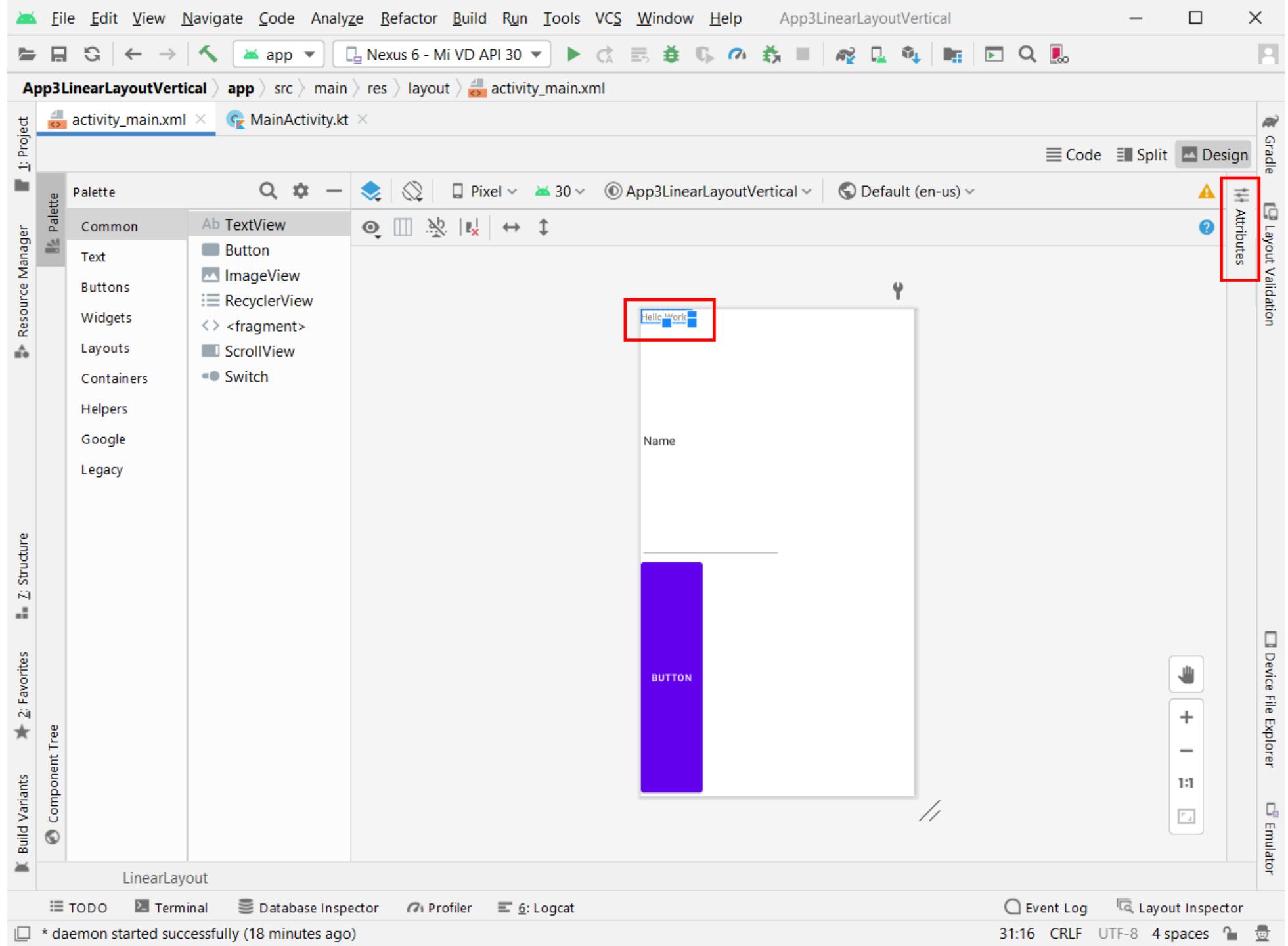
DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical



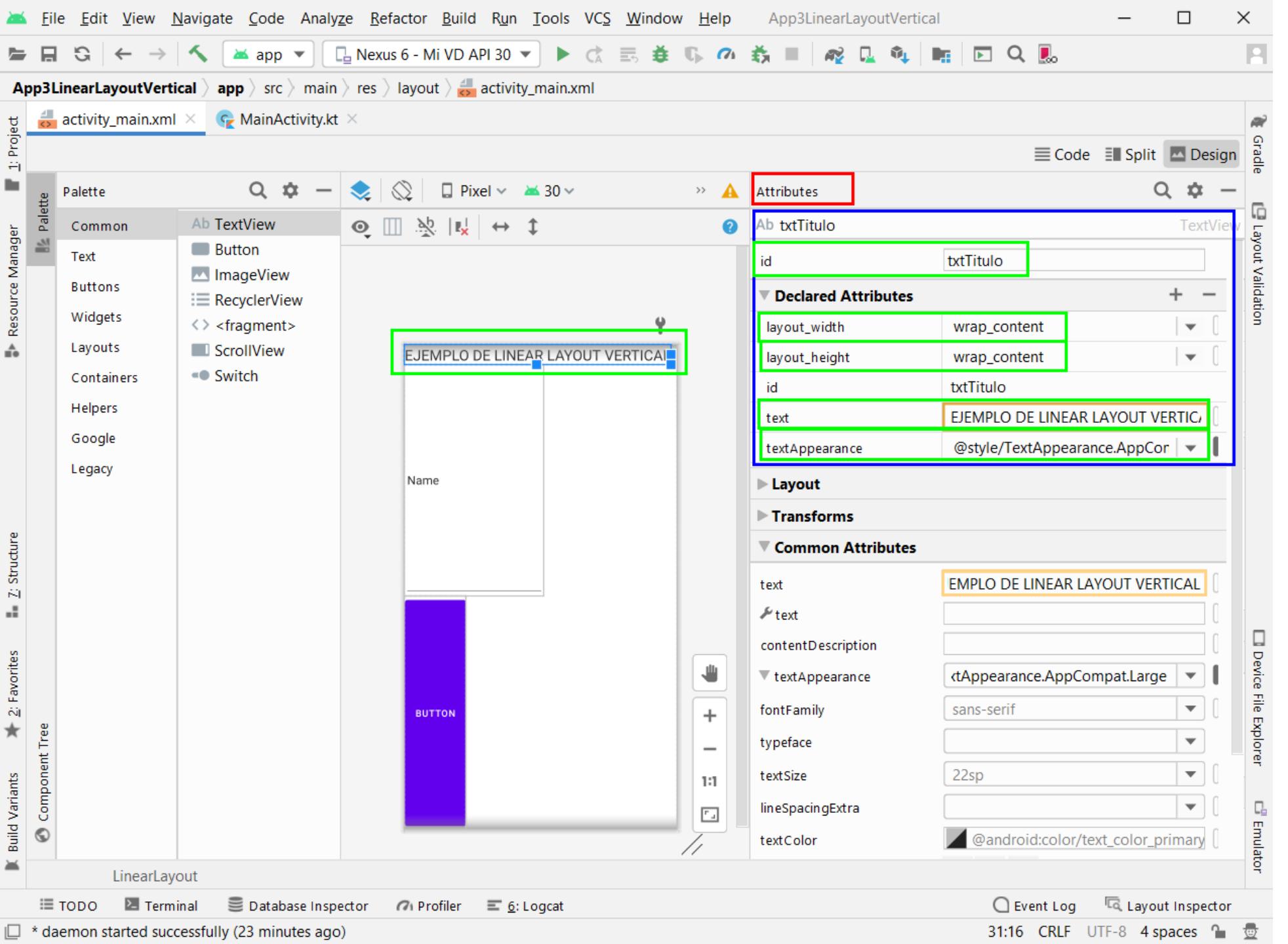
DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical



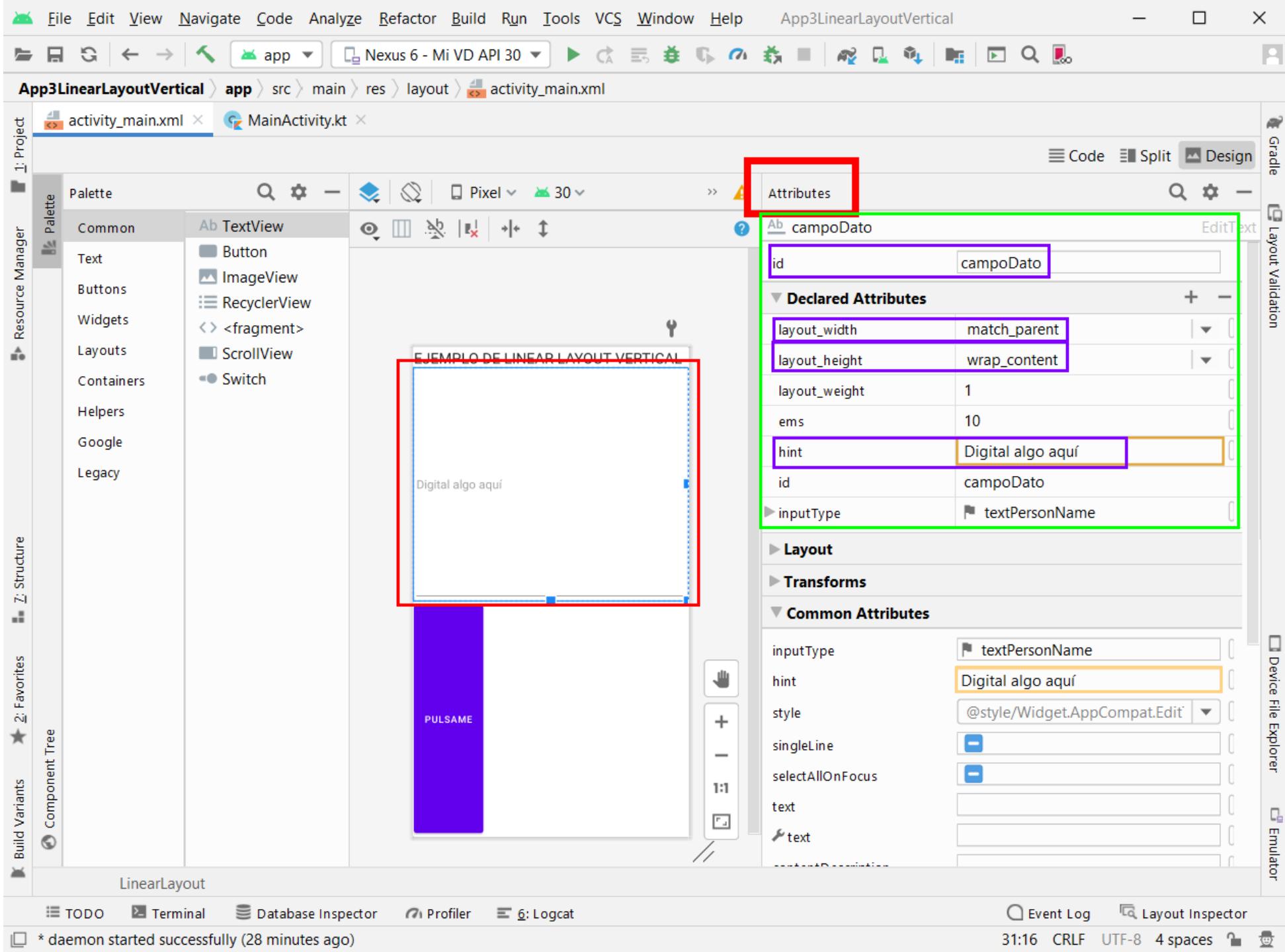
DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical



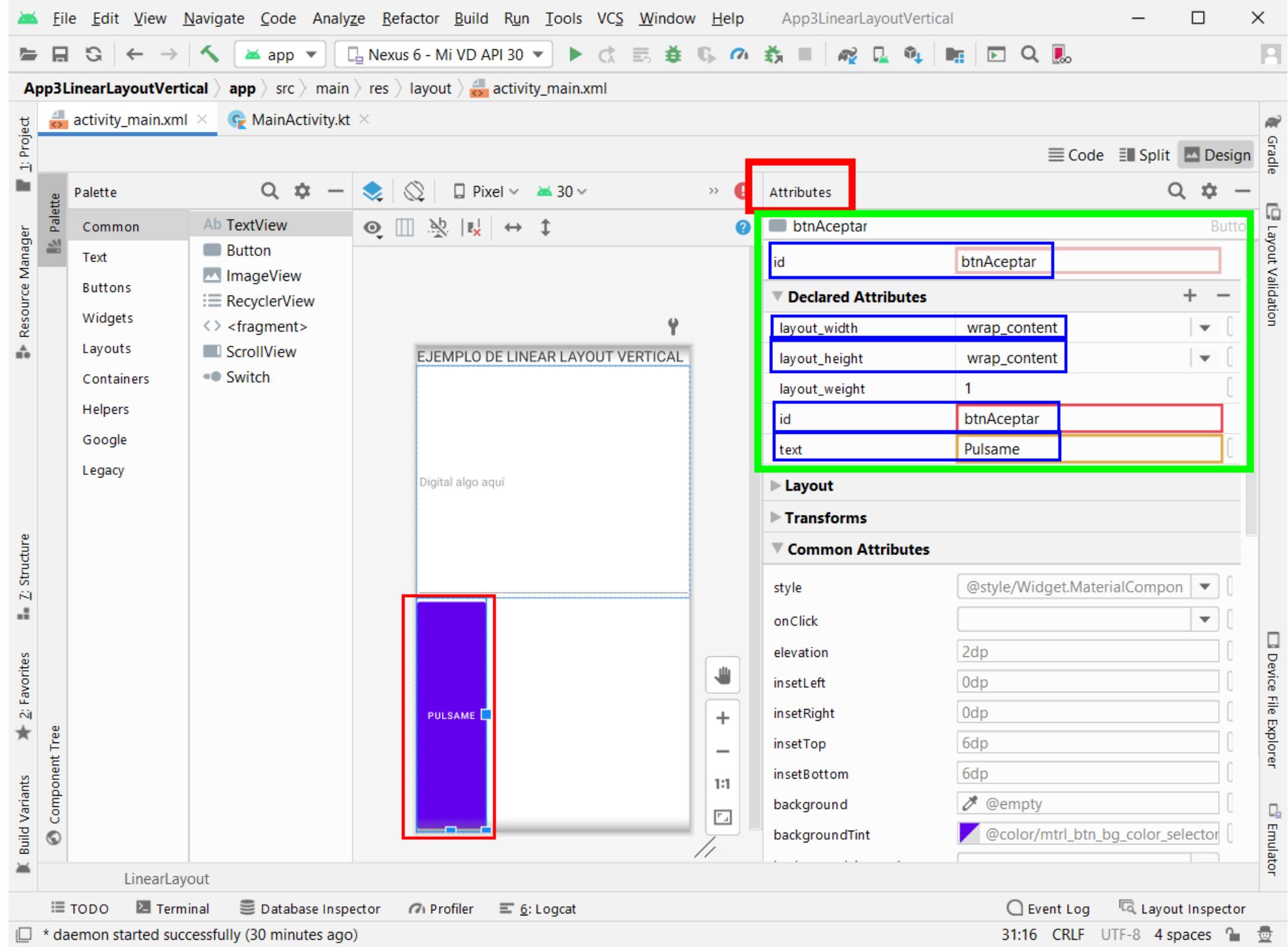
DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical



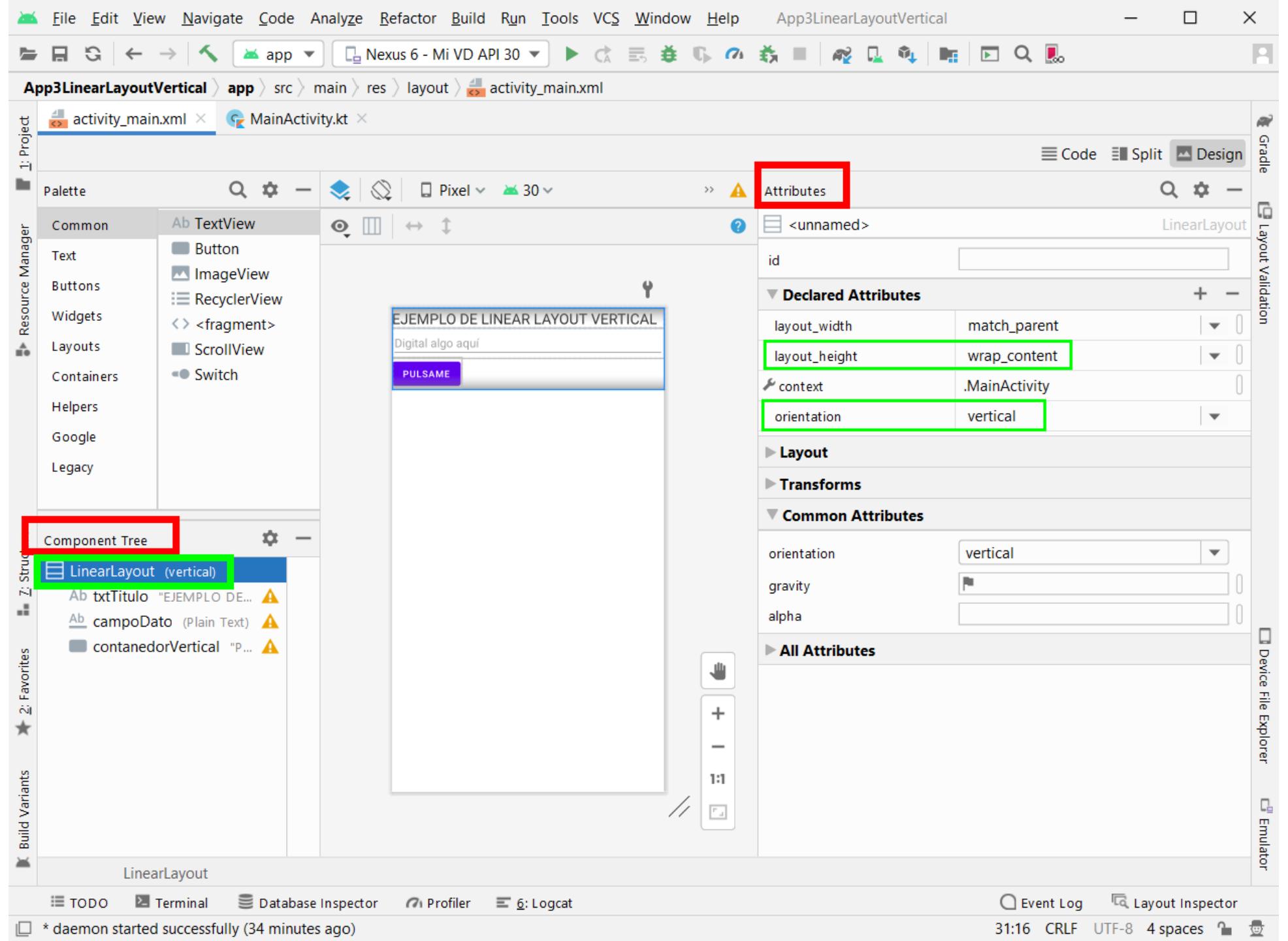
DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical



DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical



DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical

The screenshot shows the Android Studio interface with the XML code for an activity. The code defines a vertical linear layout containing a TextView and an EditText, both with specific styling and hints.

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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="wrap_content" android:orientation="vertical"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/txtTitulo"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="EJEMPLO DE LINEAR LAYOUT VERTICAL"
        android:textAppearance="@style/TextAppearance.AppCompat.Large" />

    <EditText
        android:id="@+id/campoData"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:ems="10"
        android:hint="Digital algo aquí"
        android:inputType="textPersonName" />

    <Button
        android:id="@+id/contenedorVertical"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="Pulsame" />
</LinearLayout>
```

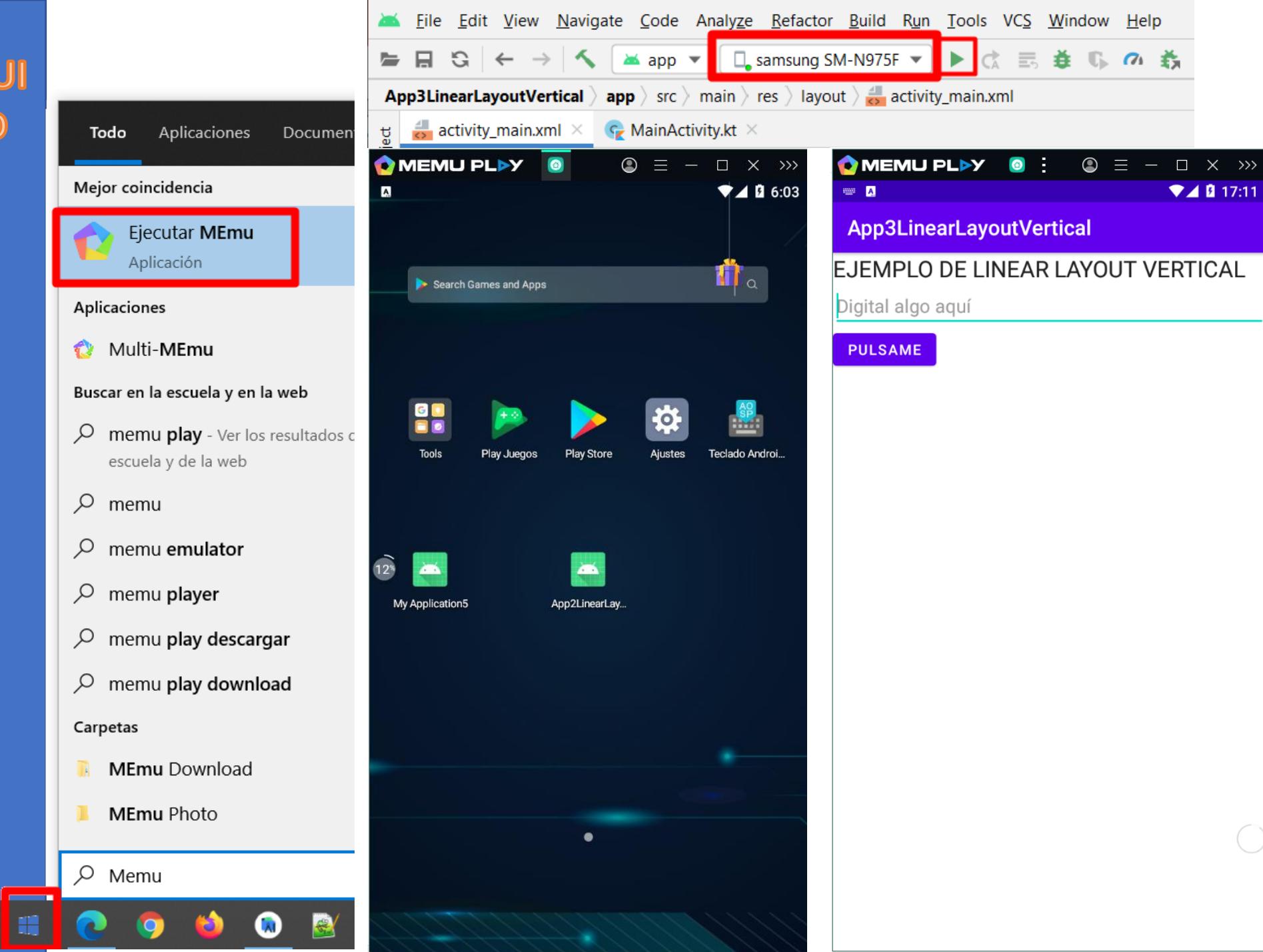
The code is organized into three main sections, each highlighted with a red box:

- Section 1 (Root Layout):** Contains attributes for the root `LinearLayout`, including `xmlns:android`, `xmlns:app`, `xmlns:tools`, `android:layout_width="match_parent"`, `android:layout_height="wrap_content"`, `android:orientation="vertical"`, and `tools:context=".MainActivity"`.
- Section 2 (Text View):** Contains the XML definition for a `TextView` with attributes `android:id="@+id/txtTitulo"`, `android:layout_width="match_parent"`, `android:layout_height="wrap_content"`, `android:text="EJEMPLO DE LINEAR LAYOUT VERTICAL"`, and `android:textAppearance="@style/TextAppearance.AppCompat.Large"`.
- Section 3 (Text Input):** Contains the XML definition for an `EditText` with attributes `android:id="@+id/campoData"`, `android:layout_width="match_parent"`, `android:layout_height="wrap_content"`, `android:layout_weight="1"`, `android:ems="10"`, `android:hint="Digital algo aquí"`, and `android:inputType="textPersonName"`.

The entire code block is enclosed in a large red box.

DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical



DISEÑO DE GUI EN ANDROID

PROBLEMAS

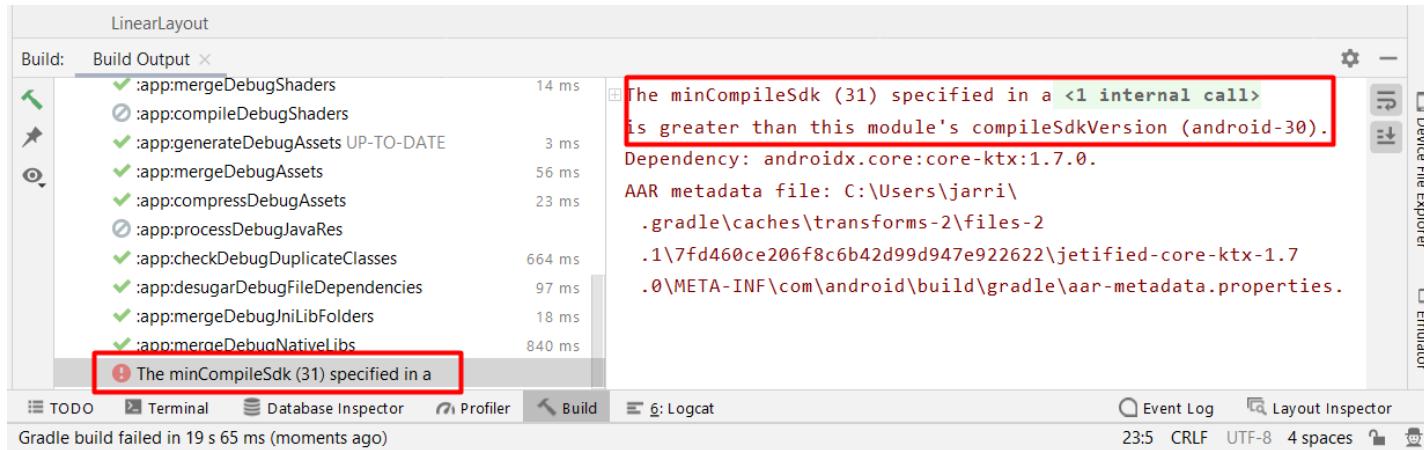
No puede ejecutar la App en el emulador

- ERROR DE minCompileSdk (31)

build.gradle

```
configurations.all {
    resolutionStrategy { force 'androidx.core:core-ktx:1.6.0' }
}

7   android {
8       compileSdkVersion 30
9       buildToolsVersion "30.0.3"
10
11      defaultConfig {
12          configurations.all {
13              resolutionStrategy { force 'androidx.core:core-ktx:1.6.0' }
14          }
15          applicationId "co.gov.misiontic.ciclo4"
16          minSdkVersion 17
17          targetSdkVersion 30
18          versionCode 1
19          versionName "1.0"
20
21          testInstrumentationRunner "androidx.test.runner.AndroidJUnitRunner"
22      }
23  }
```



```
defaultConfig {
    configurations.all {
        resolutionStrategy { force 'androidx.core:core-ktx:1.6.0' }
    }
    applicationId "com.paxees.tcc"
    minSdkVersion 21
    targetSdkVersion 30
    versionCode 1
    versionName "1.0"
    multiDexEnabled true
    testInstrumentationRunner "androidx.test.runner.AndroidJUnitRunner"
}
```

DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical

The screenshot shows the Android Studio interface with the following components:

- Code Tab:** Displays the XML code for a linear layout with three buttons.
- Palette:** Shows icons for various UI components like buttons, text views, and images.
- Component Tree:** A tree view of the UI elements in the layout.
- Toolbars:** Includes "Pixel", "30", and other design-related tools.
- Right Panel:** Shows three buttons labeled "BOTON 1", "BOTON 2", and "BOTON 3" arranged vertically.

XML Code:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="horizontal"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent" >
    <Button
        android:id="@+id/boton1"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="bottom"
        android:layout_weight="40"
        android:text="Boton 1" />
    <Button
        android:id="@+id/boton2"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_weight="20"
        android:gravity="bottom|right"
        android:text="Boton 2" />
    <Button
        android:id="@+id/boton3"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="top"
        android:layout_weight="40"
        android:text="Boton 3" />
</LinearLayout>
```

Annotations: Several lines of XML code are highlighted with red boxes:

- Line 4: `android:orientation="horizontal"`
- Line 5: `android:layout_width="fill_parent"`
- Line 6: `android:layout_height="fill_parent" >`
- Line 11: `android:layout_gravity="bottom"`
- Line 18: `android:layout_gravity="center"`
- Line 26: `android:layout_gravity="top"`

DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical

The screenshot shows the Android Studio XML layout editor. The code editor displays an XML file with three TextView components nested within a RelativeLayout. The XML code is as follows:

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

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerInParent="true"
        android:text="Centrado en el Padre"
        android:textColor="#4BAE4F" />

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerVertical="true"
        android:text="Centrado Verticalmente"
        android:textColor="#FA291A" />

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:text="Centrado Horizontalmente"
        android:textColor="#0A73C6" />

</RelativeLayout>
```

The attributes `android:layout_centerInParent="true"`, `android:layout_centerVertical="true"`, and `android:layout_centerHorizontal="true"` are highlighted with red boxes. The text "Centrado en el Padre" is highlighted in yellow. The text "Centrado Verticalmente" and "Centrado Horizontalmente" are highlighted in green. The preview window on the right shows the visual representation of the layout.

DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical

The screenshot shows the Android Studio interface with the following components:

- Code Tab:** Displays the XML layout file content.
- Split Tab:** Shows the corresponding UI preview.
- Palette:** A sidebar with various UI component icons.
- Component Tree:** A tree view of the UI components.
- Bottom Buttons:** Navigation buttons for the preview area.

XML Layout Content:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent" >
    <Button
        android:id="@+id/primerBtn"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Primer Boton" />
    <Button
        android:id="@+id/segundoBtn"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Segundo Boton" />
</LinearLayout>
```

UI Preview: The preview shows a purple screen with two white buttons. The top button is labeled "PRIMER BOTON" and the bottom button is labeled "SEGUNDO BOTON".

DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical

The screenshot shows the Android Studio interface with the code editor and design preview. The code editor displays the following XML layout:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent" >

    <Button
        android:id="@+id/primerBtn"
        android:layout_width="wrap_content"
        android:layout_height="fill_parent"
        android:text="Primer Boton" />

    <Button
        android:id="@+id/segundoBtn"
        android:layout_width="wrap_content"
        android:layout_height="fill_parent"
        android:text="Segundo Boton" />
</LinearLayout>
```

The XML code uses a `LinearLayout` with `android:orientation="vertical"`. It contains two `Button` elements. The first button has `android:layout_height="fill_parent"` and the second also has it. Both buttons have `android:layout_width="wrap_content"`. The design preview on the right shows a purple rectangular area with the text "PRIMER BOTON" centered inside it.

DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical

The screenshot shows the Android Studio interface with the following details:

- Activity Layout:** activity_main.xml
- Kotlin File:** MainActivity.kt
- Code Editor:** Displays the XML code for a vertical linear layout with two buttons.
- UI Preview:** Shows a vertical stack of two purple buttons labeled "PRIMER BOTON" and "SEGUNDO BOTON".
- Toolbars and Palettes:** Standard Android Studio toolbars and palettes are visible.

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content" >
    <Button
        android:id="@+id/primerBtn"
        android:text="Primer Boton"
        android:layout_width="wrap_content"
        android:layout_height="fill_parent"/>
    <Button
        android:id="@+id/segundoBtn"
        android:text="Segundo Boton"
        android:layout_width="wrap_content"
        android:layout_height="fill_parent" />
</LinearLayout>
```

DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical

The screenshot shows the Android Studio interface with the following components:

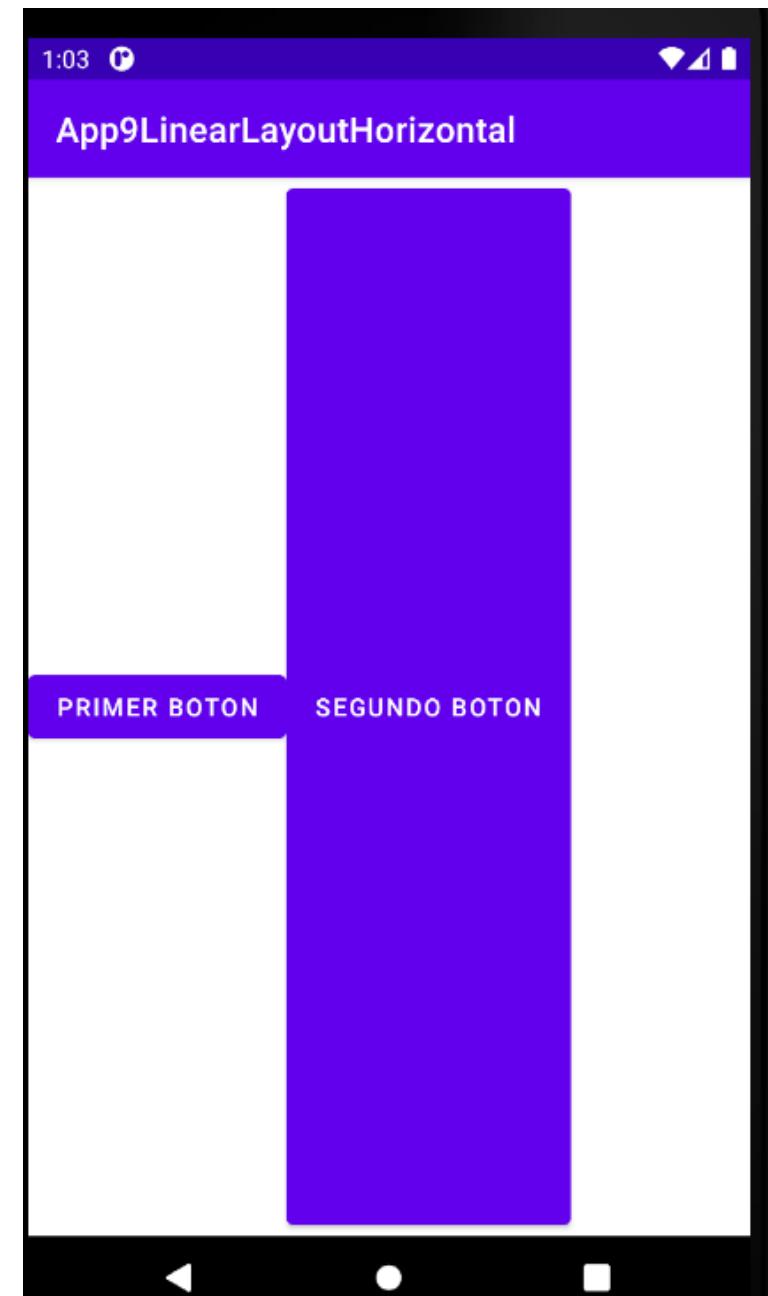
- Code Editor:** Displays the XML code for a layout. The code defines a horizontal `LinearLayout` containing two `Button` elements. The `LinearLayout` has attributes: `android:orientation="horizontal"`, `android:layout_width="fill_parent"`, and `android:layout_height="fill_parent"`. Each `Button` has attributes: `android:id="@+id/primerBtn"`, `android:layout_width="wrap_content"`, `android:layout_height="wrap_content"`, and `android:text="Primer Boton"`. A second `Button` with similar attributes and text "Segundo Boton" is also present.
- Layout Preview:** Shows a visual representation of the layout. It consists of a blue outer container holding two purple rectangular buttons. The left button is labeled "PRIMER BOTON" and the right button is labeled "SEGUNDO BOTON".
- Component Tree:** Located at the bottom right, it shows a tree structure of the layout components.
- Toolbars and Palettes:** Standard Android Studio toolbars and palettes are visible along the top and right edges.

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="horizontal"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent" >
    <Button
        android:id="@+id/primerBtn"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Primer Boton" />
    <Button
        android:id="@+id/segundoBtn"
        android:layout_width="wrap_content"
        android:layout_height="fill_parent"
        android:text="Segundo Boton" />
</LinearLayout>
```

DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical

```
1  <?xml version="1.0" encoding="utf-8"?>
2  <LinearLayout
3      xmlns:android="http://schemas.android.com/apk/res/android"
4          android:orientation="horizontal"
5          android:layout_width="fill_parent"
6          android:layout_height="fill_parent" >
7      <Button
8          android:id="@+id/primerBtn"
9              android:layout_width="wrap_content"
10             android:layout_height="wrap_content"
11             android:text="Primer Boton" />
12     <Button
13         android:id="@+id/segundoBtn"
14             android:layout_width="wrap_content"
15             android:layout_height="fill_parent"
16             android:text="Segundo Boton" />
17  </LinearLayout>
18
19
20
21
22
23
24
25
26
27
28
29
```



DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical

The screenshot shows the Android Studio interface with the XML code for a RelativeLayout. The code defines five TextViews with specific layout parameters:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent" android:layout_height="fill_parent">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:text="ARRIBA" />
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="ABAJO"
        android:layout_alignParentBottom="true" />
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="A LA IZQUIERDA"
        android:layout_alignParentLeft="true" />
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="A LA DERECHA"
        android:layout_alignParentRight="true" />
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="EN EL CENTRO"
        android:layout_centerInParent="true" />
</RelativeLayout>
```

The XML code is annotated with red boxes highlighting specific attributes:

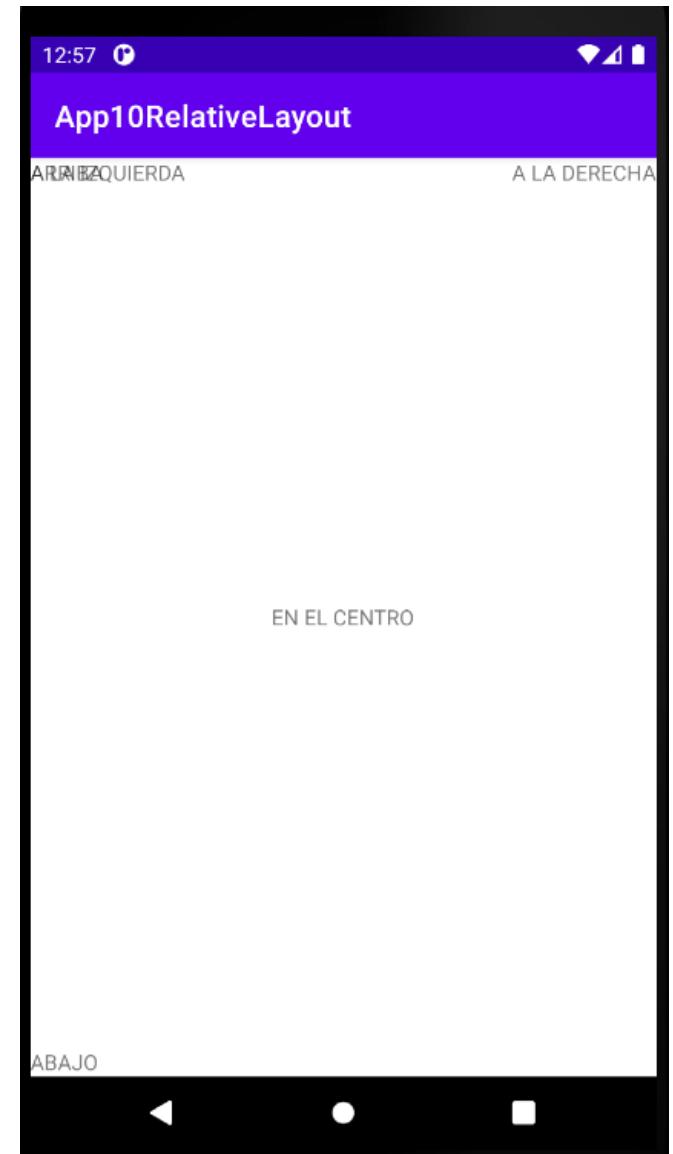
- Line 4:** android:layout_width="fill_parent" and android:layout_height="fill_parent"
- Line 6:** android:layout_width="wrap_content", android:layout_height="wrap_content", and android:text="ARRIBA"
- Line 13:** android:layout_alignParentBottom="true"
- Line 18:** android:layout_alignParentLeft="true"
- Line 23:** android:layout_alignParentRight="true"
- Line 28:** android:text="EN EL CENTRO" and android:layout_centerInParent="true"

The right side of the screen shows the Android Layout Editor with a blue frame representing the layout. Inside the frame, text labels indicate the position of each TextView: "ARRIBA" (top), "ABAJO" (bottom), "A LA IZQUIERDA" (left), "A LA DERECHA" (right), and "EN EL CENTRO" (center). A vertical toolbar on the right contains icons for zooming and orientation.

DISEÑO DE GUI EN ANDROID

EJEMPLO 2 USO DE LinearLayout Vertical

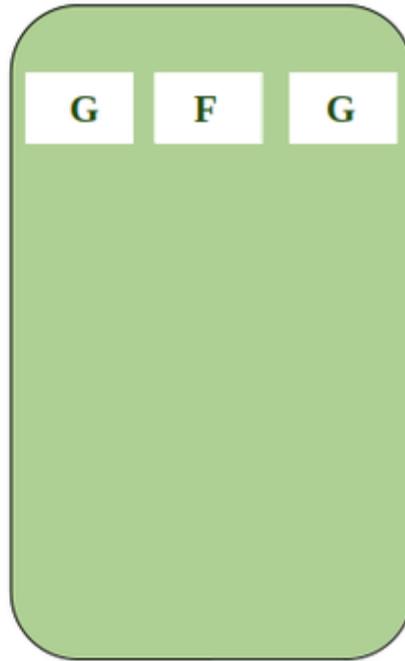
```
1 <?xml version="1.0" encoding="utf-8"?>
2 <RelativeLayout
3     xmlns:android="http://schemas.android.com/apk/res/android"
4     android:layout_width="fill_parent" android:layout_height="fill_parent">
5     <TextView
6         android:layout_width="wrap_content"
7         android:layout_height="wrap_content" android:text="ARRIBA"
8         android:layout_alignParentTop="true" />
9     <TextView
10        android:layout_width="wrap_content"
11        android:layout_height="wrap_content"
12        android:text="ABAJO"
13        android:layout_alignParentBottom="true" />
14     <TextView
15        android:layout_width="wrap_content"
16        android:layout_height="wrap_content"
17        android:text="A LA IZQUIERDA"
18        android:layout_alignParentLeft="true" />
19     <TextView
20        android:layout_width="wrap_content"
21        android:layout_height="wrap_content"
22        android:text="A LA DERECHA"
23        android:layout_alignParentRight="true" />
24     <TextView
25        android:layout_width="wrap_content"
26        android:layout_height="wrap_content"
27        android:text="EN EL CENTRO"
28        android:layout_centerInParent="true" />
29 </RelativeLayout>
```



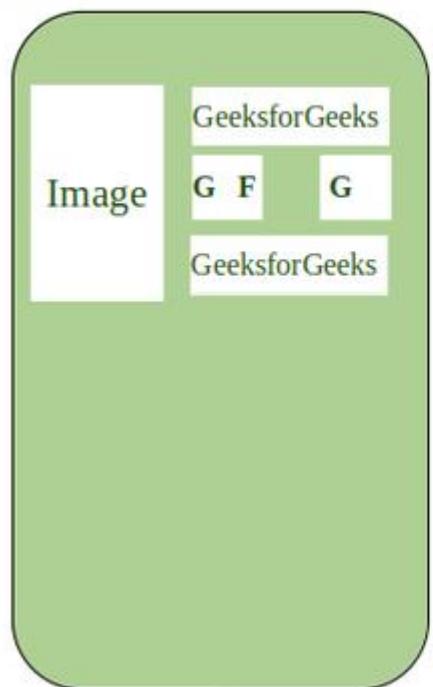
VERTICAL VIEW



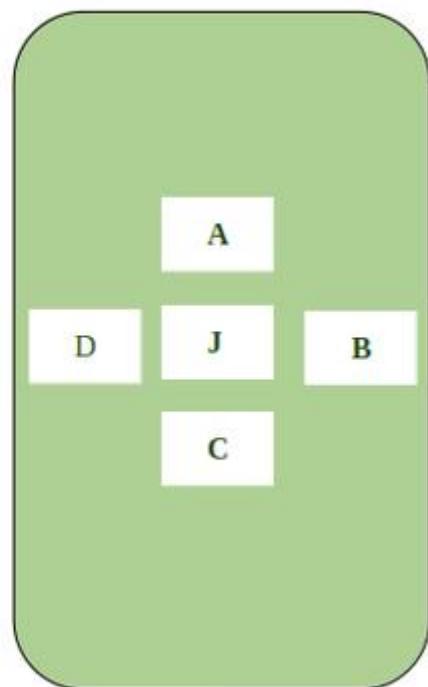
HORIZONTAL VIEW



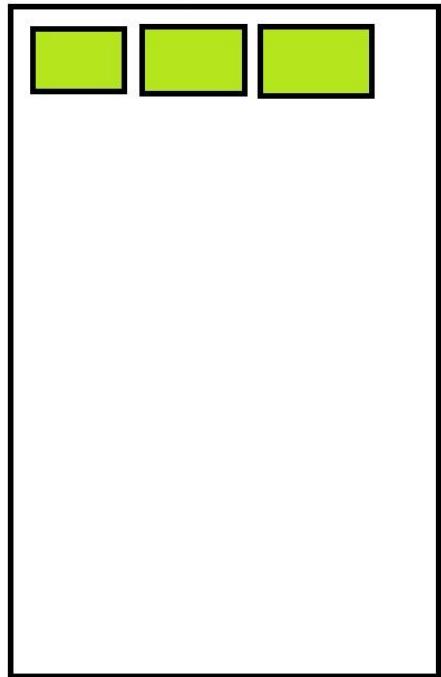
Relative View 1



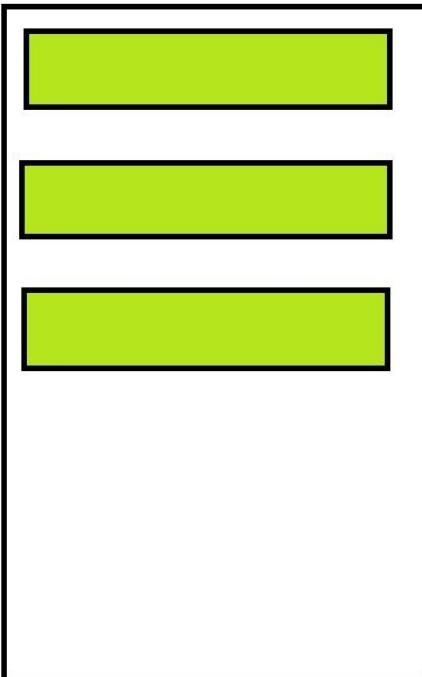
Relative View 2



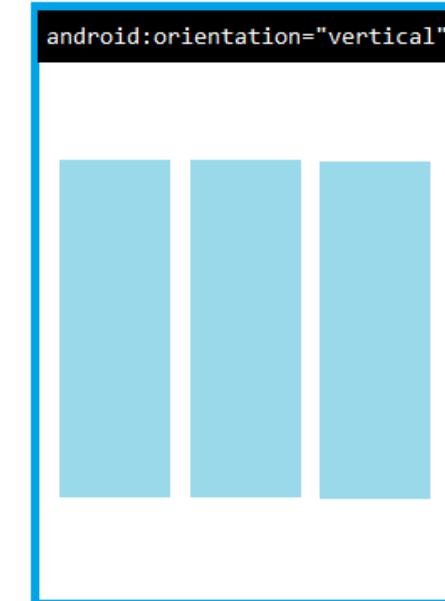
Linear Layout Horizontal



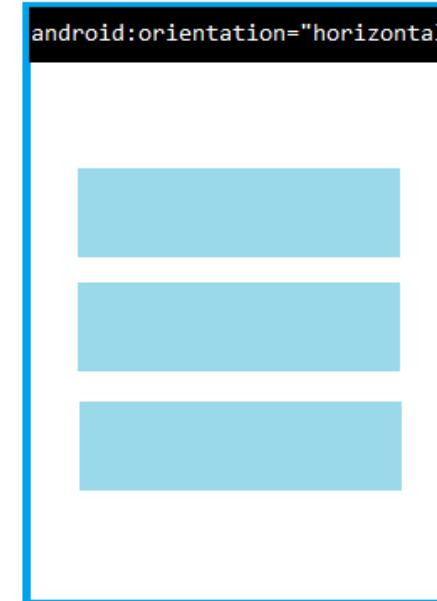
Linear Layout Vertical



android:orientation="vertical"



android:orientation="horizontal"

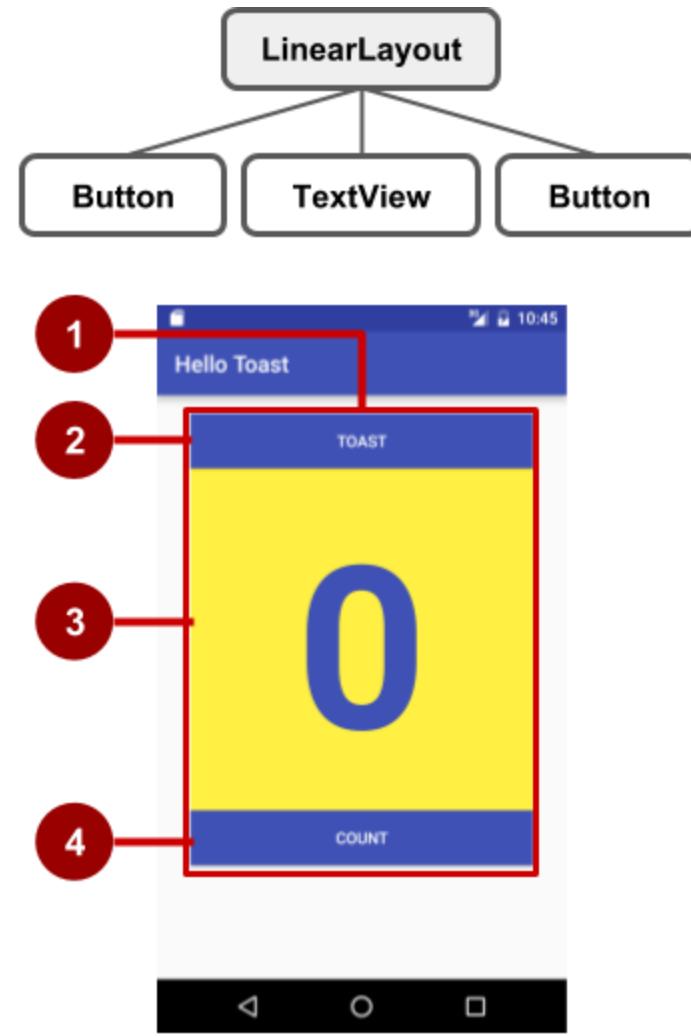
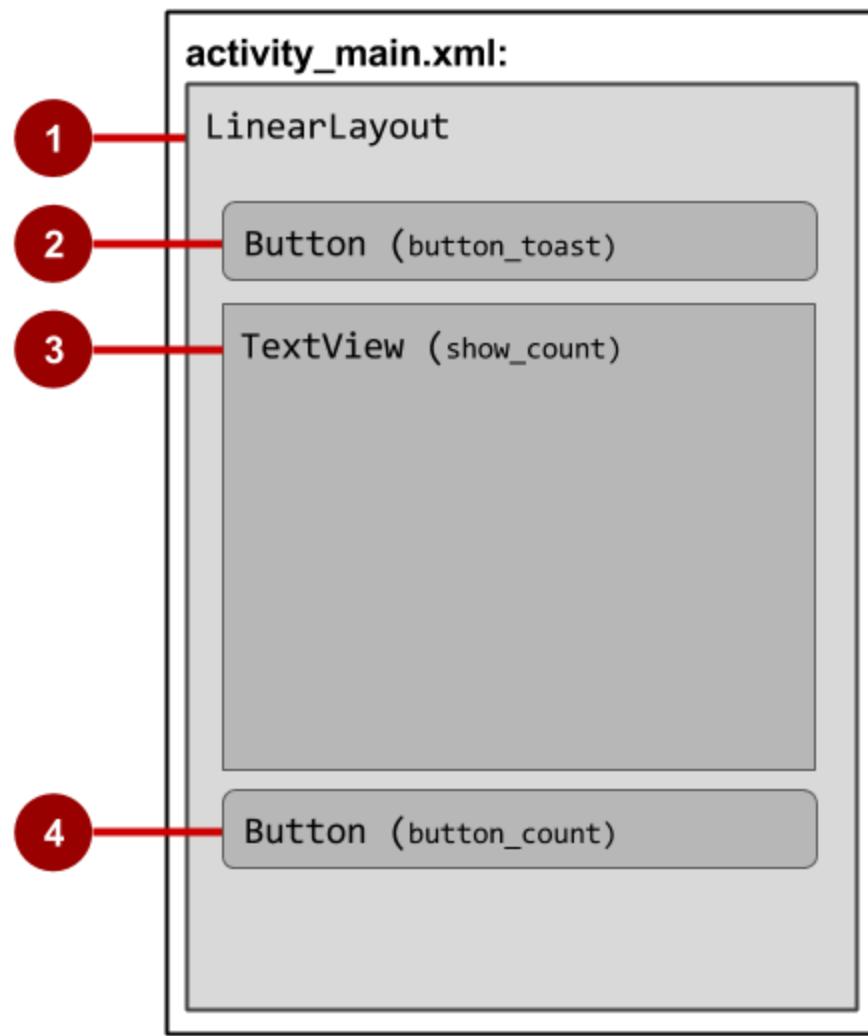


Android:orientation="horizontal"



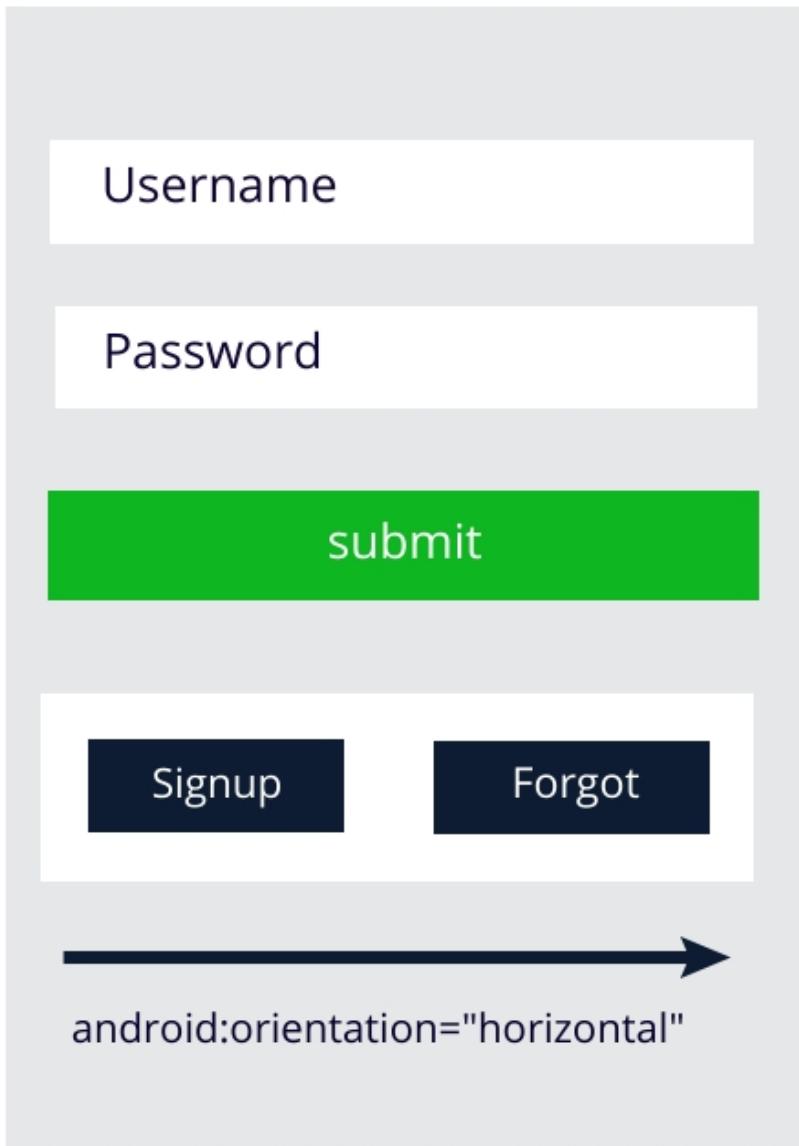
Android:orientation="vertical"





Linear Layout

android:orientation="vertical"



android:orientation="horizontal"