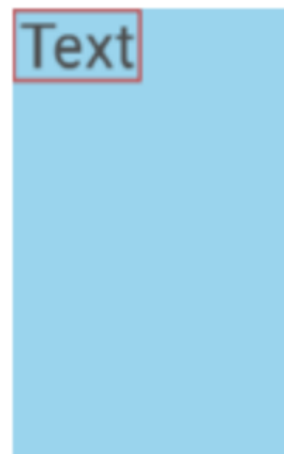# Guía : Proyecto Cambio de Colores

1. Crear un proyecto siguiendo la guía Proyecto Base
2. Abrir el archivo activity_main.xml y cambiar el Layout por LinearLayout, agregando 1 TextView , y 2 Botones.
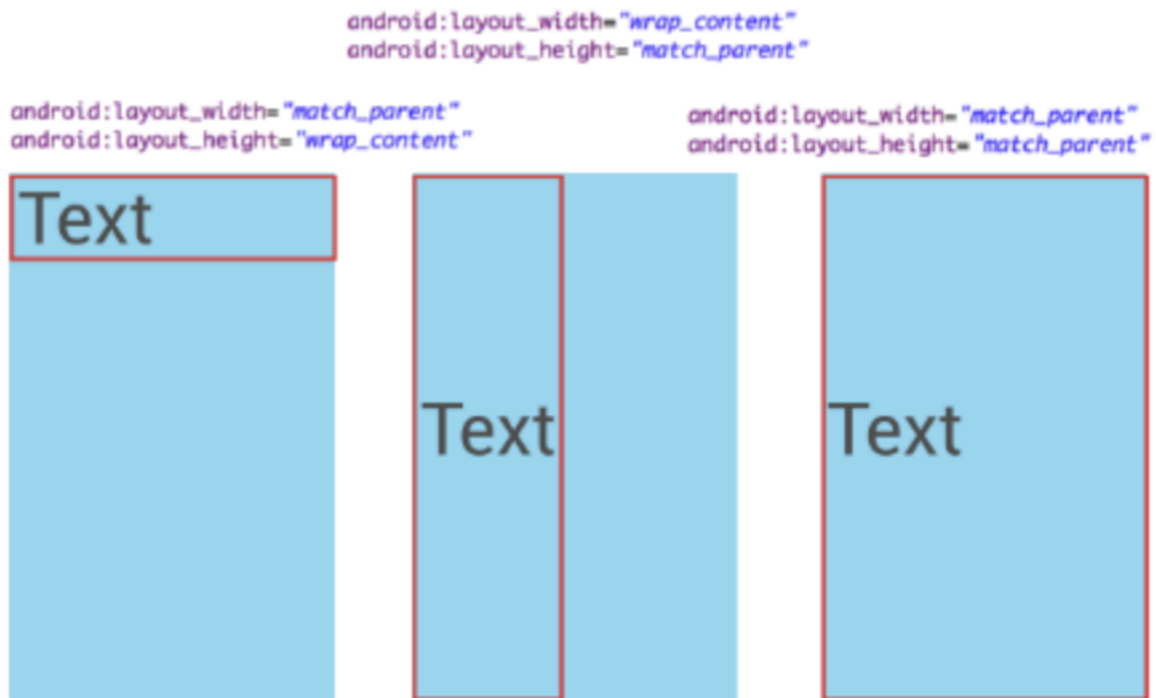

3. Match parent y wrap_content.

wrap_content

```
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    ...
/>
```

match_parent

android:layout_width="wrap_content"
android:layout_height="match_parent"

android:layout_width="match_parent"
android:layout_height="wrap_content"

android:layout_width="match_parent"
android:layout_height="match_parent"

Text

Text

Text

4. Solución al problema visual

```xml
<?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:layout_gravity="center"
    android:orientation="vertical"
    tools:context="ucb.bo.edu.colores.MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center_horizontal"
        android:text="Cambio de Colores"
        />

    <Button
        android:id="@+id/btnAzul"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center_horizontal"
        android:text="Rojo" />

    <Button
        android:id="@+id/btnWhite"
```
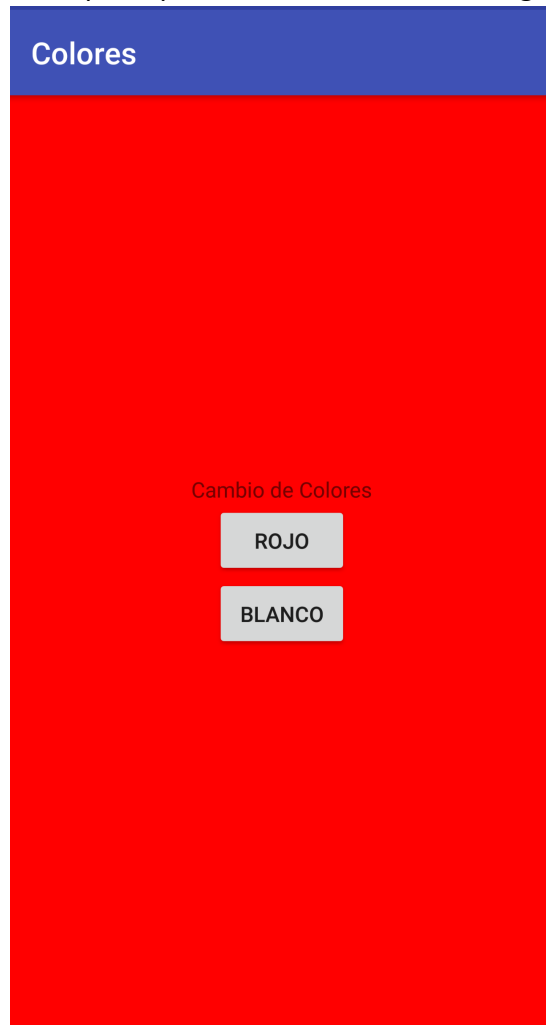
```xml
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center_horizontal"
            android:text="Blanco" />
    </LinearLayout>
```

5. Integrar los botones con el archivo MainActivity.java y agregar los respectivos eventos de los botones para que cambie el color del background de fondo.

6. Solución código kotlin

   MainActivity.kt

```kotlin
import android.graphics.Color
import android.support.v7.app.AppCompatActivity
import android.os.Bundle
import android.view.View
import android.widget.Toast
import kotlinx.android.synthetic.main.activity_main.*
import kotlin.math.log

class MainActivity : AppCompatActivity() {
```

```kotlin
private val redBtn : Button
    get() =  findViewById(R.id.red_btn)

private val whiteBtn: Button
    get() = findViewById(R.id.white_btn)

private val layoutPrincipal: ConstraintLayout
    get() = findViewById(R.id.layout_main)


override fun onCreate(savedInstanceState: Bundle?) {
    super.onCreate(savedInstanceState)
    setContentView(R.layout.activity_main)
    redBtn.setOnClickListener {
        toast(getString(R.string.btn_red_label))
        layoutPrincipal.setBackgroundColor(Color.RED)
    }

    whiteBtn.setOnClickListener {
        toast(getString(R.string.btn_white_label))
        layoutPrincipal.setBackgroundColor(Color.WHITE)
    }

}

    private fun toast(text: String, duration: Int = Toast.LENGTH_LONG) =
Toast.makeText(this@MainActivity, text, Toast.LENGTH_LONG).show()
}
```

activity_main.xml

```xml
<?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:id="@+id/layout_main"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <TextView
```

```xml
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/description_label"

app:layout_constraintBottom_toTopOf="@+id/red_btn"
        app:layout_constraintEnd_toEndOf="parent"

app:layout_constraintHorizontal_chainStyle="spread"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"

app:layout_constraintVertical_chainStyle="packed" />

    <Button
        android:id="@+id/red_btn"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/btn_red_label"

app:layout_constraintBottom_toTopOf="@+id/white_btn"
        app:layout_constraintEnd_toEndOf="parent"

app:layout_constraintHorizontal_chainStyle="spread"
        app:layout_constraintStart_toStartOf="parent"

app:layout_constraintTop_toBottomOf="@+id/textView" />

    <Button
        android:id="@+id/white_btn"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/btn_white_label"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"

app:layout_constraintHorizontal_chainStyle="spread"
        app:layout_constraintStart_toStartOf="parent"

app:layout_constraintTop_toBottomOf="@+id/red_btn" />
</androidx.constraintlayout.widget.ConstraintLayout>
```